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A Case Study of Women's Health in Malé, Republic of Maldives

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no materials which have been accepted for the award of any other degree or diploma in any university.

Signature: ……..

Date: ……..

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Dedication

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Abstract

Background: Limited knowledge exists on the social determinants of urban women's health and health inequities in the developing world. However, gaps in health attributable to political, social and economic factors should be closed in a generation (Commission on Social Determinants of Health, 2008). Successful efforts require understanding women's perspectives and experiences in relation to health and health inequity within the context in order to reduce disparities and provide evidence to support effective health policies and programs.

Aim: The overall aim of this research is to investigate and document women's health needs and concerns in Malé city, Republic of Maldives.

Methodology: A sequential explanatory mixed method design with use of qualitative and quantitative research method employed. In the first phase of the study, stratified purposive sampling and snow ball sampling were used to identify participants for the qualitative study. A total 152 females above 15 years of age participated in 55 in-depth interviews (IDIs) and 15 focus group discussions (FGDs). This was complemented with 3 FGDs with males and 31 IDIs and 6 FGD with community leaders. Thematic analysis was carried out to identify the major health-determining factors for women. Some of the salient findings from qualitative results were tested by use of a survey. Most of the questions included in the survey were taken from previous surveys and the developed questionnaire with piloted. A total 449 females were purposefully selected through an online and field survey. Descriptive statistics of frequencies and percentages were used to describe sample. Multiple regression analysis was used to determine the factors that were associated with women's self-rated health.

Findings: Five major themes emerged through the multiple phases of the thematic analysis that resulted in a multidimensional picture of the determinants of women's health; namely, financial stability, education, shelter and living condition, violence against women, and health system factors. Gender issues remained the overarching them. In regard to survey findings, the multi-nominal regression analysis showed 13 variables significantly associated with women's self-rated health. In particular, education level below secondary school, inadequate living condition factors,

inadequate food access, not being physically active, decision-making domains within the household between husband and wife, health care access and health information sources were significantly associated with women's self-rated health.

Conclusion: Health remains significantly connected with women's living and working environment, socioeconomic status, cultural beliefs and practices, autonomy and roles. Women's health policies need to shift beyond the traditional biomedical approach to align and incorporate the critical social determinants of health.

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Abbreviations

ADK	ADK Hospital
ANC	Antenatal Care
AOR	Adjusted odds ration
AUD	Australian dollars
BMI	Body mass index
CEDAW	Committee on the Elimination of Discrimination against Women
COR	Crude odds ratio
CSDH	Commission on Social Determinants of Health
DHS	Demographic and Health Survey
DV	Domestic violence
FGD	Focus group discussion
FV	Fruits and vegetables
GDP	Gross domestic product
GEM	Gender empowerment measure
GPI	Gender Parity Index
HCE	Health care expenditure
HCP	Health Care Professionals
HDI	Human Development Index
HIC	High-income countries
HRCM	Human Rights Commission of the Maldives
ICESCR	International Covenant on Economic, Social and Cultural Rights
IDI	In-depth interviews
IGMH	Indira Ghandi Memorial Hospital
IMAGE	Intervention With Microfinance for AIDS and Gender Equity
IPV	Intimate partner violence
OECD	Organization for Economic Co-operation and Development
LFP	Labour force participation
LMIC	Low- and middle-income countries
MDG	Millennium Development Goal
MDHS	Maldives Demographic and Health Survey
MPHC	Maldives Population and Housing Census
MVR	Maldivian rufiyaa

NCD	Non-communicable disease
NISRA	Northern Ireland Statistics and Research Agency
NGO	Non-governmental organization
PE	Physical education
PHC	Primary Health Care
QALY	Quality adjusted life years
SAH	Self-assessed health
SDG	Sustainable Development Goals
SDH	Social determinants of Health
SES	Socioeconomic status
SPSS	Statistical Package for Social Science
SRD	Self-rated disability
SRH	Self-rated health
STI	Sexually transmitted infection
SV	Spousal violence
UK	United Kingdom
US	United States
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VAW	Violence against women
WHO	World Health Organization

Chapter 1 – Introduction

1.1 Introduction

This thesis examines women's perception and experiences of their health in Malé city, the Republic of Maldives. This will be the first empirical study to examine women's health needs and concerns in contemporary urban dwellings. It will encompass the multiple factors in women's lives that impact health within social, economic, cultural and political contexts. Documenting social determinants of women's health and health inequities provides an evidence base for policy dialogue and debate in national, regional and international arenas, which could lead to more effective and innovative practices and further research.

Chapter 1 provides, the context of the study, specifying the international discourse of women's wellbeing and the scope of women's health issues. Then, the research questions, aims and objectives are given. Next, the significance of the research and the structure of the thesis is outlined.

1.2 Overview of women's health

Women make up over half of humanity and their health needs require equal importance and research efforts as those of men (World Health Organization, 2009). Yet some authors suggest that historically, women's health was neglected around the globe (Bird & Rieker, 1999; Wuest, Merritt-Gray, Berman, & Ford-Gilboe, 2002). Over recent decades, more attention has being given to women's health (World Health Organization, 2014); however, the focus has largely been on fertility control and reproductive health measures to meet demographic targets within the narrow view of biomedical approaches (Cohen, 1998; Crooks, 2001; Hinton & Earnest, 2011; Inhorn, 2006).

While the biomedical model can be used to generate significant advances in understanding diseases and their appropriate treatment, the pre-eminence of this approach is being increasingly challenged (Baum, Bégin, Houweling, & Taylor, 2009). The main argument is that, while it has reduced women's health problems associated with diseases, it tends to ignore important social processes (Crooks, 2001;

Inhorn, 2006). Moreover, several authors argue that the narrow focus of prioritising and managing women's health by medical and public health personnel has not only limited our understanding of the multiple realities and dimensions of women's health, but has also dissociated women from being part of the processes that define their own health (Crooks, 2001; Hammarström, Lehti, Danielsson, Bengs, & Johansson, 2009; Inhorn, 2006). Qualitative studies suggest that women rarely assess their health concerns and needs in the same ways as the biomedical community or policy makers (Doornbos, Zandee, DeGroot, & De Maagd-Rodriguez, 2013; Hinton & Earnest, 2011; Leipert & George, 2008; Travasso, Rajaraman, & Heymann, 2014). With these limitations encircling women's health, there is a growing body of literature that advocates encompassing all aspects of women's health through a life course and social determinants approach that has women as its central focus (Blas, Sommerfeld, & Kurup, 2011; Commission on Social Determinants of Health, 2008; A. Evans & Nambiar, 2013; McDonough, Worts, McMunn, & Sacker, 2013; World Health Organization, 2009).

Women's health is unique, with a complex interplay between a wide range of factors that determine health and illness (Cohen, 1998; World Health Organization, 2009). Women generally live longer than men (Barford, Dorling, Smith, & Shaw, 2006; United Nations, 2010) due to their biological and behavioural characteristics; however, this does not necessarily guarantee healthier lives (Mathers, Sadana, Salomon, Murray, & Lopez, 2001; Vos et al., 2016). Widespread and persistent suffering and inequities in women's health results from the places in which they grow up, live, work and age (Commission on Social Determinants of Health, 2008; M Marmot et al., 2008). It is broader features of a society (such as education, income, employment, social support, gender, culture, and social policies and systems) that are the social determinants of health, and can help to explain health inequalities (Angus et al., 2013; Commission on Social Determinants of Health, 2008; A. Evans & Nambiar, 2013; G Sen & Östlin, 2008; G. Sen, Östlin, & George, 2007; World Health Organization, 2009).

The literature regarding health and socioeconomic status in relation to education, income and occupation is robust and consistent: those who live in less advantaged socioeconomic circumstance not only suffer higher mortality rates, but also experience more sickness and ill-health (Kaplan, Howard, Safford, & Howard, 2015;

M Marmot et al., 2008; Mathers et al., 2001). For example, approximately one-third of a million women in the developing world die from causes arising from pregnancy and childbirth, and more than 90% of them are in Africa and Asia (World Health Organization, 2015). Several authors have suggested that the majority of these maternal deaths could be prevented if women were given access to basic health services (Ahmed, Li, Liu, & Tsui, 2012; Campbell, Graham, & Lancet Maternal Survival Series steering group, 2006; Rosenfield, Min, & Freedman, 2007). It is also estimated that 21.6 million women went through unsafe abortions in 2008, and most of these cases were in developing countries (World Health Organization, 2011). Furthermore, girls and women who live in richer households have lower mortality rates and also use more health care services than to those in poorer households (World Health Organization, 2009).

There is also a causal relationship between the number of years spent in education and women's health, survival and overall development (United Nations Children's Fund, 2015). The Organization for Economic Corporation and Development (OECD) (2012) stated that half of the total economic growth in its member states during the past five decades has been strongly associated with giving girls and women access to education. For example, higher levels of education change women's attitudes towards physical abuse committed by a partner, they think of it as inappropriate rather than accepting it (United Nations Children's Fund, 2015, p.19). Similarly, women with no education and those who completed only 1- 6 years of education were two-and-a-half times more likely to die during pregnancy and two times more likely to die in child birth, compared to women who had 12 years or more education (Karlsen et al., 2011). Moreover, women's education attainment and its links to better child survival is established (Gakidou, Cowling, Lozano, & Murray, 2010).

Despite this evidence, education and wealth continues to differ by gender. For example, three-quarters of the 774 million illiterate adults in the world live in South Asia and Sub-Saharan Africa, and two-thirds (493 million) of these are females (Huebler & Lu, 2013, p.09). This figure has not changed over the past two decades (Huebler & Lu, 2013). In terms of wealth, United Nations (2015, p.08) estimates that throughout the world, women's earnings are 24% less than men's. Even in developed nations such as the United States (US), 14.8% of females live in poverty compared to12.2% of males, and almost twice the number of female-headed families (28.2%)

live in poverty compared to male-headed families (14.9%) (United States Census Bureau, 2016, September 13).

Studies also show that women suffer from chronic diseases and non-communicable diseases more than men, reflected in disability and functional morbidity (Denton, Prus, & Walters, 2004; Mathers et al., 2001); malnutrition due to anaemia (Singhal, 2015), anorexia and bulimia (Smink, van Hoeken, & Hoek, 2012); obesity (James, Leach, Kalamara, & Shayeghi, 2001); and mental health disorders (Poongothai, Pradeepa, Ganesan, & Mohan, 2009; Van de Velde, Bracke, & Levecque, 2010). There are also more women living with HIV infection than men (United Nations Children's Fund, 2012, p.07). A multi-county study on violence against women by World Health Organization (WHO) estimates that between 15% and 71% of women were targeted by their husband or partner for physical and/or sexual violence in their lifetime (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006). Furthermore, women's voices are rarely heard in the top policy-making positions in most countries. The United Nations (2010, p.117) indicates that women held 17% of cabinet posts worldwide in 2008, while only 7 out of 150 elected heads of states and 11 out of the 192 heads of government positions were held by women.

The WHO (2008) defines health inequities as avoidable inequalities in health between groups of people within countries and between countries that can be attributed to the social determinants of health. At the heart of health inequities lies an unfair and deep-rooted power imbalance between genders, with a broader structural marginalisation, vulnerability and discrimination that denies women their basic human right of health (G Sen & Östlin, 2008). The United Nations Covenant on Economic, Social and Cultural Rights (1966), built on the Universal Declaration of Human Rights (1948), affirmed that the right to the highest attainment of health is a fundamental human right, with the right to an adequate standard of living, food, clothing, housing and education (United Nations, 1966). International treaties that followed these, such as the Convention of the Elimination of All Forms of Discrimination against Women (CEDEW) (1989), the Convention of the Rights of the Child (1989), and the Convention on the Rights of Persons with Disabilities (2006), as well as WHO constitution and its prominent charters, collectively recognise the right to health as a basic human right (Commission on Social Determinants of Health, 2008; World Health Organization, 1946, 1978, 2007).

More specifically, since the International Conference on Population and Development's (1994) Programme of Action created a landmark for articulating and advancing women's rights, the international treaties that followed this mandate built on and expanded it. The Beijing Declaration and Platform for Action (1995), the United Nations' Millennium Development Goals (2000) and the most recent 2030 Sustainable Developmental Goals (SDG) (2015) are treaties in which world leaders committed to offer equity, social justice and development for women in all aspects of their lives, without discrimination. The fundamental principle and common objective of these global agendas is that equity and social justice are basic human rights, with a special focus on preserving and protecting human dignity by giving significant attention to empowering women through economic and social development in all spheres of life (Office of the United Nations High Commissioner for Human Rights & World Health Organization; United Nations, 1995, 2015).

The WHO's Commission on Social Determinants of Health (CSDH) (2008) further recognises that women's health initiatives need to move beyond women's fertility to a broader focus on women's rights and the social structures that influence women's lives. The commission challenges that, without empirical knowledge on health inequalities, information on the interplay of health, social factors and other dimensions that interact with women's lives will not be available and the global targets will not be achieved.

The WHO, with its overarching goal of improving population health, further recommend identifying and addressing health inequities of women in developing nations as an urgent and significant public health challenge, and that it should involve all agencies and organisations in a nation (World Health Organization, 2009). The global call for action in this regard involved ensuring equity and rights for vulnerable and disadvantaged women through policy and programs, to build their capabilities and ensure their right for economic and political participation. In the meantime, the scientific community, feminist researchers and women's health activists emphasise the importance of letting women be heard and involved in health policy processes, to reduce the health inequity gap (Hinton & Earnest, 2011; Inhorn, 2006; G. Sen et al., 2007; Whittle & Inhorn, 2001). The emerging knowledge base from international studies on women's health reaffirms that making women active

agents in health policy change leads to more equal and fairer societies (A. Evans & Nambiar, 2013; World Health Organization, 2009).

To date, however, there is a dearth of empirical studies in relation to women's health and health inequalities within the Maldivian context. There are no empirical studies on the links between women's social and economic conditions and their connection to physical, psychological and social health. Additionally, in the policy arena, there has been limited focus on the ways in which different forms of social inequalities may contribute to the health and wellbeing of women. Efforts to prevent health problems in women may be restricted substantially if the factors underlying social inequalities are not understood and addressed.

1.3 Research aim and objectives

The overall aim of this research is to investigate and document women's health needs and concerns in Malé city, Republic of Maldives.

Objective 1 – To determine women's perceptions and experiences related to their health needs and concerns.

Objective 2 – To determine women's roles and responsibilities in the context of family, the community and society, and the impact these have on women's health.

Objective 3 – To explore and explain patterns in women's self-assessed health.

Objective 4 – To assess similarities and difference among women's, men's and key informants' reports of women's health including needs and concerns.

Objective 5 – To provide recommendations for the health system services to better meet the health needs and concerns of women, thereby reducing health inequities.

1.4 Significance of the study

This study provides a significant contribution to knowledge in relation to women's health policy, research and practice at local, regional and international levels.

Firstly, the central premise of this thesis is to address women's health concerns by identifying the health inequalities and social determinants of health – a novel area for the Maldives (World Health Organization, 2010a). Thus, this mixed methods research using a holistic framework of women's health is the first of its kind to capture the social determinants of women's health in Malé city, Maldives. The United Nations (2015) recognises that the key to sustainable development is to generate empirical data that informs policy decision making, monitoring and coordination.

Secondly, the current research is timely. The WHO recently assisted the Maldives to conduct a workshop to identify the role of different sectors in addressing the social determinants of health (World Health Organization, 2010a). It also completed a secondary analysis of its national surveys, to identify some of the social inequalities and their impact on health (World Health Organization, 2010b). They identified an urgent need to examine the existing health system and re-examine public health programs through the lens of social issues, values and culture. The limitations of the existing health system were identified as 'limited delivery of health promotion', 'an increasing medical service delivery model' and a 'lack of secondary prevention guidelines' (World Health Organization, 2010a, p.14). It was recommended that it was essential to revitalise the primary health care system and, at the same time to 'evaluate inequities within communities and between communities and to address these issues'(World Health Organization, 2010a, p.11). The Maldives made a commitment to address both the WHO report (2010a, 2010b) and the Millennium Development Goals (Ministry of Health, 2012).

Thirdly, this study complement and addresses the challenges of presenting lay knowledge by including the 'privileged' experts or women as key informants outlining how the places they live in give rise to health inequalities (Popay, Williams, Thomas, & Gatrell, 1998, p.622). This will enrich the practical significance of the knowledge base and identify the limitations in the current predominantly medical focus of evaluating the health care delivery system in Malé city (World Health Organization, 2010a). It will thus make recommendations for policy makers, health professionals, health educators and women themselves, to help them re-build the system and address the health inequalities of women.

1.5 Structure of thesis

Through its eight chapters, this thesis details the background to the topic, an in-depth literature review, research methods employed, and results of the two-stage empirical data collection process which seeks to achieve the research aim and objectives.

Chapter 1 provides an overview of the study, focusing on global health initiatives and discourses, and introducing the terms 'health inequity' and the concept of social determinants of health, highlighting the international commitment and treaties that aim to achieve health equity for women. The chapter also outlines the research questions, aims and specific objectivise of the study, and its significance.

Chapter 2 provides a brief background of the Maldives, describing historical, demographic, socioeconomic, cultural, environmental and political context. It also highlights the challenges and constraints for women within the system, to develop the context of the study, identify the existing gaps and clarify the focus of the overarching research aims and objectives.

Chapter 3 reports the findings from a comprehensive literature review. The aim is to identify and appraise existing knowledge relating to women's health and how it has been measured. The first part of the chapter details the systematic and comprehensive processes that were followed to locate empirical studies pertaining to the research objectives, and how the literature search strategy was devised. The second part mainly focuses on a critical review of the relevant literature and gaps in the current body of knowledge. The chapter concludes with the conceptual framework of the study.

Chapter 4 describes the methodology and methods used in this thesis. The chapter is divided into three sections. After revisiting the aims and objectives of the study, an overview of case study methodology and mixed methods research is detailed, rationalising the approaches used. Following that, the qualitative research design and data analysis processes are presented. Finally, the quantitative survey design and data analysis processes are presented.

Chapter 5 reports the qualitative findings. The focus is on objectives 1, 2 and 4 – women's perception and experiences related to health needs and concerns and to triangulate these with community leaders and men's narratives. The major themes,

sub-themes and supporting quotes are presented in this chapter, outlining women's health inequalities in Malé city.

Chapter 6 details the quantitative survey findings and addresses the research objective 3 – to explore and explain patterns in women's self-assessed health. The descriptive and inferential analysis and its results are presented to explain the predictors of women's self-rated health in Malé city.

Chapter 7 discusses the key findings of the qualitative and quantitative results in light of the literature and empirical work. The discussion brings together these findings to develop a framework that conceptualises the determinants of women's health and health inequalities in Malé city.

Chapter 8 presents the limitations and contributions of the research. In addition, the chapter outlines the recommendations for policy, practice and future research, ending with a brief conclusion.

1.6 Summary

This chapter introduced the study with a brief overview of the dimensions in women's lives and their effect on women's health and wellbeing. It has also outlined the international commitments and treaties that recognise women's health as a basic human right. This chapter highlighted the study's aims and objectives. The significance of the study is not only limited to women's health and health policy in the Maldives; but it is relevant for policy dialogues at regional and international forums. The next chapter presents a detailed background of the study.

Chapter 2 – Background

2.1 Introduction

This chapter comprises a detailed background of the Maldives, with a focus on a demographic and social profile of women in the Maldives, specifically those in Malé city. Because of the limited number of empirical studies in Maldives, and Malé city in particular, most of the data presented in this chapter come from grey literature from national and international organisations' reports and surveys as well as from a newspaper article.

This chapter starts an outline of the history and geography of the Maldives followed by a brief overview of the recent development and health indicators. Then, some of the central dimensions of women's life measures are presented: women's education and roles in the social, economic and political spheres; the demographic transition of the population, with a focus of Malé city; and the health and social system of the country.

2.2 History and geography

The Republic of Maldives is an archipelago in the Indian Ocean formed from 1,190 low-lying coralline islands grouped in double chain of nineteen atolls, covering 90,000 square kilometres (Ministry of Health and Gender, 2014). Most of the islands are less than one square kilometre and are uninhabited. The population stands at 344,023 with locals populating 188 islands; however, 123 (65%) of these islands have fewer than 1,000 inhabitants (National Bureau of Statistics, 2014c, p.22). Although the country faces a severe paucity of land and other natural resources, over the past few decades, 109 islands have been developed exclusively for tourist resorts and 128 islands for industrial (National Bureau of Statistics, 2014c, p.06). The tourism sector remains the main source of revenue for the country (Ministry of Health and Gender, 2014).

In 2010, under the Decentralization Act, 184 administrative constituencies were formed across the Maldives, of which 181 were declared islands, one declared an atoll, and two declared as cities. Malé city, the focus of this study, remains the only urban development in the nation compromising three islands, Malé, Villingili, and

Hulhumalé (an artificially reclaimed island). Table 2.1 illustrates the geographic layout, population and population density of these islands.

Table 2.1 Area, population growth rate, and distance to Malé city by locality

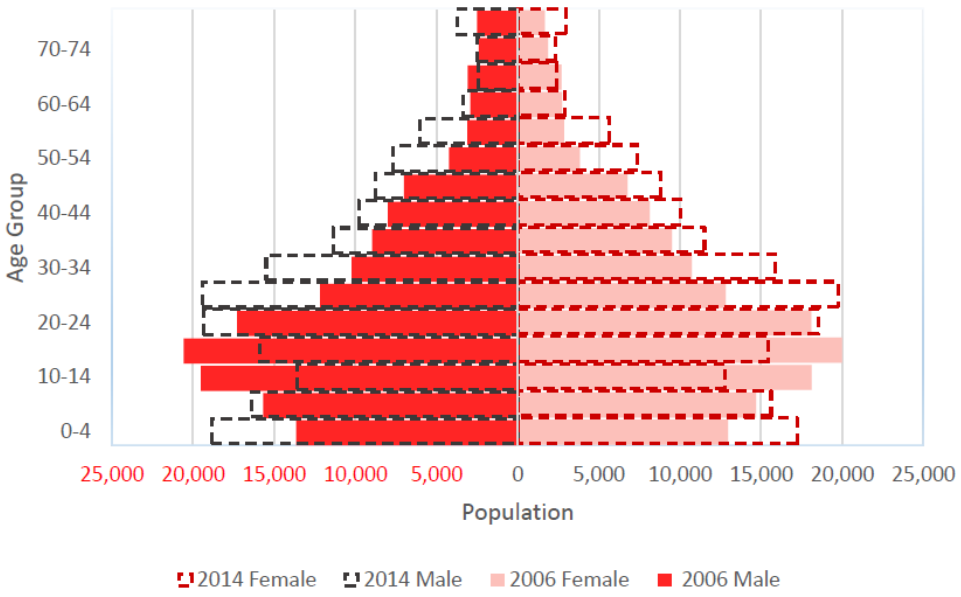
Locality	Land area 2008 (in hectares)	Local population (census 2014)	Annual population growth rate(expn) (Census 2014)	Distance to Malé (in km) by sea
Malé	193.2	133,412	2.96	0.0
Villingili (natural island)	31.7	7,516	0.91	2.8
HulhuMale (artificial island)	200.0	14,843	19.35	5.3

Note: The data adapted from the Statistical Yearbook of Maldives 2016 and Statistical Yearbook of Maldives 2011, Retrieved from: http://statisticsmaldives.gov.mv/yearbook/2016/wp-content/uploads/sites/2/2016/10/3.3.pdf; http://statisticsmaldives.gov.mv/YearBook2011/yearbook/Geography/1.5.htm

Maldivians are ethnically homogenous Sunni Muslims, who uses a common indigenous language, Dhivehi, with variance in dialect. Although Maldivians use this unique native language, English is the primary language that is used in the formal education system and most of the formal government sector. History records the Maldives as a sovereign island nation, except during the 16th century when it was ruled for 15 years by the Portuguese. The country remained under the British protectorate from 1887 to 1965 (The Commonwealth, 2016), before declaring independence in July 1965, and becoming a member of the United Nations in1965 (Department of National Planning, 2012b). Following independence, the country thrived with peace and prosperity for several decades, and in 2008 it held the first multi-party election under its new democratic constitution. The legal system follows Islamic Sharia law and English common law; the latter dominates civil and commercial activities, and the regulations of the country (M. Ibrahim & Karim, 2013). However, the cultural and social life of Maldivians is a combination of Islamic and South Asian tradition, which influence social attitudes, behaviours and activities (United Nations Development Programme, 2011).

2.3 Health and development

The Maldives has continued to improve the health status of its population (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014), which is predominantly a youth population at present (Figure 2.1) (National Bureau of Statistics, 2014c).



Note: Figure retrieved from Maldives Population and Housing Census (MPHC) 2014 (National Bureau of Statistics, 2014c, p.23).

Figure 2.1 Population pyramid of Maldives, 2006 and 2014 Census.

The Human Development Index value of 0.688 ranks the nation 104th out of 187 countries and territories, one of the highest in South-East Asia (Table 2.2) (United Nations Development Programme, 2013). The country has reduced overall poverty, under-five and maternal mortality, and has also achieved universal primary education, thus accomplishing five out of the eight Millennium Development Goals (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014). A high literacy rate in Dhivehi at 98% is maintained for both men and women throughout the nation (Ministry of Health and Gender, 2014).

Between 1990 and 2014, the fertility rate decreased from 6.4 to 2.2 per woman (National Bureau of Statistics, 2014c, p.15). The maternal mortality ratio also reduced from 677 per 100,000 live births in 1990 to 68 per 100,000 live births in 2015 (World Health Organization, 2015). Moreover, life expectancy increased over the years: today for females it is 74.8 years compared 73.1 years for males (Ministry of Health, 2016, p.08).

Table 2.2 Basic demographic characteristics

	Number (%)
Human development Index	0.688
Crude death rate (2012)	3/1000 population
Maternal mortality ratio	68 per 100,000 live births
Under five mortality (2012)	11/1000 live births
Infant mortality (2012)	9/1000 live births
Total fertility rate (2014 census)	2.2 per woman
Life expectancy at birth	
Females (2012)	74.8 years
Males (2012)	73.1 years
Literacy rate	
Both females and males	98% (local language)

Note: The data are adapted from United Nations Development Program (2013); Ministry of Health and Gender (2014); National Bureau of Statistics (2014c); World Health Organization (2015) & Ministry of Health (2016).

Table 2.3 compares the population distribution of males and females nationally and in Malé. The sex ratio of the population has gone from 119 males per 100 females (in 1911) to 103 males per 100 females (in 2014) (National Bureau of Statistics, 2014c, p.14). Additionally, infectious diseases such as polio, neonatal tetanus, whooping cough, diphtheria, malaria and lymphatic filariasis have been eradicated, while tuberculosis and HIV infection remain under control (Ministry of Health, 2016).

Table 2.3 Population distribution of the Maldives

	Number (%)
Total Maldivian Population	344023
Sex	
Female	169,357 (49.2)
Male	174,666 (50.8)
Sex ratio (males per 100 females)	103
Annual growth rate	1.65
Age groups	
Birth to 14 years	93,478 (27)
15-64 years	228,619 (68)
65 or above	16,337 (05)
Malé	
Total population	133,412 (38.8)
Female	67,084 (50.3)
Males	66,328 (49.7)

Note: The data are adapted from MPHC 2014 (National Bureau of Statistics, 2014c, pp.14, 30 & 39).

The introduction of universal health insurance (Ministry of Health, 2016) and the enacted laws listed in Table 2.4 (Attorney General's Office, 2015) paved legislative pathways for vulnerable populations to increase access to social and economic

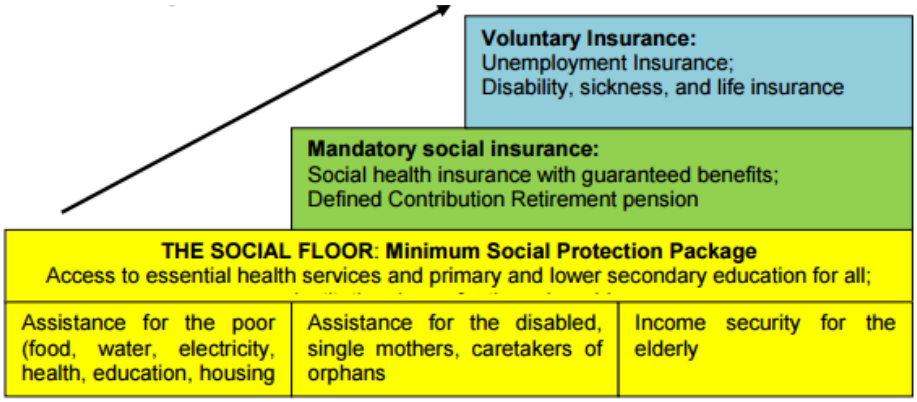
security. The most recent ratification was the Bill of Sexual Abuse and Harassment and the Bill on Sexual Offences 2014 (The President's Office, 2014), which further ensured a safer and more secure public life and work environment for women in the community.

Table 2.4 Some enacted Acts and Bills in the Maldives

Acts / Bills
Family Act 2000
Maldivian Land Act 2002
Human Rights Commission Act 2006
Employment Act 2008
Special Provision Act to Deal with Child Sex Abuse Offenders Act 2009
Disability Act 2010
Domestic Violence Prevention Act 2012
Maldives Civil Service Act 2007
Maldives Pension Act 2009
*Bill of Sexual Abuse and Harassment, 2014
*Bill on Sexual Offences, 2014

Note: The data are adapted from the Attorney General's Office (2015) & *The President's Office (2014).

In addition, the nation established a minimum social protection floor in 2009 (Figure 2.2), which ensures access to universal health care and primary and lower secondary education. It also safeguards vulnerable groups within society, such as single parents, the elderly and the disabled, by providing monetary support. The economically poor get assistance through subsidies for basic needs (A. Ibrahim, 2012).



Note: Figure retrieved from Ministry of Health and Family (2009) as cited in (A. Ibrahim, 2012, p.03).

Figure 2.2 Minimum social protection floor of the Maldives

Several authors have suggested that women in the Maldives are the most emancipated in the Islamic world (Dayal & Didi, 2001; Faizal & Rajagopalan, 2005; Mittra & Kumar, 2004) as well as compared to women in other nations in South Asia

(Asian Development Bank, 2007). Although the Maldives follow a patrilineal kinship system similar to other nations in the region, females can maintain their maiden names after marriage, perform consent for marriage, file for divorce and have constitutional right to inherit property. Mittra and Kumar (2004), in their compilation of the Encyclopaedia of Women in South Asia, further indicate that compared to other nations in the region, there is no overt social customs that prefers male children over females or explicit sex-based discrimination. While child marriage is prevalent in South Asia, there has been no reports of these incidents from the Maldives in the past 15 years (Khanna, Verma, & Weiss, 2011)

Economic growth over the past few decades also came with other progress that ensured fair and just systems for those in the labour market (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014). While the Constitution of the Maldives affirms the right to work, the Employment Act 2008 and the Employment Tribunal protect the rights of workers as well as employers (Employment Tribunal, 2015; Ministry of Legal Reform Information and Arts, 2008) The country has also ratified ten conventions of the International Labour Organization after becoming a member in 2009 (International Labour Organization, 2016), heightening formal labour force participation. Today, the main source of household earnings is wages and income (57%), followed by businesses (22%) and property income (9%) (Department of National Planning, 2012a).

Additionally, Table 2.5 shows the international treatises ratified by the Maldives. Following these, gender equality was embedded within the Maldives constitution, and gender mainstreaming has been adopted within its national policies (Ministry of Gender and Family, 2009). In light of these indicators, the Maldives ranks highest in South Asia in the Gender Development Index (GDI) of the United Nations Development Program (United Nations Development Programme, 2013). In fact, this development and prosperity moved the nation from Least Developed Country to Middle Income Country status in 2011 (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014; Ministry of Health, 2012).

Table 2.5 Ratification status of Maldives to international treatises

United Nation conventions	Signature date	Ratification date
Convention of the Elimination of All Forms of Discrimination against women (CEDAW)		1993

CEDAW optional Protocol	2006	
International Covenant on Economic, Social and Cultural Rights		19 September 2006
Convention of the Rights of Children	10 May 2002	29 December 2004
Convention of the Rights of Persons with Disabilities	02 October 2007	05 April 2010
International Covenant of the Civil and Political Rights		19 September 2006

Note: The data are retrieved from United Nations Human Rights, Office of the High Commissioner. Retrieved from **http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=106&Lang=EN**

2.4 Women's education and roles in social, economic and political sphere

Table 2.6 shows educational milestones for females in the Maldives. Currently, more girls complete primary and lower secondary education than boys, and a thriving co-education system prevails in the country (The World Bank, 2012). Despite these positive measures, there is a sharp drop in net education enrolment at the higher secondary school level (19 %) with a gender disparity: 18.4% of males compared to 16.4% of females (Department of National Planning, 2012a; Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014). Out of the total scholarships offered from1997 to 2008, females were awarded 41% of the undergraduate and 33% of the postgraduate scholarships (Department of National Planning, 2012a). In addition to gender disparities in higher education, the quality of education offered in the mainstream education sector is an issue at present (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014; The World Bank, 2012). For example, in 2011, two out of three children were not able to obtain five passes in the GCE O/L exam, with 16% not achieving a single pass (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014, p.73).

There are also limited opportunities for those who drop-out of school, with inadequate awareness about the social and professional development opportunities for women in the nation (Ministry of Youth Development and Sports, Ministry of Planning and National Development, & United Nations Task Force on Adolescents and Youth, 2005). For instance, females were excluded from 561 opportunities

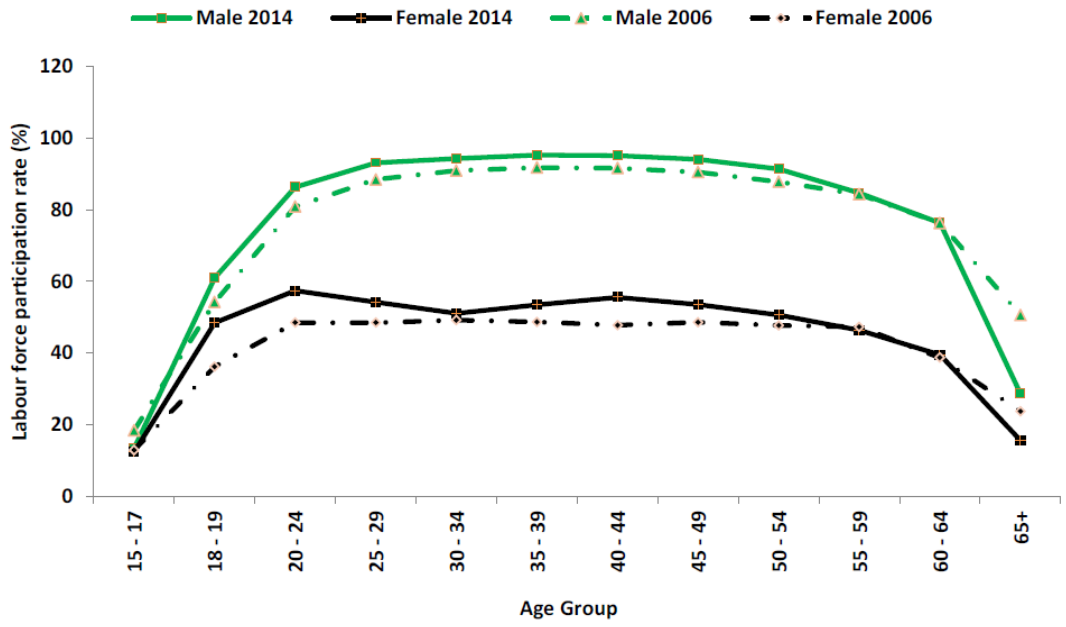
offered for unemployed youths in the skilled development diploma level training program (Asian Development Bank, 2015).

Table 2.6 Education milestone for Maldivian females

Education milestone	Year
Initiate formal education of females	1944
1st batch of females enrolled in London GCE (O/Level)	1967
Nationwide education system launched	1978
100% net enrolment in primary education	2002
99.3% net enrolment for females in lower secondary education	2013

Note: The data are adapted from (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014, pp.69-70; Office for Women's Affairs the Republic of Maldives, 1989).

Although the Maldives achieved gender parity in primary and secondary school enrolment, this has not ensured women's equal participation in social, economic and political arenas. Figure 2.3 illustrates the large disparity between males' and females' labour force participation (LFP) in the Maldives. In 2014, the LFP rate was 47.6% for females, compared to 79.7% for males (National Bureau of Statistics, 2014a, p.06). Similar to previous surveys (Department of National Planning, 2012a), the most recent Maldives Population and Housing Census (MPHC) (2014) indicated that 41.5% of females stated household chores and childcare responsibilities as the main reason they could not work for income. Previous surveys further suggested that one in four females (25%) stated that their families' objection was another reason they could not work (Department of National Planning, 2012a). This situation could be anticipated with the country's high dependency ratio of 56.8 and the absence of facilities for child and elderly care (Ministry of Planning and National Development, 2008). Furthermore, women's domestic activities and caring roles within the household have not been considered as an economically productive activity in the Maldives (Ministry of Planning and National Development, 2008).



Note: Figure retrieved from MPHC 2014 (National Bureau of Statistics, 2014a, p.06).

Figure 2.3 Labour force participation rates by age group and sex, Census 2006 and Census 2014.

With respect to working women, 55% of civil service employees are women (National Bureau of Statistics, 2014a). However, most females perform stereotypical jobs in education, manufacturing and general administrative work (National Bureau of Statistics, 2014a). An average of eight hours a day is spent by working women on domestic work in addition to six hours in regular income-generating work (Ministry of Planning and National Development, 2004b). In this way, gender disparities in labour market wages and occupation have been reported in the Household Income and Expenditure Survey (HIES) 2009/2010. Men are paid higher monthly incomes than females, for the same jobs, across all industries in the Maldives (Department of National Planning, 2012a). And most women occupy low-paying jobs while most men have high-paying jobs (Department of National Planning, 2012a)

Furthermore, despite the tourism sector generating 34% of gross domestic product (GDP) (Ministry of Health and Gender, 2014) and 60% of the foreign exchange revenue in the Maldives, only 2% of its employees are women (Ministry of Tourism and Civil Aviation, 2006). One reason has been husbands' or parents' restrictions on females working away from home. Another reason has been structural barriers within

the tourism industry, with restricted suitable work environments for females, unlike men (Bauer & Salih, 2007).

Situations that further exacerbate women's conditions in the Maldives are the norms of marriage and divorce which increases the potential for socioeconomic vulnerability and marginalisation of females, in particular, single mothers and female-headed households. The Maldives has the highest divorce rate in the world, with approximately 11 divorces per 1,000 people per year (Guinness World Records, 2016). The 2000 census reported more than 25% of all adults 35 years and older had been married five times or more (Ministry of Planning and National Development, 2001). In 2010, there were 4,944 marriages and 2,406 divorces (Department of National Planning, 2011).

In addition, the Maldives has one of the highest rates of female-headed households (nationwide – 40%; Malé – 38%) (National Bureau of Statistics, 2014b). Two major causes identified in official reports are the breakdown of families, as mentioned above, and the high amount of spouse migration for work (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014). In this context, the socioeconomic vulnerability of female-headed households was demonstrated in the 2006 census by the 47% employment rate, compared to 84% for male-headed households (Ministry of Planning and National Development, 2008). Also, women income earner households received 1000 Maldivian Rufiyaa (AUD87) less than male income earner households (Department of National Planning, 2012a). Moreover, property ownership was disproportionately distributed, with women averaging 31.3% share compared to men who held 65.5% (Ministry of Planning and National Development, 2008). Although the Employment Law 2008 entitles working hours, some entitlements (paid maternity leave and time off from work for breastfeeding) in the private sector are usually not given (Department of National Planning, 2012a). Moreover, a major limitation identified by the assessment carried out by Human Rights Commission of the Maldives (HRCM) is that the Employment Law 2008 does not specify minimum wages and it is not fully implemented across the nation (Human Rights Commission of the Maldives, 2009)

Although the first National Women's Council was established in 1979, and women's committees were active in clean-up campaigns, health promotion and community

development activities throughout the nation (Office for Women's Affairs the Republic of Maldives, 1989), women's equal participation and representation in influential leadership and decision making are notably low in the Maldives. Women represent 6% in parliamentary and 7% in ministerial positions (World Economic Forum, 2010). A recent assessment carried out by a prominent non-government organisation reported that 'there is no evidence to suggest such a nationwide effort had indeed taken place to promote the political participation of women specifically' (Hope for Women NGO, 2012, p.14).

Equally, women's representation in the Maldivian judiciary is limited to 1.7% – 3 females out of 180 judges (Judicial Service Commission, 2016). It should be noted that the majority of laws that have been ratified for the protection, prevention and support of victims of violence and sexual abuse, such as the Domestic Violence Prevention Act 2012, the Bill of Sexual Abuse and Harassment 2014, and the Bill on Sexual Offences 2014, was initiated and drafted by one of the few female parliament members (Minivan News, 28 April 2014) indicating the relevance of females in top leadership positions in the Maldives.

2.5 Demographic transition and housing

The Maldives has experienced rapid urbanisation, prosperity and development; however, these advances also brought with it several challenges that may affect population health. For example, over the years, rapid and unplanned urbanisation shifted 38% of the total population to the urban island of Malé (National Bureau of Statistics, 2014c, p.20), increasing the population density of the island by 40% (Human Rights Commission of the Maldives, 2008). As a result, population density is 65,201 persons per square kilometre (National Bureau of Statistics, 2014c), while more than half (54%) of Malé residents indicating that pedestrian facilities are inadequate with greater air and traffic pollution (I. Mohamed, 2011). Furthermore, without proper urban planning, infrastructure and social protection polices, the urban population's dwellings in Malé are considered to be equivalent to a 'slum' (Human Rights Commission of the Maldives, 2008). According to the HRCM (2008), 85% of families in Malé are either crowding with other families or living in temporary or makeshift living spaces.

Moreover, the Household Income and Expenditure Survey (HIES) 2009/2010 showed that the poverty rate and inequality on expenditure increased in Malé compared to other regions and the national a whole (Department of National Planning, 2012a). Between 2003 and 2010 poverty rates (equivalent to living on US$2 or less per day) increased from 9% to 19%. It has been also predicted that 44 out of 100 persons in Malé is poor, when the international poverty rate is adjusted for Maldivian Rufiyaa 44 (US$3.5)(Department of National Planning, 2012a, p.23). In terms of expenditure, there is marked inequality between the rich and poor in Malé; the richest 20%t spends ten times more than the poorest 20% of the population (Department of National Planning, 2012a). In Malé specifically, the income of the upper-income classes doubled between 2002/03 and 2009/10 – the top 10% of the population share 49% of total income, while the bottom 10% share 0.1% of the income (Department of National Planning, 2012a, p.61).

The 2014 census reported that in Malé, most households (59%) were living in rented accommodation (Table 2.7) The HIES 2002/2003 showed that those who lived in rented accommodation had comparatively lower savings that those households living in their own or rent-free accommodation (Ministry of Planning and National Development, 2004a). For example, in Malé, home owners annually saved twice more (63%) compared to those who lived in rented accommodation (31%) (Department of National Planning, 2012a, p.76). In addition, the country relies on imports for both food and fuel which sees high inflation with any increase in import prices. The Asian Development Bank's (which offers financial loans and technical support for the Maldives) consultant report noted that, 'Due to the growing disparity between the rich and the poor within Malé, the implementation of targeted and inclusive social protection programs with broad coverage and benefits that cushion the most vulnerable against poverty shocks is crucial' (A. Ibrahim, 2012, p.06). In addition, the government recognises income inequality and poverty issues in urban areas as a major challenge for the development and social stability of the nation (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014).

The vulnerability of the population in urban dwellings may further be aggravated by the democratic political reform that was initiated by civilian unrest and political

instability confined on Malé island, which remains the administrative, economic and political hub in the nation (Human Rights Commission of the Maldives, 2012).

Table 2.7 Housing facilities

	Malé Percentage (n)	Republic Percentage (n)
Tenure arrangement		
Rented	59%	28%
Owned	30%	61%
Others	11%	11%
Headship of household		
Male-headed household	58% (12,229)	56% (31,148)
Female-headed household	38% (8,364)	40% (23,756)
Not stated	4% (184)	3% (366)

Note: The data are adapted from the MPHC 2014 (National Bureau of Statistics, 2014b, p. 20 & 44).

2.6 Health and social system

Health is a basic human right affirmed in the Constitution of the Maldives as well as in national health policy (Ministry of Health, 2012; Ministry of Legal Reform Information and Arts, 2008). The Ministry of Health's second long-term Health Master Plan 2006–2015 centralised its strategies within these core principles of equity and the right of the population to access affordable and quality health care (Table 2.8). The approach to achieve equitable health for its population was to revitalise primary health care and address social determinants of health (Ministry of Health, 2012).

Table 2.8 Four principles of the Maldivian government's health policy

	Principal
1	Recognising health as a human right and its universality
2	Ensuring equitable access to affordable, quality health services based on primary health care approach
3	Harnessing solidarity for health in all national policies
4	Ensuring policy development based on facts and scientific evidence

Note: The data adapted from Second long-term Health Master Plan 2006–2015 (Ministry of Health, 2012, p.14).

The Maldives' health system is organised in a five-tier referral model. At the central level, the Ministry of Health oversees and regulates the entire health delivery system and the Centre for Community Health and Disease Centre has been mandated for public health and disease control (see Appendix I for the Ministry of Health's organisational chart). Two tertiary level hospitals, Indira Gandhi Memorial Hospital (public) and ADK Hospital (private), and approximately 45 private clinics (73%) are found in Malé (Ministry of Health, 2012). These two hospitals offer the highest level

of health care for the entire Maldivian population. There are two more primary level hospitals, one in Hulhumalé and the other in Villingili (Ministry of Health, 2012).

The major constraints of the health care system identified by the Ministry of Health were a chronic shortage of local skilled workers as well as limited advanced medical treatment and diagnostic procedures (Ministry of Health, 2012). To compensate for these two access barriers, the health system has been recruiting expatriate health professionals (nearly half of the total health service providers in the nation) from neighbouring countries. Along with this, referrals to overseas medical services are provided for those facilities not available in the Maldives. In addition, the focus on a medical model of health care delivery compels the health system to spend a large portion of the public health care budget (66.8%) for curative services. In comparison 1.9% of the public health fund is allocated to preventive and public health services (Ministry of Health, 2013).

With the country experiencing a period of morbidity transition from communicable to non-communicable disease burden (NCD) of mainly circulatory system diseases, diabetes mellitus, cancers, and mental illnesses (Ministry of Health, 2012), women who live longer will bear the illness burden. For example, in 2012, cardiovascular diseases accounted for one-third of all mortality in the Maldives (Ministry of Health and Gender, 2014). The empirical studies done in the Maldives collectively show that there is also low levels of health literacy in women (P. Basu et al., 2014; Jackson, 2006) and youth (Cockcroft, Pearson, Hamel, & Andersson, 2011). Other studies indicate that in women, nutritional disorders such as malnutrition (Golder et al., 2001; Jackson, 2006) and life style behaviours such as high consumption of tobacco, unhealthy food and stressful living conditions are evident (Aboobakur et al., 2010). It has been further suggested that the prevalence of NCD remains high among the poor and disadvantaged, with disparities observed in access to and use of medical care, which favoured mostly richer households in Malé (World Health Organization, 2010b).

As mentioned in Chapter 1, the WHO (2010a) raised concerns over the Maldives existing health system, with its limited delivery of health promotion, increasing medical service delivery model and lack of secondary prevention guidelines. The WHO recommended that it is essential for the Maldives to revitalise the primary

health care approach and at the same time evaluate inequities within communities and between communities, and to address these issues through both qualitative and quantitative studies (World Health Organization, 2010a, 2010b).

The social welfare system and social support services and policies are in their infancy in the Maldives (A. Ibrahim, 2012). There is evidence that violence against women is high, with one in three women (34.6%) aged 15–49 experiencing physical or sexual violence, or both and one in eight women (12.2%) experiencing childhood sexual abuse (Fulu, 2007b). Moreover, the social norms of violence are highlighted when 38.6% of victims of domestic violence do not tell anyone (Fulu, 2007b) and 31% of the 7131 women who participated in the nationwide survey justified reasons for husbands beating their wives (Ministry of Health and Family, 2010b). Meanwhile, a baseline survey done by HRCM revealed that 82.1% of the 1095 respondents considered sexual abuse of girls to be a serious problem in the Maldives, and more women (84.1%) than men (78.7%) perceived these acts as a serious problem/common issue (Human Rights Commission of the Maldives, 2006, p.51). It has been indicated that the most frequent reasons for seeking psychosocial counselling services in contemporary urban dwellings is due to marital and intimate partner relationship issues (National Bureau of Statistics, 2014d).

Furthermore, the most recent assessment carried out by the UN Committee on the Elimination of Discrimination against Women (CEDAW) (2012) showed that most victims of violence and sexual abuse do not report these acts because of broader structural limitations. The majority of women face stigma from justice and support services, while others do not trust service providers to maintain the confidentiality of the matter. More importantly, the general public are not aware of their right to appeal. The committee also recognised that the main social barrier for Maldivian women is economic insecurity, which forces them to depend financially on the perpetrator husband, which often compels them to withdraw allegations of abuse in court (United Nations, 2012).

2.7 Summary

This chapter provided an overview of the statistics and policies, and some of the contextual factors that could influence women's health and wellbeing. The surveys and assessments from government and international organisations illustrates that

although the nation has achieved economic progress and decreased mortality rates, there remains a large socioeconomic gap, as well as cultural and environmental barriers that could influence women's health.

The challenge of offering the constitutional right of health equity for women is linked to several other dimensions in women's lives which move beyond women's capacity and resources. The WHO (2010a) continues to urge the nation to include health in all policies in decreasing health inequities of the population and to revitalise its primary health care approach. What is clear from the issues identified in this chapter is that, so far, this gap remains, with little attention given to health promotion within the biomedical model of the health care delivery system. The medicalisation of health care further widens the gap for health equity, by disproportionately allocating the limited health budget to curative services rather than preventive services and health promotion. This is, to a certain degree suggested by the evidence gathered from empirical studies done in the Maldives, which indicate that vulnerable groups such as women and youth lack adequate health information to make healthy lifestyle choices. With this critical and comprehensive background to women's lives within the context of Maldives and Malé city, the next section details the literature review and conceptual framework of the study.

Chapter 3 – Literature review

3.1 Introduction

This chapter provides an in-depth review of the literature pertaining to women's health. It provides a critical analysis of empirical studies, with a focus on theoretical perspectives on the existing knowledge and gaps. The chapter has two main sections. The first part begins with details of the literature review search strategy: the purpose and objectives of the review, the search terminologies and databases used, and how the search process was narrowed down to locate relevant empirical studies. Following that, a critical analysis of literature is presented in four interconnected themes: socioeconomic differences on women's health; the influence of gender on women's health; social relationships and support networks and their links to women's health; and the health systems relationship to women's health.

3.2 Review focus and questions

To have a systematic procedure to retrieve relevant literature relating to the aim and objectives of the study, and to present a critical review, the narrative synthesis process recommended by Popay et al. (2006) was followed. This process involves six main stages for synthesising and detailing the literature review:

1. Identifying the review focus, and searching for and mapping the available evidence.
2. Specifying the review questions.
3. Identifying the studies to include in the review.
4. Extracting the data.
5. Synthesising the evidence.
6. Reporting the results of the review and dissemination.

The main purpose of the literature review is to identify gaps in the knowledge of women's health, by recognising the key concepts, ideas, methodologies and methods that were used in previous studies to generate rational discourse in which further research could contribute to the knowledge base (Burns & Grove, 2001; Hart, 1998). The following five review questions were outlined to synthesise and narrow the focus of the review:

1. Why is important to study women's health concerns and needs?
2. What methodologies were used to study women's health inequalities and the gaps in these approaches?
3. What is the current global status of women, and how does it compare to women living in South Asia, or a similar context?
4. What is the existing knowledge and gap on the determinants of women's health?
5. How does these determinants or factors present as health inequalities for women?

3.3 Review methodology

3.3.1 Literature searching and mapping key terms

Chapter 1 and Chapter 2 outlined the fact that the complexities of women's health range across various disciplines. Therefore, it seemed logical to explore and retrieve the most relevant articles using a cross-disciplinary approach, from areas of economics, education, environment, development, health, law, management, social sciences and psychology. For this reason, a broad search algorithm was established, with an initial map of the key search terms (Burns & Grove, 2001) and identified through the research aims and objectives. Following that, search terms were modified and more global terms used, to uncover literature pertaining to the topic of interest. The final key terms and phrases, and their combinations, are presented in Table 3.1.

Table 3.1 Literature review search terms

	Search terms
#1	exp Women/ OR female*
#2	health* or healthcare OR 'health concern' OR 'health need' OR 'health service utili?ation' OR 'health care access' OR 'health services access' OR 'delivery of health care'
#3	social determinants' or 'socioeconomic status' or 'social determinants of health' or politic* or culture* or cultural* or educate* or education* or income or economic* or finance* or financial* or occupation* or work* or job* or employ* or poverty or hous* or 'living condition' or neighbourhood or environment* or 'built environment'
#4	inequalit* OR inequit* OR disparit* OR barrier* OR 'social exclusion' OR 'social disparit*' OR constrain* OR challeng* OR difficult* OR equit* OR inequit*
#5	social roles' or 'social status' or 'sexual discrimination' or 'gender discrimination' or 'family life' or 'marital conflict' or 'violence against women' or 'wife beating' or 'battered women' or 'gender-based violence' or 'intimate partner violence' or "gender" or "gender relation*" or 'social capital' or 'social support'
#6	perception* OR experience*
#7	'Self-rated health' OR 'self-assessed health'
#8	empower* OR autonomy
#9	exp 'decision making'/

The large amount of literature pertaining to women's health made it challenging to capture and retrieve the most relevant articles through a single search strategy. A further search using advanced and complex search methods, combining two or more concepts or synonyms in one search (Burns & Grove, 2001), retrieved a more refined and focused scope of the review (Hart, 1998). Table 3.2 shows the refined and advanced search combinations used.

Table 3.2 Refine and advance searches

	Search terms combination
#10	1+2+3+4+5
#11	6+7
#12	8+9
#13	11+12
#14	6+10
#15	7+10
#16	8+10
#17	9+10
#18	10+11
#19	10+12
#20	10+13
#21	10+11+12+13

Key: Numbers 1-9 in the 'search terms combination' column represent the search key terms used in Table 3.1.

Table 3.3 shows the ten peer-reviewed databases that were searched. Appendix II illustrates an example of the search strategy for Ovid Medline ® 1946 to present, conducted at the start of the study then updated in December 2016.

After establishing the key search terms and phrases, the specific combinations in Table 3.2 were used in the databases outlined in Table 3.3 to track relevant records. Besides searching these databases, additional studies were retrieved by cross references and cited references using a snowball technique (McLaughlin, O'Carroll, & O'Connor, 2012; Turley, Saith, Bhan, Rehfuess, & Carter, 2013; Vyas & Watts, 2009).

At the same time, the databases were searched by looking for studies specific to low- and middle-income countries (LMIC). This resulted in retrieving some studies that were not initially identified. For example, in the Scopus database alone with the key search terms "violence and women's health AND developing countries", 70 articles were retrieved for India alone, some of which were not initially identified from the generic search strategy. The final search was limited to English Language and

Humans and was not restricted to publication year, to capture any pertinent trends in women's health.

Table 3.3 List of databases

	Databases
1	Cochrane (Library) Public Health Group Specialised Register (1996-2016) limited to reviews
2	Ovid Medline ® (1946 to present)
3	CINAHL (1937 to present)
4	Embase (1947 to present)
5	Global Health (Ovid)
6	ProQuest (1995 to present)
7	PsychoINFO (1920 to present)
8	Scopus (1995 to present)
9	Sociological Abstracts (ProQuest)1952 to present
10	Web of Science (1972 to present)

3.3.2 Identifying studies to include in the review

A total of 1402 articles were retrieved from different databases. The citations and abstracts were exported to Endnote software for further review. After removing duplicates 618 articles were screened against the inclusion and exclusion criteria outlined in Table 3.4. The inclusion and exclusion criteria ensured that articles focused on relevant studies.

Table 3.4 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
• English language literature	• Studies that include and focus on females less than 15 years of age and their health (other than few studies that investigated gender dimensions in health care access and feeding practices for children - males and females, in developing countries)
• Studies that involved females at least 15 years of age	• Studies that focused on male health issues (except if the study reported gender-based difference in health)
• Empirical investigations	• Studies concerned with specific conditions (for example, disabilities, autism or psychiatric disorders) and specific populations (refugees, prison inmates, military personnel, drug abuse, immigrants, sex workers, homosexuals and transgender)
• Peer-reviewed literature only	• Letter to editors, summaries, guidelines
• Original research reports only (reviews, meta-analysis, structured reviews, studies from international organisations with a review process)	• Web-page data
• Studies main antecedent relate to social determinants or aspects such as socioeconomic factors,	• Studies in other languages, unless a translated version is available

socioeconomic inequalities and empowerment	
• Time duration was not limited	• Animal studies or laboratory studies

3.4 Review stages

3.4.1 Data extraction

Data extraction was done by the researcher. The empirical studies that met the inclusion criteria were read in detail and key themes noted on a spreadsheet alongside specific areas of interest for analysis. The spreadsheet was organised so that key themes were critically identified and noted, and an overview with a summary analysis (Appendix III). The analysis provided the evidence synthesis of the review.

3.4.2 Evidence synthesis

For analysis, a narrative synthesis of the evidence was conducted (Popay et al., 2006). In the first stage, studies that showed similar findings and conclusions relating to the research objectives were grouped together. These groups were then analysed and a main thematic category generated. For example, those studies showing education, income and living condition inequalities were grouped under 'socioeconomic differences and their influence on women's health'. This enabled coherent thematic grouping of studies, to highlight common issues identified while not overlooking relevant areas. There was some overlap in relation to themes and topics, and these were noted.

3.5 Review findings

3.5.1 The nature of literature

A total of 211 papers met the inclusion criteria and were included in the narrative synthesis of the literature.

3.5.1.1 Year of publication

The literature search strategy did not limit to year of publication, to identify any trends in the women's health research and its discourse. Throughout the world, there were only a handful of relevant studies published before 1980s. During the 1980s, there were slightly more studies done, but these were within the context of developed nations. The momentum in women's health research grew only in the late 1990s. This could be associated with the priority given to women's wellbeing following the

prominent Beijing Declaration and Platform for Action in 1995, which affirmed and emphasised on equity and opportunities for girls and women (United Nations, 1995). Following this, more studies were published from developing countries, but mostly within the domain of reproductive health issues.

However, a tremendous increase in the number of studies in the area of women's health and health inequality was seen only after the new millennium. More specifically, there were more publications within the last decade, probably as a consequence of WHO (2008) CSDH publications, which signified the increase in the health inequity gap within and across nations (Commission on Social Determinants of Health, 2008). Therefore, more than two-thirds (n=162, 77%) of the studies in this literature review were published in the past 9 years.

A few scholarly articles from earlier studies have been included in the review for two main purposes. One reason is to highlight the areas of scholarly knowledge gained within the discipline of health inequalities discourse by some renowned social scientists such as Marmot (1997). The other reason is to emphasis on the large gender discriminatory practices for females continuing in LMIC, for example, Hossain and Glass (1988). Additionally, two scholarly perspectives of Sen (2011, 2013) have been included in this review to fill some of the knowledge gap existing in LMIC. Finally, in this review, there are studies from each year since 1997.

3.5.2 Geographical range

The papers in the review included an equal distribution between high-income nations (HIC) and LMIC. The majority of papers from HIC were from the US and European countries. Most papers from LMIC were from South Asia and some from Middle East and Africa. A number of studies were exclusively tracked from India (23), Bangladesh (14), Pakistan (13) and Nepal (9), mostly within the discourse of maternal and child health mortality and morbidity. There were a number of multicountry systematic reviews and meta-analysis that combined dataset within and across LMIC and HIC. For example, the WHO multicountry studies of violence against women (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008; Garcia-Moreno et al., 2006).

Knowledge from HIC offers opportunities to understand some of the important determinants of women's health. This is mainly due to data relating to health

inequalities, which is lacking in literature from LMIC (Ahmed, Creanga, Gillespie, & Tsui, 2010). However, the review has attempted to use studies from LMIC to present contextual factors that determine women's health and wellbeing.

3.5.3 Academic discipline

The empirical studies relating to women's health came from a range of disciplines. A large proportion of studies were categorised within the discipline of social sciences and epidemiology. These studies focused on socioeconomic inequalities and related mortality and morbidity patterns among general population as well as women. There was also a cohort of studies that focused solely on gender differences in physical and psychological morbidities, social relations between genders, and intimate partner violence (IPV) and its effects on women's health and wellbeing. Within the discourse of violence against women, an emerging body of knowledge was amassed on women's empowerment in social and economic arenas, and its effect in reducing IPV.

Apart from this, there were studies that focused on vulnerable women who lived in resource-poor settings in both HIC and LMIC. Studies in this area looked into economically poor women, single mothers, elderly women and minority women and their individual factors, as well as structural barriers to access health-enhancing resources. Some studies examined social and health welfare policies and system, and their effect on low-income women's health.

Furthermore, a number of studies highlighted the effects of the built environment and living conditions on women's health. This discipline has advanced in the HIC, where discourse on urban design, public health interventions and health policy are studied in combination. The studies in this field examine patterns of emerging chronic disease morbidity, lifestyle behaviours and the psychosocial wellbeing of women as well as men.

There was also a cohort of studies that focused on women's social capital and coping behaviour, decision-making power, autonomy and empowerment. These studies were mostly concentrated in psychology and anthropology, in addition to epidemiology and sociology.

As mentioned previously, the literature from LMIC, such as those from South Asia, discussed the above topics within the discipline of maternal and child health issues, such as maternal and child mortality, morbidity and contraceptive use. Therefore, there remains a large gap in understanding women's health and health inequalities beyond the area of women's reproductive health in these countries.

Thus, the studies included in this review came from sociology, economics, education, development, environmental health, anthropology, psychology and health administration and policy.

3.5.4 Methodological approaches

A number of different research designs were used in the studies included in this review. The majority of the studies were quantitative cross-sectional correlation studies, with a limited number of longitudinal and experimental studies. A number of studies used primary data, but the majority reported secondary analysis through systematic reviews and meta-analysis drawn from national statistics. This was particularly the case in HIC. The number of qualitative research was far less and included focus groups, ethnographic field studies, grounded theory research and case study research. An innovative approach to qualitative meta-synthesis was also highlighted (Angus et al., 2013), while a limited number of studies also used mixed methods.

Compared to HIC, there were a limited number of cross-sectional studies and far fewer systematic reviews from LMIC. Although there is a slow but steady increase in number of epidemiological studies in LMIC regions, the narrow conceptualisation of health disparities within the discipline of maternal and reproductive health care limited understanding of the broader and multidimensional contextual factors that may create health inequities. Furthermore, in LMIC, there were far fewer qualitative studies that examined the health inequalities of women. For example, some data suggest prevalence of IPV and its negative health consequences for women in Bangladesh, India, Maldives, Nepal and Pakistan. However, the context of abuse and how and why this was happening is less clear.

Moreover, most studies from both developed and developing countries distinguished between the qualitative and quantitative paradigms. There was limited literature that used holistic and mixed method approaches to study the health inequalities of

women. This could be expected because the mixed method design is an emerging discourse, even in developed countries, for studying social determinants of women's health and health inequities. Furthermore, the studies included in this review located few studies from South Asia using a mixed method design to study women's health and health inequalities. The majority of studies from LMIC measured women's socioeconomic inequalities of health based on maternal or reproductive health care access. However, the review showed that during the past few years, there were some studies done beyond women's reproductive health in countries such as India, Pakistan and Bangladesh, such as in the topic of violence against women.

3.6 Thematic analysis of the literature

The main purpose of this literature review was to identify empirical papers that give insight into the different discourses of women's health and health inequity, and to critically evaluate them to identify some of the major themes of this large body of literature. These include:

- socioeconomic differences and their influence on women's health
- gender inequalities and gender-role discrimination that affect women's health and quality of life
- social relationships and support and its links to women's health
- the health system and its interaction with women's health

3.6.1 Socioeconomic differences and their influence on women's health

A common theme within the literature is that women's health is influenced by their socioeconomic status (SES). In epidemiological studies, the most commonly studied SES indicators are the relationships between women's health and education, income, employment, occupation and neighbourhood (Ahnquist, Fredlund, & Wamala, 2007; Ross, Masters, & Hummer, 2012; Stafford & Marmot, 2003; Wu, Wang, & Eamon, 2014). These social and economic factors are also assumed to be the root causes of inequalities for women's health in qualitative studies (Angus et al., 2013; Hinton & Earnest, 2011; Sahoo et al., 2015).

Most of the literature that shows a causal association between health and SES comes from HIC (Zavras, Tsiantou, Pavi, Mylona, & Kyriopoulos, 2013), although there has been a slow but steady increase in the number of studies from LMIC (Ahmed et

al., 2010; Andersson & Lundin, 2015; Pandey & Ladusingh, 2015; Sauvaget et al., 2011). Some studies have compared the difference in SES inequalities between HIC and LMIC (Sommer et al., 2015). The epidemiological studies concerning women's health use disaggregated surveys, as well as systematic reviews and meta-analyses of cross-sectional studies to make causal inference about the determinants of women's health (Ahmed et al., 2010; Furnée, Groot, & van den Brink, 2008; Lam, Broaddus, & Surkan, 2013). On the other hand, qualitative research used ethnographies, focus group discussions, community-based participatory research, as well as grounded theory research to examine the holistic and contextual factors that influenced women's health and wellbeing (Clarke et al., 2014; Doornbos et al., 2013; Hinton & Earnest, 2011; Murphy-Graham, 2010).

Overall, these studies have shown that socioeconomic inequalities in women's health is a burgeoning public health challenge for all countries, irrespective of their social, economic, cultural or political systems. The next section of the review will focus on the main areas of education, income and living conditions, and their effects on women's health.

3.6.1.1 Education and women's health

A positive and robust association between education and health has been established (Furnée et al., 2008; Ross et al., 2012; Schütte, Chastang, Parent-Thirion, Vermeylen, & Niedhammer, 2013; Simkhada, van Teijlingen, Porter, & Simkhada, 2008; Subramanian, Huijts, & Avendano, 2010; Van Der Kooi, Stronks, Thompson, DerSarkissian, & Arah, 2013). Evidence demonstrates that education is highly correlated with health – those with higher education enjoy better health than their less educated counterparts (Subramanian et al., 2010) and investments in education result in a higher cost–benefit ratio (Furnée et al., 2008). Subramanian et al. (2010) reported from a study of 69 countries' data, that around the world, there was an inverse association between years of education and self-rated poor health. Individuals in the lowest quintile of years of schooling were two times more likely to report less than good health compared to those in the highest quintile, independent of the geographical region or nation's income levels. While in US, each additional year of education lowers mortality by 5% (Zajacova, 2006), with each additional year of schooling reducing mortality gradually until a steeper decline was shown following a high school diploma qualification (Montez, Hummer, & Hayward, 2012). Karlsen et

al. (2011) also showed the positive association between having 12 years of education and lower maternal mortality rates.

Studies from developing nations show how education differences influence women's ability to access resources as well as protect them from intimate partner abuse. Ahmed, Creanga, Gillespie, and Tsui (2010) used demographic and health survey data from 31 developing countries, challenging their existing health care systems that used predominantly biomedical models. The meta-analysis showed that women who have completed primary level education were five times more likely than less educated women to have a skilled birth attendant during delivery, twice more likely to use modern contraception and nearly three times more likely to have four or more antenatal visits. In Nepal, women with secondary or higher education were more likely to receive skilled antenatal and delivery care and be involved with decisions about their own health care and large household purchases, than women with no or lower education (Furuta & Salway, 2006). In Pakistan, women's education significantly improved their reproductive choice and autonomy in decisions over the number of children they had, the space between births and contraceptive use (A. Saleem & Pasha, 2008).

The value of education in women's safety from IPV was further supported by Ackerson, Kawachi, Barbeau and Subramanian (2008) using a sample of 83,627 women from the Indian National Family Health Survey. This study demonstrated that women with no formal education were nearly five times more likely to report lifetime IPV and nearly six times more likely to report recent IPV in comparison to women who had more than 12 years of education. In addition, it has been suggested that in Jordan, women with primary education or less were nearly seven times more likely to support wife beating compared with those with higher than secondary education (Linos, Khawaja, & Al-Nsour, 2010). Several other studies indicate that completion of secondary education has a protective effect on IPV risk (Vyas & Watts, 2009).

There is a large volume of studies from developed nations that demonstrate the impacts of education on women's health. As an example, Schaap, et al. (2009) used nationally representative data from cross-sectional studies in 19 European countries to show that less educated women between 25 and 39 years were more likely to

smoke. Another review used data from the National Health Surveys of Spain (n=84,567 women) to show that the level of SES determined women's health even in deprived neighbourhoods (compared to graduate women, those with no formal education reported increased rates of poor health) (Daponte-Codina et al., 2008).

Novakovic et al. (2014) conducted a systematic review to show that across Western Europe countries, micronutrient intake differed significantly between those with higher SES (education, income and occupation) and lower social class. The most prominent disparity in micronutrient intake was observed between differences in education of the females. Lawrence et al. (2009), using the qualitative methods of focus group discussion, explored factors that influenced food choices for less educated women compared to highly educated women in the UK. According to the authors, women with low education identified the cost of food, time constraints and caring role demands as factors that limited their ability to exercise food preference or shop for healthy foods. In addition, they described having limited support from partners and children to eat healthy, low control over meal preference and motivation, and little knowledge of the benefits of healthy eating. The highly educated women, on the other hand, talked about a more controlled and balanced method of making their food choices (Lawrence et al., 2009). The contrasting views in this study of women, based on their education level, resonates with the concerns raised by women in LMIC.

Women's social status, autonomy and decision-making power is an important area of interest for researchers who link it to human capital development. Researchers are increasingly showing the relation between these factors and SES (Murphy-Graham, 2010). Lam, Broaddus and Surkan (2013) carried out a secondary analysis of the Nepal Demographic Health Survey (n=7020 women) to demonstrate that literacy enhanced women's autonomy and decision making related to their own health care, independence and mobility compared to being illiterate. Supporting findings were reported from Oman (Al Riyami, Afifi, & Mabry, 2004) and Pakistan (S. Saleem & Bobak, 2005), when women have higher levels of education they increase their contraceptive use and autonomy in reproductive decision making . Additionally, studies undertaken in the remotest parts of developing countries, including rural Bangladesh (Bates, Schuler, Islam, & Islam, 2004; Schuler, Lenzi, Nazneen, & Bates, 2013), also shows the significance of education. Women with higher levels of

education were in a better position to negotiate life decisions, reject gender oppression and IPV, as well as access economic resources, compared to women with no or poor education levels.

3.6.1.2 Income, employment and occupation

A positive and robust association between income and employment and health has been established from empirical studies. Although there is a paucity of data from developing countries on this issue (Sommer et al., 2015), other than within discourse of maternal and reproductive health, a number of studies show that women with low income, as a result of being in a low-paying occupation, have a higher risk of morbidity and mortality (Ahnquist et al., 2007; Montez & Zajacova, 2013; Sauvaget et al., 2011; Wu et al., 2014).

William-Brennan, Gastaldo, Cole, and Paszat (2012) reviewed 37 studies from LMIC to show that women of higher education and income were better informed and participated more in cervical cancer screening activities than those with lower SES. A systematic review of studies in 28 developing countries, Simkhada, van Teijlingen, Porter and Simkhada (2008) reported that better education and economic status were the two major determinants of timely and adequate antenatal care for women, while financial constraints were the most significant factor limiting these services. Supporting evidence comes from other meta-analysis in developing countries, which shows that for women in the lowest wealth quintile, there is 94% less opportunity to access a skilled birth attendant at delivery, 84% less likely to complete four antenatal care visits and 74% less likely to use modern contraception compared to those in the highest wealth quintile (Ahmed et al., 2010). Another study, with Puerto Rican women, indicated that poverty, food insecurity, lack of access to quality education, lack of social support and unsafe environment were significant life stressors that affected women's physical and psychological health (Bermúdez-Millán et al., 2011). Women in rural Papua New Guinea also interrelated several factors such as violence against women, workload burden, lack of economic opportunities, and health care access barriers to poor health (Hinton & Earnest, 2010a).

Studies from developed nations also show similar correlations. Aaltonen et al. (2015) demonstrated from a recent cross-sectional survey in Finland that cost-related barriers were a major constraint in accessing health care for individuals with low

income and education, particularly females. In the US, unemployment of women, in addition to several other social and relationship issues, were determinants of women's mental health, while limited resources for low-income populations and lack of financial resources and insurance were identified as barriers to accessing mental health services (Doornbos et al., 2013). Moreover, low income and poor educational attainment were significant predictors of poor self-rated health for single mothers in the US (Zekeri, 2013).

An emerging body of literature shows a positive correlation between women's income and asset ownership, and household decision-making and bargaining power and resource access. The evidence suggests that women's ability to share household decisions is determined by their education and income, which in turn significantly increases the uptake of maternal health services in Pakistan (Hou & Ma, 2013) and contraceptive use in Egypt (Alsumri, 2015), Oman (Al Riyami et al., 2004), Bangladesh (M. M. Rahman, Mostofa, & Hoque, 2014) and reduce IPV in Bangladesh (Schuler et al., 2013).

These studies show that a woman's personal income and asset ownership matters more for their decision-making power and autonomy than their husband or household income (Anderson & Eswaran, 2009; Krenz, Gilbert, & Mandayam, 2014). For example, Beegle, Frankenberg and Thomas (2001) argue that compared to women with no personal assets, those with personal household assets have increased decision-making power within the household and were able to use maternal health care services. Anderson and Eswaran (2009) also support this notion, with the argument that women's personal income counts more for their autonomy than working on their husband's farm in rural Bangladesh. Meanwhile, the literature from developed nations also shows a similar scenario. In Sweden, for instance, a woman's personal income is a significant determinant of health (Hemström 2005).

Apart from income, the literature suggests a positive association between women's land ownership and bargaining power within the household (Allendorf, 2007). Mishra and Sam (2016) found that in Nepal, women's land ownership significantly increased their household decision making regarding their own health care, major household purchases and mobility outside the home to visit family and friends. Another study from the US showed that for white Americans, home ownership is

significantly associated with positive self-perceived health and timely access to medical care and prescribed medication (Ortiz & Zimmerman, 2013). In Spain, for the elderly in particular, housing equity is more important than having an income in determining positive health outcomes and reducing disability in old age (Costa-Font, 2008).

Within the women's economic empowerment discourse, studies from developing countries highlighted the benefits of microfinance credit programs in reducing gender inequality and generating social and economic development for women (Kim et al., 2007; Krenz et al., 2014). In Asia, for example, the most commonly studied cohort is poor women in rural Bangladesh (Orton et al., 2016) and poor slum areas in India (Krenz et al., 2014), who received economic benefit through microcredit programs. Women who participated in such programs increased bargaining power with their husbands, decision making within their households, improved access to economic assets and social networks, and had greater mobility and freedom (Pitt, Shahidur, & Cartwright, 2006).

Krenz et al. (2014) used qualitative research to show that in India, women who participated in microfinance programs had better psychosocial wellbeing with increased access to capital assets and financial management skills, which in turn helped to reduce poverty, improve the standard of housing, and increase household consumption and children's education. Kim et al. (2007) identified from a mixed method study, the benefits of combining a microfinance program with different awareness strategies (for example, increasing awareness of and training on HIV infection, gender consciousness, domestic violence and sexuality) in reducing the prevalence of physical and sexual violence by intimate partners in South Africa. Unlike the abovementioned literature from qualitative and observational studies, a recent systematic review of mostly quasi-experimental studies showed that these microfinance schemes reduced infant and child mortality, improved contraception and health care access and decreased IPV (Orton et al., 2016).

In contrast to these positive findings, a systematic review and meta-synthesis reported that microcredit does not systematically empower women's control over household expenditure in LMIC (Vaessen et al., 2014). The authors recognised major methodological weaknesses in the quantitative studies included in the review, and

suggested adopting systematic reviews of qualitative studies to inform discourse on this subject, with 'context-specific' details of how microcredit programs empower women within the household (Vaessen et al., 2014).

At the same time, a large number of robust epidemiological studies and some experimental studies from mostly HIC have moved beyond establishing a correlation between income and health to investigate the effects of different levels of occupation, its distribution and working conditions on mortality and morbidity (Joyce, Pabayo, Critchley, & Bambra, 2010; M. G. Marmot, Bosma, Hemingway, Brunner, & Stansfeld, 1997; Montez & Zajacova, 2013; Toch et al., 2014). These studies have established a causal link between occupational category, income and health in industrialised economies, although the underlying causes of these relationships are still being explored. Toch et al. (2014) demonstrated with cross-national research from Europe that in addition to psychological working conditions, the effects of physical working conditions on women's health were significant – those in unskilled manual jobs had poorer health than those who worked in white collar jobs. Joyce et al. (2010) also showed that flexible working interventions that enhanced an individual's choice and control of their work environment positively influence their health.

Another area that is being studied is the significance of accumulated wealth and chronic deprivation with its effects on women's health over the long term. Ahnquist et al. (2007) delved deeper into the matter to demonstrate, from a Swedish panel study of 16 years, that unlike men, women who had financial hardship were 1.4–1.6 times more at risk for health morbidity. Ahnquist et al. (2007) suggest that chronic economic hardship and its stress over years is a stronger predictor of women's health than low income. This notion is further supported from the Swedish Level of Living survey, where Kjellsson (2013) showed that occupation class experience and its association with health is both accumulative and lasting. The study found that while social inequalities differ between men and women, in general, an individual's past employment experiences in working class are associated with health disparities in the present.

The most recent knowledge on this matter is presented by von dem Knesebeck, Vonneilich and Kim (2016), who used International Social Survey Programme data

to look through 23 nation's (n=37,228) public perceptions on income-related health inequalities. The author's analysed a single question ("Is it fair or unfair that people with higher incomes can afford better health care than people with lower incomes?") and the response categories were measured on a Likert scale from 'very fair'(1) to 'very unfair'(5). The authors indicated that although there were large differences between countries, the majority (67.4%) of the respondents viewed that it was unfair for those with higher income to enjoy better health while lower-income individuals cannot. This group comprised mostly women, and those in the lower SES and who have insufficient insurance coverage as well as those who reported their health to be poor.

Nevertheless, Onarheim, Iversen and Bloom (2016) assert from their most recent systematic review of studies from both HIC and LMIC that looked into economic benefits of investing in women's health, that most of these studies used biological perspectives to examine women's health and focused on women's reproductive rather than productive roles, with little emphasis on social determinants of health, that emphasises women's productivity.

3.6.1.3 Living conditions

The literature review suggested that the determinants of health go beyond individual factors, with links to the environment and living conditions (McKinnon, Siddiqi, Chaloupka, Mancino, & Prasad, 2016; Pessoa, Mendes, Gomes, Martins, & Velasquez-Melendez, 2015; Stafford, Cummins, Macintyre, Ellaway, & Marmot, 2005; Stafford & Marmot, 2003; Triguero-Mas et al., 2015). In line with the ecological model of morbidity and mortality, elements within the environment seem to be strongly associated with health and a healthy lifestyle. One example is the association between substandard housing and overcrowding and their negative effects on physical and mental health (Bonnefoy, Braubach, Moissonnier, Monolbaev, & Röbbel, 2003; G. W. Evans, Wells, & Moch, 2003). Others showed the association between socioeconomically disadvantaged neighbourhoods and depression (Mair, Roux, & Galea, 2008) and lower levels of physical activity (Kavanagh et al., 2005). Additionally, limited access to neighbourhood healthy food outlets has been also linked to lower intake of fruits and vegetables (Pessoa et al., 2015). On the other hand, the availability of natural environments (green space) has been shown to positively affect the mental health of adults (Gascon et al., 2015) and

self-rated health (Triguero-Mas et al., 2015), and increased physical activity, recreation and social relationships for women (Thomas, 2015). In this way, neighbourhood safety has been also linked to positive health (Ortiz & Zimmerman, 2013).

The association between physical housing condition and health is well established. Among studies, G.W Evans et al. (2003) assert from their review that substandard housing and overcrowding increases adult's and children's psychological stress due to multiple interacting factors, such as limited parent–children interaction, restriction of children's mobility, limited space for children to play, and safety and security concerns. In particular, the authors identified that women who stay at home with children have an increased risk of being socially isolated, which increases psychological distress. Another review that used cross-sectional survey data from eight European cities showed damp or mouldy housing conditions and overcrowding elevated the risk of depression (Shenassa, Daskalakis, Liebhaber, Braubach, & Brown, 2007).

Additionally, the gender dimension of living environment is noted in literature. Some studies suggest that compared with men, women's health and wellbeing is more inextricably linked to their housing and built environment (Triguero-Mas et al., 2015). For example, Stafford et al. (2005) used three different data sources from UK to demonstrate that certain aspects of living conditions (for example, socio-political environment, services, physical environment, unemployment and deprived neighbourhood) were more profoundly associated with women's rating of poor health than men's.

Furthermore, the significance of neighbourhood characteristics and its association to physical and psychological health is established. A systematic review that analysed 45 epidemiological studies comprising cross-sectional (n=35) as well as longitudinal (n=10) data from developed nations showed that there are links between neighbourhood features and depression (Mair et al., 2008). While Ford and Dzewaltowski (2011) used data from 21,166 low-income women from the US to reveal that body mass index (BMI) was high among women who lived in highly deprived neighbourhoods in metropolitan areas. The authors assume that the association between BMI and health goes beyond access to resources (e.g.

supermarket) and is connected to the level of deprivation experienced in the urban neighbourhoods. Another study from the US showed that perceived neighbourhood safety was associated with positive self-perceived health (Ortiz & Zimmerman, 2013). These findings suggest a relatively strong relation between individuals health to their surrounding living environment.

Additionally, the literature in the area has expanded to explore the benefits of various interventions that have been used to alleviate housing and environmental conditions and their effects on population health (Saegert, Klitzman, Freudenberg, Cooperman-Mroczek, & Nassar, 2003; Thomson, Thomas, Sellstrom, & Petticrew, 2013; Turley et al., 2013). A Cochrane systematic review analysed 39 studies, mostly high-quality quantitative studies and some qualitative studies, from both developed and developing countries, to assert the social and health impacts on residents following improvements to housing infrastructure (Thomson et al., 2013). The findings indicated the relevance of adequate size and space within the house for the number of residents, and its association with the overall physical, social and emotional health of the residents (Thomson et al., 2013). Another Cochrane systematic review of five studies from LMIC (one randomised controlled trail and four controlled before and after studies) demonstrated that slum communities value infrastructure upgrading as the highest priority, even above their own health, education and financial interventions (Turley et al., 2013).

Although there are a number of studies from HIC suggesting the link between population health and environment, this is not an area studied in in LMIC (Gascon et al., 2015). For example, Collins and Hayes (2010) used a meta-narrative mapping of 1004 journal abstracts published between 1986 and 2006 to identify municipal government's actions on health inequities. The authors suggested that although the number of studies in the field had increased over the years, most of them used a biomedical and behavioural approach. Additionally, the authors indicated that only 11 of the 171 abstracts that addressed municipal government's actions on health issues were from LMIC. These findings indicate, to a certain degree, the level of significance given to the housing and built environment in LMIC. Of the limited literature available from Asia, a grounded theory research from India provides insight to how women connected their physical, social, psychological and sexual health to their physical and social environment (Sahoo et al., 2015).

The literature review of socioeconomic factors suggests that women's health is linked to their education, income, employment and living conditions. However, there is a large gap in literature of understanding how contextual factors create health inequalities in LMIC compared to developed nations.

3.6.2 Gender inequalities and gender-role discrimination that affect women's health and quality life

A common theme within the literature is that gender relations and gender inequality are complex cross sectorial issues that worsen women's ability to protect their own health and decrease their overall quality of life (Garcia-Moreno et al., 2006; Hinton & Earnest, 2011; Mumtaz & Salway, 2009; Schoenfeld & Juarbe, 2005). Within this discourse, there is a growing literature investigating different dimensions of gender and its interaction with women's life with its trajectories to health and wellbeing. In this section, the focus will be on three main discourses in gender studies: gender differences in physical and psychological health; gender roles and its effects on women's health and violence against women.

3.6.2.1 Gender difference in physical and psychological health

The literature suggests that regardless of nationality or socioeconomic position, women are sicker than men. Women suffer more disability and functional limitations (Bora & Saikia, 2015; Saikia, Moradhvaj, & Bora, 2016), mental health disorder and depression (Calvó-Perxas, Vilalta-Franch, Turró-Garriga, López-Pousa, & Garre-Olmo, 2016; Kuehner, 2003; Poongothai et al., 2009; Van de Velde et al., 2010; Wilhelm, Mitchell, Slade, Brownhill, & Andrews, 2003), co-occurrence of depression and pain (Calvó-Perxas et al., 2016); diabetes and its related mortality (Gao et al., 2015), and self-rated poor health (Andersson & Lundin, 2015; Chemaitelly et al., 2013; Denton et al., 2004; Pandey & Ladusingh, 2015; Ross et al., 2012; Zavras et al., 2013).

In terms of women's increased risk for mental health disorders, a large population-based study in urban areas of South India comprising 25,455 participants observed a prevalence of depression at 15.1%, with higher odds of depression among females (16.3%) compared to males (13.9%) (Poongothai et al., 2009). Additionally, a recent systematic review of epidemiological studies showed that the proportion of depression and anxiety burden was higher in women (54%) than in men (33%) in

China, while depression was consistently higher in women (63%) compared with men (42%) in India (Charlson, Baxter, Cheng, Shidhaye, & Whiteford, 2016). This study further estimated that the overall mental health disorders are projected to increase over the next decade in both these nations, thus increasing its impact on women's wellbeing.

Several mechanisms have been put forward to explain the heightened risk of depression in females compared with males in Asia. A number of authors posit that one of the most prominent causative factors is the sociocultural roots that discriminate against females in preference of male offspring (Sudha & Rajan, 1999). In this regard, studies show that Asian women who carried female fetuses expressed severe distress (Clarke et al., 2014) and suffered intense IPV (Deuba, Mainali, Alvesson, & Karki, 2016; Newbrander, Natiq, Shahim, Hamid, & Skena, 2014; Trivedi, Mishra, & Kendurkar, 2007).

There is also consensus among studies done in South Asia that traditional custom places females at an increased disadvantage following birth when sons are disproportionately favoured with high-quality and large quantities of nutritious food in India (Borooah, 2004), Pakistan (Baig-Ansari, Rahbar, Bhutta, & Badruddin, 2006), and health care in Bangladesh (Hossain & Glass, 1988). Raj, McDougal and Silverman (2015) further supported these claims from a recent analysis of DHS data from Bangladesh, India and Nepal. The authors found that having male siblings increased the risk of acute malnutrition (severe wasting) for girls, and having three or more sisters heightened the risk for chronic malnutrition (stunting/underweight) for girls. In contrast, boys were less affected by the presence of a female sibling or number of siblings. A qualitative study carried out in urban Karachi in Pakistan with 28 women provides more insights into the sociocultural roots of gender discrimination (T. S. Ali et al., 2011). The women who participated in this study described that gender discrimination for females was initiated from preconception due to a cultural preference for a son which disadvantages female throughout life. The major themes that were prominent were: giving subordinate roles for women who were moulded to depend on others with little authority for decision making; providing girls with limited opportunities for education; suppressing women's emotions and suffering in abusive relationships in order to uplift and maintain the

honour and respect of the family; and limiting women's agency and equal right of health (T. S. Ali et al., 2011).

The disadvantage and discrimination for females at birth continues in later years in these countries. Although women in developed nations tend to use more health care services (Bertakis, Azari, Helms, Callahan, & Robbins, 2000; Redondo-Sendino, Guallar-Castillón, Banegas, & Rodríguez-Artalejo, 2006) and spend more on their health care (Alemayehu & Warner, 2004) as a consequence of increased morbidity in spite of their longer lives, empirical studies from some LMIC show that women fare worse than men in health morbidity, as well as in health care access and health care expenditure (Roy & Chaudhuri, 2008; Saikia et al., 2016). For example, Roy and Chaudhuri (2008) used data from a nationally representative household survey of 34,086 older men and women (≥ 60 years) to show that although older women in India report poor self-rated health (SRH) and higher prevalence of disabilities, they use fewer health care services than older men.

Bora et al. (2015) used data from the 2007 WHO Study on Global Ageing and Adult Health in India to investigate the self-reported health and disability of 10,736 men and women. The study demonstrated that women reported poor health twice as much men, and spent more years of their lives with disabilities. A further investigation using data from the India Human Development Survey 2004–2005 and 2011–2012 to calculate morbidity prevalence rates and mean health care expenditure observed that after controlling for demographic and socioeconomic factors, women significantly reported lower health care expenditure for acute and chronic health morbidities (Saikia et al., 2016). The study recognised that women had significant disadvantage, with the gender gap between male and female increasing from Indian Rupees (INR) 1298 to INR 4172 over the study period (Saikia et al., 2016).

Although there are limited empirical studies with which to fully understand the gender-based discriminatory context and morbidities in the context of developing countries, upon review of different explanatory models that were used to explain the gender difference in depression, Hammarstrom, Lethi, Danielsson, Bengs and Johansson (2009) found that the biomedical model was the most frequently used discourse to explain the phenomenon, followed by sociocultural and then psychological models. The authors further argue that the biomedical framework

could least explain the difference in depression between the genders, unlike the social and psychological models.

6.2.2.2 Gender roles and health

There is an extensive body of literature examining gender roles and their effects on the health and wellbeing of women. These studies tend to address two main discourses. A large number of studies examine informal caregiving roles with limited support from others and its effects on women's health, while other studies test how multiple roles of informal caregiving complemented with paid employment effects women's physical, psychological and social wellbeing. Most studies in this discourse are available from developed countries.

The literature suggests that irrespective of the sociocultural context, in most parts of the world, women take up most of the caregiving roles (Pinquart & Sörensen, 2007). This involves assisting children, the elderly and spouses with personal activities of daily living, as well as caring for sick and unwell family members. Although some studies indicate that informal caregiving may have some benefits in lowering mortality (O'Reilly, Connolly, Rosato, & Patterson, 2008; Ramsay, Grundy, & O'Reilly, 2013), most studies show that caregiving roles have negative physical and psychological implications for the carer's wellbeing (Pinquart & Sörensen, 2007). Of the limited studies from LMIC, Yiengprugsawan, Harley, Seubsman and Sleigh (2012) investigated caregiver's physical and mental health status (n= 60,569 men and women) in Thailand. This study revealed that female caregivers, compared to non-caregiving females, suffered lower back pain and psychological distress, and had poorer self-assessed health. The authors further indicated that full-time caregivers reported poorer health compared to part-time caregivers and non-care-givers.

Within this dialogue, the gender-role segregation and division of labour within households is of greater concern to researchers (e.g. anthropologists, feminists and social scientist) who have investigated how role segregation within the household affects women's health and wellbeing.

Studies from Ghana (Avotri & Walters, 1999), India (Pereira et al., 2007; Travasso et al., 2014), Lebanon (Khawaja & Habib, 2007) and Saudi Arabia (Alyaemni, Theobald, Faragher, Jehan, & Tolhurst, 2013) demonstrated that there is a major role conflict and imbalance of household activities between husbands and wives, leading

to negative repercussions in women's health. Khawaja and Habib (2007) found that husbands' support for household chores significantly improved their wives self-rated mental health, marital satisfaction and overall happiness, while those who received limited support reported more distress, discomfort and discontent with their husband. Alayemni et al. (2013) provides information on the different ways women's health gets compromised when there is limited support from their husbands. This study attributes women's poor health to their multiple roles of childbearing, household and care provider roles. Additionally, women linked their psychological distresses to limited support received from their spouses in child care responsibilities and marital conflict. This notion is also supported by other literature that shows low control at home in terms of caring and domestic role demands and lower household position, increases the risk of coronary heart disease among women unlike men (Chandola, Kuper, Singh-Manoux, Bartley, & Marmot, 2004).

Other studies examined the discourse of the complementing caregiving roles and paid employment, and role segregation between genders within household and its pathways to women's health and wellbeing. There are two main thoughts of scholarship in this matter. One notion is explained with the role strain theory that posit multiple workloads are detrimental to one's health (Mui, 1992) where the role burden increases women's physical strain and psychological distress (Gjerdingen, McGovern, Bekker, Lundberg, & Willemsen, 2000). The other notion comes from role enhancement theory and multiple attachment theory, is that multiple roles are rewarding and beneficial (Barnett & Hyde, 2001; Moen, Robison, & Dempster-McClain, 1995; Waldron, Weiss, & Hughes, 1998) increasing women's access to resources that enhance health and quality life in later life (Stone, Evandrou, Falkingham, & Vlachantoni, 2015).

The literature that supports role strain theory comes from several studies. Gjerdingen, McGovern, Bekker, Lundberg and Willemsen (2000) review compared the distribution of women's work roles in paid employment, household work and childcare and their impact on women's health in three developed nations (the US, Sweden and the Netherlands). Similar to studies in developing countries (Alyaemni et al., 2013; Khawaja & Habib, 2007), the authors showed that while women performed most of the household work, heavy workload responsibilities and unequal distribution of household work undermine marital happiness, increasing women's

physical strain and psychological distress, particularly if women perceived inequity in the way their partners share household work. Additionally, study findings suggested that there was an association between heavy workload burden and increase in incidence of cardiovascular diseases, musculoskeletal disorders, depression and anxiety. A recent cross-sectional study from Sweden of working women also supported this notion, demonstrating a significantly higher level of perceived psychological distress, physical problems and unbalanced work–family conflict reported by those who perceived more unequal distribution of household chores, as compared to those women in relationships where they perceived an equal distribution of responsibilities (Eek & Axmon, 2015).

Although studies show that both men and women benefit from higher education and occupation, evidence suggest that although psychosocial work resources were beneficial for both genders, unlike highly educated men, women with equal level of education and demanding roles at work reported significantly more stress and depression, and higher levels of work–family conflict (Qiu, Bures, & Shehan, 2012). These authors further suggested that working overtime is mostly beneficial for men's health rather than women. While another study suggested that working women use more sleep medication, with an increase in family–work conflicts, but not men (Lallukka et al., 2013).

On the other hand, the usefulness of women's multiple roles including being a wife, mother and employee is supported from studies which support the multiple attachment theory and role-benefit theory. Lahelma, Arber, Kivelä and Roos (2002) compared two cross-sectional surveys done in Britain and Finland, to understand whether multiple roles affect women's health positively or negatively. These countries had some similarities as well as contrasting welfare policies to support child care among working and lone mothers. In both countries, women who were married/cohabiting and had dependent children reported better health compared to other family types, and women who were in paid employment reported better health than housewives. Another study from Greece also indicated that employed women report better health than housewives (Zavras et al., 2013). A more recent analysis that used data from the English Longitudinal Study of Ageing (n=2160 women) supported these claims and provided further explanations that women who performed sequential rather than simultaneous multiple roles of full-time work and family

responsibilities receive favourable health outcome in later life (Stone et al., 2015). While in Ireland, caregivers (both males and females) generally report better health and lower levels of mortality than non-caregiver (O'Reilly et al., 2008). Barnett and Hyde (2001) argue that the advantages of holding multiple roles flow through to eight different dimensions of a women's life (e.g. buffering, added income, social support, increased opportunities for success, broader frame of reference, increased self-complexity, a similarity of experiences and interests between men and women, and gender-role ideologies).

3.6.2.3 Violence against women and their health

An extensive body of literature on violence against women comes from cross-sectional surveys and qualitative studies that reveal a number of perspectives. Although there is disagreement between theories and models (e.g. social learning theory, feminist theory and ecological models) describing the phenomenon of violence against women (P. A. Ali & Naylor, 2013), these explanations and discourses have been used to identify the prevalence of violence against women and to recognise its physical and psychological consequences on women, and how it extends to children (Garcia-Moreno et al., 2006; Ziaei, Naved, & Ekstrom, 2014). Regardless of the variation in prevalence between countries, there is a general recognition and consensus among scholars and the global community that women suffer disproportionately in gender-based violence or IPV and it is an endemic public health concern that is a challenge for nations around the world, and a major human rights abuse (Garcia-Moreno et al., 2006).

A number of studies concerned with the issues of violence against women suggest that, globally, IPV is the most prevalent form of gender-based violence between married couples as well as cohabiting and dating couples (Alhabib, Nur, & Jones, 2010; Garcia-Moreno et al., 2006). Although the prevalence of IPV varies between countries, a systematic review of violence studies suggests that one in three women worldwide is at risk of IPV (Alhabib et al., 2010). Devries et al. (2013) further used data from 141 studies in 81 countries to estimate that 30% of women aged 15 and above experienced physical and/or sexual IPV around the world in the year 2010. The prevalence of IPV is 19.3% in Western Europe and 27% in Eastern Europe (World Health Organization, 2013); 67% in Bangladesh (Bates et al., 2004); 58% in Nepal (Adhikari & Tamang, 2010); and 34.6% in the Maldives (Fulu, 2007b).

Additionally, violence has been shown to be repeatedly perpetrated by intimate partners (Garcia-Moreno et al., 2006) and is not limited to women's age, education, income, ethnicity or nationality (Bonomi et al., 2006; Ellsberg et al., 2008; Garcia-Moreno et al., 2006).

There is mounting evidence to recognise unfavourable consequences of IPV on women's physical, psychological and sexual health (Garcia-Moreno et al., 2006). Although a number of studies report on physical abuse and its unfavourable implications, most studies indicate that women significantly suffer more from emotional abuse than physical abuse (Bonomi et al., 2006; K. Devries et al., 2011). The consequences of emotional abuse are also reported to be more severe and have long-term debilitating effects on wellbeing and self-integrity (Ellsberg et al., 2008; Garcia-Moreno et al., 2006). Women who suffer from IPV report significantly more depressive disorder (Bonomi et al., 2006; K. M. Devries et al., 2013) and anxiety and post-traumatic disorders (Trevillion, Oram, Feder, & Howard, 2012).

The literature from around the world (K. M. Devries et al., 2013; Ellsberg et al., 2008; McLaughlin et al., 2012) shows that the incidence of suicide is disproportionately higher among females and this has been linked to sociocultural context, gender-based disparities and IPV (K. Devries et al., 2011). In the Maldives, women who suffered physical and/or sexual violence were four times more likely to have suicidal thoughts than those who have not experienced IPV (Fulu, 2007a). Women who were diagnosed with major depressive episodes in India linked it to their lower social status, gender-based discrimination and different forms of domestic violence which was a reason why some attempted suicide (Rao, Horton, & Raguram, 2012). Concurrently, among youths (16 to 24 years), suicidal behaviour increased nearly seven times with being female and three times with those who suffered sexual abuse (Pillai, Andrews, & Patel, 2009).

Although the incidence and prevalence of IPV are increasing being reported around the world, evidence gathered from this literature review indicate that there remain gaps in knowledge in terms of fully comprehending the unique contextual factors to explain the predictors as well as workable interventions for IPV (Morrison, Ellsberg, & Bott, 2007). Within the discourse of feminist studies, the patriarchal norms of some societies (with ideals of masculinity as the basis of the control and

marginalisation of women with restrictions on mobility, seclusion norms, social isolation, and often using violence in cases of resistance) are implied to increase the risk of IPV (Bonomi et al., 2006; Hinton & Earnest, 2010a; Rizvi, S Khan, & Shaikh, 2014). These social and cultural norms also allow men to have multiple and concurrent intimate partners, increasing the risk of IPV (Abramsky et al., 2011; Hassouneh-Phillips, 2001). Supporting literature from Bangladesh (M. Rahman, Nakamura, Seino, & Kizuki, 2013), India (Sahoo et al., 2015), Nepal (Deuba et al., 2016), the Maldives (Fulu, 2007b) and Pakistan (Rizvi et al., 2014) suggest these gender-based inequalities, social norms, attitudes and practices profoundly disadvantage women's power, agency, and self-reliance, heightening the risk of IPV.

Within this discourse, there is growing dialogue and debate on the links between socioeconomic empowerment and IPV. Previous sections in this literature review highlighted, to a certain degree, how social and economic deprivation (for example, no or lower education, income and material access) is associated with increasing risk of IPV (Ackerson, Kawachi, Barbeau, & Subramanian, 2008; Heise & Kotsadam, 2015). This notion is being consistently challenged by several authors who argue that women engaged in paid employment face more abuse compared to non-working women in developing countries, for example, in Bangladesh (K. Dalal, Dahlström, & Timpka, 2013; M. Rahman et al., 2013), India (Koustuv Dalal, 2011; Paul, 2016) and Nepal (Adhikari & Tamang, 2010). A recent review by Heise and Kotsadam (2015) supports this perception, suggesting that women's cash income alone seems to be a trigger to increases the risk of IPV. Rather than economic empowerment, along with female education, and that addressing the gender norms of IPV was necessary to reduce risk of IPV.

Furthermore, few studies from South Asia extend beyond education and income inequalities, and tend to connect social and cultural discriminatory practices against females to IPV. It has been shown that getting married at a young age (<18years) increases IPV incidence and risk in some states of India (Santhya et al., 2010; Speizer & Pearson, 2011) and Bangladesh (Mosfequr Rahman, Hoque, Mostofa, & Makinoda, 2014). In LMIC, ever-partnered adolescent and young women reported lifetime prevalence of IPV between 19% and 66% (Stöckl, March, Pallitto, & Garcia-Moreno, 2014). Although the context is different, studies from the US also report high levels of IPV among adolescents (Cui, Ueno, Gordon, & Fincham, 2013;

Hickman, Jaycox, & Aronoff, 2004; Silverman, Raj, & Clements, 2004). Additionally, a qualitative study in Bangladesh showed that the sociocultural practices of the dowry system of marriage lead to the physical and psychological suffering of women (Bates et al., 2004). Some studies in Pakistan (Qadir, Khan, Medhin, & Prince, 2011) and Nepal (Deuba et al., 2016), as well as a study conducted in the US that included Indian women (Puri, Adams, Ivey, & Nachtigall, 2011), shows that the gender preference for sons from preconception is a major cause of stress and ill-health for women, often leading to IPV. For example, the qualitative study done in the urban slums of Nepal involving pregnant women found that women are physically, sexually and emotionally abused if the foetus is of female sex and if they gave birth to a girl (Deuba et al., 2016). Puri et al. (2011) further reported that in this situation a number of women were forced to terminate and abort female foetuses.

Beyond these gender discriminatory practices, the literature also indicates that the attitude and norms towards wife beating is a significant risk factor for IPV (Abramsky et al., 2011; Heise & Kotsadam, 2015; Jesmin, 2015). Several studies conducted in Asian and Middle-Eastern nations suggest that women justify different circumstances for wife beating (Boy & Kulczycki, 2008; Linos et al., 2010; Schuler & Islam, 2008). For example, Linos et al. (2010) used secondary data from a cross-sectional survey in Jordan to demonstrate that the majority (87.5%) of Jordanian women justified wife beating. Those of lower socioeconomic status and who had limited decision-making power were more likely to justify than others. Women in Egypt (86%), and Turkey (40%) justified violence against women (Boy & Kulczycki, 2008) and 84% of Bangladeshi women condoned wife beating (Schuler & Islam, 2008). Jesmine (2015) reported from Bangladesh that women who lived in communities with positive attitudes towards wife beating were nearly five times more likely to justify husband's physical abuse. In India women who justified wife beating were twice more likely to suffer IPV compared to those who rejected it (Donta, Nair, Begum, & Prakasam, 2016). In Pakistan, 47% of women who condone wife beating also suffered it (Aslam, Zaheer, & Shafique, 2015). T.S. Ali et al. (2011) further demonstrate that in Pakistan, men physically abuse their wives without social condemnation mainly because male ego and physical aggression towards their wives are socially accepted.

The findings of these studies are re-confirmed by a recent systematic review completed by Beyer, Wallis and Hamberger (2015) that linked neighbourhood features and IPV. This systematic review showed that in comparison to studies in developed nations such as the US, evidence from LMIC (for example, India and Bangladesh) demonstrated to a certain degree how the community norms of violence and attitudes towards women further exacerbate IPV. These findings were supported a study conducted by Heise and Kotsadam (2015) that revealed that regardless of the situation of justifying abuse, in societies where there is any justification of wife beating, IPV increased by 14.6% compared to places where no-one justifies it. The risk of IPV is higher in places where there are norms related to male authority over female behaviour and the extent to which the law disadvantages women compared with men in terms of access to land, property and productive resources (Heise & Kotsadam, 2015). This study also showed the significance of female education in reducing the risk of IPV in places where wife beating is a risk; however, education of females had little effect in reducing the risk of IPV in places where wife abuse is a social norm (Heise & Kotsadam, 2015).

The literature review further suggested that a negative attitude towards IPV and victim blaming is a main reason why women from the Middle East and Asia do not report and share IPV incidence with family or formal services (T. S. Ali et al., 2011; Damra et al., 2015; Zakar, Zakar, & Kramer, 2012). For example, in Pakistan, abused women often get silenced and shunned by their own family if there is a case of IPV, and they often hesitate to seek formal services in fear of escalating violence (Zakar et al., 2012). In Saudi Arabia, most abused women do not seek formal services (Afifi, Al-Muhaideb, Hadish, Ismail, & Al-Qeamy, 2011) and in Jordan, multiple services-related barriers as well as health professionals' lack of consideration lead to women's dissatisfaction with formal services (Damra et al., 2015).

Despite this body of knowledge, there is a large gap in literature of how gender inequalities and sociocultural forces effect women's health in different context of LMIC, specifically in the Maldives, and require detailed investigation.

3.6.3 Social relationships and support

The literature review so far has highlighted some of the adverse social, cultural and economic circumstances, indicating how it creates inequalities for women in

maintaining health and wellbeing. Within these circumstances, there is a growing dialogue among scholars of the relevance of social capital and social support for enabling and empowering women, as well as maintaining health and wellbeing (Griffiths et al., 2009; Hakulinen et al., 2016). Within the discourse of social relations, social support and social capital, there are main two perspectives: an emerging body of studies look within the neighbourhoods, communities and social networks and their association with health and wellbeing, while others study women's health within marriage and cohabiting relationships.

Most of these studies suggest that positive social relationships and support networks enhance health for women (Eriksson, Ng, Weinehall, & Emmelin, 2011; Hinton & Earnest, 2010b; Leipert & George, 2008; Lombardo et al., 2014; Lowe, Griffiths, & Sidhu, 2007). On the other hand, having few and poor social relationships is a cause of poor mental health as well as being disempowering for women (Musheke et al., 2013; Pereira et al., 2007). In Beirut, Lebanon, for example, social capital of trust and reciprocity were substantive for both men and women; however, social support, networks and social relationships were significantly associated with positive health for women, but not for men (Chemaitelly et al., 2013). In developed nations, such as in Sweden, collective social capital through positive neighbourhood support offered considerably better health for women compared to men (Eriksson et al., 2011). Women in Canada used multiple strategies to access health services of which social support and networks are prominent (Lombardo et al., 2014). This suggests that although social relationships might benefit both men and women, there seems to be a marked gender dimensions to social capital and its manifestation, which tend to positively benefit women.

The assumed correlation between social capital and women's health is also based on the premise that these networks and acquaintances enhance women's access to critical resources, especially in the case of socially and economically vulnerable and marginalised women (Griffiths et al., 2009; Hinton & Earnest, 2010b; Leipert & George, 2008). In Sub-Saharan Africa, social networks seem to be an important predictor for HIV testing (Musheke et al., 2013), while in the US, for older African American women living in low-income housing, there seems to be an association between having mammography and social support (Farmer, Reddick, D'Agostino, & Jackson, 2007).

Within the discourse of social relations, the literature review indicates that one of the widely studied areas is how marriage or cohabiting is associated with health.

Women in married or serious relationships have better physical and mental health than single individuals (Lahelma, Arber, Kivelä, & Roos, 2002), and this relationship is significantly protective against depression in both women and men (Van de Velde et al., 2010). The literature from developing countries shows that being single and unmarried was associated with nearly twice the risk of maternal death compared to being married or cohabiting (Karlsen et al., 2011). However, unhealthy relationships with husband are perceived by women to be major causes of depression (Pereira et al., 2007).

Within a relatively disadvantaged and subordinated position in the household (as highlighted in previous sections), in developing countries, a woman's mobility and health care access is often determined by her husband. For example, in some parts of rural Afghanistan, women need their husbands' permission to leave the house, even in an emergency (Newbrander et al., 2014). Section 3.6.1 has already highlighted that women's socioeconomic status determines their household decision-making power, which ensures critical resources and health care access (for example, contraception, antenatal visits and having a skilled birth attendant).

Additionally, Simkhada et al. (2008) found that, in developing countries, married women used more antenatal care services than single women. In Nepal, considerable male involvement is required for women to get access maternal health care services (Mullany, Hindin, & Becker, 2005). In India, women's marital relationships play a pivotal in determining women's agency (ability to exercise power by making choices) in the family, which not only empowers women, but also improves their wellbeing (Allendorf, 2012). In contrast, mixed results are shown from sub-Saharan African nations where in some countries, such as Burkina Faso, male involvement enhanced women's empowerment and seeking antenatal care services, however, in Malawi, women's higher empowerment status significantly lowered their male partner's involvement with antenatal care services (Jennings et al., 2014).

The other relevant knowledge derived from the autonomy and decision-making paradigm suggests mixed results on the idea that women's increased intra-household bargaining power results in better outcomes in accessing health care and reducing

risk of violence. Emerging studies suggest that within developing countries, rather than husbands' or wives' independent power in decision making within the household, it is the joint and equal decision making between the couple that increases women's use of contraception (Uddin, Pulok, & Sabah, 2016) and maternal health care uptake (Mullany et al., 2005). Mullany, Becker and Hindin (2007) demonstrated from a randomised control study in urban Nepal that pregnant women who were educated with their husband during the antenatal period were more likely to prepare for birth, as well as use post-partum care services, compared to women groups who were provided with only health education or those who did not receive any health education. A review of studies from LMIC suggested that women were more likely to take up cervical cancer screening if they had positive support from social networks and were married rather than single (Williams-Brennan, Gastaldo, Cole, & Paszat, 2012). In the Maldives, although women had adequate information and access to contraception services, their husbands' attitude and support was the major determining factor for women's use of contraceptives (Nagase, Kunii, Wakai, & Khaleel, 2003).

Much of the emerging literature around women's health suggests that accomplishments requiring an equal distribution of power have been achieved through social action by partnering with community support networks as well as men. The limited empirical studies conducted in the Maldives (Fulu, 2007b; Nagase et al., 2003) as well as studies within the same geographical territory of South Asia (Mullany, Becker, & Hindin, 2007; Uddin et al., 2016) and other nations (Al Riyami et al., 2004; Murphy-Graham, 2010) suggest the relevance of male involvement in improving women's health.

3.6.4 The health system and its interaction with women's health

The health care sector is a powerful and influential determinant of health (A. Sen, 2011). There is consensus among the scholars that health system policies, design, services, programs and actors are critical factors in providing health care that is available and accessible. Within this discourse, empirical research consistently shows health system constraints as a major barrier for uptake of services in places where the need for such services is greatest.

Two systematic reviews (Simkhada et al., 2008; Srivastava, Avan, Rajbangshi, & Bhattacharyya, 2015) and one scoping review (Williams-Brennan et al., 2012) indicated some of the major factors that enhance or hinder health care access for women in LMIC. Simkhada et al. (2008) identified cost of services as an important determinant. The authors suggested that free and subsidised services increased antenatal care uptake among urban slum-dwelling women. Supportive evidence was revealed by William-Brennan, et al. (2012), who showed that major obstacles for women in developing countries were the cost of services, lack of health insurance, a shortage of cervical cancer screening facilities, lack of referrals by health care professionals and lack of confidence and trust in health care professionals. Additionally, Srivastava et al. (2015) highlighted that women's satisfaction with maternal care services was determined by having positive interpersonal relationships with health providers, and getting treated in a respectful, courteous and non-abusive manner. Women's satisfaction, which also determined access of services, was also associated with having an adequate and clean environment, privacy, emotional and cognitive support from providers, receiving care on time, provider competency and getting access to female providers (Srivastava et al., 2015).

Similar findings have been reported from developed nations: difficult appointment system (Angus et al., 2013), inadequate number of doctors, discriminatory practices, service provider attitude and lack of consideration for women's health concerns (Doornbos et al., 2013; Ferrer, Trotter, Hickman, & Audrey, 2014; Leipert & George, 2008), limited female providers (Leipert & George, 2008), limited choice and access controlled by health provider (Angus et al., 2013) were linked to women's frustrations with services which influenced women's uptake of services. For example, Angus et al. (2013) argues from their meta-synthesis of qualitative studies that though Canada offers a publicly funded health care delivery system, the multiple contextual barriers and deterrents within the system challenge women's equitable access to health care. Some of these health system disparities were lack of provider–patient communication, limited availability of services and unaffordability. The authors noted that often it is the marginalised, minority and low-income women who suffered most.

Supporting literature is reported by Ferrer, Trotter, Hickman, and Audrey (2014) suggested from their review of qualitative studies from developed nations (mostly

comprising studies from US and UK) that, in addition to individual factors and social norms, health policy, service provider attitude and cost of human papilloma vaccination were determinants of vaccine uptake by young women. Lowe et al. (2007) further supported the claims that providers' biased attitudes remain a main barrier for some South Asian women in Britain to access contraceptive services. These claims are supported by Saftner, Martyn and Momper's (2014) grounded theory study that showed adolescent females in the US were more likely to access sexual health services if they trusted and had confidence in their health providers, could access easy and flexible appointment systems, and if transport and the cost of services were not barriers.

More specifically, literature show that acceptance and trust of a health system and service providers are critical to improve service uptake (Doornbos et al., 2013; Musheke et al., 2013; Saftner, Martyn, & Momper, 2014; Shaikh & Hatcher, 2005 9-11). Women with choice preferred services that they could trust, irrespective of the cost (More et al., 2011). Within this context, studies highlight that there is increasing trend of women in Asia using private health care facilities for childbirth (Pomeroy, Koblinsky, & Alva, 2014). For instance, even in the slums of India, women chose the private sector for maternal health care services if they had the necessary financial and social support (Alcock et al., 2015; More et al., 2011). Ergler, Sakdapolrak, Bohle and Kearns (2011) reported that in India, even the poor sought private providers despite cost if they considered that the quality of care was better. Similar findings have been reported from Pakistan that women's perception of poor public health services was a main reason they sought private services for maternal health care (Mumtaz & Salway, 2007).

Pomeroy (2014) explains that women prefer these places because they get access to a doctor, as there is a general perception that the quality of care provided is better in the presence of a doctor. The general population in LMIC also have similar perceptions that presence of doctors, having positive relationships with doctors, and getting greater timelines during consultation as good quality of care by private health providers (S. Basu, Andrews, Kishore, Panjabi, & Stuckler, 2012). Sen (2011) argues that low funding for public health in India is the major factor driving the poor to private doctors, despite low quality and fraudulent services offered from the private health sector in India. These claims are supported by other authors who indicate that

health professionals in the private sector often violate medical standard of practice (S. Basu et al., 2012; Ergler, Sakdapolrak, Bohle, & Kearns, 2011).

Although this argument is reasonable, those who studied women's health-seeking behaviour suggest the complexities in this matter and that women's perceptions of being worthy of health care have been considered within a sociocultural context and positively related to seeking health care (Chamberlain et al., 2007). Qualitative studies conducted in eight developing countries on women's perceptions of iron deficiency anaemia prevention and control stated that women's beliefs and cultural context were a strong determinant for using iron to prevent anaemia (Galloway et al., 2002). It has been also suggested that women in LMIC refrain from taking part in cervical cancer screening due to shame and stigma related to the procedure (Williams-Brennan et al., 2012). Asian women living in the UK reported that their culture and social norms of oppression stop them from seeking formal supportive services, despite suffering from mental and psychological distress (Chew-Graham, Bashir, Chantler, Burman, & Batsleer, 2002).

Although this is the situation, findings from three studies on women's health care decision-making processes revealed that women desired active participation in decision making (J. B. Brown, Carroll, Boon, & Marmoreo, 2002) This suggest that social and cultural norms, beliefs and practices, as well as women's decision-making autonomy play a significant role in women's access to services and health-seeking behaviour.

Sen (2013) substantiates these claims with the concept of 'interactive agency' – individuals need freedom to decide their needs and to do what they want. Sen (2013) points out that this could be achieved by a democratic social process and public discussion and participation that involve giving others the role of reasoning and decision-making power within a more holistic approach. This notion is supported by several authors who have studied women's health (Doornbos et al., 2013; Hinton & Earnest, 2011; Inhorn, 2006). These authors argue that women's health has been defined by health sector professionals within a biomedical model and compartmentalised into maternal health, reproductive health or mental health. This approach has resulted in defining women's health as a pre-determined treatable illness, with little attention given to the internal and external factors that impact

health and illness. Subsequent studies have reported a disconnect between women's health needs and existing policies in the majority of developing as well as developed countries (Avotri & Walters, 1999; Ferrer et al., 2014; Hinton & Earnest, 2011; Inhorn, 2006; Rizvi & Nishtar, 2008; Trivedi et al., 2007). As an example, Gill and Strewart (2011) showed mismatch between exiting gender-sensitive policies in South Asia and the provision of services in the health system in a gender-equitable manner.

Finally, the literature review provided evidence that while economic growth alone has been important for improving health, it alone is insufficient for development and equity. Economic growth needs to be considered along with better health, education and empowerment, as well as with rigorous health and social policies that ensure an even distribution of benefits. Acknowledging women's perceptions and experiences, relationships, roles and responsibilities, and preferences as central to understanding their health problems and exploring these issues within the complexities of women's life is advocated and emphasised within the literature. Increasing knowledge of the social determinants process could help policy makers, service providers and development agencies understand existing inequalities as well as the extent of the challenges that lay ahead in reducing the health disparities for women in meeting their right for health equity.

3.7 Conceptual framework

Upon completion of a detailed literature review, and before embarking on the methodology and study design, it is important to condense the knowledge amassed and develop a conceptual framework that could guide the empirical study. Several authors suggest the relevance of a conceptual framework in guiding the research process (Baxter & Jack, 2008; Stake, 1995; Yin, 2009). Figure 3.1 illustrates the conceptual framework of the study, which was developed by the researcher and draws on the following theory and frameworks. The systems theory (Von Bertalanffy, 1968), and other supporting literature including the human rights framework (United Nations, 1948), which conceptualises a broader and holistic understanding of women's health.

Systems theory proposes a holistic and transdisciplinary approach for understanding human beings (Von Bertalanffy, 1968). The theory conceptualises that existing systems are open and interact with their environments, and during this process

continuously acquire new characteristics for adaptation. To understand the systems, it is vital to study the arrangements and relationships among all the parts that connect the whole systems, rather than studying different properties and parts of the entity separately. Systems theory further proposes that in order to comprehend the complex dynamics of human beings and solutions to their issues, people need to be actively involved in the process, to shape their future. The human rights discourse simultaneously recognises and centralises individual's rights without discrimination.

The conceptual framework (Figure 3.1) illustrates that a deeper understanding of women's life circumstances, including social determinant facilitators and constraints for health equity, is embedded within women's perceptions and experiences, in the health care delivery system as well as in the context. A critical component of women's health problems is that it cannot be 'separated from the broader social, cultural, economic and political forces that share and mostly constraints women's lives' (Inhorn, 2006, p.348). The conceptual framework further demonstrates that to gain equitable and optimal health, women need access to critical health-enhancing resources without discrimination. Some of these critical facilitators and constraints identified from the literature review are symbolised at the core of the conceptual framework which includes, but is not limited to, education, wealth, power, gender, health systems and the context. The inclusion of both internal and external factors that influence women's lives provides an increased understanding of the relationships and how these factors contribute to women's health and wellbeing.

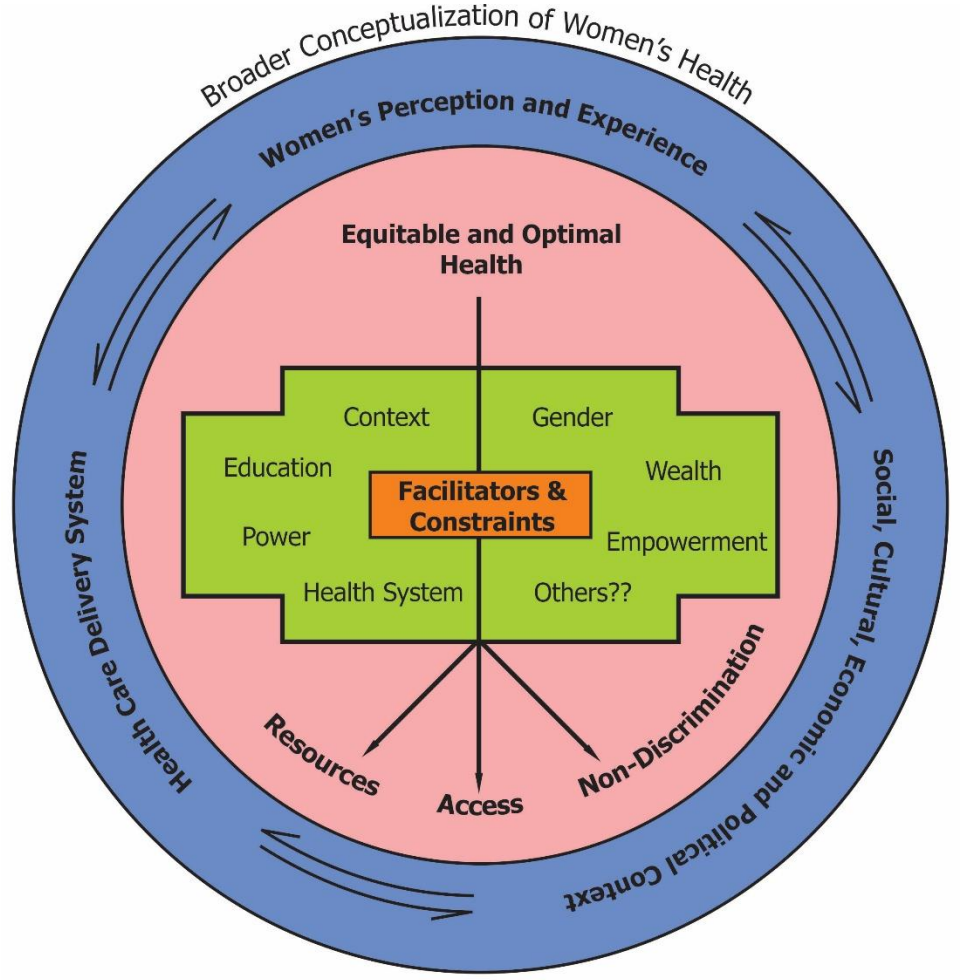


Figure 3.1 Conceptual framework

3.8 Summary

3.8.1 Contribution to the research aims and objectives

While contributing to the research aims and objectives 1 to 3, the literature review summarised and reviewed existing work on the determinants of women's health and health inequalities from both developed and developing countries. Combined with chapters 1 and 2, the literature review identified a number of discourses; most notably, social and economic context, gender and social relations, and health system policies and services and their significance to women's health and health care access.

The review has also provided some important directions for the present study. First, the existing and growing body of knowledge suggests that there are multi-contextual and multidimensional factors that may determine women's health and health inequalities. Therefore, it is essential to move beyond a single factor (e.g. maternal

health care) to understand entrenched contextual dimensions of women's lives that determine health and wellbeing.

Second, the literature review indicated that women's health and health inequalities is to a major degree determined by society, social forces, gender relations, status and the social position of women. Within this notion, many scholars argue and challenge the biomedical model of health. These studies suggest that future study methodologies need to move beyond a biomedical model to include social influences on women's health or the social determinants of women's health within their life course.

Third, a number of studies reported that women have been under-represented in their own health care decisions (Inhorn, 2006). At the heart of the inequities lies a prominent power imbalance and marginalisation of women within the household and broader society, implying that involvement of women in research is itself an empowerment process for women.

Fourth, although there is a paradigm distinction between quantitative and qualitative research, both of these methods are invaluable in understanding the context of women's lives to give insight and meaning as to how and why certain health inequalities exist and their influences on women's health.

Finally, involving men as well as the other key community leaders (e.g. policy makers and service providers) in empirical methods that study women's health is underscored, since disparities of women's health move beyond individual women's control and power, specifically within the social, economic, cultural and political context of LMIC.

3.8.2 Gaps in knowledge and implications for this study

While acknowledging the contribution of the literature in adding to the knowledge base of women's health, the literature review has also underscored significant gaps in terms of fully understanding women's health.

First, although the literature search strategy used broad search terms and their combinations to capture empirical studies within the discourse of women's health from different academic disciplines, databases and nations there is limited knowledge

on the matter, relative to the significance of the issues of women's health, in particularly in LMIC. This is a significant gap in knowledge that needs to be further addressed.

Second, there is clearly a lack of empirical work focused purely on using holistic approaches and mixed methods designs that studied social determinants of health within women's health discourse in LMIC. In general, women's health and health inequalities are largely overlooked in this region, other than within a single domain (e.g. maternal/reproductive health/violence), which limits understanding of the multiple contextual factors. The literature review has indicated that the social and cultural context of nations differ greatly. Deep-rooted realities of women's lives in societies could influence women's health in their specific context and vice versa. The failure to incorporate the social realities that may implicate women's health in previous empirical research is a significant gap in the literature.

Third, although the literature underlined some of the broader contextual factors that may create health inequalities, very little knowledge is available of how and why these factors shape certain marginalised and disadvantaged women's access to health care.

Fourth, although epidemiological studies have their merit, these studies limit understanding of the multiple contextual factors that may create health inequalities for women within and across different societies of the developing as well as developed nations. Clearly, there is a gap in understanding the determinants of women's health, which could be closed by using conceptually relevant holistic models that takes into account all aspects of women's lives, and using multiple perspectives to explore inequalities to move beyond disease patterns. It is clear from the literature review that health inequalities are unfairly created as the result of several modifiable factors that could be addressed through health and social policies. Health inequalities must be understood, to guide and address the policies that modify the contextual and root causes of inequalities that exacerbate women's health.

3.8.3 Summary

This chapter comprises a brief critical review of the literature pertaining to women's health, which was based on an empirical narrative analysis to map the theoretical and empirical knowledge on the matter of health inequalities of women from around the

world. The review has highlighted on the aim and objectives of the study, but there remains a number of gaps in the evidence base and further research that could help to understand the meaning that women assign to their own health concerns and needs and health inequalities.

Having outlined a brief critical overview indicating the multiple factors that may influence women's health, the conceptual framework outlined in the chapter included the internal and external factors within women's lives, for a deeper understanding of the realities that may influence women's health. The next chapter provides a methodology and methods used in this study.

Chapter 4 – Methodology

4.1 Introduction

This chapter explains the research methodology and methods used in this study. It starts by revisiting the aims and objectives of the study, then examining the theoretical underpinning of case study methodology and the use of two distinct methodological approaches within the mixed method discourse of qualitative and quantitative designs. These two phases of the study will be presented separately: first the qualitative component followed by details of the quantitative. The final three sections will describe how the validity of this study was established and the ethical considerations.

4.2 Aims and objectives

As outlined in Chapter 1, the overall aim of this research is to investigate and document a comprehensive explanation of women's health needs and concerns in Malé city, Republic of Maldives. The aim is to provide an evidence base that draws on the lived perception and experience of women, men and community leaders.

The study addressed the following objectives:

Objective 1 – To determine women's perceptions and experiences related to their health needs and concerns.

Objective 2 – To determine women's roles and responsibilities in the context of family, the community and society, and the impact these have on women's health.

Objective 3 – To explore and explain patterns in women's self-assessed health.

Objective 4 – To assess similarities and difference among women's, men's and key informants' reports of women's health including needs and concerns.

Objective 5 – To provide recommendations for the health system services to better meet the health needs and concerns of women, thereby reducing health inequities.

The evidence generated from this study will inform research, policy and practice to improve women's health and wellbeing with its central goal to reduce health inequities for women living in Malé city, Maldives.

4.3 Case study methodology

Case study research allows extensive and in-depth investigation of contemporary social phenomena or 'cases' within a 'bounded system' in a real life context (Stake, 1995; Yin, 2009). The phenomenon, or case, studied in this research was 'women's health concerns and needs', and the case study site or 'bounded system' was Malé city, Republic of Maldives.

The selection of Malé city was based on several factors. Firstly, according to Yin (2009), the cases (women's health concerns and needs) could not be considered without context. As this was the first study investigating women's health with a case study discourse, it seemed important to investigate within the 'bounded system' of the only urban dwelling in the Maldives: Malé city. Being the only urban dwelling in the nation, the study was likely to illuminate some of the barriers and constraints leading to health inequities, identifying the gap to be abridged to meet the health needs and concerns of women. The second reason is that due to the geographic nature of the islands, it was prohibitively difficult to carry out a large study throughout the nation. Some of the foreseen challenges were a lack of skilled people, large expenses for transport and an inadequate timeframe (Yin, 2014). The researcher's familiarity of the urban context compared to the regional islands was the third reason for choosing Malé city, specifically in recruiting participants through different social networks. Finally, more than one-third of the total national population resides in Malé city (National Bureau of Statistics, 2014c); therefore, this area was predicted to be the most relevant site to carry out a study of this nature.

Further, several authors suggest that case study research needs to be considered when collecting rich, authentic and deep data that seeks to explain and understand the 'how' and 'why' of a social phenomenon (Creswell, 2013; Yin, 2014). In this study, the main aim was to investigate 'how' and 'why' certain health inequalities exist within the complexities of women's lives, while tracing the impacts to health.

Contrary to other qualitative approaches, the unique strength of case study research also lies in its ability to use multiple data sources using a range of techniques to rigorously explore and describe a phenomenon. This strategy allows for the collection and integration of both qualitative and quantitative data within a single study and it is the combination or integration of the two approaches, known as mixed method research (Creswell, 2014; Tashakkori & Teddlie, 2003) that offers the best and most thorough means of understanding the determinants of health.

4.4 Mixed method design

This study integrated both qualitative and quantitative research methods in a single study, which is termed 'mixed method design' (Creswell, 2014; Tashakkori & Teddlie, 2003).

Qualitative research provides an approach to study complex phenomena within their context. It produces rich and contextual data through the natural flow of events and processes, as and how participants interpret them (Creswell, 2013). The qualitative researcher cannot be separated from what is being studied and generalisability is neither vital nor desirable (Creswell, 2013; Liamputtong, 2013). On the other hand, quantitative research is focused on identifying and explaining relationships and causes, and is closely associated with deductive reasoning, which is based on the characteristics of positivism. Tashakkori & Teddlie (2003) explains that the positivist approach is based on the assumption that there is a single reality where a causal relationship exists and that the researcher can be separated from what is being studied and generalisability is achievable and desirable.

Within these two methodological discourses, case study research allows a mixed method design that can combine the virtues of both qualitative and quantitative methodologies either simultaneously or sequentially (Creswell, 2014; Tashakkori & Teddlie, 2003; Yin, 2014). The current study used a sequential explanatory mixed method design, with an initial in-depth qualitative data collection and analysis phase that was integrated with and followed by a quantitative survey (Figure 4.1). The mixed method design provided a comprehensive and deeper insight into the phenomenon being studied, explaining how and why certain health inequalities exist in women's lives in the context of Malé city.

The rationale for using this sequence of data collection and analysis (i.e. qualitative prior to quantitative) is to use the critical findings of the qualitative results to develop the quantitative survey instrument, in an attempt to extend and test some of the critical determinants of women's health identified in the qualitative work. Although this study followed a sequential methodological approach, equal emphasis was given for both the qualitative and quantitative methods of data collection and analysis, strengthening the rigor and validity of the study (Tashakkori & Teddlie, 2003; Yin, 2014).

4.5 Research design

Figure 4.1 presents an overview of the methodological processes applied in designing the study, which consisted of three main phases. In the initial phase, the research proposal was developed on the basis of the theoretical literature and the research design was conceptualised. The qualitative data collection tools were developed and ethics approval was obtained for the study. In the second phase, qualitative research instruments were piloted, the study was advertised and participants were recruited. The different steps in qualitative data collection and analysis continued throughout the remaining period of the study. The third phase involved mainly quantitative research. In this phase, a survey instrument was developed based on preliminary qualitative findings and this survey was piloted. Following that, survey data were collected and analysed. The second and third phases of the study were iterative and overlapped in the actual data collection and analysis processes. Sections 4.6 (qualitative research phase) and 4.7 (quantitative research phase) of this chapter further elaborate on these two main research designs.

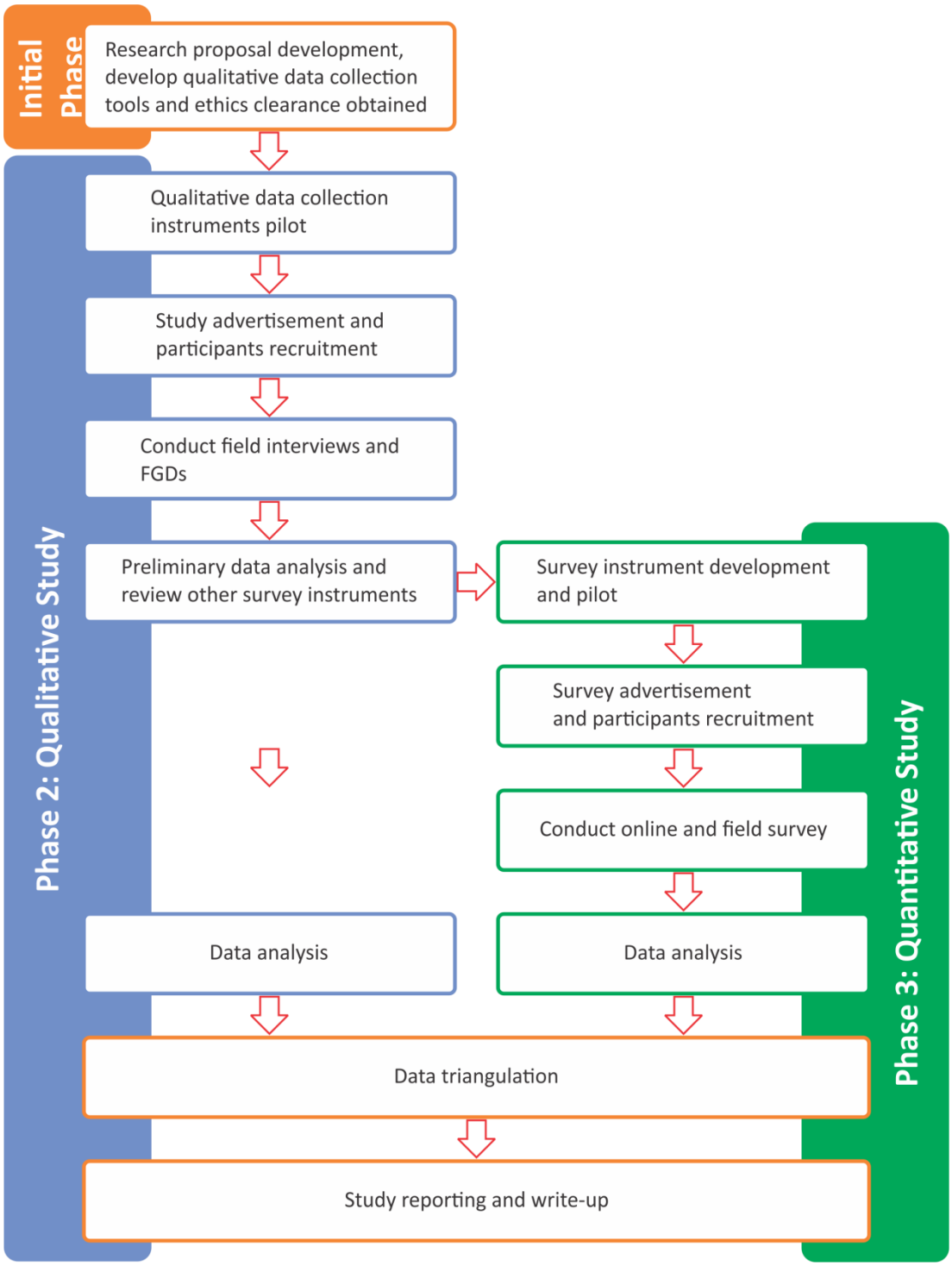


Figure 4.1 Overview of research design

4.6 Qualitative research

4.6.1 Data collection methods

Two main qualitative data collection methods were used: open-ended semi-structured in-depth interviews (IDIs) and focus group discussions (FGDs). Open-ended interviews remain one of the most frequently used data collection tools (Streubert & Carpenter, 2011, p.34), one of the 'most important source' of case study research (Yin, 2014, p.10) and the 'most commonly' used method in qualitative research (Liamputtong, 2013, p.51). Similarly, FGDs enhance the exploration of a topic within a group, to ensure that aspects of the phenomenon are being viewed from multiple perspectives (Streubert & Carpenter, 2011, p.37), and this unique group interaction also distinguishes FGD from IDIs (Liamputtong, 2013, p.75). The mixing of two major qualitative data collection methods in a single study ensures the trustworthiness and credibility of the qualitative findings and allows methodological and data triangulation (Yin, 2014).

4.6.2 Instruments, sources and pilot testing

For data collection in the first phase, semi-structured IDI guides (Appendices IV and V) and FGD guides (Appendices VI, VII & VIII) were used. These guides were flexible tools that consisted of open-ended questions to probe and explore in great depth and clarify (Liamputtong, 2013) women's, men's and community leaders' perception and experiences of the health concerns and needs of females in the community. These guides also ensured that all the concerns of women were covered during the informal and free-flowing discussion. Participatory activities were incorporated into the FGDs that were conducted with women and men, to enhance group dynamics (Appendix IX). These instruments were developed based on the literature and within the discourse of the conceptual framework used in this thesis (Note: Figure retrieved from Maldives Population and Housing Census (MPHC) 2014 (National Bureau of Statistics, 2014c, p.23).

Figure 2.1). Expert feedback for these research instruments was obtained from the supervisory team. The instruments were approved by the Curtin University Human Research Ethics Committee (Appendix X) and the Maldives National Health Research Committee (Appendix XI). The ethical considerations will be presented in Section 4.9.

Creswell (2013), Yin (2009) and Silverman (2010) further advocate a pre-test or pilot testing of the interview questions, to refine the data collection strategy. In this study, the IDI guide was piloted with an adult woman and the FGD guide was piloted with a group of young women in the field prior to actual data collection. After the pilot test, no changes were made to the FGD guide. However, the pilot test was valuable in gaining familiarity with the consent process, questions and methods, and to manage the duration and flow of the discussions. For the IDI guide, after consultation with the supervisory team, a question about 'health information and support resources' was added, to remind the interviewer to explore this area.

4.6.3 Data collection procedures

4.6.3.1. Population, sample and sampling

Women and community leaders were recruited for the IDIs and FGDs, and men for FGDs, between 1st January to 30th May, 2013, in Malé city. During this period, the study was formally and informally publicised in Malé city, and social networks (Appendix XII). In considering the importance of gaining analytical generalisation, (Liamputtong, 2013; Yin, 2014), women and men from different age groups and diverse socioeconomic characteristics were recruited through stratified purposive sampling and the snow ball technique (Burns & Grove, 2001; Creswell, 2013). Women were grouped into three age categories: those 15–24 years were considered young women; those 25–49 years were defined as adult women; and those 50 years and above were classified as older women. Women from these three different age groups were recruited for the IDIs and FGDs until data saturation was reached. Similarly, IDIs and FGDs were conducted with community leaders, and FGDs were conducted with men, until women's accounts of their health concerns were triangulated.

4.6.3.2 Recruitment process for women

The young, adult and older women were recruited from community institutes, through community leaders, from individual households and through social networks (Figure 4.2). Some young women were recruited from their educational institutes, such as university, colleges, higher secondary schools and secondary schools (Appendix XIII). Official approval from the Ministry of Education was obtained prior to approaching these educational institutions (Appendix XIV). In addition, young, adult and older women were recruited through non-government organisations.

Other than these places, community leaders from informal networks were significant in recruiting women for the study. In addition, the researcher's personal and social networks within the urban setting were important in finding participants. It was observed that the latter two methods were more effective in getting women for the IDIs and FGDs than approaching formal organisations in Malé city.

Potential participants were approached and invited to participate in the study. Information was sent through emails and social networks, and hard copies were handed directly to study participants (Appendix XV). The participants were required to provide informed written consent prior to data collection (Appendix XVI). Girls under 18 years of age were required to provide signed assent forms (Appendix XVII) and one of their parents or guardians had to provide written consent (Appendix XVIII).

4.6.3.3 Recruitment process for men and community leaders

Men who participated in the FGDs were recruited through informal social networks. Two male research assistants helped recruit these participants through their own social networks. Men were recruited from diverse socioeconomic backgrounds which facilitated data saturation. Community leaders were recruited from government and other community organisations based on their expert knowledge and experiences of women's health (Appendix XIX). The majority of the community leaders were invited to participate in the study through a formal request (Appendices XX, XXI and XXII).

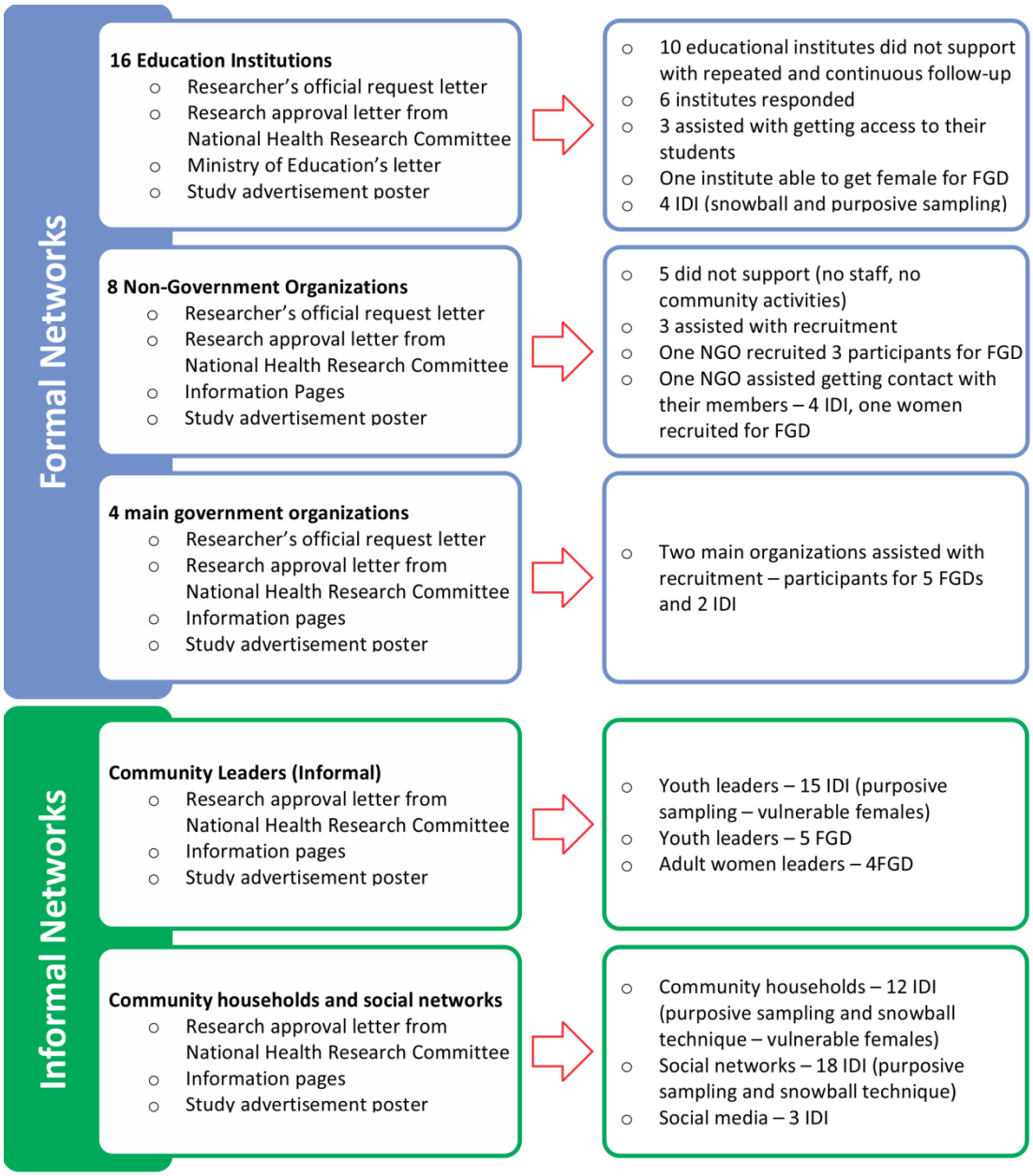


Figure 4.2 Summary of recruitment process for women

4.6.4 In-depth interview and focus group discussion procedures

Table 4.1 shows the places where IDIs and FGDs were held. Most of the IDIs and FGDs with women were completed in the Reproductive Health Centre in IGMH. Appendix XXIII shows the sample letter that was sent to get access to a room to conduct the IDIs and FGDs. For the community leaders, almost all of the IDIs and FGDs were done in their own work environment. All the IDIs and FGDs were digitally audio recorded after getting informed consent from participants and informed assent from those below 18 years of age.

One of the main strengths of the data collection procedure was that all the IDIs and FGDs with women and community leaders were completed and moderated by the researcher until data saturation was reached. This minimised the impact that the moderator might have on the dynamics of the focus groups and ensured that the questions were asked in a consistent manner (Streubert & Carpenter, 2011). In addition, the same research assistant helped throughout, except for three FGDs held in Hulhumalé.

Table 4.1 Summary of data collection locations

	Reproductive Health Centre	**Home**	**Research Office**	**Youth Centre**	**NGO**	**Villingili Health Centre**	**HulhuMale Hospital**	**Educational Institute**	**Office / Work Environment**
IDI with females	25	16	12	1	1				
FGD with females	5	1	1	1		1	3	3	
FGD with males	1		2						
IDI with community leaders		2							29
FGD with community leaders									6

Key: IDI: In-depth interview; FGD: Focus group discussion

4.6.4.1 In-depth interview procedure with women

All of the IDIs with women were conducted by the researcher at a time and place most convenient for the women (Table 4.1). Every step was taken to ensure that the interview location and environment provided adequate privacy and comfort, and allowed uninterrupted conversation and digital audio-tape recording (Creswell, 2013).

At the time of the IDI, the researcher introduced herself and greeted women on arrival at the interview location. These informal interactions allowed the researcher to build an initial rapport with women prior to the interview session (Gray, 2014, p.392). Informed written consent from the participants was taken prior to the IDIs. All the IDIs were carried out in private, with only the researcher and interviewee present, with three exceptions: one minor was accompanied by her guardian, another young woman came with her friend, and an adult woman was accompanied by her

16-year-old daughter. In each case, the interviewee requested to complete the IDI in the presence of the extra individual and none of the extra people contributed to the conversation.

At the start of each IDI, the researcher explained the interview procedure and provided women with a pamphlet entitled 'Local resources available for counselling in Malé city' (Appendix XXIV). First, women's demographic details were noted. After that, the audio recording was started, and the first question in the interview guide (Appendix IV) was asked: 'I would like to explore aspects relating to your everyday life. Can you please share with me your daily routines?' Then the conversation proceeded. It was observed that this opening question allowed women to talk freely about their everyday activities while getting comfortable with the environment and the interviewer. Women's behaviour, tone and critical elements for further inquiry were noted as the IDI progressed. Adverse events protocol (Appendix XXV) was followed in whenever necessary.

All the IDIs were completed in one sitting. The field notes compiled during IDIs allowed the researcher to be reflective and enhance further data collection and analysis processes.

4.6.4.2 Focus group discussion procedure for women

Focus group discussion participants were stratified according to women's age and other demographic details, to maintain the homogeneity of the groups (Table 4.2). Effort was also made to recruit women who were familiar with each other. This strategy enhanced the natural flow of conversation and the group dynamic, and encouraged participants to share sensitive matters relevant to other women in the community (Bryman, 2012, p.510). All the FGDs with women were facilitated and moderated by the main researcher and, for most FGDs, the same female research assistant took notes until data saturation was reached in each age category. The research assistants signed a confidentiality agreement prior to getting involved with the field activities (Appendix XXVI). There were between 5–11 women in each FGD (Creswell, 2014; Liamputtong, 2010; Streubert & Carpenter, 2011). Concurrently, reflective journals were maintained by the researcher and field notes were recorded by research assistants. The journals helped the researcher to be reflective and capture themes and other aspects important to the research as and when they occurred.

Table 4.2 Details of groups formed in the focus group discussions with women

Number of FGD	Young women	Adult women	Older women
1	Lower Secondary school students	Professionals (same profession and work environment)	Civil service staffs, housewives and labourers (same neighbourhood)
2	University students (undergraduate)	Civil service staffs and professionals	Housewives and labourers in civil service
3	University students (diploma) and youth leaders	Professionals and civil service staffs (familiar with each other)	Housewives and labourers in civil service
4	University students (Diploma)	Housewives and civil service staffs	Housewives / volunteers / labourers in civil service
5	College students (Advance certificate level)	University students (Diploma)	
6		Housewives (same neighbourhood)	

The FGDs adopted a participatory approach to mapping, scenarios, sorting and ranking exercises (Appendix IX). After recoding demographic details, 15 to 20 minutes were given for a group activity. Appendix XXVII shows a few of the posters that were prepared by participants during this time. After that, the group discussions started and were audio recorded. When there was adequate discussion on the first activity, poster and topic, the moderator directed the second group to share their activity and poster. This type of group activity and brainstorming was advantageous in getting rich and authentic information that might not have been captured from just asking verbal questions. Additionally, the process engaged the participants in the discussion and facilitated participants' control and group dynamics, allowing them to openly discuss their concerns that were depicted on the posters. The concerted efforts of these group activities resulted not only in getting some of the sensitive issues in pictorial form, but also in most women showing keen interest and enthusiasm to complete group activities. Mostly, the moderator observed, listened and facilitated the discussion, and prompted quiet participants, if necessary.

4.6.4.3 Focus group discussions with men

The FGDs with men were facilitated by a trained male interviewer and assisted by a male research assistant who took notes. Both the FGD moderator and research assistant were trained by the main researcher in the consent process, moderation of the FGD and field note-taking. The male interviewer and research assistant signed a confidentiality agreement prior to the FGD (Appendix XXVI). Table 4.1 and Appendices VII and IX shows that the FGD locations and procedure followed a

similar pattern to women's FGDs, which adopted a participatory approach of mapping, scenarios, sorting and ranking exercises. Appendix XXVIII shows two posters that were prepared by males during this activity.

4.6.4.4 In-depth interview and focus group discussion procedures with community leaders

The IDIs and FGDs with community leaders were conducted and facilitated by the researcher either in the local language, Dhivehi, or English and in the locations specified in Table 4.1. During IDIs, community leaders were presented with issues highlighted by women in different age groups and these areas were explored. Having IDIs complement FGDs with community leaders strengthened and enriched the inquiry and aided in the rigour of the qualitative study findings. For example, when it was obvious that violence against women was a major theme from women's narratives, the policies, services and programs available for women in this area were explored. The FGDs conducted with grassroots level service providers, such as social workers in the Ministry of Gender and Law and the case managers in the Maldives Human Rights Commission, illustrated how and why certain contextual factors increase the victimisation of women. This also triangulated women's narratives to highlight the gap within the social system.

4.6.5 Qualitative data analysis

Before initiating data analysis, and to maintain anonymity, the data were de-identified. The transcripts were labelled with dummy names, numbers and codes. The women who participated in the IDI were given dummy names; however, their original age was maintained (for example, Hawwa, 56 years). In the FGDs, both women and men were coded with a number, and only the age category of participants and their gender was mentioned (Adult woman, FGD #54). For community leaders, the abbreviation CL was created and a code number given (CL, #28). In some cases, the quotes from community leaders were attached with generic occupation level, to signpost the significance of their view in relation to the topic being discussed (e.g. social worker, service provider, and policy maker).

For the purpose of this study, the qualitative data analysis methods were systematic processes of inductive thematic analysis (Braun & Clarke, 2013; Gray, 2014). The thematic analysis followed the research aim and objectives of the study and was

continued until data saturation was reached (Yin, 2014). Figure 4.3 shows the five iterative and systematic processes that were employed: an initial phase of getting familiar with data; data reduction and coding; identifying and analysing patterns to develop themes; and reviewing and refining themes and reporting themes (Braun & Clarke, 2013; Gray, 2014).

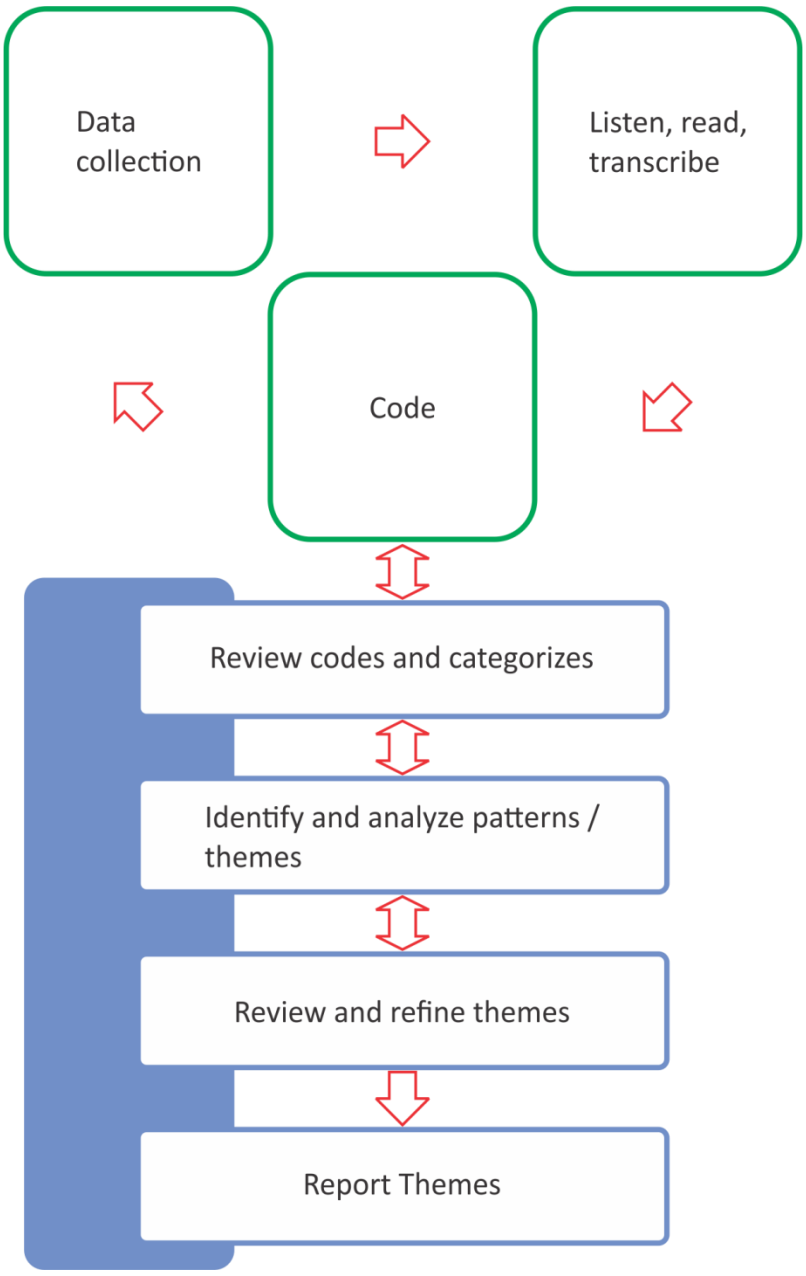


Figure 4.3 Qualitative data analysis process

4.6.5.1 Initial phase

Data collection and data analysis occurred concurrently. Upon completion of the IDIs and FGDs, a brief overview of the details summarising participants' views and

experiences were noted. Simultaneously, the audio recordings were transcribed by research assistants. The transcripts were rechecked and cleaned for errors, accuracy and voice tone by the researcher. During this process, the recordings were listened to several times.

To begin qualitative thematic analysis, the verbatim transcripts, along with field notes, were read and re-read, in order to become familiar with and feel a sense of the whole interview. While reading through the FGDs transcripts, the posters created by women were also examined to search for insights and meaning shared by women. During this stage, several flow charts and other graphic displays were manually created by the researcher, in an attempt to understand the meaning attached to women's perception and experiences.

After that, the transcripts were read line by line, and a series of opinions, views, concerns and experiences were noted both manually on the transcript and in the QSR NVivo 9 program. The NVivo program was mostly used for coding and categorising the qualitative text from the transcript, while the actual analysis was done by the researcher. During this inductive process, the perspectives and experiences of women were initially coded from the data itself, rather than by comparing or contrasting them with the literature. To minimise the researcher's bias, her own thoughts and perspectives were also bracketed.

4.6.5.2 Data reduction

The individual codes for concerns/issues/perceptions/experiences of women were then grouped into categories and were then labelled. For example, the different quotes concerning bodily abuse were categorised as 'physical abuse'. During this stage, the literature was reviewed to understand and make connections and association between the codes. This process was continued until the entire transcript were coded and categorised.

4.6.5.3 Identifying and analysing patterns

The data were then analysed at a higher level for axial coding by completing a theoretically sensitive categorisation using procedures outlined by several authors (Braun & Clarke, 2013, p.223; Yin, 2014, p.134). The categories created from the initial codes were analysed to discover recurrent and unifying concepts and

statements. These were grouped and organised by making connections between each major category and its subcategories to make sense of emerging themes. This thematic analysis was continued by constantly comparing emerging categories to each other, in order to determine their nature and significance to the objectives of the study until data saturation was reached. For example, women's accounts of different forms of abuse, such as physical, financial, emotional and sexual were grouped into one major theme of 'intimate partner violence'. In the meantime, the emerging patterns were analysed against the literature to understand the underlying issues of 'how' and 'why' women faced 'intimate partner violence'. Creating meaning to these patterns of data generated greater insight into the issue being studied (Braun & Clarke, 2013, p.224). For instance, during this process of analysis, one major underlying cause for intimate partner abuse that emerged from the data was power imbalance between the genders. The literature also supported this notion.

The multiple data sources were compared across and between age groups, IDI and FGD participants, and women, men and community leaders in identifying similarities and overlap between patterns, until major themes and related sub-themes were generated. Although this sounds like a straightforward process, this was one of the most challenging phases of the data analysis procedure. This was due to the iterative nature of the process, and the large amount of time required to get immersed in the data to find logic and meaning and fully comprehend how and why certain concerns raised by women seem to affect their health and wellbeing. These connections were also linked to men's and community leader's narratives – seeking similarities and differences in an attempt to validate the findings.

4.6.5.4 Reviewing and refining themes

After identifying major themes and related sub-themes, the transcripts and quotes were revisited to find meaningful insight into the 'story' that each theme tells, and to understand how well these themes fit with the overall aim and objectives of the thesis (Braun & Clarke, 2013, p. 233; Gray, 2014, pp.609-610). The analysis was constantly verified by the research supervisory team. Finally, the themes and sub-themes, with compelling extracts relating to the thesis aim and objectives, were used to draw conclusions and associations in order to explain the findings (Yin, 2014). Further to the process of validation, the qualitative findings were shared through a

process of member checking (Liamputtong, 2013). Braun and Clark (2013, p.283) emphasise the relevance of member checking as a processes of 'establishing the credibility and quality of the analysis'. Four oral presentations were completed by the researcher in Malé city in October 2015. Three sessions were conducted for relevant community leaders representing prominent organisations that also participated in the study, and one session was conducted for women in the community. There was general consensus among the participants regarding the themes and sub-themes, although a few community leaders seem to rationalise why inequities exist.

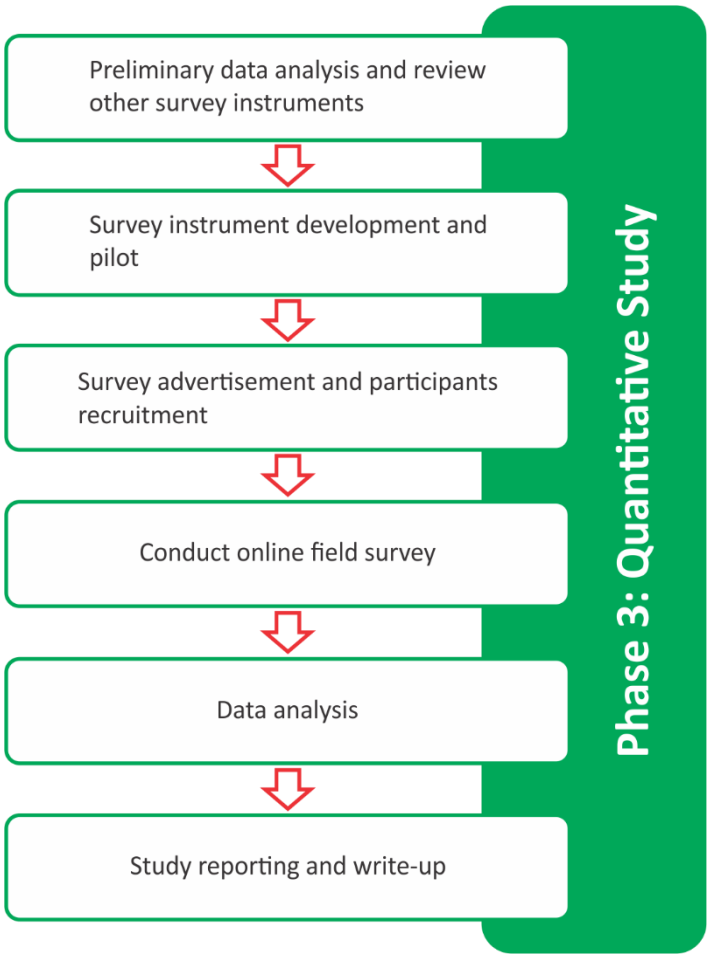
4.6.5.5 Final writing

The final stage of the qualitative data analysis involved writing the results. In this stage, the themes and sub-themes that emerged were supported by quotes drawn from participants' comments. As mentioned above, the participant details were de-identified. Every attempt was made to provide a rich, interconnected and logical extract with quotes that illustrated participants' perceptions and experiences in relation to the themes and sub-themes. The findings of the thematic analysis are presented in Chapter 5.

4.7 Quantitative study

In the third phase of the research, which was the second phase of data collection, a quantitative survey was planned, designed and administered for women from June 2013 to April 2014.Note: Adapted from Figure 4.1 (p.70) in this thesis.

Figure 4.4, a sub-section of Figure 4.1, illustrates the six stages of the quantitative survey design and administration (Czaja, 2005).



Note: Adapted from Figure 4.1 (p.70) in this thesis.

Figure 4.4 Stages in survey planning, development and administration

4.7.1 Survey instrument design

The design of the survey instrument (Appendix XXIX) was based on the aim and objectives of the thesis and some salient preliminary findings from the qualitative data (Creswell, 2014). Appendix XXX summarises the specific areas and number of questions included in the survey. Most questions were extracted from existing standardised surveys (Appendix XXXI), such as the Maldives Demographic Health Survey (Ministry of Health and Family, 2010b); the Maldives Study of Women's Health and Life Experiences (Fulu, 2007b); the Global School Health Survey (Shifa, 2009); the WHO STEPS survey (World Health Organization, 2005); the World Health Survey (World Health Organization, 2002); and the UK-based Survey on Poverty and Social Exclusion (Bradshaw et al., 1998). These surveys were reviewed and the relevant questions extracted and modified, if needed. The process of reviewing qualitative data, developing questions, and extracting and modifying some

of the standardised questions was completed by the research student with the supervisory team from June 2013 to November 2013. The self-administered survey questionnaire was initially designed in English and then translated into local Dhivehi. Expert feedback from the supervisory team was obtained for the English survey instrument.

4.7.2 Population, sample and sample size

The population for the survey was the entire female population above 15 years of age in Malé city. Sample sizes for the survey were derived from approximate population statistics of women (Ministry of Planning and National Development, 2008). Since there are no actual statistics available for females in the three different age categories (15–24 years; 25–49 years, and 50 years and above) living in Malé city, the required stratified sample size was calculated based on the total population and sex ratio of the population in the Maldives, approximated with the population of Malé island (Appendix XXXII) (Ministry of Planning and National Development, 2008). Several indicators were included in the survey; however, the prevalence of these indicators was not available for Malé city. Therefore, for estimation, the sample size was based on health service utilisation. Assuming 50% of women across all age groups accessed health services, the maximum largest sample size was calculated, and it was determined that 400 women were needed. This number was proportionated to the estimated population of women in each age group in Malé city. Therefore, required for the survey were approximately 160 (41%) women aged 15–24, 160 (41%) women aged 25–50 and 80 (18%) women aged 50years or older.

4.7.3 Data collection procedure

Figure 4.5 shows that the self-administered questionnaire was delivered by two different methods: the English questionnaire was available online through the Qualtrics program and the Dhivehi questionnaire was made available on paper, for self-administration as well as interviewer administration. A total of eight research assistants were trained for participant recruitment and consent processes and on survey administration (Appendix XXXIII, XXXIV and XXXV), prior to commencing the survey. The research assistants signed a confidentiality agreement before initiating fieldwork.

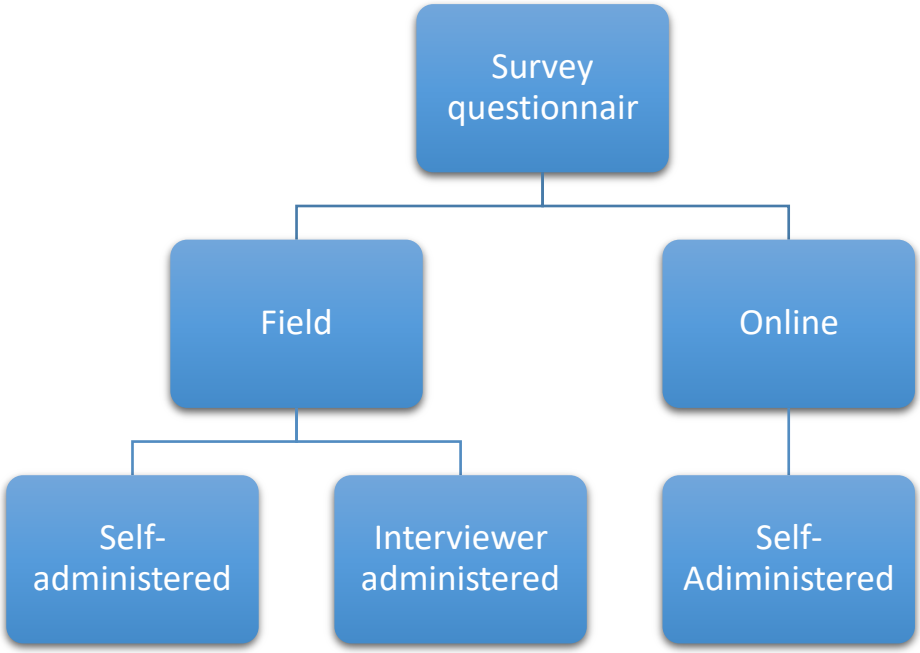


Figure 4.5 Questionnaire administration procedure

4.7.4 Pilot survey

The survey was piloted in October 2013 Malé city, to gauge the interpretation of the questions by respondents (Gray, 2014). The online English survey was piloted with 16 females through the Qualtrics program, while the paper-based Dhivehi survey was piloted with 10 females in the field. Women from different age groups participated in the pilot study. The main purpose was to evaluate the ease of completion, duration, flow, language, comprehension and clarity of the questions by respondents. After the pilot study, the survey instruments were modified. For example, the questions involving Likert scales were altered so that the response options were words rather than numbers, because pilot study participants identified that they were not familiar with the number calibration. As an example, Question 36, which asked participants to rate their level of satisfaction with health services on a Likert scale from 1 to 5, was amended to instead have the options very dissatisfied, dissatisfied, neutral, satisfied and very satisfied.

In addition, the phrasing and format of several questions were amended. For example, Question 11, which asked about participants' activities in a typical day, was initially in the original format and wording form similar to that in the standardised questionnaire (Bradshaw et al., 1998). However, women found it difficult to

write/type the number of hours they were involved with each activity. Therefore, the format of the question was altered to give a range of hours to select from.

After these amendments, both the Dhivehi and English questionnaires were sent to the Maldives Health Research Committee, Ministry of Health, for ethics clearance and expert feedback. The revised surveys were agreed upon by the researcher and supervisory team and launched in December 2013.

4.7.5 Online and field survey

Women were recruited for the survey using purposive sampling and the snow ball technique. Four main recruitment strategies were used: email, website posting, direct mail and home visit. The survey was advertised on social media, mainly Facebook, in December 2013 (https://www.facebook.com/WomensVoice2013/). The online survey was delivered using Qualtrics Survey Software and was in English. The survey link was directly sent to potential participants' email addresses and was not open access on social media to ensure the validity of respondents. The research assistants took the minors' assent and one of their parent's/guardian's informed written consent. Following this, the survey link was sent to the minor's email addresses or they completed the paper survey.

A paper copy of the survey was also made available in Dhivehi. Women were able to choose their method of participation, and most of them preferred the paper survey to the online survey. The participants who needed assistance from research assistants were mostly elderly women and those who could not understand English and had difficulty reading or writing in Dhivehi.

4.7.6 Quantitative data analysis

Figure 4.6 summarises the data analysis steps that were followed to attain Objective 4 (to explore and explain patterns in women's self-assessed health). Initially, the survey data were checked for errors and cleaned. The Statistical Package for Social Science (SPSS) software 19.0 was used for quantitative data analysis. The steps summarised in Figure 4.6 were followed in a systematic and orderly manner to predict women's self-rated health.

Steps 1 and 2 – Coding and descriptive statistics

To begin with, the survey responses were categorised and coded into 13 groups to generate descriptive statistics for continuous variables by mean, standard deviation and median values. Categorical variables were presented as frequency and percentages in relevant categories.

Steps 3 and 4 – Recoding and Chi-square analysis

For further analysis, the dependent variable, 'women's self-rated health' was examined by survey question 33: 'In general, would you describe your overall health as excellent, very good, good, fair, poor or very poor?'. Self-rated health (SRH) is a valid and reliable global measure used to predict mortality and morbidity (Furnée et al., 2008; Subramanian et al., 2010; von dem Knesebeck, Vonneilich, & Kim, 2016; Zavras et al., 2013).

The first three options (excellent, very good and good) were combined into good SRH; and fair, poor and very poor were combined into poor SRH. This dichotomous measure of SRH, combining 'very poor', 'poor' and 'fair' or 'very bad' and 'bad' into a 'less than good health' or 'poor health' category is reported in others' studies to predict self-rated health (Hemström 2005; Subramanian et al., 2010). In addition, there were few responses of very poor and poor health; thus, including fair SRH in the group divided the sample responses more evenly between the good and poor SRH.

The response categories for the independent variables were further recoded and the Pearson Chi-square test was used to detect significant associations between the dependent variable (self-rated good health versus self-rated poor health) with each of the independent variables in Box 1 (Figure 4.6) The independent variables that were associated with SRH ($p<0.05$) were identified, and these covariates went through further inferential analysis to predict women's SRH.

Step 5 – Inferential statistics

Multinomial logistic regression analysis was used to predict the association between the dependent variable SRH good health (reference category) versus poor health with statistically significant independent covariates (Chi-square analysis $p<0.05$) in 11 different models (variables identified in Box 1 – Groups 1–8 and 13). A summary of the covariates included in each model is given in Appendix XXXVI.

The broad categories included in each model were:

1. age, education, marital status, and number of children
2. work and income
3. family structure and household living arrangements
4. daily activities and roles
5. living conditions
6. diet and physical activity
7. decision making
8. health information sources
9. perception and behaviour towards health
10. perception of health services and health care access
11. perception of the barriers to health care access

Steps 5a, 5b and 5c will provide the details of the multinomial inferential statistics.

Step 5a – Univariate logistic regression analysis

Initially, univariate logistic regressions were carried out to determine the relationship between SRH and independent explanatory covariates (Figure 4.6 – Box 1 – individual variables in groups 1– 8 and 13), which measured the regression coefficient (b1) of the relative odds prediction at the 95% confidence level.

The crude odds ratios estimated for the independent variables enabled identification of those factors with the greatest impact on SRH. For each of the covariates in the group, univariate regression analysis was carried out, independently generating crude odds ratio (COR) at the 95% confidence level. A COR for independent variables < 1 suggest a lower likelihood of poor health and a COR > 1 suggest a higher likelihood of self-rated poor health, compared with the reference group (good health). Missing data of the independent covariates were included in this analysis, to ensure that all available information about the missing observations was used in the analysis. The use of both complete cases and incomplete cases is useful to calculate the log likelihood.

Step 5b – Multivariate logistic regression analysis

In this step, separate logistic models were fitted to estimate the effect of correlation and interaction between the adjusted odds ratios of each explanatory variable on

SRH ($p<0.05$). In these models (Box 1 – groups 1 – 8 and 13 [11 different models created with variables in group 1 separated into 3 different models Appendix XXXVI]) both the unadjusted and adjusted odds ratio estimates were used to show the contribution and magnitude of each variable to SRH. The missing data of independent covariates were included in this analysis for two main reasons: it minimised bias if the value was missing because of a legitimate skip; and the data set would then use all the information available, including missing observations, to calculate the log likelihood.

Step 5c – Final model

The statistically significant ($p<0.05$) covariates from the previous logistic models were put in one main multinomial logistic regression. The reason for including independent variables that were significant in the adjusted odds ratios (multivariate regression) but not in the crude odds ratios (univariate regression) is that two or more explanatory and correlated variables might cancel out in the COR but the regression would separately identify the effects. After controlling for the statistically significant predictors, most of the variables lost their significance, except for the variables that seemed to predict women's SRH in this survey. These predictors and their odds ratios were used to determine women's SRH (see Chapter 7 for survey findings).

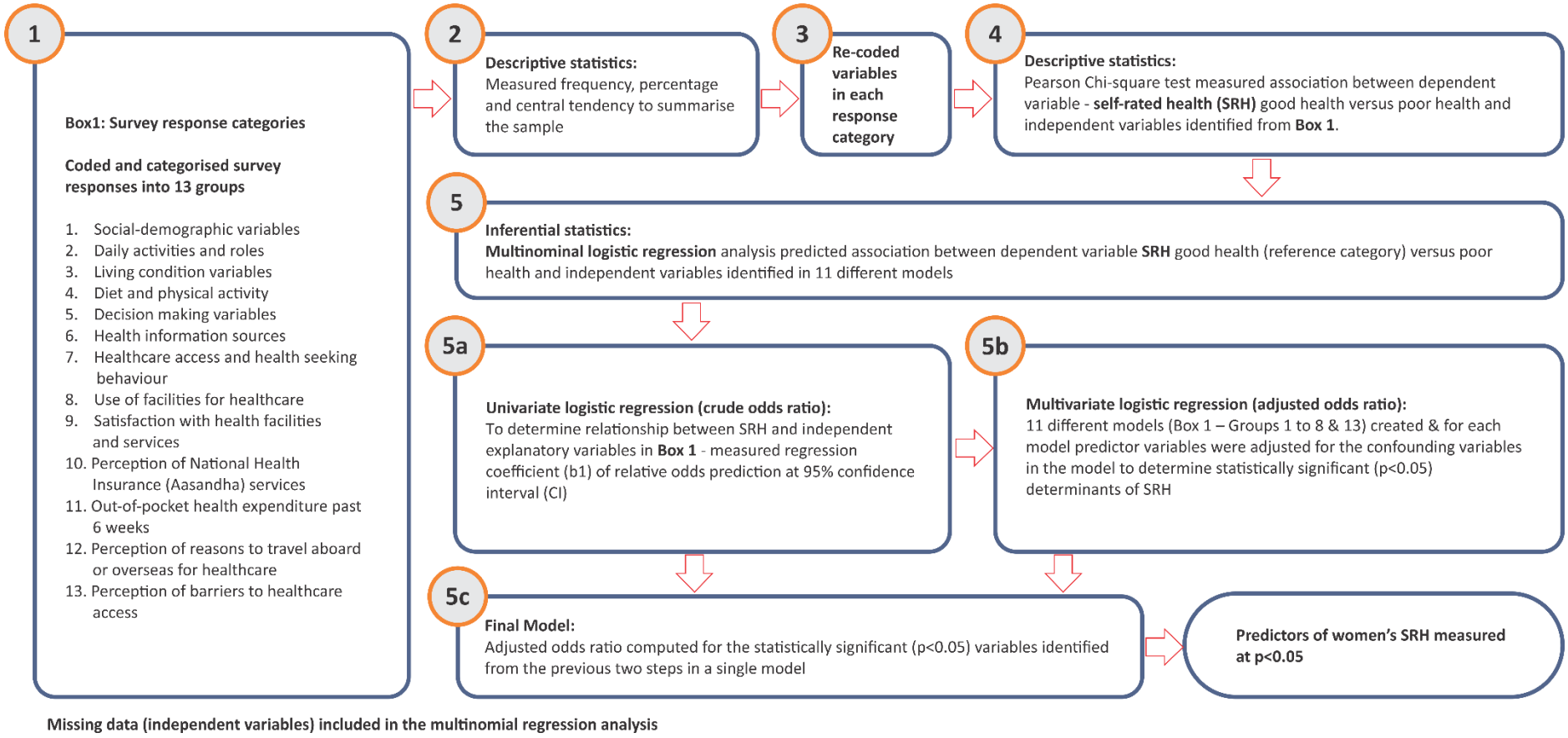


Figure 4.6 Steps in data analysis

4.8 Validity of the study

A number of techniques were used to establish the validity of this study. Figure 4.7 shows that multiple theories, methodologies, data sources, data collection methods and analytical procedures were used to triangulate the findings.

This chapter has described how the study design was developed from a comprehensive literature review and sound conceptual framework. These theoretical approaches guided the methodology, thus maintaining analytical generalisation and external validity (Yin, 2014 p.127). It has also outlined how a sequential mixed method design was used, which was initiated with exploratory qualitative research. The salient findings from the qualitative results were used to develop the survey questionnaire. In addition, multiple data sources and methods were used in the qualitative study to triangulate the findings. Women from three different age groups along with community leaders participated in both the IDIs and FGDs. Focus group discussions with men were used to converge data obtained from women and community leaders, thus creating a case study database and maintaining a chain of evidence, to increase the reliability of the study (Yin, 2014 p.127). This chapter has also described corroborating qualitative evidence from different sources, methods and data analysis processes, to enable investigation of the phenomenon within a real life context from multiple perspectives, which addresses the construct validity (Creswell, 2013; Yin, 2014). Furthermore, the different methods of data triangulation used through convergence of evidence helps to strengthen and heighten construct validity, thereby improving the overall quality of the case study (Yin, 2014, p.121 & 128).

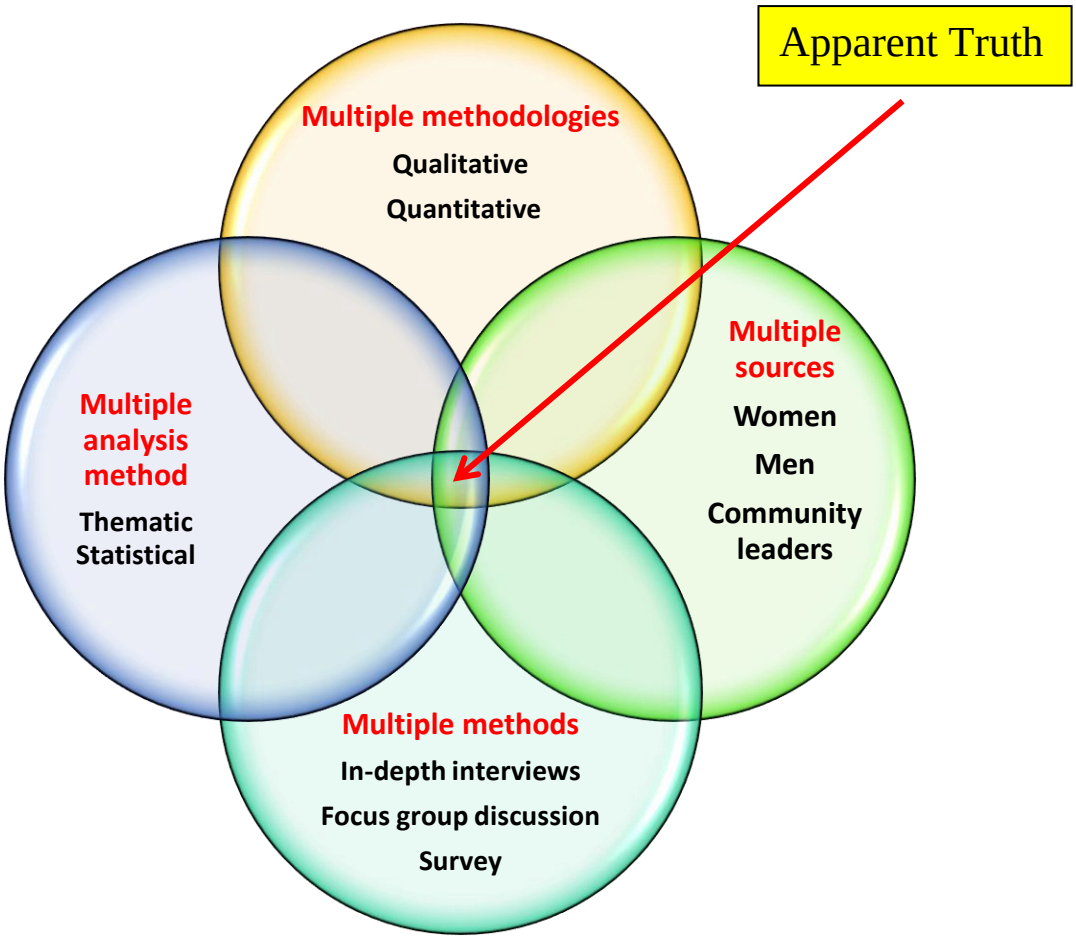


Figure 4.7 Traingulation process

4.9 Ethical considerations

Ethical approval for this research was granted by the Curtin University Human Research Ethics Committee (Appendix X) and the National Health Research Committee in the Maldives (Appendix XI). The community institutes in Malé city were officially informed and approval from them was obtained prior to participant recruitment. The organisations in which IDIs and FGDs were conducted (Indira Ghandi Memorial Hospital, Maafannu Youth's Centre, and Hulhumalé hospital and Villingili Health Centre) were officially approached and permission obtained. Written informed assent and informed consent was received from all participants.

The study was advertised on social media and in different community groups through formal and informal institutions. Twelve different and specific information pages and consent forms were prepared in English and10 of these were translated into Dhivehi. For participants below 18 years of age, separate assent forms along with parental informed consent forms were delivered for each data collection method. These

information pages, informed consent forms and assent forms were adapted from the World Health Organization's Informed Consent Form Templates (World Health Organization, 2016).

Participation was voluntary, and all participants gave written consent. Previous sections in this chapter outlined how voluntary participation was obtained and maintained throughout the data collection process. Written informed consent and assent agreement was obtained from all study participants. For those below 18 years of age, assent forms were required as well as informed consent from one parent/guardian. Study participants were given a list of appropriate available services, including counselling services, (Appendix XXIV) in Malé city.

Permission was sought to record the IDIs and FGDs by digital audio recording. To ensure confidentiality, the digital audio recordings, written transcripts and survey forms were coded and password protected. Any written transcripts were also coded and securely stored in a locked cupboard. A confidentially agreement (Appendix XXVI) was obtained from all the research assistants prior to their involvement in data collection or transcription. During FGDs, participants were assured of confidentiality and advised not to share anything discussed in the group. After completion of the thesis, the hard copies of the transcripts and field activity posters, as well as the electronic data files, will be password protected on a USB and securely stored for five years in the supervisor's office at Curtin University of Technology.

All subjects were treated fairly, and the procedures that were outlined and provided to participants in the study information pages were followed during IDIs, FGDs and the survey. Women could choose the interview and group discussion site and the method of participation (detailed in previous sections). Adverse events protocols (Appendix XXV) were used to guide the researcher in identifying women who needed emotional support and these were followed accordingly. In respecting the culture and sensitivity of the topic being investigated, the three FGDs with males were conducted by a male interviewer and male research assistant.

4.10 Summary

This chapter has detailed the philosophical and methodological underpinnings of case study research methodology and the mixed method approaches used in this

study to elaborate and rationalise the design, methods and methodology of the thesis. The chapter also detailed the procedures that were followed in developing the research instrument, participant recruitment, data collection and data analysis methods. The approaches taken to triangulate the findings and establish validity of the study were detailed, and the measures taken to ensure the study followed ethical principles were discussed throughout the chapter. The next two sections describe the findings of the study; Chapter 5 details the qualitative findings and Chapter 6 presents the survey findings.

Chapter 5 – Women's health concerns and needs

5.1 Introduction

This chapter presents qualitative result from the semi-structured in-depth interviews (IDIs) and focus group discussions (FGDs) conducted with 152 women in Malé city, which were triangulated through men's and community leader's narratives.

The overall aim of this qualitative study is to inductively explore women's perceptions and experiences of their health concerns and needs with a view to discover critical health-determining factors that impact on women's ability to maintain health and wellbeing in Malé city. The five main themes which emerged from women's account were economic stability, education, shelter and living environment, violence and health system factors.

The next section will present the demographic characteristics of the women, men and community leaders. Following that, the critical themes of the qualitative analysis will be introduced and presented. Representative quotations from women, men and community leaders will be used to illustrate the deeper insights into the meaning women assign to their health (Bryman, 2012; Liamputtong, 2013).

5.1 Demographic characteristics

Table 5.1 summarises the total number of participants who participated in each method of data collection. A total of 152 women participated in 55 IDIs and 15 FGDs, of which five women contributed in both. A total of 20 IDIs with young and adult women led to data saturation, while for older women it was 15. These numbers are considered to be sufficient to reach saturation point in qualitative research (Bryman, 2012; Lincoln & Guba, 1985). In addition, 15 FGDs were conducted with 102 women in different age groups (40 young women, 39 adult women and 23 older women).

On average, the IDIs with women took 1 hour 54 minutes. The longest IDI was approximately 3 hours and the shortest was around 1 hour (Appendix XXXVII). On average, the FGDs with women took 1 hour 44 minutes. The longest was 2 hours 18 minutes and the shortest was 56 minutes. The duration of each FGD was influenced by group dynamics and participation levels.

A total of 21 males participated in three FGDs and 55 community leaders participated in 31 IDIs and 6 FDGs. Each IDI and FGD was conducted until data saturation was reached. On average, the FGDs with men took approximately 1 hour 37 minutes. For community leaders, the IDIs averages 1 hour 48 minutes, while FGDs lasted, on average, 2 hours (Appendix XXXVII).

Table 5.1 Sources, participants and data collection methods

Participants (years)	IDI	FGD	TOTAL
	Number	Number of FGDs (total number of participants)	
Women			
15 - 24	20	5 (40)	
25 - 50	20	6 (39)	
≥ 50	15	4 (23)	
Total	55	15 (102)	152 (5 participants partook in both IDIs & FGDs)
Men ≥ 18		3 (21)	21 (FGD only)
Community Leaders	31	6 (24)	55

Key: IDI: In-depth interview, FGD: Focus group discussion.

5.1.1 Demographic characteristic of women

Table A1 in Appendix XXXVIII shows that the mean age of women was 34.3 years (SD ±14.9), with the age range between 15 and 70. Regarding education, there is a strong age effect. Most of the young and adult women had completed secondary education or above, whereas most of the older women had only a basic literary level or had only completed primary school. Of those women who participated in the interviews, 31.6% (n=12) had three or more marriages, while 23.7% (n=9) had two marriages. A total of 16.4% (n=9) had five or more children, and 21.9% (n=12) had three to four children. Most young women remained unmarried and did not have any children.

A similar percentage of women lived in nuclear and extended families (36.8% (n=56) and 31.6% (n=48), respectively), while 13.2% (n=20) resided with a single parent in an extended family and 17.1% (n=26) lived with host families constituting mainly young women. The majority of women lived on Malé island, and their mean length of residency in Malé city was 21.9 years (SD ±18.2). In terms of accommodation, 59.2% (n=90) rented and approximately 52.6% (n=80) shared living quarters with seven or more others. Regarding employment, 52.6% (n=80) were unemployed (predominantly students and housewives), 36.2% (n=55) were employees and the

remaining 11.2% (n=17) were self-employed. Approximately 25% (n=38) were housewives, 32.2 % (n=49) were students, and the remaining had professional jobs, did clerical work or worked as labourers. More than half of the respondents, 53.3% (n=81), had no income, while the rest earned on an average less than 4,999 Maldivian Rufiyaa (<AUD333) per month. Approximately one in four women earned more than 5000 Maldivian Rufiyaa (>AUD333) per month

5.1.2 Demographic characteristics of men and community leaders

Table A2 in Appendix XXXVIII shows that the mean age of men was 28.3 years (SD ± 7.3), with a range of 18 to 40 years. All men had education at or above a secondary school level. The majority (57.1%, n=12) were married, and 52.4% (n=11) had only one child. Most men were employed (66.7%, n=14), and worked mainly in clerical or administrative jobs (42.9%, n=9), while 23.8% (n=5) worked in professional jobs. Almost all men lived in Malé island (95.2%, n=20), with a mean duration of residency of 17.6 years (SD ± 13.8). In terms of accommodation, 52.4% (n=11) belong to nuclear families, while 61.9% (n=13) rented. Similar to women respondents in this study, the men shared households with a mean number of 6.5 other residents (SD ± 6.6).

Table A3 in Appendix XXXIII shows the demographics of 55 community leaders who participated in 31 IDIs and 6 FGDs. A majority, 70.9 % (n=39), of the community leaders were female and 43.6 % (n=24) were service providers who offered direct services to girls and women in the community. The rest of the community leaders were program coordinators or manager (32.7%, n=18), policy makers or politicians (12.7%, n=7) and scholars in religion, justice or law (10.9%, n=6). The speciality areas of the community leaders varied between health, gender, human rights, youth, social services, education, law, judiciary, religion and media.

5.2 Introduction to themes

Table 5.1 specifies the five major themes and their related 10 sub-themes that emerged through in-depth content analysis of the women's IDIs and FGDs.

Although the themes are presented separately, women in this study perceived that these major health-determining factors were interrelated. Women considered the fundamental aspects of a healthy life and health equity within households and the

wider community in a holistic manner, articulating the complexities and interrelationship between physical, social and psychological dimensions of wellbeing. The relationship between autonomy, power and control in decision making, and how its interfaces determined fundamental resource access to maintain health equity, were further highlighted.

The remaining five sections in this chapter will elaborate on these themes and sub-themes in the order they have been presented in Table 5.2. The themes will be enriched with community leaders' and men's quotations in attempts to compare and contrast the different respondents' perspectives.

Table 5.2 Five main themes and related sub-themes

Main themes	Sub-themes
Economic stability	Interrelationship between economics and women's health
	Gender roles, women's workload and women's economic capacity
Education	Limited opportunities for education
	Lack of effective and quality education
Shelter and living environment	Access to adequate housing
	Surrounding environment
Violence against women	Intimate partner violence
	Abuse within family and household
	Social supportive system
Health system	Health system barriers to health care access
	Health awareness and information

5.3 Economic stability

One of the major themes to emerge in this study was women's association between their economic stability and health. Women highlighted two main areas in relation to this theme: the interrelationship between economics and women's health, and gender roles, women's work burden and economic capacity.

5.3.1 Interrelationship between economics and women's health

Most women in the study considered there to be an association between their material possessions, income capacity and health. These respondents believed that economic hardship together with the high cost of living in Malé city was a major constraint on health, with deprivation of healthy food, adequate shelter, health care access and other necessities of life.

> "Money, right? If we had money we could afford to eat healthy [smiling]. Money is everything! All food items are expensive. For example, there are some who could always afford it. As for me, I will eat today and try to save money for tomorrow's meal rather than buy expensive healthy food." (Older woman, FGD, #59).

> "I am unable to properly manage a home-based income because we have a tiny space, then three children need to share same toilet, boy is turning 14, but still sleeps in the same room. Everyone is aware what issues could happen! Even in our religion by seven years we need to separate boy's and girl's sleeping arrangements. I can't alter this situation – unable to afford it! This causes so much mental distress!" (Adult woman, FGD, #54)

Often, women in this situation believed that spending their minimal income and fulfilling their children's needs superseded their own health needs. Hawwa detailed her difficult life situation as a single mother and how she survived with five children:

> "I worked as a security guard in the museum during the morning hours, and at two in the afternoon rushed from the Museum to *Naadhee* (government sports centre), and worked till seven at night. That's how I worked to live! During my spare time, I laboured in other houses, cooked and washed overnight dishes, prepared *roshi* [flat-bread] and curry for their meals, earned a good income from all different houses. They used to offer me leftover food and I brought it home for my children. That's how I survived! But I was not able to have a good meal! We lived a struggling life. My earnings were spent on rent, providing education for my children, buying children's school items: books, pencils and uniforms. A very difficult life, when we all had to depend entirely on my earnings." (Hawwa, 56 years)

Community leaders also suggested that financial difficulties in women's lives remain a barrier to accessing healthier options in life.

> "We can't tell people to eat fresh fruit and vegetables if the alternatives are much cheaper, and fruit and vegetables are more expensive. People are living from pay cheque to pay cheque!" (Community leader (CL) #28)

5.3.2 Gender roles, women's workload and economic capacity

The majority of women outlined three fundamental constraints to securing an income to enhance livelihood and health: the interconnection between gender roles and women's workload (both within the household and in the labour market); women's economic capacity and social support; and broader labour market constraints.

5.3.2.1 Gender role and women's workload

Most of the women described being engaged in multiple roles, including housekeeping (for example, cooking, cleaning, ironing, dusting, and laundry); caregiving roles for their children, husband and other household members; and earning an income. Women believed that these multiple workloads tended to drain them physically and cause severe psychological stress and physical ill-health for two main reasons. First, these caring and domestic roles were rarely supported by men. Second, neither men nor others in the society valued, recognised or appreciated their heavy work burden. Women expressed that this combination of multiple stressors and limited support from others led to physical exhaustion, lack of adequate sleep and relaxation, inadequate food intake, social isolation and mental distress. Indeed, most women specified that this was the main reason they could not give importance to their own health needs:

> "I am not able to give any importance to my own health in this hectic life! I am not able to eat properly – some days eat while preparing food or eat the children's leftovers. Even now I'm sick, very sick, but unable to give importance to my own health!" (Nazima, 46 years)

> "It's been ages since I've exercised. No time. If I want to exercise then I need to do it at midnight!" (Nasira, 51 years)

> "We also have our own personal needs other than tending to our children. Often our needs are not fulfilled, and this caused so much stress!" (Adult woman, FGD, #54)

> "The norm in this house, because my husband prefers *roshi* [flat-bread], is that *roshi* should be always available for him. Every day I have to prepare *roshi*, and keep meals ready for him. As for me, sometimes I forget to eat.

I'm sick, but unable to leave the children alone and go to hospital!" (Naila, 30 years)

Other women disclosed that they would get ill-treated and abused if household tasks were below their husbands' expectations;

"My husband would ask me to prepare meals, but then one kid might cry, I might be held back or request him to assist with the child. He wouldn't bother. Rather, he would order, "Why don't you carry him and bring me the meal!" I got more depressed, and cried a lot, when he came home each day and threw his food. "This tastes so bad! What have you cooked today? Do you always cook *garudiya* [fish soup]? Do we always need to eat *rihaakuru* [fish paste]? This taste only of salt!" Some days, in his rage, he would pour *garudiya* over my head. I needed to rush whenever he called, even if I was in the shower. He would never soothe a crying child. Instead he would scream, "Come out, stop the child!" If I was one minute late, he would smack my ankles. He has given me countless scars [shows multiple scars on lower leg]. I needed to keep his meals and water ready on table. The minute he finished drinking water, the betel nuts tray should be ready, otherwise he would get furious. By the time he finished his shower, all his clothes, underwear and socks should be ready. When I'm busy with the kids, is it possible to keep everything in order?" (Haseena, 52 years)

Community leaders and men suggested and confirmed how women performed multiple workloads within the society:

"Women cook, clean, sweep, iron, dust and do laundry every day. They cook and prepare four different meals for four different time of the day, continue earning from their jobs, take care of children, every single day, 24 hours per day, they are involved with these activities. Women need support with their daily activities!" (Male participant, FGD, #89)

"I meet several women during my community visits who say they are "not able to spare time, life is hectic, managing household and other tasks, getting crazy!"" (CL #01).

Some women believed that often after a divorce, it is these women who become economically vulnerable and suffer more. Two females described their stress as well as their single mother's economic struggles in the following way:

> "All my life I lived with my mother, because my father left me and two other siblings while my mother was pregnant. I was diagnosed with diabetes around 15 years of age. My father ceased all financial support for my medicines, so mother used to borrow money from others to buy medicines such as insulin. At that time, I became depressed and very lonely. Sometimes I felt that I was a burden on others. I was sick and, on top of that, a financial burden on others!" (Shizna, 25 years).

> "When my father knew that I was sick [thalassemia] at 6 months of age, he divorced my mother – left us and didn't offer any support. My mother single-handedly took care of me, labouring in other houses. She struggled a lot to get money for my medical treatment. Some days she cried in front of me. I tried not to show her my sorrow, but cried at bedtime" [hurtful voice] (Amaan, 18 years).

Community leaders also assumed that the root cause of women's economic struggles were related to social norms and practices that disadvantaged and marginalised women through gender-role segregation, discrimination, oppression and social exclusion:

> "I think, if two level-head people married and then get a divorce, the woman will understand it's okay, it's a divorce, I need to move on. But, when you have a family where the relationship is so unbalanced, where the women's role is to simply serve the man, to cook, to just stay at home, in that situation with that sort of mentality, when there is a divorce, it is an absolute loss for women, as far as they understand! So, it takes time for them to get back on their feet, if they ever do! Either they get back on their feet or they start to find another person to look after them. I think it is the responsibility of the state to ensure that enough awareness and avenues are in place to support women who are working, who are the head of their households. In a country, in a society where women have been subjugated, women have been

discriminated against, I think there should be some level of affirmative action taken to ensure that women do get on their feet after divorces!" (CL #12)

5.3.2.2. Women's economic capacity and social support system

The above sub-theme underscored areas of consensus among women, men and community leaders on the effects of women's work role burden on health. However, women additionally highlighted that this gender-based work segregation in the home was a major constraint for women's income opportunities. For instance, several women indicated that they ceased paid jobs to take over household demands, despite having better earnings and more stable employment than their husbands. Women in this situation believed that they suffered more if their husband's earnings were inadequate to meet the basic needs of living in Malé city.

> "Following my mother's illness there was no-one to take care of my children, so I left my formal full-time job to manage the household. I think we are living in this difficult situation because I am unemployed and not earning. If I don't have a job or income, all we have left is my husband's earning! Mostly we don't have money. Life is really pathetic!" (Nazima, 46 years)

Most of the community leaders further reinforced that the root causes of women's suffering lay within an inherent culture of gender-role discrimination, social subordination and an unsupportive social system. One community leader explained how role segregation and an unaccommodating social system collectively and unfairly marginalised women's ability to earn and its projection on women's health:

> "Even those women who worked in their early years mostly resign in their 40s. I believe it happens because their household responsibilities increase, such as taking care of elderly parents, children and household chores, and they have to make a choice. Most often its's women who have to stay home! I met this woman two weeks ago during my home visit. She was in her late 30s, managed a small private profitable business. But, she plans to quit her business to take care of her two younger mentally handicapped siblings because her mother was getting physically fragile and siblings' condition was deteriorating. Nobody in their right mind would send their children to Guraidhoo [the island with the only institute that manages mentally disabled

> in the Maldives] because of abuse. Now she is in her late 30s. Give her five more years of staying home and I bet she won't be healthy, and will complain of either a chronic headache or stomach-ache. This is the situation – there are neither institutions nor caring supportive services available!" (CL #1)

Another community leader emphasised that although women's issues were prominent at the state level, there were limited policies and processes in place to create awareness and enhance women's equal participation in the social and economic arenas, to provide women with opportunities to enhance their quality of life.

> "No, I don't think there is a system. I would rather say how our society stereotypes women into these gender roles, how women are forced to live these gender roles, at the same time work, earn money, and contribute to the economy. I don't think there is a state mechanism to ease the problems for women because they are doing both types of work: all the domestic work as well as being employed. There is a very strong belief, for example, that men should eat first, and therefore women should cook beforehand and then serve the man. So even if she is working, she cannot be working as much as a man. There are no mechanisms in place to ensure that women can take the responsibility of being employed, without that affecting her domestic life. There are no mechanisms for child care facilities. The other thing is that there are no programs for awareness, to do away with the belief that women should be heading the domestic scene. There is no awareness to promote shared responsibility. So, mechanisms, awareness, state responsibility – I think that there is a long way to go. The responsibility falls to the state – it is obliged under international conventions like the CEDAW, ICCPR and ICESCR. The state has not fulfilled its responsibility for ensuring equality for women!" (CL #12)

A number of young and adult women stated that although their future seemed bright with better education and employment prospects, women will continue to leave the employment sector if proper child care support is not available, thus supporting the above quote from the community leader:

> "I personally do not agree that girls need to stay home after marriage. But for me, I can't leave my child in someone else's care and go to work, unless trustworthy carer and environment is created!" (Shiuna, 20 years)

5.3.2.3 Labour market constraints

The third main concern identified by women was the labour market constraints and how they impacted their income capacity and overall health and wellbeing. The two main issues identified by women in this regard were limited employment opportunities and intensive working conditions. In terms of working conditions, women spoke of extreme work pressure, undesirable working conditions, precarious work, discrimination and exploitation.

> "After I stared work, life is hectic and unpredictable! Normally start work at eight in the morning, gets busy with no time for breakfast or even lunch sometimes. Formal work hours finish by three, but I need to work until four, or sometimes seven, eight or as late as 10.30 at night. My eating routine and social life has changed – I am not able go out at night. On those days, I get home early, I am so tired and usually go to bed. Five days of the week are spent in this way. Sometimes I need to work during weekends too!" (Imsha, 20 years)

> "I worked as a relief teacher, but needed to work from morning till late at night. Some days I needed to be in school until 11pm or midnight, and again start work early the next day. I was not able to get proper sleep!" (Adult woman, FGD, #58)

> "Many women ceased work because our private employer did not give us our wages. We used to roll 500 *roshi* in a single day, at a rate of MVR65 (AUD5) per day. We laboured for two and half months without wages, and then we'd had enough! He owes me MVR5000 (AUD435). He supplies *roshi* to tourist resorts. He tells us he did not get paid, but continues to do business." (Laila, 36 years)

Women further disclosed sexual harassment and victimisation within the workplace, and how these acts degrade women's agency and employment opportunities, and its consequently have adverse effects on health.

> "My sister-in-law worked as a typist in a private business. A male employee kept on harassing her, and one day he squeezed her breast. She cried so much and finally quit her job. Later on this male employee was fired due to some accounts issues. The employer asked her to re-join the company; however, she replied "You only fired him when it involved work issues, but not all those days I kept complaining about getting sexually harassed." She didn't join!" (Young woman, FGD, #56)

> "She studied with me in secondary school. After that she started work in a private business. According to her, she worked in a single cabin with a man who was a bit older. Often she had to work at night. At first he made intimidating comments and jokes, but she wasn't bothered. Then one night he raped her. She quit her job, but to avoid the shame and humiliation she didn't report him to the police at the time. Unfortunately she got pregnant. Her baby is three months old now. She just turned 18 years – she was only a child at that time!" (Young woman, FGD, #56)

This theme has focused on the concerns and needs of women in relation to gaining financial capital to maintain health and wellbeing. The findings suggest that women's health and wellbeing were closely related to their access to economic resources. The cultural norms of gender discrimination that subordinate women's agency and roles, and hinders women's access to material resources, was a major constraint to enhance economic empowerment which in turn negatively impacted on health and wellbeing. In addition, social system support limitations further hindered women's rights and ability to gain economic capital and empowerment at different stages of life.

5.4 Education

The second major theme to emerge was the relationship between women's education and health. Two main areas were identified by women in relation to this theme:

limited opportunities for education and the issues surrounding lack of effective and quality education in Malé city.

5.4.1 Limited opportunities for education

Most of the old and adult women with basic literacy and some women with only primary school education talked about missed opportunities for education and its negative consequences on their health and wellbeing. Women in these two age groups identified that certain life circumstances limited their access to formal education, such as poverty, early marriages leading to multiple marriages and divorces, and subsequent demanding care-provider and housekeeping roles. These women believed that the root causes for limited educational opportunities were related to their own powerlessness in decision making within both the household and broader society.

> "My first marriage was a result of my parent's wishes, so I had to leave school to marry at the age of 14 and a half. I got divorced from him and married my children's father, but later on that turned out to be hell! In those days, parents thought that education was not important!" (Haseena, 52 years)

Women in this situation described several disadvantages because of not having education. These constraints were related to limited prospects for adequate employment and income, disparities in getting access to health and social support services, and women's perceived powerlessness within abusive intimate relationships.

> "I didn't get an education, nor do I have an income. I am financially depending on my ex-husband and endure his continuous torture." (Waheeda, 51 years)

> "Many women believe that a women's main role is within the household, but they can't believe any other way because they haven't been educated and made aware." (Haseena, 52 years)

While considering the importance of education for their wellbeing, some young and adult women disclosed how their husbands were obstacles for further education:

> "I tried to do a Quran course. I wanted to take part in GCE O-level classes too. But my husband didn't allow me. He said, "You can't go!"" (Nasheeda, 42 years)

> "I applied for the teacher training course without even telling my husband, who was working in another island. He would not agree! I only told him after starting studies. My husband was furious. He ordered me to immediately leave the training centre and return home. He said that he does not want me to study any further. He didn't support me at all and my parents were even providing the tuition fees!" (Muna, 24 years)

Other young and adult women elaborated that even though they were given opportunities for higher education and career development, they experienced significant gender discrimination within households by parents and other family members, which narrowed their educational and career opportunities. For example, a young woman illustrated that she studied travel and tourism in secondary school for three years and contemplated working in the tourism industry. According to this young woman, she was totally discouraged by her parents to continue higher education in tourism studies, and offered alternatives that ensured she could get employment near her home and within Malé island:

> "Actually there is large discrimination against girls but not boys, especially in Malé society! Maybe they perceive it's not safe for girls. Even I feel the present society is not safe. But if we maintain our self-discipline, maybe we will be able to manage. In resorts, many people smoke and consume alcohol, but even in college lots of boys smoke, but rarely girls. But a boy will be allowed to choose career in tourism sector, while for a girl it's not safe. Anyway, if something happens to a girl it becomes common knowledge, but not when it happens to a boy. Like getting pregnant, and that kind of stuff. If a girl acts indecently, everyone talks about it, while that's not the case for boys. Unmarried pregnancy is not accepted!" (Leela, 17 years)

5.4.2 Lack of effective and quality education

Three major areas of concern were raised by young women under this sub-theme: academic pressure and discrimination, school bullying and limited school supportive services.

5.4.2.1 Academic pressure and discrimination

Most young women described several pathways by which the quality of their education gets compromised in schools and its impact on their health and wellbeing. One group of young women described that the secondary school years were extremely stressful period because their schools did not provide effective education, but expected higher educational achievement. This compels them to get additional academic assistance; however, this compromises other aspects of life;

> "The final year of school [grade 10] was very stressful. Sometimes I got fed up with my studies – there was lots to study! It was more difficult and hectic because the teacher did not explain things properly in school. I had to take tuition for all nine subjects. Tuition starts at five then continues till nine at night, sometimes on Fridays and Saturdays [weekends]. Some days I didn't get time to eat after breakfast. I seldom spent time with family!" (Sofa, 16 years)

Others revealed that because their school's focus was only on academics skills, the development of other skills and health-enhancing activities were limited. For example, one young woman expressed her distress when physical activity was limited in school:

> "From grade 8 onwards we didn't have PE [physical education]. I think it was something like "It's a waste of time. If you want to be active, then you'll have to participate in a sport". At school, there was no time allocated for PE, but I think there should be so that lazy people could also get active in some way. Initially we had two recess breaks, and this was the only time we could walk. Even that was reduced to one break because it seemed too long. Most of us sit from the moment we go to school until the end and our legs get sore!" (Fazla, 16 years)

In this way, most of the young women considered continuous hours of classroom teaching and limited school-based physical activity a major cause of psychological and physical ill-health, with a negative effect on their educational performance and overall health and wellbeing.

> "I always slept in class. I didn't pass any of the five subjects." (Leela, 17 years)

> "To tell you the truth, most girls visit the health room with excuses like a headache or some stuff like that only to skip classes, or else they hide in vacant classrooms upstairs. There is no other choice!" (Imsha, 20 years)

Within this context, some of the young women disclosed they observed and experienced discrimination, unfair treatment and limited educational opportunities based on their academic scores;

> "I have seen how much schools discriminate between academically better and poor students. In particular, those who were in the *national top ten* or those with higher academic standards get treated in a special manner, always favoured, and given opportunities to participate and perform in all the school activities. There are others with leadership talent. Maybe other students would also want to be part of it!" (Yumna, 17 years)

> "It was our final year [grade 10], but our class was labelled as failures [due to poor academic scores]. We were isolated and separated on top floor – only we were there! Teachers rarely came, gave excuses that they didn't know the whereabouts of our classroom! We didn't have curtains in the classroom, broken fans were never mended; it used to be so hot! But for us, sometimes it was fun. During class hours, we used to have singing competition and that sorts of things, because the teachers hardly came! Sadly, no-one passed their exams!" (Sheela, 17 years)

Community leaders in the education sector were asked about the above issues. They accepted that disparities based on academic ranking were happening within the school system. For example, a community leader explained that the root cause of academic pressure and limited physical activities happened because of the

educational curriculum model followed in schools that limited overall development of young females.

> "I think discrimination based on academics results does happen. One reason is related to our reporting system. From a very early age, we label our students A, B, C, D. Those who cannot perform academically are labelled as failures. We cannot bring change because, at the moment our curriculum doesn't stipulate standards, it just gives us a lot of content to be covered. It has a huge negative impact on girls' mental health and self-esteem. Label them from a very young age – you are a failure, you are a failure – and it impacts self-esteem. If you are labelled as a failure, you act like a failure. It is something very bad that we do. I don't think many people do realise that or recognise it within in school system!" (CL #23)

5.4.2.2. School bullying

Young women also emphasised that they faced patterns of school bullying by a group or 'gang' of peers in school, through verbal and physical abuse, name calling, spreading of lies or stories about them, and being isolated. The respondents revealed that the most common cause of bullying was closely connected to 'boyfriend issues'. Often, those who got bullied talked about different forms of psychological ill-health such as feeling of sadness, anxiety, fear, loneliness and being depressed.

> "Bullying is common in schools (among girls). Girls get bullied mostly due to boy issues. Sometimes we got physically shoved around. Sometimes we told them it really hurts when inappropriate language or words were used!" (Leela, 17 years)

> "I've witnessed lot of fighting during recess time. The biggest fight I've ever seen was between two girls. They were ripping each other's uniforms, pulling each other's hair – everything was so out of control. The supervisor's veil was removed, too. They fought due to boyfriend issues". (Imsha, 20 years)

Another young woman disclosed the negative effects of bullying on her physical, and emotional wellbeing, as well as learning process.

> "I started getting sad, depressed due to their loathing. I stopped going to canteen or having lunch. I didn't know what to do! Some days I left school in the middle of a session. I felt nervous … scared … as if I would throw up. Sometimes I would arrive at school and feel so scared that I would leave from another door. I would come from school, sit with mother and cry a lot!" (Sofa, 16 years)

Young women who participated in FGDs also discussed the occurrence of sexual harassment by male classmates and male teachers. Community leaders recognised that bullying and harassment issues were common in schools. One community leader outlined some health issues of young women, and recognised the gap between what is currently offered and what is optimal;

> "In particular, in relation to girls, mental health is definitely an issue. In many instances, girls get bullied. There are sexually active children within the school system, many issues related to drugs and alcohol, and so many issues related to nutrition. We haven't addressed it yet!" (CL #23)

5.4.2.3 School support services

The three main issues identified in relation to education support systems were poor canteen and toilet facilities; inadequate health information and awareness; and limited wellbeing support from counsellors, health assistants and teachers.

> "The canteen is the worst. It rarely provides clean, hygienic or tasty food, and 'short eats' [snacks] are so oily, the tissues get soaked with oil. So, everyone buys a 'Pick Fine' packet or 'Apollo' for lunch." (Fazla, 16 years)

> "I never drank water during school hours, to avoid going to toilet. I would hold the urine in until I reached home." (Rasha, 19 years)

These young women believed that they were not given adequate health information from schools, and that the existing wellbeing support services were inadequate, insensitive and inconsiderate:

> "In Maldives, schools provide very limited health awareness for children. We have very poor health knowledge. Schools need to provide health awareness for teenagers!" (Yumna, 17 years)

> "I study business, so there is no way I could get health information from school. Even if we visit the health room with menstruation pains, sometimes the "Health Miss" [school health assistant] screams, maybe because some students go there to skip classes." (Hana, 18 years)

> "Told a teacher about my personal problems after she saw me crying in toilet. The next day, all the teachers were asking me about it!" (Young woman, FGD, #17)

> "A very bad school counsellor, talked in me in a very rude manner. Don't trust those people anymore!" (Manal, 18 years)

> "I don't believe counsellors in Malé schools offer the necessary support to us. I believe they are very judgemental, because if we do something wrong, they always blame us, yell at us and force us, rather than showing us the correct way or providing advice in a pleasant manner." (Imsha, 20 years)

Although most young women agreed that the education system had a major role in determining their healthy growth and future development, there was consensus amongst respondents of the ways schools inhibit wellbeing support and its consequences on their overall development.

> "This generation is really smart – can rule the nation too! But the issue is within the education system in Malé. It's not at all functioning properly! They don't give proper attention to students and never inquire about difficulties. Because, the caring part does not exist. So even those with potential get lost. The education system needs to improve, totally!" (Imsha, 20 years)

Most of the community leaders also suggested that these issues highlighted by young women existed within schools. Community leaders from the education sector believed that one of the root causes was contemporary education policies with a sole focus on academic success, which limits the addressing of the health and wellbeing issues of school children. One community leader elaborated that this also narrows

human resources, development and training in the school health area, and reduces focus given to young women's health and wellbeing within the school.

> "Scheduled in-service programs are targeted at teachers, so what happens is the counsellors and health assistants get neglected. We do recognise that they do need a lot of professional help and guidance. Schools are supposed to have so many health policies, anti-bullying policies and others. There is so much work to do yet!" (CL #23)

Further, community leaders also suggested that social and cultural beliefs, attitudes and practices of society remain as the other major challenge to offering appropriate health information and awareness. Community leaders from education and public health sectors shared contrasting views. A policy maker from educational sector explained:

> "Our lifestyle has changed quite drastically, but with that our mentality has not changed. For sex education, for example, we get so much resistance from parents. We can't even mention it. And the schools are not very willing to confront parents and deal with that. It's the easy way out for them too! We just don't talk about it. Four years back we had the reproductive system in the science curriculum. Due to pressure from parents, the grade six and seven national curriculum panel for science decided that they needed to remove that unit. Taboo subjects, drug education and sex education! Parent's don't want to accept that their children are already sexually active!" (CL #23)

In contrast, community leaders from the public health sector pronounced that in addition to parents' sociocultural beliefs, school supportive staff's (for example, principals, teachers, health assistants and counsellors) beliefs and attitudes were a major barrier to the provision of effective school health programs:

> "Because sexuality is still taboo, parents themselves are uncomfortable in terms of expressing their sexuality and talking about it. The other thing is the tolerance levels, attitudes, and comfort levels of the teachers and health workers or whoever in the school are talking about these issues. There's lot of stereotyping if a child asks a sensitive question. The child may be labelled as somebody who was exploited or exposed to difficult or sensitive behaviour or

> information. So, teachers or other supportive staffs [school counsellor/ school health assistants] tend to be extra careful in not letting these children express and repeat the same question, and shut them up!" (CL #19)

Community leaders had contrasting views on the barriers and challenges to offering appropriate and effective health information and education for young women within the education system. However, this theme has explored and presented the multiple interlinked dimensions within the context of disadvantaged women in obtaining appropriate, effective and quality education to improve their overall health and wellbeing. Most notably, the study respondents identified critical barriers within the existing education system in Malé city, which disproportionately disadvantages young women's education potential to enhance their own health and wellbeing.

5.5 Shelter and living condition

The third major theme that was discussed by women respondents was shelter and livings conditions and their influence on health and wellbeing. Women articulated how housing conditions and the surrounding urban environment influenced their autonomy and empowerment, self- esteem and dignity, independent mobility, access to quality education, and ability to gain economic and social capital to enhance health and wellbeing.

Nonetheless, women revealed that irrespective of wealth, education or social status, Malé city's urban dwellings had detrimental effects on their health, limiting equal rights to access fundamental resources to maintain quality of life. Women identified two main elements that emerged as sub-themes: access to adequate shelter and constraints within the surrounding living environment.

5.5.1 Access to adequate housing

The majority of women in this study noted issues concerning congested households in Malé city and its deleterious effects on their health. Several women highlighted that the congested dwellings increased their workload, limited the time available for sleep, relaxation and personal space, decreased interpersonal relationships, and limited mobility, independence and their sense of security. Women from economically poor backgrounds, such as those who had no personal income or those

with lower household income, highlighted that they suffered most with minimal choices and resources to alter life circumstances.

> "I do the cooking and all the household tasks [stressed]. At night I feed the whole family – the children and all the others at home. Around midnight I finish work and able to go to sleep." (Nazima, 46 years)

> "My entire life has been spent in Malé, where entire households and visitors shared a single toilet. Children and adults always suffered from some type of infection!" (Old woman, FGD #60)

In addition, young women described the vulnerability and emotional distress associated with having insufficient space within the household. These respondents described a sociocultural context wherein they were confined within the home environment, except when in school or college. In this situation, young women identified several issues related to inadequate space such as limited personal time and privacy; inadequate space to concentrate on studies; compromised adequate food intake and relaxation; and overhearing adults and parent's conflicts. These factors were believed by young women to have negative consequences on their education, self-esteem, self-confidence and overall health and wellbeing:

> "We rent two rooms, with five people in each room. These days, there are more people because relatives from the island came for medical appointments. I am not able to get any privacy, and am unable to relax. The house is rarely empty. It's very uncomfortable. I hardly get proper meals as mother can't afford to buy food for us all!" (Amaan, 18 years)

Women who lived with host families elaborated limited autonomy and its distresses:

> "We need to continuously sacrifice our feelings and make others happy, otherwise we cannot survive here in Malé. For example, sometimes we just want to go home and take a nap. But then we need to consider whether others are comfortable with it. We often sacrifice activities such as sleeping, watching a movie or listening to music." (Young woman, FGD #17)

Women revealed that their living conditions and multiple roles meant that not only did their overall health deteriorate and their risk of illnesses increase, but that

overcrowded households augmented the fear, stress and helplessness regarding the increased risk of child sexual molestation and abuse. A number of women who lived in crowded households disclosed that they were sexually abused during childhood either by their step-father, male cousin, or men who shared living and sleeping quarters:

> "I was sexually abused from the age five until 12 by my three cousins and two males who lived in our house. They always had excuses to enter our room because their clothes were hanging in there. Some nights two of them would hold me, while the others take turns raping me, used their organs, fingers, keys, cigarettes. They came three to four nights every week. I used to cry in pain, but didn't make noise in fear. They used to threaten that they would hurt my younger sister if I didn't cooperate. I didn't understand what was happening until I was in grade 8! I always suffered from fever and urine infection. I lived in that pain and torture for seven years!" (Zaina, 24 years)

A service provider indicated:

> "We get lots of abuse cases. Most often they are sexually abused children between 5 to 12 years of age, with the majority of them girls. Maybe some of them are from other islands, but most of them are from Malé. Often the perpetrator is a family member, such as their father or brother." (CL #13)

Additionally, several married women expressed that marital stability with their spouse and their relationship with their children becomes fragile within crowded households, with limited space, privacy, personal time and interpersonal communication. Some women interviewees and FGD respondents described the severity of this issue, sometimes to the extent where married couples were forced to rent temporary day rooms for intimacy.

> "We both sleep separately because of Malé living conditions. He sleeps on sofa, while I sleep with his mother and nine-year-old nephew. We go out to have necessary conversations, as we are not able to get privacy to talk inside the house. We have been living like this for past 7 to 8 months." (Muna, 24 years)

> "Often, the husband and wife need to rent rooms for intimacy, because there is no privacy within congested households." (Adult woman, FGD, #44)

The majority of female respondents in both IDIs and FGDs believed that economically poor individuals were more likely to suffer in this regard:

> "The major problem is the lack of space and shelter! Married couples could give their children a separate room and then enjoy themselves. But their earnings are not enough. They have to pay rent, electricity bills and manage other life necessities, such as feeding their children. If they cannot afford a bigger house, couples have to manage in one single room! They must sacrifice something in life to get something else. What they sacrifice is sex. That's the end of their marital relationship! The man will start going to other women, and then the relationship ends in divorce. We usually talk about these issues with my group of friends, and we all agree that the reason for divorce is the living environment. This is a very important issue to address – there is no shelter!" (Haseena, 52 years)

> "How can husband and wife communicate when they both share a room with their children? Where do we get the opportunity? Normally, after a day's work, they both sleep in exhaustion. The husband goes to work the next morning. Weeks then months pass. Unresolved conflicts become major issues. Relationship falls apart. For example, even for me, we have a 15-year-old daughter and 10-year-old son. We have two rooms but need to provide the eldest daughter with her room. There is no other choice then to accommodate three of us in the second room. Most nights my husband sleeps in the sitting room, because our room can only accommodate one bed with a trundle bed underneath. These are our pathetic living conditions!" (Adult woman, FGD, #54)

Furthermore, women respondents revealed a sense of uneasiness, discomfort, stress and attempts to rationalise and withhold sexual intimacy while children were around or sleeping. Some women described their efforts to justify this with demanding and controlling spouses, and how it often led to marital conflict ending with females getting physically, emotionally and sexually abused. Several women disclosed

marital torture and rape by their spouse in this way, and in some instances of children witnessing parents' conflict and sexual intimacy. Consequently, women considered that one of the main reasons for marital conflict and divorce related to poor and difficult living conditions.

> "We all lived in a single room. But on Friday's when the children were at home, he might want to have sex. He would tell our three children to go out of the room. But my mind won't be set for it. Even at night-time, our three children slept on a mattress in front of us. We are not animals! I used to tell him to be patient, wait till the children leave for school. We still get enough time before he leaves for office. But he would always force himself on me. I was their mother. How can I get mentally ready for sex in presence of my children?" (Haseena, 52 years)

Although men in the FGDs did not disclose using sexual violence in this way, most of the women's sentiments in relation to difficult living arrangements and its effect on marital relationship were substantiated by these men:

> "Sharing toilets and sleeping quarters with children often lead to sexual issues between married couples." (Male participant, FGD, #89)

Apart from marital disputes, economically poor women who were involved in minor home-based income-generating activities (such as tailoring, food preparation, laundry and ironing) described multiple challenges of managing a living and home-based income within the limited space and congestion, with inadequate ventilation and lighting:

> "In one room, three children sleep. The second room is for us [married couple]. We do cooking and manage income-generating activities within this space. After meals, we clear the table then continue tailoring. Often I get sick due to cloth fibres, but we are unable to survive without doing this work!" (Adult woman, FGD, #54)

Furthermore, women in this study emphasised that poor housing conditions disproportionately affected women more than men. These women claimed that the

physical difficulties and mental worries of inadequate housing added to the existing multiple work burdens of housekeeping, caregiving and income-generating roles:

> "My husband will ask "Why are you miserable and worried?" Then I say, "Look at our living conditions. How can I live without worries?" [sad but giving a smile]. I get more depressed when I lie down to sleep with my four children in a single room. When I share my anxiety with husband, he says he is also thinking about it. When he says he is thinking, now it is 19 to 20 years! If he had been really thinking, by now he would have done something about it!" (Nazima, 46 years)

> "Women need to manage household expenditure. Women's mind gets exhausted with stress! We, housewives, work non-stop from dawn to dusk, we only experience difficulties within our living environment. Men usually go to work in the morning, so they would not perceive these difficulties in the same way. Only we go through it! In reality, there is a vast difference between how you perceive a difficulty when someone explains it to you, and when you actually face it in everyday life!" (Adult woman, FGD, #54)

Women's narratives were supported by men and community leaders, who reiterated how poor housing conditions negatively impact women's health in different ways. A man in one of the FGDs outlined multiple interlinked dimensions within living conditions and its effects on women's health:

> "I am renting a newly built place, but with tiny rooms. At night, it's difficult to sleep due to the heat. Even my wife is not able to sleep. I have wanted to fix an air-conditioning unit, but am not able to afford it. We actually spend MVR18,000 [AUD1565] per month on rent in Malé. Even for a nuclear family, it is not possible to afford! Even if we desire it, it is not possible without money. Females like to complain and these issues lead to disputes. Women worry a lot about their family's living conditions, and it could lead to illnesses, anxiety, depression, even some unpredictable worse health issues. I believe women face lots of health issues because of difficulties in their living conditions!" (Male participant, FGD, #89)

Finally, a woman in a FGD reflected upon and summarised how inadequate shelter impacts women's health in Malé city:

> "I've observed and experienced housing issues as the main concern. Our health, earning, roles in society, working outside the home, and taking proper responsibility and care of children, depend on housing. If we were able to have a relaxing and comfortable life without paying rent, we would manage our children and live happily with our husbands' earning. We could also rent our property to earn an income. But all this depends on a shelter. Otherwise, we are forced to go out and earn, and in the labour market most women experience sexual harassment and provocation from males. Mostly females [not males] go through all this abuse!" (Adult woman, FGD #54)

This sub-theme suggested multiple interlinked dimensions related to inadequate and congested housing conditions in urban Malé city and their impact on women's right to maintain health and wellbeing. Appendix XXVII shows figures drawn by female FGD respondents that illustrate issues within the living environment.

5.5.2 Constraints within surrounding environment

Women in this study also related their health to the surrounding urban environment in Malé city. The two main issues identified by these respondents were environmental pollution and the increase in crime and violence. The built environment of Malé island was described by women respondents to cause health deterioration, with "dust, noise and air pollution from traffic and construction work"; "local and foreign labourers swarming streets"; and "cigarette smoke". Women also specified that overcrowding and neighbourhood decline resulted in "unclean streets and poor domestic waste disposal" and "littering of domestic garbage on rooftops or walkways" and related how these issues affect their mental and physical health. In addition, women indicated that Malé island's congested roads, poor walkways, high traffic, tall buildings without lifts and difficult stairways reduced their physical mobility, socialisation and space for relaxation.

> "The most disturbing issue is that there is so much construction work going on. Cement dust causes lots of illnesses, especially for those who suffer from breathing problems." (Adult woman, FGD, #54)

> "It's very congested, so there are many health issues. One house after another in a row, no cross ventilation. There is air pollution, and with so many vehicles, the roads are not safe." (Adult woman, FGD, #44)

> "I rarely go out with friends at night. Mostly watch television at home although television programs are not interesting. I try not to go out because Malé roads are crowded – lots of traffic!" (Yusra, 20 years)

> "I used to visit friends, but now most of them live in high-rise apartment blocks. I am not able to visit them or climb stairs for fear of falling down." (Muneera, 67 years)

Men and community leaders also suggested that Malé island's surroundings had a deleterious effect on women's health:

> "Malé is overcrowded and congested. It is no place to rest or relax – there is nowhere to go. That's why most women stay home after a busy day of work. Women don't get nature's clean air. It's worse for women who stay at home, as they can spend 24 hours, sometimes several days, inside" (Male participant, FGD, #89)

The majority of women believed that in contemporary society, these environmental issues need to be properly addressed:

> "The government needs to regulate and monitor environmental pollution issues and take proper action." (Older woman, FGD, #59)

Apart from environment pollution concerns, women in different age groups believed that the contemporary social circumstances in the urban settlements with "escalation of crime and violence", "physical fights in the neighbourhood", "drug issues", "theft", "mugging" and different forms of harassment on the streets in Malé city, in addition to "political instability", constrained their rights to freedom and independent mobility, and increased their risks around safety and security. Women specified that the increase in crime and violence in the community augmented their fear and insecurity resulting in most of these females restricting solitary mobility in early morning hours for exercise, late night jobs, and educational purposes:

> "Drugs issues are the biggest problem in this society. Intoxicated with drugs, these youths roam the streets, mugging, stealing and looting." (Adult woman, FGD, #54)

> "There are lots of gang fights on the streets. Handbags might get snatched on the streets. We don't feel any freedom and independence now!" (Adult woman, FGD, #44)

> "I am suffering from hypertension, diabetes, and taking medicines for cholesterol. Doctors have advised me to lose weight. How could I walk? During morning hours these hooligans follow you. I was attacked twice. They followed me, wanted to sell gold chains for MVR2000. When I refused, they checked my dress pockets. I was so scared, I stopped my morning walks!" (Muneera, 67years)

In addition, sexual harassment on the streets was a concern raised by these women:

> "Often, when we walk to college or some other place we get harassed on the street. This has become very common now and is a big worry. Men ask for our mobile phone numbers and sometimes touch us." (Adult woman, FGD #44)

A number of women also mentioned political instability in Malé city and the perceived insecurity related to this:

> "Before, when we didn't have political problems, there were no fighting and chaos. I miss the time when we could walk alone on the street – the peace! There were no fighting or neighbours shouting at each other." (Fazla, 16 years)

Most women said their intense fears concerning safety and security for their daughters force them to restrict their daughter's solitary mobility on the island, to a much greater degree than for their sons.

> "This intense fear for children's safety lingers. I can't help but worry. A few days back a thug got caught within school premises too." (Nazima, 46 years)

On the other hand, several young women described how they perceived this restriction, thinking of it as confinement within the home environment. They shared their mental distress and subsequent sedentary lifestyles:

> "My mother allowed me to go out with friends before, but now it's scary. Lots of rape cases!" (Sofa, 16 years)

> "I rarely walk outside alone. There's a thug group in our neighbourhood. My father drops me off and picks me from the office!" (Imsha, 20 years)

> "I spend my whole life within my room and never go out expect for school. Very stressful!" (Leela, 17 years)

Community leaders substantiated the increase in crime and violence and its disadvantages for women in Malé city.

One community leader revealed:

> "Thirty criminal gangs operate in Malé island alone" (CL #07)

Another community leader specified:

> "Illegal drug use and its negative consequences is a major cause of social issues!" (CL #19)

In this theme, women focused on concerns and needs in relation to their housing and living environment. Women strongly believed that their health and wellbeing was closely interconnected to multiple forces within their environment, such as living and sleeping arrangements, space to perform housekeeping and income-generating work, and to issues in the broader surrounding environment. These factors were believed by women to either enhance or deteriorate their abilities to perform the multiple roles in life, marital relationships, earnings, education and mental stability. The next section in this chapter will focus of the other major theme identified by women, which is the context of violence in women's lives and its effect on their health.

5.6 Violence against women

Women's stories of being victimised and tortured through different forms of violence and abuse was a recurring major life experience and a major theme that emerged in

this study. Respondents talked about being abused by a number of people throughout their life, including legal spouses, ex-spouses, boyfriends, adult children, parents, family members, co-workers and community members. Appendix XXXIX outline different patterns of violence described by female respondents. Among all forms of violence, intimate partner violence (IPV) by a husband, ex-husband or boyfriend was the most common and severe form of abuse disclosed by female respondents and this will be the focus of this section.

5.6.1 Sociocultural context of intimate partner violence

Intimate partner violence (IPV) was a collective issue raised by the majority of women in the IDIs and FGDs, irrespective of their age, education, income, marital status or level of social support. As described elsewhere in the context of the Maldives (Fulu, 2007b), women described being victimised and abused in intimate relationships through emotional, physical, verbal, social, financial and sexual abuse.

Women believed that power imbalances between men and women (women's lack of autonomy and men's misuse of their authority, cultural privileges and dominance) tend to be the core issues leading to abuse. Most women stressed that IPV undermined their sense of worth, agency and independence:

> "I've spent 20 years of my life with his abuse [sad tone]. He was awfully controlling. In his view, it's not good to go out of house. I had to spend 24 hours a day at home with the children. He had the dirtiest and foulest mouth anyone could have. The whole day he would be verbally abusing me, calling me a bitch, a dog! He was living in my own house and abusing me with all this crude slang – just imagine that! What strength would I have? I was totally depressed! But at that time I never realised that it was depression. I felt useless, helpless. I stayed alone in a corner, away from the whole world." (Haseena, 52 years)

Women also said that men often demonstrated extreme control through jealously and persistent suspicion of infidelity, and often restricted females' mobility through scrutiny, chastisement and social exclusion:

> "If I talked with a girl, he would accuse us of being lesbians. If I talked with men, he would accuse us having an affair. Friends were too scared of him. He

was so nasty; he would even go to their house and scream!" (Haseena 52 years)

"I'm 50 years old but didn't have a contented life – I suffered from severe abuse. Once I gave a speech at the school podium due to my position on the school committee. While I was talking, my husband dashed in, grabbed my hand and dragged me out. I begged him not to humiliate me in front of others, but he dragged me home, beat me so much that areas around my body were discoloured; my mother cried when she applied medicine to those injuries. At other times, he poured boiling water over my shoulders, burnt areas around my body with cigarettes, shoved me on an iron rod, and broke my backbone. I told him to leave me, but he says "only after making sure you cannot live with another person!"" (Old woman, FGD, #79)

"My life was initially very simple, until I started dating him at 15 years of age; then he started controlling me! I had to spend all my time at home or on the phone talking with him. I had to carry my phone, even when I went to school. I was so controlled! I was unable to leave the house, meet any friends or participate in extra-curricular activities, because of his disapproval! If someone called my mobile, he shouted so much. He set up my phone so that all calls were diverted to him, too. Whenever I got a call, needed to always make it a conference call, otherwise he used to get suspicious. I mean, he didn't trust me at all!" (Sara, 17 years)

Although there seems to be suspicion from men, the majority of women disclosed how their husbands' sexual promiscuity, extra-marital affairs and polygamy fuelled violence:

"If I asked him about his affairs, he would scream and use filthy words. When he got furious, he wouldn't care where he hit me – he would beat me in front of the children!" (Naila, 30 years)

"When I asked him why he goes to other women, he got furious, stretched his legs kicked my back. I cried in pain "you broke my spine!" After many years of abuse, he married another woman – how could I willingly have intimacy? But, he would use so much force, often twist fingers. I dared not make any

> sound in fear that the children would wake. Even if I refused, he would force himself on me, only to satisfy himself!" (Waheeda, 51 years)

These women revealed that men often blamed them for making the man take a second wife. Almost all women in this situation described that after taking additional wives, men treated them and their children unfairly and unequally, giving them limited time and material resources.

One woman described the reason given by her husband for his second marriage:

> "He said that it was because of me. I was disobedient … didn't do as he asked. He asked me to resign from my job and move to his island. Who will take care of my [sick] mother and family if I resigned from my job? How could we survive? After he married her, he rarely visited us, spent time with children or provided necessities." (Heena, 41 years)

> "He was a very ruthless, abusive person, but I lived patiently. He used to physically torture me, and later married another woman. Actually, he married three other women while married to me! He totally ceased coming to my house. I lived patiently for five years only for my children. Told him to divorce, but he refused. Kept me in that agony! Then one night he just came and divorced me – that's it! He promised to take care of me till I die, but didn't offer a single *laari* (coin)! I was totally shattered at the time, because we were married for 34 years. Anyway, later on I worked hard to provide an education for my eight children." (Moomina, 70 years).

Women also stated that they often encountered financial abuse with men's attempts to control women's property, assets and earnings. Some women in this situation revealed that abuse continued in these relationships despite getting their assets transferred:

> "I bought him seven mobile phones, two laptops, a large computer system and last month an S3 phone for MVR10,000 (AUD667). At that moment, he was very considerate, but then he totally stopped calling me and spent time with the other woman. Imagine my sorrow! Even last month he promised to

marry. I spent in total of MVR790,000 (AUD52,666) on him. I kept note of all the expenditure, so there is evidence!" (Old woman, FGD, #79)

Non-complaint women often indicated how they were ill-treated in different ways and finally got divorced in a socially humiliating manner:

> "When I got a share of property from my mother's land, my husband wanted that house. But that's not possible! I can't give my land! I've seen the inhuman way people get treated following land transfer. Anyway, we were married; my house belonged to him too and ultimately to our children. When I refused, he started treating me very badly, physically beating and torturing me. In my own house, I was not able to enter my own room to sleep. Actually, I stopped going into the room to avoid confrontations, as he would start a fight and I didn't want my children to see all that. After about four years in that torture he told me that he wanted to get a second wife, and bring her to my house. I told him that he can marry if he wishes, but the house was mine so he couldn't bring her. After that I encountered more severe torture, but patiently tolerated it for years. He would beat me and sexually force himself on me in the most pathetically humiliating manner. Until one day, when I was asked to attend family court, and where I was told that he had divorced me three months back. I felt dizzy, unsteady on my feet!" (Zameera, 56 years)

One woman recounted how her husband's attempts to control her earnings, and the abuse that followed when she finally decided to hide and save her earnings. She indicated that she was brutally attacked in front of her children.

> "Whenever I earned some money, he would find some excuse to take it. Finally, I hid my earnings on purpose, so that I could survive with my children after divorce. Otherwise I would have had to beg, too! He would never allow me to have cash. When he found out about those savings, he pushed his hands inside my mouth, pulled out my uvula with his finger and said "Tell me your bank account number!" I didn't tell! He pushed his hands further inside my mouth and told me to tell, otherwise he would "pull out the uvula". But I didn't tell!" (Nasheeda, 42 years)

Indeed, women in all age groups consistently raised concerns about the insensitive way some men treated them and their children during marriage and after getting divorced. Women believed that one of the main reasons women and children suffered throughout life was men's negligence of financial, emotional and social responsibility. In this way, the most commonly cited issues were material and emotional neglect.

For example, one old woman shared how her husband abandoned her and their five children and moved to another island. After that, she was forced to single-handedly manage the household, earn and provide for the children's welfare and education. She articulated her present illnesses of diabetes and hypertension as a consequence of her lifelong suffering:

> "One day I came from work and found that he was packed to leave, just like that, back to his island. I was blown away! Without mentioning anything he just left. It was so hard to bear! I cried non-stop inside the toilet; my eyes got sore. Was it my fault? I cried all night. The next morning I sent the children to school and went to work. I was alone for years, even during the children's sickness. I lived in constant misery! I had lots of financial difficulties, and borrowed from others. He didn't offer us money, or want us to call him. He rarely visited us, and even if he visited, he wouldn't stay the night. He was my husband. I too needed a sex life! My youth was wasted in that way – imagine my sorrow! If I asked him to stay, he got angry and he physically tortured me. Unable to communicate! If someone asks me about him, the words can't come out of my mouth. They get stuck in my throat. Only tears come" [sad]. (Mariyam, 55 years)

Women further recalled men's violent encounters that involved the destruction of their property, such as kitchen items, and the ripping of their clothes. Two divorced women explained:

> "For years I tolerated his cruelty and abuse! During one Ramadan after an argument he emptied all the dishes onto the ground. I ran in fright to a neighbour's house because he was throwing dishes and plates. The neighbours offered some food for children's breakfast. I wrote letters to different places to get books and uniforms for all my children – he wouldn't

have had any idea how I got it all! During stormy weather, when the sea is rough, I used to ask him to bring the children from school, but he never assisted. Helpless, I pleaded with strangers who travelled on the ferry (in Villingili)! I survived such agony!" (Nasheeda, 42 years)

"It was usual for him to rip my dresses in his fury, even while I was wearing them!" (Waheeda, 51years)

Others indicated that if they crossed any of the boundaries set by their husbands they get not only physically tortured but also socially humiliated. Three women who were divorced at the time of the study explained about their husband's abuse in the past:

"I gained weight, at last weighed 85 kilos. One night I went out jogging, and in the middle of the street he ripped and tore my t-shirt. He made me nude in the middle of street!" (Haseena, 52years)

"He didn't want me to continue nursing studies, but it was the last weeks of practical so I went to the hospital. While I was loading an injection, he just barged in, grabbed my hand and dragged me out. I begged and pleaded him to stop, due to my hurt and humiliation. Under the hot midday sun, he dragged me on gravel roads in Malé. People followed us. He didn't stop; rather he kept on screaming verbal abuse. Finally, I fainted. He brought me home and tied me on the bed with a rope!" (Majida, 49 years)

"I have lots of friends from school days, and most of them are in high positions now. One day a respected male friend greeted me "How are you?" In front of that person, my husband started, "Oh! You keep giving signals from your eyes, hands, feet and flirting, why don't you just leave with him!" I was so humiliated! He wouldn't hesitate to start even on the street. That's the main reason why I stopped going out at all. How could I dare show my face to others?" (Zameera, 56 years)

Several women described that, despite suffering from abuse, they lived with these men for the sake of their children, as they believed there were no other means to financially support them. Others feared for their lives. Victimised women connected divorce to their social context and their economic vulnerability:

> "Normally, Maldivian men would not support their children after a divorce. That's why I tolerated life with him for years. I decided to leave him the day my son started earning and when I was certain there would be some support for my family. After filing for divorce, I was returning home from court when he came from behind and pushed me to the ground!" (Haseena, 52 years)

Similarly, several other women described how they feared for their lives, and the physical and social implications of divorce:

> "He divorced me, but didn't leave my house. I had to go to family court on four occasions and when the red notice was placed on my door he left. But the abuse did not stop. He followed me on the street yelling, "I have your naked pictures in my phone, I am going to expose them and humiliate you!" (Waheeda, 51 years)

> "I went to court with my mother to file for a divorce. He threatened me outside court, saying that he would give me a *luti* (retaliation) and never let anyone else have me. That night, while I slept on the ground, he suddenly jumped on my back, held my hand, pushed a cloth inside mouth and tried to kill me! I struggled to breathe, then looked up to see our little daughter watching from top of the stairs, fearful! [crying] Finally, I bit his hand, and ran for my life. By the time police arrived, he had run away. He told police, "I treated her like that because she refused to have sex with me." (Zulaikha, 34 years)

Several women stated that men excused their violence through a female's refusal to have a sexual relationship, and often society stigmatised, labelled and blamed females for domestic violence.

> "My father blamed me for my husband physically torturing me, which happened in front of him." (Haseena, 52 years)

Women of all age groups consistently described the profound effect of IPV on their physical and psychological wellbeing, even after leaving the relationship:

> "At that time, I was not able to talk like this without crying. I might have started shaking and shivering over very simple matters. I was very fearful; all my limbs get cold, numb!" (Nasheeda, 42 years)

One woman recounted her panic attacks whenever she sees her ex-husband on street:

> "I get scared, and my legs start to shake. I walk away hastily, and hide from him!" (Zulaikha, 34 years)

In general, these women indicated fear and mistrust of men as the main reason why some of them remained single for years after getting divorced from an abusive husband. Although the FGD female participants talked mostly about women getting victimised through IPV, some of them also highlighted that they were aware of men and children being abused by their wives. As this was identified in the FGDs, few women interviewees talked about physical aggression towards their husbands; however, they rationalised it as a mode of self-defence in the context of being abused.

5.6.2 Social support system

Several women identified barriers within the social system. These included negative experiences of services and/or support networks, and their perception of getting discriminated against and victimised by the services in favour of men. Some women who accessed support services described how they got penalised, blamed and stigmatised by service providers, while not getting fair treatment. For example, two young women who got date-raped by boyfriends believed they were unfairly treated by service providers. One young woman who indicated that she was date-raped disclosed self-harming behaviours following the rape and her attempts to commit suicide to avoid the social humiliation of being unmarried and pregnant. In addition, during the interview, she talked about how her feelings of vulnerability and loneliness, social humiliation and poor social support compelled her to self-harm:

> "At first when I went to the police station I was very hopeful that they would investigate the case, and that it would give some comfort. But it did not happen; nothing happened. I did not get any help or support from them! I think there is no-one in this world who understands [respondent crying]. I feel like doing something. I feel that the baby will be taken care of by relatives, so

> it would be okay even if I die. During the pregnancy, I consumed bleach; later, I tried again but did not have the strength. I called and texted a police officer to say that I was finding things really difficult. That I was thinking about harming and killing myself. She told me that I would be killing my own child too." [crying] (Zoya, 18 years)

Another woman who was suffering from life-threatening abuse from her ex-husband believed that the law enforcement authorities were biased and favoured her perpetrator:

> "My ex-husband pressed a blunt knife against my abdomen, and asked me whether I would marry him. I said, "No, even if you stab me". He went on pressing it harder and harder, and finally threw the knife, snatched my house keys and left in fury. I reported the matter to police and filed a complaint, but I was asked to attend only one day. Police seemed more lenient on these complaints. Whenever I make a complaint about his abuse to police [on four different occasions], his side always wins. The police tell me I don't have a witness!" (Waheeda, 51 years)

Another older woman described her encounter with the legal system in her attempt to get divorce from her abusive husband. When asked her why it took two years to settle the divorce, she replied:

> "The court didn't allow it, but I continued writing letters. The magistrate asked me to bring a witness who could provide a statement about the abuse I went through. I told him I have people as witnesses to the abuse. He said not people, but a government statement, or complaint. I said that it was the first time I had been to court, how could I produce such a document. Ultimately I paid MVR2000 (AUD133) to someone and that person assisted in writing a letter explaining everything that happened in my life." (Haseena, 52 years)

Although the above encounter happened some years back, women who had attempted to get a divorce more recently described a similar situation. A young woman in a FGD described the legal constraints she has observed:

> "My friend went to court to get a divorce from her abusive husband who does not earn any money, drinks alcohol, beats her and lazes around house. They have two girls: a two-year-old and a eight-month-old. My friend's mother pays for the children, her husband and their rent. That's why this man does not want to divorce her. He doesn't want to work and it's easier to laze around. But my friend wants to leave him and start a better life. Every time she goes to court, they give her a timeframe of 15 days and ask her to wait. It's as if seems she has done some crime! It's been months, yet she is still struggling back and forth to court, and suffering his abuse!" (Young woman, FGD, #54)

Apart from legal system issues, some women believed that there were also constraints within welfare support services. Two women described their perception of the single mother's allowance provided by the National Social Protection Agency. A divorced woman who had basic literacy and no means of any income, but was taking care of four children while going through her ex-husband's abuse explained:

> "It's a long procedure to apply for single mother's allowance. I've checked it already, it's really complicated! You need to mention household expenditure, electricity bills – very complicated! You also need a divorce certificate, that's why I am not able to complete it! It's been around nine years since he divorced me. To get the divorce certificate, we needed to pay, and I didn't have money at that time. The overdue fine for the certificate will cost around MVR5,000 (AUD333) now!" (Waheeda, 51 years)

A young woman believed that negative attitudes towards single unmarried mothers made her feel undervalued, disrespected and excluded from the welfare system:

> "It is for those people who are divorced. I hear people say that if it's open to anyone then everyone can go on having children. That's why I think why should I apply? Somehow I will try to take care of my baby too!" [crying] (Zoya, 18 years)

Community leaders further suggested that the intersecting structural and institutional barriers make it more complicated for women victims to respond to intimate partner abuse. One of the critical factors identified by nearly all the community leaders was

that gender imbalance within the social and cultural context that disadvantages women's agency in all aspects of women's lives:

> "Although women are educated equally with men, in reality, culturally, the Maldives is largely a male dominant society, so it affects women's decision making. Although women are educated, they are not aware of their role in society and their decision-making power. Women's capacity is still very limited!" (CL, FGD, #05)

> "One of the biggest challenges for women is that even though they have information they are not empowered enough. They don't have the power to initiate protective measures or the power to negotiate (safer sexual practices). One aspect is the culture; another aspect is a lack of skills – a lack of understanding of their roles and how they are seen in the community, because they have been always seen as those with lesser power. Women are perceived as a group that men can access to fulfil their sexual needs!" (CL #19)

Most community leaders recognised that these interlinked factors and limited support services inhibit women victims' ability to report abuse and access institutional services. A service provider further elaborated:

> "There are very limited supportive resources for victims of domestic violence. There are a handful of counselling services, but they're also not functioning at the moment, and psychologist fees are unaffordable. Many women who go through domestic violence wants to leave their abusive husbands; however, they depend on them, because there is no other way to take care of their children, or to get money. Women are trapped!" (CL, FGD, #5)

A service provider who dealt with victims of violence reported the constraints in providing effective services to victims:

> "Often we come across severe physical abuse, not only between married couples, but even between those in intimate relationships. It's really upsetting and uncomfortable for these women when they have to go through the same triage as others who visit the hospital emergency department. We want to do

> therapeutic work, but we don't have the facilities or a supervisor to monitor our work and cases, so we refer all cases to Ministry of Gender. Initially, these victimised women share everything with us; afterwards, they need to tell the whole story to someone else in the referral centre. Women find it difficult to go through all this, and plead with us to get therapy from our place. Most women get very upset when we refer, because they don't want their families to know about it, or maybe they are fearful of escalating torture if the perpetrator knows of it. Most of them do not want to file a case. We are not able to follow-up these women, because we have a shortage of staff." (CL #13)

Several other community leaders talked about limited services, challenges and weak collaboration between authorities working in the area of domestic violence, while another community leader addressed a system where there is limited support for IPV victims:

> "Gender-based violence, sexual abuse, and child abuse is on the rise. These issues are significant, but we are not able to adequately address them through national programs. We do not have a system to address these issues. We are talking; still we are talking [said in an ironic manner]! For example, for a gender-based violence system, we don't have a proper system for screening from the health sector, a surveillance system or a proper mechanism to provide shelter for the victims of violence. In a country like the Maldives, there are other environmental issues, such as housing, urbanisation and migration. All of these things affect violence. So, it is not only one or two sectors that can establish systems or mechanism – all sectors should be involved. For instance, these issues are connected to congested housing. Therefore, the housing and health sectors need to work together. But at present, these are two separate entities. It will take time to plan and implement strategies to solve these issues … (CL #11)

> "In the health master plan, we have components specifically for women's health. If we think of a social aspect, then we have a separate ministry who takes care of … has to take care of women's social issues and other issues that actually effect on women's health. For example, gender, gender-based

> violence, disabilities and social welfare. And so there are various sectors and segments of the government that need to and that are supposed to look after these areas, so there are policies! … There is a gap between what they understand and believe and what is actually done in practice." (CL #11)

In addition to sharing about IPV, several women discussed abuse happening within the household by parents and family members. These areas have been explained in sections 5.3, 5.4 and 5.5.

This theme highlighted the magnitude and multiple dimensions of violence against women in Malé city. Women identified that the context of abuse closely related to the cultural attitudes, and social systems that unfairly benefit men, while disproportionately disadvantaging women's equal rights to prevent and protect themselves from getting abused and also to seek support services. Women also believed that the long-term consequences of IPV is profound – it impacts their physical, emotional and social health, and it has negative implications for women's agency, independence and rights for health. The next section will present the final theme of this qualitative analysis; women's concern about the health system, particularly around factors preventing appropriate health care access.

5.7 The health system

The theme of health system barriers to health care access emerged as a strong theme. The majority of women described various entry points to the health care system and their search for formal health care modalities. The two major sub-themes that emerged were health care access and health awareness and information.

5.7.1 Health care access

Women in this study experienced several health conditions including diabetes, hypertension, reproductive tract disorders, musculoskeletal disorders, respiratory disorders, mental health conditions and other general health issues such as seasonal flu. In getting care for these ailments, women indicated that they mainly used formal health care services. In this way, three main areas constraints were identified by women: health care access barriers, dissatisfaction with doctor–patient interaction and services, and mistrust of local health services.

5.7.1.1 Health care access barriers

The main concern raised by women relating to health care access barriers were difficult doctor's appointment systems, inadequate numbers of specialist doctors, a shortage of necessary medicines and medical tests, hospital bureaucracy and the cost of services. Women emphasised of the difficult appointment systems:

> "What health services do we get? [said in a frustrated tone]. It's so difficult to consult a doctor. Even if we try for a month we are not able to get an appointment. Some days come to IGMH early in the morning at 4am or stay 24 hours to get an appointment token. Finally, when we come for consultation, the doctor won't be there!" (Zameera, 56 years)

The adult and older women discussed this barrier more often and in greater detail than younger women.

> "The most stressful issue is that there are no doctors and we are not able to get necessary medicine!" (Adult woman, FGD, #54)

> "The population is increasing in Hulhumalé. Compared to that there are no doctors. Isn't that an issue? How can we travel to Malé for all our basic health needs? We also get sick!" (Old woman, FGD, #59)

Men compared obtaining a doctor's appointment to performing a "major battle" of "Umrah" [religious pilgrimage], thus demonstrating women's concern:

> "Even if services are free of charge, doctors are not accessible and services are not available in hospital." (Male participant, FGD, #89)

Women further highlighted that mental health care remains limited:

> "I have to say that in Malé health services do not exist. Psychiatric consultation services do not exist! Totally helpless!" [desperate tone](Shahula, 49 years)

Hospital bureaucracy was also mentioned as a barrier by some of the adult and older women; however, the young women rarely mentioned it:

> "I went alone to the hospital to get my eyes checked. It was really difficult to get access to a doctor and didn't know my whereabouts or hospital procedure. Finally, I started crying!" (Raziyya, 64 years)

Men believed that women often needed their support in this matter:

> "Men play a major role. Women do not dare go alone to a doctor's consultation. By nature they are shy, so they want to visit a doctor with their mother or a family member, but preferably their husband. If her husband does not accompany her, she might get frustrated and not bother about her own self or her illness, and will not visit a doctor. Women are very sensitive!" (Male participant, FGD, #89)

To a certain extent this view was also supported by women who indicated that their husband's support was necessary in seeking formal health care:

> "I discontinued my follow-up doctor visits although I was diagnosed with uterine cancer because of my husband's mistrust, refusal, and disapproval to undergo surgical treatment in Malé. He desires for a child." (Sakeena, 51 years)

> "I repeatedly self-medicated, and followed home remedies for chronic vaginal and chest infections, mostly due to my husband's attitude towards illness as a "natural phenomenon", and disapproval of me seeking formal medical treatment." (Raheema, 30 years)

However, most of the single and divorced women rarely mentioned the absence of a man in life as an issue for health care access.

The cost of treatment was a concern for some women, particularly those who had minimal income. These women described how they delayed or discontinued medical treatment, searched for alternatives or relied on self-care. For example, girls and women often mentioned, they visited the pharmacy, told staff about their problems and then asked for medicines. These respondents stressed that self-medication was a common behaviour used for temporarily symptom relief. Almost all women who had dependent children emphasised that the needs of their children always superseded

their own personal health care needs, and that chronic unattended physical illnesses and their consequences remained a major worry and stress for these women.

The majority of community leaders recognised that the contemporary health system offers limited health care services for the female population living in Malé city. For example, while talking about maternal health services, one community leader remarked:

> "Right now we are talking about three islands, vastly and heavily populated. Most people from the outer islands migrated to Malé, Hulhumalé and Villingili. Health services are inadequate. We need better structured services than small clinic like RHC in IGMH which is limited to 30 or 40 people at any one time. Health services are so limited that most people actually delay without consultation." (CL #14)

5.7.1.2. Dissatisfaction with doctor–patient interaction and services

Although the formal health system was preferred and used by women in all age groups, respondents recognised that there was a lack of respect, concern, compassion and care, and poor communication for women by most doctors in local health facilities. The following quotes capture the concerns expressed by women:

> "Doctors could at least share their opinion, but they only give us a prescription and send us away; hardly any explanation is given nor investigation done." (Adult woman, FGD, #54).

> "IGMH doctors, or doctors in other places, don't know anything. Nowadays, they don't even use the stethoscope. Sometimes if we complain about fever, they ask "How many days and nights, is there any vomiting?" I would say "No", and then they would ask, "Do you feel like vomiting now?" I would say, "No". That ends the consultation!" (Sakeena, 51 years)

> "I get really scared to get a doctor's consultation when my blood sugar level fluctuates. The doctor shouts so much, makes us cry. Doctors always blame us that we don't take care of ourselves." (Zameera, 56 years)

Most women suggested that they desired respect, compassion and consideration from doctors. These women believed that doctors need to be friendly, and listen and address women's health concerns, to improve the quality of health services:

> "Health care services need improvement in the Maldives. These places are not good. The services are provided in a very inconsiderate manner. Nowadays the public, most people, are educated, and have lots of information. Patients might sometimes give their opinion and voice their concern. But unfortunate events often happen due to poor relations between both parties, because one party [health providers] remains silent!" (Muna, 24 years)

> "I suggest all doctors need to thinks of their patients as friends. Talks and make conversation during consultations. Maybe, only then could patient easily tell the doctor about their problems. But now what happens, when we complain about pain, is they just write a prescription for medicine. Instead, it would be better to keep the relationship 'open'. If it's an 'open' relationship before writing a prescription, they could find out our problems, concerns, location of the pain, duration of the problem. But doctors are very unfriendly, how to say it? The way we feel when we talk with strangers, we have a similar feeling when we visit doctors. They don't care to the level they should! Doctors need to make eye contact and talk! Most doctors don't do that!" (Naila, 30 years)

Women often compared the health care services they received from local health practitioners with those that they received overseas, claiming that they desired compassion and care from their service providers.

> "Actually it's not Aasandha (National Health Insurance Scheme) that should be initiated in this place – they should bring better qualified doctors who could communicate with their patients! There is a huge difference between local doctors and the doctors we meet in overseas hospitals. When we enter a local doctor's room, they say "What's wrong? Sit down, are you having a headache", then write a prescription and they would leave. They don't communicate properly, the way it should be between patient and doctor. I've never experienced such interaction with doctors from aboard. When we sit in

> the chair, they pat on the shoulder and ask "How do you feel today?", or "Good morning, what's wrong?" When we explain our condition, they would explain why the problem happens. In that way, they explain a lot!" (Haseena, 52 years)

Women revealed their frustration and reluctance to seek health advice and assistance from services where they had previously experienced negative interactions. Alternatively, these women detailed how they used private and overseas health services despite the cost, while those who could not afford these alternatives described how they delayed or discontinued health care for themselves:

> "I usually go aboard for medical reasons because other countries have been far better services in these areas (lung diseases)." (Khadeeja, 70 years)

Men also noted that satisfaction and timely health care access were the reasons that women travelled aboard or seek health care from private providers. One male participant remarked:

> "The culture in Maldives is that even before getting diagnosed, medicine will be initiated for assumed diseases. When we enter a doctor's room, they will first write a prescription. What happens aboard is they first diagnose the disease, and only after that start medications. But in Maldives, no-one could leave doctors room without a prescription. For a scan, we need appointment, and often have to wait for one month or so. A woman might have stomach pain; she might have a tumour, or cyst, and in one month it would have grown. The service she could afforded at 150 or 300 rufiyaa (Maldivian), end up costing her 1000 or 2000 dollars US dollars (if she was to travel overseas for health care access). Actually, this place does not offer these health services." (Male participant, FGD, #74)

Conversely, some community leaders perceived women's health as categories of disease or disabilities; however, they also believed that there were major gaps within the present health system with inadequate public health programs and a health workforce that needs to be appropriately trained to address the specific needs of women. One of the community leaders summarised the existing issues within the

health system for young women in accessing health care, and the gaps within the health system:

> "There are issues, especially for young women in accessing the health system. Although from a policy perspective we say we need to provide youth-friendly services, we don't believe that the current system in the Maldives is youth friendly. It's not happening, not because there is no specific policy, but more because of the attitude, mindset and practices of individual health practitioners and communities. Some of these services are sought for very personal issues related to their sexual wellbeing, sexual health or development. I don't personally believe that young women or adolescent girls have a platform or opportunity to go to a health facility, get access to the kind of information they need or discuss the concerns they have on a strictly confidential manner, without having any pre-judgemental mindsets from health practitioners. That itself is a barrier for young girls or adolescents to openly seek help within the health sector. Ultimately, more and more people will prefer not to go, and that again will have many consequences. Let's say a girl has a sexually transmitted infection. If left untreated, there may be various outcomes, some of which may be quite costly in the long term life of a woman." (CL #10)

5.7.1.3 Mistrust on local health services

Although the majority of girls and women in this study indicated that they obtained regular health services from Malé city and abroad, they shared a mutual mistrust of local health services compared to aboard health services. However, women believed it increased the cost of services:

> "I've got a good-quality lens from overseas – it won't get blurred! Diabetics who have eye survey in Malé – their lens get blurred!" (Khadeeja, 70 years)

> "Do you know why I stopped seeking treatment from Malé and started consulting doctors from overseas? Medical tests done in Malé were not accurate. When we send the results overseas, they say the test have not been done properly!" (Moomina, 70 years)

> "I was admitted to the emergency department due to sugar issues, but doctor started medication immediately without doing any tests. My body weight started decreasing; my condition became worse, and one by one my teeth started falling out. The doctor didn't tell us what was happening. Finally, children decided to take me aboard. The doctor was very upset, and warned them, "Even if you take your mother to America, she won't live long!" We went to overseas, and discovered that the doctor was giving me medicines for tuberculosis. They did tests and confirmed I did not suffer from tuberculosis. I returned home in good health with certificates from three overseas doctors." (Zameera, 56 years)

> "Although we get free health services, I mostly hear negative stories regarding doctors in the Maldives. I fear that they might treat me for a non-existing sickness. I've never used *Aasandha* for that reason. Once I had a corn on my foot – I went to overseas for the operation." (Haseena, 52 years)

Men in the FGDs also raised these concerns around trust of local health services. One male participant described why he took his wife abroad on three different occasions to perform three caesarean section deliveries:

> "In fear and to prevent potential complications, we travelled five months in advance to a neighbouring country. Financial expenses were high. If she could have delivered in our island or Malé it would have been much easier, but the risk was very high. For example, if any complications had happened during the pregnancy, a doctor might not be available for a caesarean section, or a sudden emergency might have led to the death of my wife or child – that's the end of life! To avoid that risk, we needed alternatives. The reality is, in Maldives, reproductive services are not provided!" (Male participant, FGD, #96)

5.7.2 Health information and awareness

Lack of adequate health information and awareness was the other major concern or sub-theme that emerged. Section 5.4.2.3 described young women's concern about the lack of health information from educational institutes. In this section, concerns from

the three groups of women will be presented regarding how they obtained health information and the gaps they identified.

Almost all women emphasised that there was a general lack of health information and awareness from local sources such as health providers, mass media or other institutes.

> "I feel it would be better to conduct more health awareness programs. There are many people who are sick, who would smoke cigarettes or hooka, or chew tobacco. Maybe they actually don't know the risks. More awareness for youths too, about the risk of cigarette smoking. I think there are no programs [in Malé city]!" (Zahura, 51 years)

In general, these respondents expressed their dissatisfaction with the mass media's attention on politics and its dearth of health information dissemination. In this way, most of the educated females talked about using the internet as an alternative source of health information:

> "Normally I don't seek health information. But, I check the internet with any concerns. I have ceased watching local television, mostly because it is flooded with political news, and radio too!" (Rasha, 19 years)

In addition, most of these respondents stressed that women's health, social status and inclusion within society were all related to education and awareness. Women emphasised that health information and empowerment activities were needed to reduce gender-role discrimination gaps and empower women.

> "What is missing in this island is that there is not enough awareness! For example, nowadays we observe lots of fathers taking care of their children; that's because people are more aware of that matter now. There might be a street demonstration related to women's health, but that's not enough! There are many desperate people who never leave their homes – they would not participate in the street walks or even read what's on placards. They would stay home and only watch television, like serials! Our elderly and weak people are isolated in this community. Most people at this age have hypertension, diabetes or depression. They would be labelled and isolated from the rest of community, and they would slowly stop going out altogether.

> If we are 50 than we are labelled as aged people and we should change that attitude now. I feel that people should visit homes and talk with women to give them an opportunity to move forward in life! We lack so much in health awareness!" (Haseena, 52 years)

Most community leaders also suggested that there was a mismatch between existing public health issues and how the health system addressed them. The issues surrounding limited budgets, lack of trained human resources and lower priority given for public health programs was discussed in almost all the interviews and FGDs with community leaders. Community leaders had mixed views on this matter. A community leader who worked at grass-root level indicated that the gap exists because the top level influential leaders were not aware of health issues:

> "From our NGO perspective, there are issues concerning mental health that are not addressed, or that are addressed very, very poorly! Parliamentarians also don't understand what's going on!" (CL #4)

Another community leader underscored issues with health policies:

> "Community-based interventions and largely public health programs have been neglected in Malé for a long time. I think these are some bad policy decisions which we might have taken in the past without really looking this issue in a holistic manner. We have invested all our money and energy on hospitals, trying to build the best hospital. In that process, we haven't given much thought to community and public health interventions, which we could in fact have equally looked into. Currently what's happening is, for example, if a women wants to simply talk to somebody about a minor personal health concern or children's health matters, there is no place for her to go other than going to IGMH and getting a consultation appointment and meeting a doctor. There's no avenue, no platform, for her to just freely go and talk to somebody who would be willing to listen and guide her." (CL #10)

Most community leaders agreed:

> "There are no specific public health programs or outreach programs in Malé. There is a difference between Malé and the atolls. In Malé we don't have our

> post for the community; preventive services are provided by the hospital. But in other islands there are public health units attached to each hospital. The role of public health officers is to educate the community, do home visits and identify those in need. There is a need to conduct community outreach programs, even in Malé, but we don't have a plan or a system to provide these services to the community in Malé, which is different from the atolls" (CL #11)

Further, the limitations and neglect of public health interventions were related to broader social and political factors:

> "Let's face reality, most specifically in the Maldives, the national budget is something politicians decide. It's not decided by any technical person – it's a political decision. Politicians, in general, are interested in things that will have an immediate impact. Lots of public health interventions and investments take a long time to show any results. So, present politicians are more interested in dealing the complaints they receive on a daily basis. Doctors and laboratories are very costly systems, so a lot of money is needed in a country like Maldives, where we have to deal with 194 islands and try to keep doctors in every island, and specialists, laboratories and health facilities in every other island. If any political party or if any politician wants to remain in their post, or if they would want to be popular among the public, these are the things that win the hearts of the voting public." (CL #10)

> "There is a huge gap between policies and plans and the actual implementation of services. The other issue is, right now we don't have a media to use for health promotion. Media mostly focuses on politics. Everyone is interested in politics and our public is interested in politics." (CL #11)

However, most of these community leaders contemplated how the lack of policies and effective public health programs were negatively affecting women as well as the health care budget:

> "Life expectancy is increasing in the Maldives, but our health system is not geared at present to address specific health needs of older women. Many of

them don’t seek any help or else come to the health facility at a very late stage with lots of complications. Then intervention becomes very costly, or sometimes there is not much we can do. For middle-aged women, the statistics show an increase in breast and cervical cancer, and we don’t have an effective, robust program for these. Again, this is the public health aspect, because we don’t have funds, enough resources, enough people; it’s a cost to the national health system. The universal health insurance scheme is under extreme pressure because of increasing expenditure on these health outcomes. All this could be avoided if there was a good health promotional and health preventive program.” (CL #10)

This theme focused on the concerns and needs of women in relation to health system factors in getting health care access and health information and awareness. Women identified gaps at the grass-root level, such as difficulties in doctor’s appointment systems, and inconsiderate services with limited services to improve health awareness and protect from ill-health. These views were supported through the narratives of community leaders and men. More specifically, community leaders confirmed women’s concern, and also highlighted the structural constraints on health policies, budget allocation and health human resources to offer better services for women.

5.8 Summary

This chapter presented a comprehensive explanation of women’s health concerns and needs through their narratives, which were substantiated through men and community leaders. The five major themes detailed in this chapter draw attention to the complex interplay between social forces that increase women’s vulnerability, marginalisation and subordination, and gender intersection across women’s lives. It also details how social inequalities can have negative impacts on women’s health. Viewing women’s health through a holistic and social approach seems to further capture the deep-rooted realities within distal factors, such as national policies, regulation and laws, which further ostracise women’s agency and right for health, mostly through a form of gender discrimination and social marginalisation.

The process of presenting women’s narratives, along with those of men and community leaders, ensured to support women’s comprehensive accounts of the

perception and lived experiences and its influences on health. It thus provides an insightful and rich explanation of the interrelationship between critical health-determining elements within the context, and how or why certain structural inequalities impair women's health and wellbeing. The findings are significant to add knowledge to the limited literature of how contextual factors influence women's health, and for broader policy dialogue in the national and global measures to reduce health inequity gap.

The next chapter presents the survey results which was developed based on some of the salient findings of this qualitative results.

Chapter 6 – Survey results

6.1 Introduction

This chapter presents the findings of the quantitative survey. The survey gathered information on a range of variables related to women's health, including demographics, living conditions, patterns of decision making, diet and physical activity, and health and health care access. The list of questions and response categories with question-specific response rates are presented in Appendix XL The overall objective of this chapter is to explore and explain patterns in women's self-rated health (SRH).

The chapter is divided into twelve main sections. The next section provides response rates for the online and field surveys. The following section presents descriptive statistics for the sample. The next seven sections (6.4 to 6.10) present the chi-square analyses and multivariate logistic regression analyses of 11 different models to determine the predictors for women's SRH. The final section demonstrates the final regression analysis presented in Model 12, which determines the statistically significant predictors for women's SRH in this survey.

6.2 Response rate

Table 6.1 presents the response rates for the survey. A total of 642 women were invited to the study through online and field surveys, out of which 449 women participated. There was a large difference in response rates between the two methods of data collection: the field survey yielded a 97.5% (n=344) response rate while the online survey had a response rate of 36.2% (n=105). Eight respondents discontinued the field survey having only completed limited demographic questions, while 19 women discontinued the online survey, either by not providing consent or withdrawing after answering a small number of questions. For these participants, these surveys were deemed insufficient for inclusion in the final analysis.

Table 6.1 Response rates

	Total number of respondents invited	Number of surveys opened	Number of surveys incomplete / without consent	Started (frequency)	Completed (frequency)	Response rate (%)	Proportion of response rate per method of data collection (%)
Field survey	352		8		344	97.5	76.6
Online survey	290	124	19	105	105	36.2	23.4
Total	**642**				**449**	**70**	

6.3 Descriptive statistics

6.3.1 Age distribution

Table A4 in Appendix XLI shows the age distribution of the survey respondents. The most represented age group was 20–24 years (23.6%), followed by 16–19 years (16.5%) and 30–34 years (13.4%). The Maldives Demographic Health Survey (2009) reported a similar age distribution among girls and women in Malé city.

6.3.2 Sociodemographic characteristics

Table A5 in Appendix XLI shows the survey respondents' demographic characteristics. The mean age of the respondents was 32.9 years (SD ± 14.6), with a range of 16 to 83 years. Similar proportions of women respondents aged 16–24 years and 25–49 years (n=180, 40.1%) participated, while approximately one in five women (n=89, 19.8%) belonged to the 50 years and above age group.

Most young and adult women had completed secondary school or above, whereas most of the old women had only basic literacy skills (n=75, 84.3%). Overall, more than two-thirds of the respondents were educated at or above the secondary school level and none were illiterate. This pattern of higher education levels in the younger cohorts was expected, because the Maldives has achieved the United Nations Millennium Development Goal of providing universal primary education (Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014) for both sexes, with the urban population demonstrating a higher level of average education than regional atolls.

In terms of marital status, 50.6% (n=226) of the total respondents were married, with the marriage rate highest in adult women (n=134, 74.9%), followed by older women (n=52, 58.4%) and then young women (n=40, 22.2%). In contrast, one in ten women were divorced (n=47, 10.5%). Of the young women, 60.9% (n=109) remained unmarried and 15.6% (n=28) were in a committed relationship. Approximately 50% (n= 90) of the adult women had one or two offspring and 51.7% (n=46) of the old women had five or more children, while the majority of the young women had never had a child.

Regarding occupation, 43.8% (n=194) were employed, while 37.5% (n=166) were homemakers and 18.7% (n=83) were students. Although most women earned an income in their own right, 30.3% (n=132) of the total respondents had no income, and 50.8% (n=221) earned less than Maldivian Rufiyaa (MVR) 10,000 (AUD667) per month. Conversely, a minority (18.9%, n=82) earned MVR10,000 or more (AUD667) per month. Of the total female respondents, 43.3% (n=133) spent all/more than half of their personal income on household expenses.

The distribution of household income was such that, 44.3% (n=168) of respondents reported income of MVR10,000–29,999 (AUD 667–AUD 1999.9) per month, while 28.2% (n=107) reported less than MVR10,000 (AUD667). Almost an equal percentage of respondents (27.4%, n=104) reported household income to be more than or equal to MVR30,000 (AUD2000) per month.

The survey findings also showed a high level of female migration to urban dwellings, with a mean number of years lived in the city by the young, adult and old women of 10.3 years (SD ±7.8), 23.2 years (SD ±13.6) and 34.3 years (SD±22.4), respectively. Moreover, nuclear families predominated; 53.1% (n=94) of the young women lived with their parents, while 44.4% (n=80) of the adult women resided with both spouse or partner and children. In addition, 32.8% (n=58) of the young women lived with host families away from their biological parents.

The survey findings showed that 54.9% of women (n=243) rented in Malé city, 33.6% (n=149) lived in their own homes, and 11.5% (n=51) lived with others. Approximately half (50.6%, n=45) of the older group of women owned land. In contrast, 52.8% (n=94) of the adult women and 64.2% (n=113) of the young women rented. Around half of the total female women respondents (n=210, 47.7%) lived in

male-headed households, while around a third (n=153, 34.8%) lived in female-headed households. The reminder (n=77, 17.5%) lived in households headed jointly by both sexes.

In terms of the household living arrangements, 56.5% (n=248) of the total respondents resided with seven or more individuals. The young and old women lived in larger households relative to the adult women. On average, nearly nine individuals (8.6 SD ± 5.9) lived in a single household.

In terms of the size of the living area, 68.3% (n=265) lived in accommodation quarters smaller than 700 square feet; however, 13.6% (n=61) did not respond to this question. This was either because they were not sure of the size in numbers or they did not want to report it. In addition, most respondents (n=270, 61.4%) lived in houses that had one or two rooms for sleeping. In total, an average of three rooms (3.3 SD ± 2.3) was available for sleeping in a single household.

6.3.3 Women's daily activities and roles

Table A6 in Appendix XLI show women's daily activities and roles in the past four weeks. The survey indicated that women's daily activities involved household chores, providing care, education and employment. Women made time for leisure activities both inside and outside of their home.

6.3.4 Living condition

Table A7 in Appendix XLI shows women's perceptions of their living conditions. Most respondents perceived living conditions were adequate within the home. However, approximately one in five women reported inadequacy in terms of basic necessities, such as facilities and space for living and carrying out daily household activities, sleeping, storing personal belongings and spending time with family. Similarly, inaccessibility of pure and clean drinking water, inadequate waste disposable within their home and community, and poor living arrangements that promoted pests were reported. Of the 13 items explored regarding living conditions, the two major concerns reported by this group of women respondents were neighbourhood environmental pollution (58.1%, n=255) and crime (48.7%, n=213).

6.3.5 Diet and physical activity

Table A8 in Appendix XLI shows responses to questions around diet and physical activity. Most women indicated there were no issues getting food; however, only 51.1% (n=226) of the total respondents had breakfast every day during the previous 30 days of the survey. The remaining 48.9% of respondents said that they had breakfast most of the time or never. The two main reasons given for not having breakfast were having time constraints (36%, n=73) and being unable to eat in the morning hours (34.5%, n=70), rather than unavailability of food. In addition, most of the women barely consumed fruits and vegetables, and the main reason for this was high cost (52.1%, n=184). This issue was similarly reported across the three age groups of women.

Four questions were included in this survey to assess women's levels of physical activity. Approximately 44.4% (n=196) of the respondents were physically active for at least 60 minutes for each of the previous seven days. This value was similar to the proportion who reported being physically active for at least 60 minutes per day in a typical week (44.4%, n=195). The old and young women were more active relative to adult women. In terms of the exercises carried out, 73.8% (n=324) of the respondents did not perform muscle tone exercises, while 46.5% (n=204) did not perform stretching exercises. This group of respondents, in particular, reported limited physical activity, except for around half (54.5%, n=48) of the older women, who performed stretching exercises on a daily basis.

6.3.6 Decision making

Table A9 in Appendix XLI shows six dimensions in women's lives and the relevant decision-making processes. Overall, women made decisions for themselves about mobility, earnings, health care and daily household expenditure in 70.5% (n=301), 59.3% (n=237), 49.3% (n=208) and 43.6% (n=183) of cases, respectively. A total of 45.1% (n=138) and 33% (n=137) of women indicated that decisions were made by both members of the couple regarding their husband's earnings and major household purchases, respectively. Overall, these findings indicate women's autonomy in decision making which enhance resource access within households in the Malé city.

6.3.7 Health information sources

Table A10 in Appendix XLI compares health information sources used by women. The surveyed women obtained health information from a variety of sources such as mass media, social media and interpersonal social networks. The most popular method for the young and adult women was the internet, followed by television and family members. Indeed, the young and adult women were twice more likely to use the internet for health information than the other two sources. In contrast, television was the most popular source of health information media for the old women, followed by radio and their health provider. Overall, the most frequent source of health information was the internet (39.5%, n=171) and the least popular were religious leaders, teachers and counsellors.

6.3.8 Health care access and health-seeking behaviour

Table A11 in Appendix XLI shows women's attitude and behaviour towards health and health care access. Approximately 31.1% (n=138) of respondents usually consult a health practitioner with sickness, while the remaining 44.4% (n=196), 19.5% (n=86) and 4.8% (n=21) might, were unlikely to, or would never consult a health practitioner, respectively. In this manner, women's life circumstance and responsibilities were related to how they prioritised personal health matters. Nearly a third (31.6%, n=126) of the aggregate sample of respondents perceived their own health as the lowest priority in life, with more importance given for children's health (43.4%, n=173), parents or family's health (35.6%, n=142), and husband/partner's health (29.8%, n=119). Similarly, being occupied with paid employment (20.3%, n=81), household chores (19.5%, n=78) and education (16.8%, n=67) were reasons given for overlooking personal health matters. Nearly one in four women (24.8%. n=99) reported inadequate health care access as a reason for disregarding personal health care. Factors such as a husband/partner's disapproval or a husband/partner's unsupportive nature remain as trivial reasons for not prioritising personal healthcare for this group of surveyed women.

In terms of women's perception of health care access, 55.4% (n=243) of the respondents perceived there to be adequate health facilities close to their homes. Most respondents had visited a doctor or health provider recently, specifically within the last week (28.8%, n=126), the last month (30.7%, n=134) or the last six months (22.2%, n=96) of the survey. Most visits concerned getting health care access to meet

their personal health needs (62.7%, n=264) and family health care needs (44.9%, n=189).

Of those who reported they were sick in the previous six weeks, 58.9% (n=175) consulted a specialist doctor and 28.6% (n=85) a general doctor. Nonetheless, 16.2% (n=48) women who reported being sick did not consult anyone in the six weeks preceding the survey.

Most women reported either fair (36.8%, n=162) or good health (35.2%, n=155), whereas approximately two in ten women reported excellent or very good health, and only a minority reported poor or very poor health (5.5%, n=24 and 1.6%, n=7, respectively).

6.3.9 Health services utilisation

Table A12 in Appendix XLI compares health services utilisation by women who participated in this survey. A variety of health care delivery services were used by women. The two tertiary level hospitals, Indira Gandhi Memorial Hospital (IGMH) (public) and ADK Hospital (private) were the most frequently visited places by all respondents at 23.1% (n=99) and 24.8% (n=106), respectively. Likewise, private clinics, pharmacies and aboard health facilities were 'often' or 'sometimes' accessed by the surveyed women. However, health centres, traditional local health practices and sorcerers were never or rarely used by this group of women. For example, an estimated 93.4% (n=380), 80.1% (n=330) and 73.8% (n=302) never visited a traditional sorcerer, traditional (Dhivehi) health practitioner or a health centre, respectively.

6.3.10 Satisfaction with care received from health facilities and services

Table A13 in Appendix XLI describes respondents' satisfaction with care received from health services and facilities. Overseas health services were reported to offer more satisfying health services (very satisfied – 24.5%, n=81; and satisfied – 46.8%, n=155) than local health facilities. In terms of local health services, nearly an equal proportion of women reported satisfaction with the services offered from private clinics (very satisfied – 5.0%, n=18; and satisfied – 38.3%, n=137) and the private ADK Hospital (very satisfied – 4.4%, n=18; and satisfied – 33.2%, n=137), respectively. In contrast, the public hospital (IGMH) was perceived to offer the most

dissatisfying health services (very dissatisfied – 22.4%, n=95; and dissatisfied – 29.0%, n=123), respectively.

6.3.11 Perception of the National Health Insurance Scheme services

Table A14 in Appendix XLI shows women's perception of the National Health Insurance Scheme, known as Aasandha. An estimated 58.1% (n=252) of the total respondents perceived the National Health Insurance Scheme services to be adequate to meet their health care needs; however, 32.9% (n=143) believed otherwise. The most common issues were difficulties in obtaining health care services (52.7%, n=79); inability to access medications and injections (46.7%, n=70); difficulties getting necessary doctor's appointment (38.7%, n=58); inadequacy in terms of meeting basic health care (25.3%, n=38); inaccessibility of necessary laboratory and medical tests (20.7%, n=31); and inaccessibility to inpatient services (16.7%, n=25), respectively.

6.3.12 Out-of-pocket health care expenditure

Table A15 in Appendix XLI shows out-of-pocket health care expenditure on health services. The majority of women spent out-of-pocket money on obtaining health provider consultation, hospital admission, getting prescribed and non-prescribed medicine, and doing laboratory and medical tests. In addition, out-of-pocket money was spent on transport and accommodation while getting health care. Out of the total 226 women who spent out-of-pocket money on health care consultations, 66.4% (n=150) spent less than MVR1000 (AUD 67), while the remaining 33.6% (n=76) spent more than or equal to MVR1000.

6.3.13 Reasons for accessing abroad health care facilities

Table A16 in Appendix XLI indicates women's health care access in foreign countries and their reasons for it. Most of the women (77%, n=326) who participated in this survey travelled abroad for health care. The most common reasons given were to access a specialist doctor (60.2%, n=194); to access specialist hospital care services (other than doctor's consultation) that were unavailable in Malé city (43.2%, n=139); and dissatisfaction with local health services (41.6%, n=134). More than a third of the respondents also travelled in search of alternative medical opinions (38.8%, n=125) or treatment options (32.0%, n=103). Other reasons were that health

care access was perceived to be easier aboard (29.8%, n=96) and that they found it difficult to get an appointment for a specialist doctor in Malé city (25.2%, n=81).

6.3.14 Barriers to health care access

Table A17 in Appendix XLI shows women's perception of the barriers to health care during sickness. Overall, few respondents indicated any of the 15 variables listed in the question categories as a barrier 'always' or 'most of the time', except for 'difficulties in getting a doctor's appointment'. Levels of the Likert scale for this question were that 21.3% (n=87) reported always having difficulty, 17.2% (n=70) had difficulty 'most of the time' and 25.5% (n=104) reported sometimes having difficulty getting a doctor's appointment. Other concern, such as the unavailability of necessary medicines and essential laboratory and medical tests, were also identified as barriers. However, sociocultural barriers, such as women's mobility, and husband's or family's negative attitudes to health seeking, were never or rarely an issue for women respondents in this survey.

6.4 Sociodemographic factors associated with self-rated health

The cross tabulations and regression models presented in Sections 6.4–6.11 attempt to achieve the following research objective:

Objective 3 – To explore and explain patterns in women's self-assessed health.

To achieve this objective the following question is proposed:

How does women's SRH status differ between sociodemographic factors, diet and exercise, roles and responsibilities, decision-making domains, health information sources and health care access to explain the predictors of SRH?

As mentioned in Section 4.7.6, the dependent variable women's SRH was examined by survey question 33: 'In general, would you describe your overall health as excellent, very good, good, fair, poor or very poor?' The first three options (excellent, very good and good) were combined into good SRH, and fair, poor and very poor were combined into poor SRH, creating a dichotomous measure of SRH.

6.4.1 Sociodemographic factors of age, education, marital status and number of children associated with self-rated health

6.4.1.1 Cross tabulation

Table A18 in Appendix XLII shows women's sociodemographic factors associated with SRH. Chi-square analyses indicates that the significant sociodemographic factors were age, education, marital status, number of children, women's occupation, personal income, household expenditure, family structure and sex of the household head. In particular, age ($p < 0.001$, chi-square 32.52), education ($p < 0.001$, chi-square 56.68), number of children ($p < 0.001$, chi-square 26.83), and occupation for the past 12 months ($p < 0.001$, chi-square 20.31) were strongly and significantly associated with SRH.

Although differences in perceived SRH were observed between household incomes, household tenure, household composition, size of living area, and number of rooms available for sleeping, these differences were not statistically significant.

6.4.1.2 Multivariate analysis

The sociodemographic variables and their association with SRH was analysed in three different multinomial logistic regression models. Three models were run using groups of independent variables. Specifically, Model 1 included age, education, marital status and number of children as predictors, Model 2 comprised work and income variables and Model 3 involved family and household living arrangement variables associated with SRH. For each model coefficients were initially estimated through univariate logistic regression without controlling for any potential confounders. Following this, the predictor variables were adjusted for the confounding variables through multivariate analysis in each model, to determine the statistically significant factors associated with poor SRH relative to good SRH.

Table 6.2 shows the demographic factors included in Model 1. The univariate logistic regression carried out individually for demographic explanatory predictors showed that being older, having less than 10 years of education, being married and having a higher number of children were significantly associated with poor SRH. However, after analysing these variables in a multivariate way, having less than 10 years of education (below secondary school completion) compared to obtaining year 10 or above education (secondary or above) was strongly associated with poor SRH

(adjusted odds ratio [AOR] 5.39, 95% confidence interval [CI], 2.64–11.03, p < 0.001). After adjustment, age, marital status, and number of children were no longer statistically significant at the 5% level.

Table 6.2 Model 1: Sociodemographic factors associated with self-rated health

Variable	Crude Odds ratio	95% confidence interval	Adjusted Odds ratio	95% confidence interval
Women's age				
≥50	**4.62*** **	**2.67-8.07**	1.24	(0.45-3.44)
25 - 50	**1.69*** **	**1.09-2.63**	1.34	(0.71-2.53)
16 - 24	1 (ref)		1 (ref)	
Education				
<Year 10	**5.12*** **	**(3.24-8.10)**	**5.39*** **	**(2.64-11.03)**
Years 10 or above	1(ref)		1 (ref)	
Marital status				
Ever married	**1.86** **	**(1.23-2.79)**	0.84	(0.44-1.61)
Never married	1 (ref)		1 (ref)	
Total number of children				
None	**0.28*** **	**(0.17-0.47)**	1.07	(0.43-2.63)
<3	**0.53***	**(0.30-0.93)**	1.23	(0.58-2.61)
≥3	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001

#missing values controlled for the variables included in the analysis

6.4.2 Work and income associated with self-rated health

Table A18 in Appendix XLII illustrates the sociodemographic factors of occupation and income variables included in Model 2. Table 6.3 shows that in the univariate analysis, women's occupation, personal income and household expenditure were significantly associated with SRH. Working in paid employment and studying were significantly associated with good SRH relative to being a housewife. Women who had no personal income or earned less than MVR10,000 (AUD667) per month reported significantly poorer SRH than those who earned more than or equal to that amount. Similarly, women who spent all or more than half of their personal earnings on household expenditure had significantly poorer health than those who spent less than half or nothing.

After adjustment for confounding variables, women who studied were 74% more likely to report good health relative to homemakers (AOR 0.26, 95% CI 0.14–0.51, p < 0.001). Additionally, women who were employed were 43% more likely to report good health relative to home makers (AOR 0.57, 95% CI 0.34–0.94). Women with a personal income less than MVR10,000 (AUD667) per month reported significantly

twice the level of poor health than those who earned more (AOR 2.00, 95% CI 1.11–3.59). Similarly, women who spent nearly all/more than half of their personal income on household expenditure reported significantly more than twice the level of poor health than those who spent less than half/none of their income on household needs (AOR 2.18, 95% CI 1.25–3.81). The household income level was statistically not significant with SRH in either the univariate or multivariate analysis.

Table 6.3 Model 2: Working condition and income associated with self-rated health

Predictor	COR	95% CI	AOR	95% CI
Occupation past 12 months				
Employed	**0.51****	**(0.33-0.78)**	0.57	(0.34-0.94)
Student	**0.33*****	**(0.19-0.59)**	**0.26 *** **	**(0.14-0.51)**
Homemaker/self-employed/retired	1 (ref)		1 (ref)	
Personal income (monthly)				
No income	**2.09***	**(1.16-3.78)**	3.74	(0.90-15.58)
< MVR10,000 (AUD667)	**1.89***	**(1.19-3.28)**	**2.00***	**(1.11-3.59)**
≥ MVR10,000 (AUD667)	1 (ref)		1 (ref)	
Personal income on household expenditure				
Nearly all/more than half	**1.93***	**(1.15-3.25)**	**2.18****	**(1.25-3.81)**
About half	0.92	(0.47-1.82)	1.16	(0.58-2.33)
Less than half/nothing	1 (ref)		1 (ref)	
Household income (monthly)				
<MVR10,000 (AUD667)	1.39	(0.80-2.41)	1.16	(0.64-2.12)
MVR10,000- 29,999 (AUD667–AUD1946)	1.06	(0.64-1.76)	0.97	(0.57-1.67)
≥MVR30,000 (AUD1946)	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001

#missing values controlled for the variables included in the analysis

6.4.3 Household living arrangements associated with self-rated health

Table A18 in Appendix XLII illustrates the sociodemographic factors of family structure and household living arrangement variables included in Model 3. Table 6.4 illustrates that the univariate logistic regressions carried out individually for family structure and household living arrangement explanatory predictors showed that the family structure and the sex of the head of the household was significantly associated with SRH.

Women who lived with their own parents and siblings and those who lived with a host family reported significantly better health than those with alternative living arrangements. Similarly, women who lived in households managed by females or both sexes reported significantly better health – 50% more than women who lived in a male-headed household. On the contrary, women who lived alone with their own

children reported significantly poorer health compared than those women with other living arrangements.

After adjusting for the confounding variables in the model, women who lived with parents and siblings (AOR 0.39, 95% CI 0.16–0.90) or with host families (AOR 0.31, 95% CI 0.11–0.83) reported significantly better health than those under other living arrangements. In addition, women who resided in female-headed households or households managed by both sexes reported significantly better health relative than those who lived in male-headed households (AOR 0.55, 95% CI 0.32–0.96).

Table 6.4 Model 3: Household living arrangements associated with self-rated health

Demographic predictors	COR	95% CI	AOR	95% CI
Type of family arrangement				
Live with parents and siblings				
Yes	**0.63***	**(0.42-0.95)**	**0.39***	**(0.16-0.90)**
No	1 (ref)		1 (ref)	
Live with my own children				
Yes	**2.45****	**(1.37-4.38)**	1.16	(0.45-3.00)
No	1 (ref)		1 (ref)	
Live with husband/partner and or children				
Yes	1.17	(0.79-1.76)	0.72	(0.31-1.67)
No	1 (ref)		1 (ref)	
Live with host family				
Yes	**0.59***	**(0.35-0.99)**	**0.31***	**(0.11-0.83)**
No	1 (ref)		1 (ref)	
Live alone				
Yes	2.05	(0.57-7.38)	1.13	(0.23-5.68)
No	1 (ref)		1 (ref)	
Housing status (n=430)				
Rent/other	0.96	(0.64-1.44)	0.97	(0.62-1.52)
Own	1 (ref)		1 (ref)	
Head of household (n=430)				
Female/both	**0.50***	**(0.29-0.85)**	**0.55***	**(0.32-0.96)**
Male	1 (ref)		1 (ref)	
Household composition (n=429)				
≥7members	1.18	(0.80-1.74)	1.54	(0.94-2.50)
<7 members	1 (ref)		1 (ref)	
Number of rooms for sleeping (n=429)				
< than 3 rooms	0.96	(0.65-1.42)	0.83	(0.50-1.37)
≥ 3 rooms	1 (ref)		1 (ref)	
Size of living area (n=378)				
<700sqft	1.17	(0.75-1.82)	1.4	(0.85-2.28)
≥700sqft	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values controlled for the variables included in the analysis

6.5 Daily activities and roles associated with self-rated health

6.5.1 Cross tabulations

Table A19 in Appendix XLII shows women's daily activities and roles associated with SRH. Chi-square analysis indicated that the significant factors associated with SRH were number of hours involved with household activities, care provider roles and education. Moreover, studying and education was strongly and significantly associated with SRH ($p < 0.001$, chi-square 25.20).

6.5.2 Multivariate analysis

Table 6.5 shows the univariate and multivariate logistic regression models used to explore women's daily activities and roles associated with SRH. The univariate logistic regression carried out independently for the explanatory predictors showed that those who were never involved with household or child care provider roles reported significantly better health that those who spent more than eight hours each day in these roles. In contrast, women who were not currently studying reported significantly poorer health than those who spent more than eight hours each day in getting an education or training.

After adjustment for the confounding variables, women's household activities and education were found to be significantly associated with SRH. Specifically, women who were not involved with household chores (AOR 0.27, 95% CI 0.09–0.78) or those who worked less than eight hours each day (AOR 0.29, 95% CI 0.13–0.63) reported significantly better SRH than those with more than eight hours of housekeeping work.

Women who were not engaged with any form of educational training were more likely to report poor health (AOR 2.63, 95% CI 1.28–5.41) than women who studied for more than eight hours in a typical day.

Table 6.5 Model 4: Women's roles and responsibilities associated with self-rated health

Characteristics	COR	95% CI	AOR	95% CI
Demographics				
Household activities				
None	**0.29****	**(0.12-0.72)**	**0.27***	**(0.09-0.78)**
≤8 hours	**0.32*****	**(0.17-0.60)**	**0.29****	**(0.13-0.63)**
>8 hours	1 (ref)		1 (ref)	
Responsibility and care of children				
None	**0.47****	**(0.28-0.79)**	0.75	(0.40-1.39)

≤8 hours	0.61	(0.35-1.05)	0.77	(0.40-1.46)
>8 hours	1 (ref)		1 (ref)	
Responsibility and care of elderly				
None	0.69	(0.26-1.84)	1.6	(0.47-5.44)
≤8 hours	0.62	(0.22-1.77)	1.44	(0.40-5.16)
>8 hours	1 (ref)		1 (ref)	
Responsibility and care of disable				
None	2.34	(0.24-22.65)	4.13	(0.35-48.06)
≤8 hours	2.14	(0.19-23.72)	4.31	(0.33-56.78)
>8 hours	1 (ref)		1 (ref)	
Responsibility and care of siblings				
None	1.04	(0.47-2.31)	1.03	(0.39-2.68)
≤8 hours	0.77	(0.32-1.81)	1.00	(0.36-2.79)
>8 hours	1 (ref)		1 (ref)	
Education / studying / training				
None	**2.65****	**(1.36-5.17)**	**2.63****	**(1.28-5.41)**
≤8 hours	0.96	(0.48-1.93)	1.01	(0.47-2.16)
>8 hours	1 (ref)		1 (ref)	
Paid employment				
None	1.63	(0.94-2.85)	1.59	(0.86-2.96)
≤8 hours	1.18	(0.62-2.22)	1.24	(0.62-2.50)
>8 hours	1 (ref)		1 (ref)	
Leisure/social life at home				
None	1.76	(0.71-4.37)	1.14	(0.38-3.41)
≤8 hours	1.17	(0.56-2.42)	1.04	(0.42-2.57)
>8 hours	1 (ref)		1 (ref)	
Leisure/social life outside home				
None	2.86	(0.83-9.79)	2.36	(0.53-10.43)
≤8 hours	1.78	(0.55-5.81)	1.68	(0.41-6.98)
>8 hours	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values controlled for the variables included in the analysis

6.6 Living condition factors associated with self-rated health

6.6.1 Cross tabulation

Table A20 in Appendix XLII illustrates women's perception of living condition factors associated with SRH. Chi-square analysis indicated out of the 13 living condition factors asked about in this survey, the following nine predictors within the living environment were associated with self-rated health; adequate supply of pure and clean drinking water; adequate facilities for sleeping; relaxing and spending time with family; ventilation and movement of clean and fresh air; drainage system for removing waste water safely from home; waste disposal and safety at home; waste disposable and safety in community; adequate facilities within living condition to prevent breeding of harmful pest; and adequately designed home environment to prevent life-threatening dangers. Specifically, the perception of adequate supply of pure and clean drinking water ($p < 0.001$, chi-square 12.62) and adequate facilities for relaxing and spending time with family ($p < 0.001$, chi-square 18.42) were strongly associated with SRH.

6.6.2 Multivariate analysis

Table 6.6 shows the multivariate logistic regression model used to explore the significant living condition factors associated with SRH. The univariate logistic regression carried out independently for the explanatory predictors showed that the same nine variables that were significant in the chi-square analysis were statistically significant. In particular, women who 'disagree' or 'strongly disagree' to having living condition facilities mentioned in the nine variables reported significantly poorer health.

After adjustment for the correlation between the13 variables, women who perceived they did not have 'adequate supply of pure and clean drinking water' (AOR 1.90, 95% CI 1.03–3.52), and 'adequate facilities for relaxing and spending time with family' (AOR 2.13, 95% CI, 1.16–3.91) were more likely to report poor health than women who believed these facilities were adequate.

Table 6.6 Model 5: Living condition factors associated with self-rated health

Living condition factors	COR	95% CI	AOR	95% CI
Adequate space / area for washing, cooking and bathroom facilities (n=430)				
Disagree/Strongly disagree	1.38	(0.90-2.11)	0.76	(0.40-1.41)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate supply of pure and clean drinking water (n=428)				
Disagree / Strongly disagree	**2.49*** **	(1.49-4.16)	**1.90***	**(1.03-3.52)**
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate sleeping facilities (n=425)				
Disagree / Strongly disagree	**1.78***	**(1.14-2.76)**	1.31	(0.71-2.44)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate facilities for relaxing and spending time with family (n=426)				
Disagree/Strongly disagree	**2.55*** **	**(1.65-3.92)**	**2.13***	**(1.16-3.91)**
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate facilities for storing personal belongings (n=431)				
Disagree/Strongly disagree	1.53	(1.00-2.33)	0.8	(0.44-1.46)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate ventilation and movement of clean and fresh air (n=430)				
Disagree/Strongly disagree	**1.71****	**(1.14-2.55)**	1.09	(0.62-1.93)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate drainage system for removing waste water safely from home (n=428)				
Disagree / Strongly disagree	**1.64***	**(1.02-2.64)**	0.98	(0.51-1.88)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate waste disposable and safety at home (n=429)				
Disagree/Strongly disagree	**1.59***	**(1.02-2.48)**	0.02	(0.55-1.90)
Strongly agree / Agree	1 (ref)		1 (ref)	

Adequate waste disposable and safety in community (n=429)				
Disagree / Strongly disagree	**1.49***	**(1.01-2.20)**	1.1	(0.69-1.76)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate arrangement in living condition to prevent breeding of harmful pests (n=426)				
Disagree / Strongly disagree	**1.75***	**(1.14-2.68)**	1.11	(0.65-1.89)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequately designed home environment to prevent life-threatening dangers (n=428)				
Disagree / Strongly disagree	**2.03****	**(1.33-3.09)**	1.68	(0.99-2.86)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate infrastructure to easily move around (lifts, stairs) (n=430)				
Disagree / Strongly disagree	1.24	(0.76-2.01)	0.56	(0.29-1.10)
Strongly agree / Agree	1 (ref)		1 (ref)	
Adequate measures to prevent crime and provide a safe and secure neighbourhood (n=427)				
Disagree / Strongly disagree	1.43	(0.97-2.09)	0.99	(0.63-1.57)
Strongly agree / Agree	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values were controlled for the variables included in the analysis

6.7 Diet and physical activity associated with self-rated health

6.7.1 Cross tabulation

Table A21 in Appendix XLII shows lifestyle factors (diet and physical activity) associated with SRH. Chi-square results showed that several factors related to diet and physical activity were associated with SRH. This includes: past 30 days in hunger due to not enough food at home; frequency of breakfast consumption past 30 days; vegetable consumption in the past 30 days; number of days physically active for at least 60 minutes per day; and number of days stretching exercises done in past 7 days.

6.7.2 Multivariate analysis

Table 6.7 shows the univariate and multivariate logistic regression employed to further explore the lifestyle factors associated with good SRH. Univariate logistic regressions carried out separately for the explanatory predictors showed that women who were hungry in the past 30 days because there was no food at home and who did not consume breakfast or vegetables in the past 30 days reported significantly poorer health. As mentioned earlier, the responses of SRH categories was a dichotomous variable with very poor, poor and fair health combined as poor self-rated health and the good, very good and excellent combined with good self-rated health,

respectively. Similarly, women who reported they were inactive for at least 60 minutes per day and those respondents who did not perform any stretching exercises in the past 7 days were more likely to report poor health than those who were active for at least one day.

After controlling for potential confounding factors, there was a significant positive correlation between diet and physical activity and poor SRH. The women who suffered from hunger due to inaccessibility of food (AOR 2.64, 95% CI 1.20–5.81), women who did not consume vegetables (AOR 2.26, 95% CI 1.13–4.49) and those who were physically inactive for at least 60 minutes per day (AOR 3.32, 95% CI 1.26–8.77) were more likely to report poor health relative to good health.

Table 6.7 Model 6: Diet and physical activity associated with self-rated health

Diet and physical activity variables	COR	95% CI	AOR	95% CI
Past 30 days in hunger due to not enough food at home				
Sometimes / Most time / Always	**3.04****	**(1.45-6.37)**	**2.64***	**(1.20-5.81)**
Never / Rarely	1 (ref)		1 (ref)	
Breakfast consumption in the past 30 days				
Never / Rarely	**1.67***	**(1.03-2.73)**	1.41	(0.82-2.42)
Sometimes / Most time / Always	1 (ref)		1 (ref)	
Vegetable consumption in the last 30 days				
Did not eat	**1.96****	**(1.25-3.07)**	**2.26***	**(1.13-4.49)**
Ate one time or more	1 (ref)		1 (ref)	
Fruit consumption in the past 30 days				
Did not eat	1.41	(0.87-2.30)	0.67	(0.32-1.41)
Ate one time or more	1 (ref)		1 (ref)	
Number of days physically active for at least 60 minutes / day				
0 days	1.45	(0.95-2.21)	0.52	(0.20-1.35)
One day or more	1 (ref)		1 (ref)	
Number of days physically active for at least 60 minutes per day in a week				
0 days	**1.90****	**(1.24-2.93)**	**3.32***	**(1.26-8.77)**
One day or more	1 (ref)		1 (ref)	
Number of days stretching exercises done in past 7 days				
0 days	**1.65***	**(1.13-2.41)**	1.23	(0.76-2.01)
One day or more	1 (ref)		1 (ref)	
Number of days exercises done to strengthen or tone muscles in past 7 days				
0 days	1.35	(0.87-2.08)	1.02	(0.59-1.76)
One day or more	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values were controlled for the variables included in the analysis

6.8 Decision making associated with self-rated health

6.8.1 Cross tabulation

Table A22 in Appendix XLII compares the decision-making process for six potentially important dimensions in women's life tabulated with SRH. Chi-square results indicated that four of the decision-making dimensions were significantly associated with SRH. These were decisions over how money you earn is used; health care for yourself; major household purchases; and major purchases for daily household needs.

6.8.2 Multivariate analysis

Table 6.8 shows decision-making domains associated with SRH. In the univariate analysis, women were significantly more likely to indicate poor health if their husband or partner solely made decisions over the use of women's earnings, women's health care, major household purchases and daily household purchases compared to it being the woman's autonomous decision. Specifically, women reported poor health if any others were involved in women's health care decision making. In addition, women were significantly more likely to report poor health if major purchases for daily household needs were jointly decided by a woman and her husband/partner rather than a woman making this decision on her own.

The decision-making dimensions measured by six questions were correlated in a single multinomial regression model. After adjustment, the statistically significant predictors for poor health were husband or partner alone making decisions on women's earnings relative to the case where the decision was made independently by a woman (AOR 5.11, 95% CI 1.30–20.14). Similarly, women were more likely to report poor health if family members or someone else made health care choices for women rather than women making an autonomous decision (AOR 2.78, 95% CI 1.33–5.80). Women were also more likely to report poor health if a husband or partner alone decided on major purchases for daily household needs (AOR 3.34, 95% CI 1.09–10.20) and when woman shared this decision-making dimension with her husband/partner (AOR 2.91, 95% CI 1.26–6.73) rather than the decision being made independently by the woman.

In contrast, women were significantly more likely to report better health relative to poor health if they jointly made decisions with their husband or partner about major

household purchases rather than women alone making this decision (AOR 0.36, 95% CI 0.14–0.94).

Table 6.8 Model 7: Decision making associated with self-rated health

Decision-making domains	COR	95% CI	AOR	95% CI
Decides how money you earn is used				
Husband / partner	**8.00****	**(2.28-28.06)**	**5.11***	**(1.30-20.14)**
You and husband / partner jointly	1.34	(0.72-1.79)	1.03	(0.47-2.27)
Family or someone else	1.02	(0.48-2.18)	0.80	(0.34-1.92)
You	1 (ref)		1 (ref)	
Decides how husband's earning is used				
Husband / partner	1.26	(0.62-2.58)	0.91	(0.41-2.05)
You and husband / partner jointly	1.23	(0.61-2.49)	1.03	(0.39-2.76)
Family or someone else	1.1	(0.22-5.57)	1.43	(0.27-7.64)
You	1 (ref)		1 (ref)	
Decide health care for yourself				
Husband / partner	**2.17***	**(1.08-4.38)**	0.72	(0.24-2.16)
You and husband / partner jointly	**1.86***	**(1.16-3.00)**	1.83	(0.91-3.67)
Family or someone else	**1.93***	**(1.10-3.36)**	**2.78****	**(1.33-5.80)**
You	1 (ref)		1 (ref)	
Decides major household purchases				
Husband / partner	**2.44***	**(1.21-4.92)**	0.98	(0.34-2.86)
You and husband / partner jointly	0.93	(0.53-1.63)	**0.36***	**(0.14-0.94)**
Family or someone else	0.97	(0.56-1.69)	0.79	(0.38-1.65)
You	1 (ref)		1 (ref)	
Decides major purchases for daily household needs				
Husband / partner	**4.12*****	**(1.87-9.07)**	**3.34***	**(1.09-10.20)**
You and husband / partner jointly	**1.61***	**(1.00-2.60)**	**2.91***	**(1.26-6.73)**
Family or someone else	0.96	(0.56-1.63)	0.71	(0.34-1.48)
You	1 (ref)		1 (ref)	
Decides about visit to your family and relatives				
Husband / partner	2.12	(0.61-7.38)	1.32	(0.27-6.49)
You and husband / partner jointly	0.87	(0.54-1.39)	0.62	(0.32-1.22)
Family or someone else	0.6	(0.25-1.46)	0.57	(0.21-1.55)
You	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values were controlled for the variables included in the analysis

6.9 Health information sources associated with SRH

6.9.1 Cross tabulation

Table A23 in Appendix XLII shows the health information sources used by women that were associated with SRH. Chi-square results showed that several health information sources such as 'newspaper', 'magazine', 'internet', 'family', 'friend', 'teacher/counsellor' and 'religious leaders' were significantly associated with SRH. Most notably, internet ($p < 0.001$, chi-square 27.56), and family ($p < 0.001$, chi-square 18.44) as sources of health information were strongly associated with SRH. Although a difference in SRH was identified with other health information sources

such as television, radio and health provider, these findings were not statistically significant.

6.9.2 Multivariate analysis

Table 6.9 shows health information sources associated with SRH. Univariate logistic regressions carried out separately for individual health information sources showed that those who never used newspaper, magazine, internet, family, friend, teacher/counsellors or religious leaders for health information significantly reported poor health compared to those who used the sources occasionally or frequently.

After adjustment for the correlation between the 10 variables in Model 8, internet, family and health provider remained as health information sources that were statistically significant predictors of SRH.

The findings suggest that women who never obtained health information from the internet were twice as likely to report poor health compared to those who used the internet occasionally or frequently (AOR 2.10, 95% CI 1.29–3.43). Similarly, women who never obtained health information from a family member were more likely to report poor health compared to those who received information this way occasionally or frequently (AOR 1.87, 95% CI 1.07–3.28) and these findings were statistically significant. Although chi-square analysis and univariate regression analysis did not confirm a significant association between SRH and obtaining health information from a health provider, a statistically significant association between the variables was predicted in this correlation which was adjusted through regression. Conversely, women who never received health information from a health provider were more likely to be associated with better health relative than poor health (AOR 0.56, 95% CI 0.34–0.91). In other words, women who occasionally or frequently obtained health information from a health provider were in significantly poorer health.

Table 6.9 Model 8: Health information sources associated with self-rated health

Health information sources	COR	95% CI	AOR	95% CI
Newspaper				
Not at all	**1.66***	**(1.12-2.46)**	1.13	(0.68-1.87)
Occasionally / Frequently	1 (ref)		1 (ref)	
Magazine				
Not at all	**1.87****	**(1.24-2.83)**	1.07	(0.63-1.81)
Occasionally / Frequently	1 (ref)		1 (ref)	
Television				
Not at all	1.55	(1.00-2.39)	1.32	(0.78-2.24)
Occasionally / Frequently	1 (ref)		1 (ref)	
Radio				
Not at all	1.06	(0.72-1.57)	0.83	(0.52-1.34)
Occasionally / Frequently	1 (ref)		1 (ref)	
Internet				
Not at all	**2.97*****	**(1.97-4.49)**	**2.10****	**(1.29-3.43)**
Occasionally / Frequently	1 (ref)		1 (ref)	
Family				
Not at all	**2.68*****	**(1.69-4.23)**	**1.87***	**(1.07-3.28)**
Occasionally / Frequently	1 (ref)		1 (ref)	
Friend				
Not at all	**2.11****	**(1.37-3.25)**	1.28	(0.75-2.19)
Occasionally / Frequently	1 (ref)		1 (ref)	
Teacher / Counsellor				
Not at all	**2.05****	**(1.35-3.11)**	1.32	(0.80-2.18)
Occasionally / Frequently	1 (ref)		1 (ref)	
Health Provider				
Not at all	0.92	(0.62-1.38)	**0.56***	**(0.34-0.91)**
Occasionally / Frequently	1 (ref)		1 (ref)	
Religious leader				
Not at all	**1.65***	**(1.07-2.55)**	0.45	(0.87-2.40)
Occasionally / Frequently	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values were controlled for the variables included in the analysis

6.10 Perception of health, health-seeking behaviour and health care access associated with SRH

6.10.1 Cross tabulation

Table A24, Table A25 and Table A26 in Appendix XLII shows women's perceptions of, and behaviour towards, health, health care access and health-seeking behaviour, and barriers to health care access during sickness associated with SRH.

Table A24 shows health-seeking behaviour during sickness measured in one question, and 11 different variables associated with SRH that measured women's perceptions of and behaviours towards health. Chi-square analysis indicated that health-seeking behaviour in terms of visiting a health practitioner during sickness was not associated with SRH. However, women's perceptions of and behaviours

towards health, such as ‘I give more priority to my children and their health than my own health’; ‘I’m too busy studying to take care of my health’; ‘I don’t have easy access to health services’ and ‘I am not able to give much importance to health, it’s the lowest priority in my life’ were significantly associated with SRH. Although women respondents’ other life priorities showed a difference when associated with SRH, these measurements were statistically not significant.

Table A25 shows additional health-seeking behaviour responses associated with SRH. Chi-square analysis showed that women’s perception of ‘adequate health services close to home’; ‘last time visited a doctor or health care provider’; and consultation with a ‘specialist doctor’, ‘general doctor’, or ‘others’ were significantly associated with SRH. However, the health facilities used by women for their health care were statistically not significant.

Table A26 shows women’s perception of the barriers to health care access during sickness associated with SRH. Chi-square analysis indicated that out of the 15 barriers outlined in the survey question, ‘distance to health facility’ and ‘concern that necessary laboratory or medical investigations may not be available’ were the two barriers associated with SRH.

6.10.2 Multivariate regression

Associations between women’s perception of health, health-seeking behaviour and health care access with SRH were explored in three different multinomial regression models. Table 6.10 depicts Model 9, where women’s perceptions of and behaviours towards health were measured through 11 different factors. Similarly, Table 6.11 depicts Model 10, in which health care access and health-seeking behaviour variables were associated with SRH. Table 6.12 illustrates Model 11, in which women’s perceptions of barriers to health care access were associated with SRH. For each model, coefficients were initially estimated through univariate logistic regression without controlling for any potential confounders. Following this, the predictor variables were adjusted for the confounding variables to determine the statistically significant factors associated with poor SRH relative to good SRH. Separate analysis of each variable enabled identification of those factors with the greatest impact on the differences in SRH.

Table 6.10 shows that univariate regression carried out individually for the explanatory predictors tracing women's perceptions of health in relation to other factors in their lives. Without adjustment for any variables, the crude odds ratios for poor health were 1.88 (95% CI 1.27–2.79) for those who gave more importance to their children; 1.76 (95% CI 1.12–2.77) for women who reported they did not have easy access to health services; and 1.69 (95% CI 1.12–2.57) for those who perceived health as their lowest priority in life, compared to women who gave importance to their own health.

Adjustment for the confounders decreased the odds ratio for the variable 'giving more priority to children than my own health' (AOR 1.68; 95% CI 1.06–2.65). However, for the variable 'Giving more priority to my husband/partner's health …' had a notable effect, with the direction of the relationship becoming significant towards more positive/better health (AOR 0.50, 95% CI 0.30–0.84). The odds ratio of priority given for education remained almost same on a better health effect in both the unadjusted (COR 0.43, 95% CI 0.24–0.76), and adjusted analysis (AOR 0.48, 95% CI 0.25–0.89). Odds ratios were no longer significant for 'I don't have easy access to health care services' and 'Not able to give much importance to health, health is the lowest priority in my life'.

Table 6.10 Model 9: Perception and behaviour towards health

Predictors	COR	95% CI	AOR	95% CI
Health-seeking behaviour				
When I am sick, I will not see a health practitioner	1.15	(0.46-2.92)	1.20	(0.44-3.32)
When I am sick, I am unlikely to go to a health practitioner	1.34	(0.78-2.31)	1.36	(0.76-2.43)
When I am sick, I may go to a health practitioner	1.32	(0.85-2.05)	1.17	(0.73-1.87)
When I am sick, I usually go to a health practitioner	1 (ref)		1 (ref)	
Perception of the reasons why priority was not given for own health				
Give more priority to my children and their health than my own health (n=424)				
Yes	**1.88****	**(1.27-2.79)**	**1.68***	**(1.06-2.65)**
No	1 (ref)		1 (ref)	
Give more priority to my husband / partner's health than my own health				
Yes	0.74	(0.48-1.14)	**0.50****	**(0.30-0.84)**
No	1 (ref)		1 (ref)	
Give more priority to my parents / family members (other than own children) health				
Yes	0.93	(0.62-1.40)	1.08	(0.68-1.69)
No	1 (ref)		1 (ref)	
Too busy doing household chores to bother about my own health				
Yes	1.56	(0.95-2.56)	1.32	(0.73-2.37)
No	1 (ref)		1 (ref)	
Too busy in my job to take care of my health				
Yes	0.89	**(0.55-1.46)**	0.95	(0.56-1.62)
No	1 (ref)		1 (ref)	
Too busy studying to take care of my health				
Yes	**0.43****	**(0.24-0.76)**	**0.48***	**(0.25-0.89)**
No	1 (ref)		1 (ref)	
Do not have adequate information about health service providers / places or healthy living				
Yes	1.42	(0.72-2.81)	0.89	(0.41-1.95)
No	1 (ref)		1 (ref)	
Do not have easy access to health services				
Yes	**1.76***	**(1.12-2.77)**	1.65	(0.99-2.72)
No	1 (ref)		1 (ref)	
Husband does not approve or support in seeking health care				
Yes	6.3	(0.73-54.37)	4.01	(0.43-37.27)
No	1 (ref)		1 (ref)	
Unable to give much importance to health, health is the lowest priority in my life				
Yes	**1.69***	**(1.12-2.57)**	1.53	(0.98-2.44)
No	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001

#missing values were controlled for the variables included in the analysis

Table 6.11 shows univariate logistic regressions carried out independently for the explanatory predictors for health care access and health-seeking behaviour. Without adjustment for any variables, the crude odds ratios for poor health were significant for the following predictors; ‘Adequate health services close to home’, visit to a doctor or health care provider ‘within the last one week’, and consultation with a ‘specialist doctor’, ‘general doctor’ or ‘others’ within the last six weeks.

After controlling for potential confounding factors, there was a positive correlation towards poor health between the perception of adequate health services close to home (AOR 1.96, 95% CI 1.27–3.03); visit to doctor or health provider within the last one week (AOR 1.88, 95% CI 1.04–3.39); visit to a specialist doctor (AOR 1.90, 95% CI 1.12–3.21), a general doctor (AOR 2.21, 95% CI 1.23–3.95) and ‘other’ health providers (AOR 2.38, 95% CI 1.08–5.25). Adjustment for the confounders substantially moved the odds ratios measurement of the variable health care access ‘Sick but consulted no-one’ from a non-significant association to a strongly correlated poor SRH (AOR 3.97, 95% CI 1.88–8.39).

Similarly, with adjustment for the confounders, three of the health care access facilities that were not significant in the unadjusted odds ratios became substantially correlated with SRH. Women who visited IGMH ‘all the time/often’ (AOR 1.98, 95% CI 1.14–3.45); and hospital/health care abroad ‘sometimes’ (AOR 1.99, 95% CI 1.14–3.47) were more likely to report poor health compared to those women who never used these health facilities. In contrast, those who visited the private, ADK Hospital ‘sometimes’ (AOR 0.48, 95% CI 0.28–0.83) were more likely to report better health relative to those who never visited this place.

Table 6.11 Model 10: Perception of health services and health care access

Predictors	COR	95% CI	AOR	95% CI
Adequate health services close to home				
No	**1.81****	**(1.24-2.66)**	**1.96****	**(1.27-3.03)**
Yes	1 (ref)		1 (ref)	
Last time visited a doctor or health care provider				
Within the last one week	**2.23****	**(1.38 -3.59)**	**1.88***	**(1.04-3.39)**
Within the last one month	1.49	(0.93-2.39)	1.40	(0.80-2.46)
Prior to one month and within last 2 year	1 (ref)		1 (ref)	
Health-seeking behaviour during sickness in the past six weeks				
Sick, but consulted no-one				
Yes	1.32	(0.72-2.41)	**3.97*****	**(1.88-8.39)**
No	1 (ref)		1 (ref)	
Specialist doctor				
Yes	**1.49 ***	**(1.01-2.20)**	**1.90***	**(1.12-3.21)**
No	1 (ref)		1 (ref)	
General doctor				
Yes	**1.67***	**(1.04-2.70)**	**2.21****	**(1.23-3.95)**
No	1 (ref)		1 (ref)	
Others (nurse, pharmacist, counsellor)				
Yes	**2.11***	**(1.12-4.02)**	**2.38***	**(1.08-5.25)**
No	1 (ref)		1 (ref)	
Facilities and resources used for health care access				
IGMH (Public hospital)				
All the time / Often	1.56	(0.99-2.46)	**1.98***	**(1.14-3.45)**
Sometimes	0.96	(0.60-1.53)	1.89	(0.68-2.06)
Never / rarely	1 (ref)		1 (ref)	
ADK Hospital (Private hospital)				
All the time / Often	1.13	(0.82-2.10)	1.37	(0.79-2.38)
Sometimes	0.73	(0.46-1.16)	**0.48****	**(0.28-0.83)**
Never / rarely	1 (ref)		1 (ref)	
Private clinics				
All the time / Often	1.28	(0.79-2.08)	1.50	(0.84-2.68)
Sometimes	1.2	(0.76-1.89)	1.00	(0.58-1.74)
Never / rarely	1 (ref)		1 (ref)	
Health Centre				
All the time / Often	2.07	(0.72-5.93)	2.32	(0.69-7.84)
Sometimes	1.21	(0.57-2.55)	1.77	(0.75-4.18)
Never / rarely	1 (ref)		1 (ref)	
Pharmacy				
All the time / Often	0.74	(0.43-1.28)	0.59	(0.31-1.09)
Sometimes	0.95	(0.57-1.58)	0.89	(0.50-1.59)
Never / rarely	1 (ref)		1 (ref)	
Hospital / Health centre Aboard				
All the time / Often	0.84	(0.46-1.54)	0.95	(0.46-1.95)
Sometimes	1.43	(0.89-2.27)	**1.99***	**(1.14-3.47)**
Never / rarely	1 (ref)		1 (ref)	
Traditional Medicine practitioner (Dhivehi beys)				
All the time / Often	1.29	(0.26-6.49)	0.70	(0.10-5.02)
Sometimes	1.19	(0.51-2.75)	1.00	(0.32-3.11)
Never / rarely	1 (ref)		1 (ref)	

Traditional Sorcerer (Fanditha verikan)				
Sometimes	0.85	(0.24-3.08)	0.54	(0.08-3.46)
Never/rarely	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values were controlled for the variables included in the analysis

Table 6.12 outlines the 15 barriers to health care access questioned in this survey associated with SRH. The association between 'distance to the health facility', and 'concerns that necessary laboratory and medical tests may not be available' were statistically significant in the unadjusted regression analysis. Adjustment for the confounders increased the odds ratios for the variable 'distance to the health facility' as 'always/most of the time' a barrier toward poor health (AOR 3.05, 95% CI 1.00–9.27). In contrast, women who were 'always/most of the time' concerned that necessary laboratory and medical tests may not be available (AOR 0.23, 95% CI 0.07–0.76) were significantly more likely to report good health.

With adjustment, one of the barriers of concern that necessary medicines may not be 'always/most of the time' relative to those who rarely worried about this factor, which were not significant in the unadjusted odds ratios, became substantially associated with poor SRH (AOR 3.41, 95% CI 1.03–11.28).

For the two variables "Family members' negative attitude towards medical care" and "Husband/partner's negative attitude towards medical care", the response category 'sometimes' was grouped to 'always/most of the time' category as there were small numbers in each.

Table 6.12 Model 11: Barriers to health care access

Predictors	COR	95% CI	AOR	95% CI
Getting permission to go (n=411)				
Always / Most of the time	0.45	(0.16-1.28)	0.25	(0.06-1.56)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Family members negative attitude towards medical care (n=405)				
Always / Most of the time / Sometimes	0.28	(0.06-1.32)	0.28	(0.04-1.84)
Rarely / Never	1 (ref)		1 (ref)	
Husband/partner's negative attitude towards medical care (n=366)				
Always / Most of the time / Sometimes	0.66	(0.16-2.68)	1.46	(0.22-9.88)
Rarely / Never	1 (ref)		1 (ref)	
Getting money needed for the treatment (n=404)				
Always / Most of the time	1.33	(0.66-2.68)	1.17	(0.49-2.80)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Distance to the health facility (n=400)				
Always / Most of the time	**2.42 ***	**(1.12-5.24)**	**3.05***	**(1.00-9.27)**
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Having to take transport (n=399)				
Always / Most of the time	1.7	(0.93-3.09)	1.12	(0.48-2.60)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Not wanting to go alone (n=397)				
Always / Most of the time	1.8	(0.94-3.45)	1.47	(0.61-3.53)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Not able to leave my dependents alone at home and seek personal health care (n=382)				
Always / Most of the time	0.77	(0.30-1.99)	0.51	(0.17-1.54)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Difficulties in getting a doctor's appointment (n=408)				
Always / Most of the time	1.33	(0.89-1.98)	1.09	(0.68-1.74)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Concern that there may not be a health provider (n=397)				
Always / Most of the time	1.32	(0.60-2.92)	2.45	(0.78-7.77)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Concern that there may not be a female health provider (n=395)				
Always / Most of the time	1.06	(0.51-2.12)	0.92	(0.35-2.38)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Concern that the necessary medicines may not be available (n=396)				
Always / Most of the time	1.51	(0.68-3.36)	**3.41***	**(1.03-11.28)**
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Concern that necessary laboratory or medical investigations may not be available (n=395)				
Always / Most of the time	**0.39***	**(0.16-0.94)**	**0.23***	**(0.07-0.76)**
Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Concern that health practitioner will be rude and unfriendly (n=400)				
Always / Most of the time	0.59	(0.25-1.39)	0.45	(0.07-2.92)

Sometimes / Rarely / Never	1 (ref)		1 (ref)	
Concern that health practitioner will not listen and be uncaring (n=400)				
Always / Most of the time	0.54	(0.20-1.42)	0.48	(0.08-3.10)
Sometimes / Rarely / Never	1 (ref)		1 (ref)	

*p < 0.05; **p < 0.01; ***p < 0.001
#missing values were controlled for the variables included in the analysis

6.11 Final model

Model 12 in Table 6.13 is the final multinomial regression model drawn up for the survey which was developed through three main stages. In the first stage, crude odds ratios were estimated for the independent variables, to identify those factors with the greatest impact on SRH. Second, separate logistic models were fitted to estimate the effect of correlation and interaction between odds ratios of each explanatory variable on SRH. In these models, both the unadjusted and adjusted odds ratio estimates were used to show the contribution and magnitude of each variable to SRH. Finally, the 36 statistically significant variables from the previous logistic models were put in one main multinomial logistic regression. After controlling for the 36 statistically significant predictors, most of the variables lost their statistical significance, expect for 13 variables that predicted women's SRH in this survey. These predictors with their odds ratios are explained here.

As mentioned previously, in this analysis the dependent variable SRH was measured as a dichotomous variable. The response categories of very poor, poor and fair SRH were combined to form poor SRH, while excellent, very good and good health was combined to form good SRH.

The final analysis in Table 6.13 shows that the relative odds of having poor health as opposed to good health increases with having less than 10 years of education (below secondary) (AOR 3.75, 95% CI, 1.43–9.82, p=0.007). Thus, the results infer that with a 95% confidence interval, women with less than 10 years of education are nearly four times more likely to report poor health than women with education beyond secondary school.

Among indicators for living conditions, notable effects on poor health were seen for women who perceived that they had inadequate facilities within their home environment for relaxing and spending time with family (AOR 2.89, 95% CI, 1.35–

6.19, p=0.006). The relationship between this independent variable and SRH became stronger in the final analysis (with the odds ratio rising from 2.13 to 2.89). Thus, the results conclude that with a 95% confidence interval, women who disagree or strongly disagree that they have adequate facilities for relaxing and spending time with family are more likely to report poor health than those women who perceive these facilities to be adequate.

For food accessibility, the relative odds of having poor health compared to good health increased five-fold if women had to stay hungry because they could not access food (AOR 5.15, 95% CI, 1.63–16.22, p=0.005) compared to those who never or rarely had to face food shortages. Regarding exercise, women who were active for less than 60 minutes each day in a week were more than twice as likely to report poor health than good health (AOR 2.44, 95% CI, 1.21–4.93, p=0.01), compared to those who were active for this duration at least for one day each week. These values were significant at the 95% level.

Although some of the variables were statistically significant in the individual logistic regression, after controlling for all the significant variables in the final model, three of the decision-making domains remained statistically significant. Women were more likely to report good health rather than poor health if they jointly decided on major household purchases with their husband rather women making these decisions on their own (AOR 0.19, 95% CI, 0.05–0.72, p=0.01). On the contrary, the relative odds of having poor health versus better health increased six-fold if the husband alone made such decisions (AOR 5.91, 95% CI 1.28–27.27, p=0.02) rather than women alone doing it. Moreover, poorer health is strongly associated, and increased eight times more, if women jointly made this decision with their husbands (AOR 7.77, 95% CI 2.45–26.63, $p < 0.001$) rather than women themselves making the decision.

The internet, family and health provider were statistically significant predictor for gaining health information in the single adjusted model. However, after adjustment for the confounders in the final model, there was a substantially increased odds ratio of the family's effect on SRH – those who never obtained health information from family members were three times more likely to report poor health than those who occasionally or frequently got this support (AOR 3.28, 95% CI 1.54–7.00, p=0.002).

The internet and health providers had no association with SRH from this evidence, so it was dropped from the final model.

Women's perception of their priority of health compared to other life activities predicted that although three variables were significant in the individual model, after correlation between predictors in the final model, women who gave more priority to their studies than their health were 70% more likely to report better health than poor health (AOR 0.30, 95% CI 0.10–0.87, p=0.03). Giving priority to children's or husband's health has no association with SRH at 95% CI so it was dropped from the final model.

For health care access, although several factors were significant in the individual logistic model, only four predictors remained statistically significant in the final model. Women who were sick but did not consult a health care provider were four times more likely to report poor health (AOR 4.31, 95% CI 1.55–11.95, p=0.005) than others who accessed a health provider. Similarly, the results infer that with a 95% confidence interval, women who visited a general doctor are between 1.11 and 5.61 times more likely to report poor health than those who did not consult these health providers in the past six weeks (AOR 2.50, 95% CI 1.11–5.61, p=0.03). Those who visited the private ADK Hospital were significantly better health than those who never visited this place (AOR 2.51, 95% CI 1.18–5.36, p=0.02). In contrast, women who sometimes travelled to a foreign country to gain health care access were three times more likely to have poor health than to those who have never travelled aboard for medical reasons (AOR 2.85, 95% CI 1.35–6.00, p=0.006).

In terms of the barriers to accessing health care, although three predictors were correlated with SRH in the independent multivariate logistic model (Model 11), only one remained substantially associated with SRH after adjustment for the confounders in the final model. Women who were always concerned about unavailability of necessary laboratory or medical investigations reported significantly better health (AOR 0.14, 95% CI 0.03–0.73, p=0.02), than those who sometimes or never have to worry about it. Distance to health facility and unavailability of necessary medicines has no association with SRH at 95% CI, and it was drop from the final model.

Table 6.13 Model 12: Predictors of women's self-rated health

Predictors	AOR (individual model)	95% CI	p-value	AOR (final model)	95% CI	p-value
Model 1 Demographics						
Education						
<year 10	**5.39*** **	**(2.64-11.03)**	**<0.0001**	**3.75** **	**(1.43-9.82)**	**0.007**
Year 10 or above	1(ref)			1(ref)		
Model 2 Work and income associated with SRH						
Occupation past 12 months						
Employed	**0.57***	**(0.34-0.94)**	**0.03**	0.65	(0.28-1.50)	0.31
Student	**0.26 *** **	**(0.14-0.51)**	**<0.0001**	0.56	(0.18-1.80)	0.33
Homemaker/Self-employed/Retired	1(ref)			1(ref)		
Personal income (per month)						
No income	3.74	(0.90-15.58)	0.07	6.96	(0.69-70.65)	0.1
<MVR10,000 (AUD667)	**2.00***	**(1.11-3.59)**	**0.02**	1.34	(0.57-3.14)	0.5
≥MVR10,000 (AUD667)	1(ref)			1(ref)		
Personal income on household expenditure (per month)						
Nearly all/More than half	**2.18** **	**(1.24-3.81)**	**0.006**	1.60	(0.70-3.71)	0.27
About half	1.16	(0.58-2.33)	0.68	1.36	(0.48-3.88)	0.57
Less than half/Nothing	1(ref)			1(ref)		1(ref)
Model 3 Household living arrangements associated with SRH						
Type of family arrangement						
Live with parents and siblings						
Yes	**0.39***	**(0.16-0.90)**	**0.03**	1.04	(0.45-2.41)	0.94
No	1(ref)			1(ref)		
Live with host family						
Yes	**0.31***	**(0.11-0.83)**	**0.02**	0.70	(0.26-1.85)	0.47
No	**1(ref)**			1(ref)		
Head of household						
Female/Both	**0.55***	**(0.32-0.96)**	**0.03**	0.86	(0.39-1.91)	0.72
Male	1(ref)			1(ref)		
Model 4 Roles and responsibilities associated with SRH						

Household activities						
None	**0.27***	**(0.09-0.78)**	**0.02**	0.40	(0.09-1.68)	0.21
≤8 hours	**0.29****	**(0.13-0.63)**	**0.002**	0.39	(0.14-1.08)	0.07
>8 hours	1(ref)			1(ref)		
Education/Studying/Training						
None	**2.63****	**(1.28-5.41)**	**0.009**	1.53	(0.46-5.07)	0.49
≤8 hours	1.01	(0.47-2.16)	0.97	1.03	(0.34-3.12)	0.96
>8 hours	1 (ref)			1 (ref)		
Model 5 Living condition factors associated with SRH						
Adequate supply of pure and clean drinking water (n=428)						
Disagree/Strongly disagree	**1.90***	**(1.03-3.52)**	**0.04**	1.97	(0.87-4.46)	0.11
Strongly agree/Agree	**1 (ref)**			1 (ref)		
Adequate facilities for relaxing and spending time with family (n=426)						
Disagree/Strongly disagree	**2.13***	**(1.16-3.91)**	**0.02**	**2.89****	**(1.35-6.19)**	**0.006**
Strongly agree/Agree	1 (ref)			1 (ref)		
Model 6 Diet and Exercise factors associated with SRH						
Past 30 days in hunger due to not enough food at home						
Sometimes /Most time/Always	**2.64***	**(1.20-5.81)**	**0.02**	**5.15****	**(1.63-16.22)**	**0.005**
Never/Rarely	1 (ref)			1 (ref)		
Vegetable consumption in the past 30days						
Did not eat	**2.26***	**(1.13-4.49)**	**0.02**	1.45	(0.71-2.99)	0.31
Ate one time or more	1 (ref)			1 (ref)		
Number of days physically active for at least 60 minutes per day in a week						
0 days	**3.32***	**(1.26-8.77)**	**0.02**	**2.44***	**(1.21-4.93)**	**0.01**
One day or more	1 (ref)			1(ref)		
Model 7 Decision making associated with SRH						
Decides how money you earn is used						
Husband/Partner	**5.11***	**(1.30-20.14)**	**0.02**	6.30	(0.95-41.60)	0.06
You and husband/Partner jointly	1.03	(0.47-2.27)	0.94	0.82	(0.32-2.06)	0.67
Family or someone else	0.8	(0.34-1.92)	0.62	0.67	(0.19-2.34)	0.53
You	1 (ref)			1(ref)		
Decide health care for yourself						
Husband/Partner	0.72	(0.24-2.16)	0.56	0.89	(0.18-4.48)	0.89

You and husband/Partner jointly	1.83	(0.91-3.67)	0.09	1.37	(0.52-3.57)	0.52
Family or someone else	**2.78****	**(1.33-5.80)**	**0.006**	2.66	(0.86-8.22)	0.09
You	1 (ref)			1 (ref)		
Decides major household purchases						
Husband/Partner	0.98	(0.34-2.86)	0.97	0.49	(0.12-2.05)	0.33
You and husband/Partner jointly	**0.36***	**(0.14-0.94)**	**0.04**	**0.19***	**(0.05-0.72)**	**0.01**
Family or someone else	0.79	(0.38-1.65)	0.53	0.88	(0.30-2.58)	0.82
You	1 (ref)			1(ref)		
Decides major purchases for daily household needs						
Husband/Partner	**3.34***	**(1.09-10.20)**	**0.04**	**5.91***	**(1.28-27.27)**	**0.02**
You and husband/Partner jointly	**2.91***	**(1.26-6.73)**	**0.01**	**7.77*****	**(2.45-26.63)**	**<0.001**
Family or someone else	0.71	(0.34-1.48)	0.36	0.70	(0.25-1.99)	0.51
You	1 (ref)			1 (ref)		
Model 8 Health information sources associated with SRH						
Internet						
Not at all	**2.10****	**(1.29-3.43)**	**0.003**	0.41	(0.16-1.03)	0.06
Occasionally/Frequently	1 (ref)			1 (ref)		
Family						
Not at all	**1.87***	**(1.07-3.28)**	**0.03**	**3.28****	**(1.54-7.00)**	**0.002**
Occasionally/Frequently	1 (ref)			1(ref)		
Health Provider (n=410)						
Not at all	**0.56***	**(0.34-0.91)**	**0.02**	0.58	(0.30-1.13)	0.11
Occasionally/Frequently	1 (ref)			1 (ref)		
Model 9 Perception of the reasons why priority was not given for own health associated with SRH						
Give more priority to my children and their than my own health						
Yes	**1.68***	**(1.06-2.65)**	**0.03**	0.85	(0.40-1.81)	0.68
No	1 (ref)			1(ref)		
Give more priority to my husband/partner's health than my own health						
Yes	**0.50****	**(0.30-0.84)**	**0.008**	0.63	(0.30-1.30)	0.21
No	1 (ref)			1(ref)		
Too busy studying to take care of my health						
Yes	**0.48***	**(0.25-0.89)**	**0.02**	**0.30***	**(0.10-0.87)**	**0.03**
No	1 (ref)			1(ref)		

Model 10 Perception of health services and health care access associated with SRH						
Adequate health services close to home						
No	**1.97****	**(1.27-3.05)**	**0.003**	1.4	(0.75-2.61)	0.29
Yes	1 (ref)			1(ref)		
Last time visited a doctor or health care provider						
Within the last one week	**1.96***	**(1.08-3.56)**	**0.03**	1.52	(0.69-3.36)	0.30
Within the last one month	1.46	(0.82-2.59)		1.24	(0.58-2.67)	0.58
Prior to one month and within last 2 year	1 (ref)			1(ref)		
Health-seeking behaviour during sickness in the past six weeks						
Sick, but consulted no-one						
Yes	**3.98*****	**(1.87-8.48)**	**<0.0001**	**4.31****	**(1.55-11.95)**	**0.005**
No	1 (ref)			1 (ref)		
Specialist doctor						
Yes	**1.91***	**(1.12-3.24)**	0.02	1.25	(0.59-2.65)	0.57
No	1 (ref)			1(ref)		
General doctor						
Yes	**2.29****	**(1.27-4.12)**	**0.006**	**2.50***	**(1.11-5.61)**	**0.03**
No	1 (ref)			1 (ref)		
Others (nurse, pharmacist, counsellor)						
Yes	2.23	(1.00-4.96)	0.05	1.53	(0.58-4.06)	0.39
No	1 (ref)			1 (ref)		
Facilities and resources used for health care access						
IGMH (Public hospital)						
All the time/Often	**1.93***	**(1.10-3.38)**	**0.02**	1.54	(0.72-3.29)	0.27
Sometimes	1.18	(0.68-2.05)	0.57	1.27	(0.58-2.78)	0.55
Never/Rarely	1 (ref)			1(ref)		
ADK Hospital (Private hospital)						
All the time/Often	1.36	(0.78-2.36)	0.28	**2.51***	**(1.18-5.36)**	**0.02**
Sometimes	**0.46****	**(0.26-0.80)**	**0.006**	0.85	(0.42-1.73)	0.66
Never/Rarely	1 (ref)			1 (ref)		
Hospital/Health centre Aboard						
All the time/Often	0.94	(0.45-1.95)	0.87	1.15	(0.42-3.16)	0.78
Sometimes	**1.96***	**(1.12-3.43)**	**0.02**	**2.85****	**(1.35-6.00)**	**0.006**
Never/Rarely	1 (ref)			1(ref)		

Model 11 Barriers to health care access associated with SRH						
Distance to the health facility (n=400)						
Always/Most of the time	**3.05***	**(1.00-9.27)**	**0.05**	2.05	(0.61-6.92)	0.25
Sometimes/Rarely/Never	1 (ref)			1 (ref)		
Concern that the necessary medicines may not be available (n=396)						
Always/Most of the time	**3.41***	**(1.03-11.28)**	**0.04**	4.27	(0.92-19.75)	0.06
Sometimes/Rarely/Never	1 (ref)			1 (ref)		
Concern that necessary laboratory or medical investigations may not be available (n=395)						
Always/Most of the time	**0.23***	**(0.07-0.76)**	**0.02**	**0.14***	**(0.03-0.73)**	**0.02**
Sometimes/Rarely/Never	1 (ref)			1 (ref)		

*p < 0.05; **p < 0.01; ***p < 0.001

#missing values were controlled for the variables included in the analysis

6.12 Summary

This is the first empirical study to gather evidence of predictors of women's SRH health in Malé city, Maldives. Differences in SRH were analysed between several dimensions of women's sociodemographic and living conditions, patterns of decision making, diet and physical activity characteristics, and health and health care access.

The study findings reaffirmed the possibility of socioeconomic inequalities (e.g. lower education attainment, disadvantaged living environment, limited access to food, limited physical mobility) as significant predictors of poor SRH. The findings also suggested that women's power and autonomy in decision making is vital for SRH. The positive relationship between getting health information from family and improving health suggests that social support mechanisms help maintain health. Women's health-seeking behaviour and health care access within and outside the Maldives remain strong predictors of SRH. Women who reported not getting any consultation during sickness reported significantly poorer health. Those who access private or overseas health care reported significantly poorer health, indicating to a certain degree the health-seeking behaviour of women in urban dwellings.

Although the Maldives has improved the health status of its population, the inequality identified in this chapter (e.g. socioeconomic inequalities, gender disparities, health care access barriers) seems significant. The findings in this chapter and the previous chapter will be integrated and triangulated in the next chapter, to discuss the social determinants of the health inequity gap for women in Malé city.

Chapter 7 – Discussion

7.1 Introduction

The aim of this study was to examine women's health needs and concerns using case study research within a sequential mixed method design. The study was guided by a conceptual framework based on systems theory (Von Bertalanffy, 1968) within the discourse of a rights-based approach, offering an alternative to the biomedical approach to women's health in Malé city. The complex interactions that predicted women's health were investigated and triangulated using women, men and community leaders' perspectives and experiences (Chapter 5). Some of the key qualitative findings were then tested using a cross-sectional survey (Chapter 6).

The aim of this chapter is to summarise the main findings from these two strands of empirical research in relation to the research aims and objectives. The results will be discussed in light of existing theoretical and empirical literature. The chapter will conclude with reflections on the limitations of the study.

7.2 Reflecting on findings: social determinants of women's health

Contrary to the biomedical view of women's health, this study found that factors influencing women's health were multidimensional and embedded within the context and complexities of women's lives (Commission on Social Determinants of Health, 2008). Social determinants of women's health were a combination of factors within the domains of education, economics, living conditions, gender and/or social relations and the health system (Figure 7.1). The results also suggest how these social factors intersect with women's status, autonomy, power, and decision-making ability, enhancing or diminishing women's capability to attain health and wellbeing. The global community as well as women's health advocates agree that women's health gets compromised as a consequence of structural factors that seem beyond individual women's power, agency and control (A. Evans & Nambiar, 2013; World Health Organization, 2009), supporting the findings of this study.

The findings of this thesis are unique and novel, representing the first such work in Malé city. They also provide evidence that will be relevant to other jurisdictions of the Maldives and other low- and middle-income countries (LMIC). More

importantly, the findings that build on the discourse of social determinants of women's health provide a basis for discussing the salient factors or inequalities that affect women's health and wellbeing.

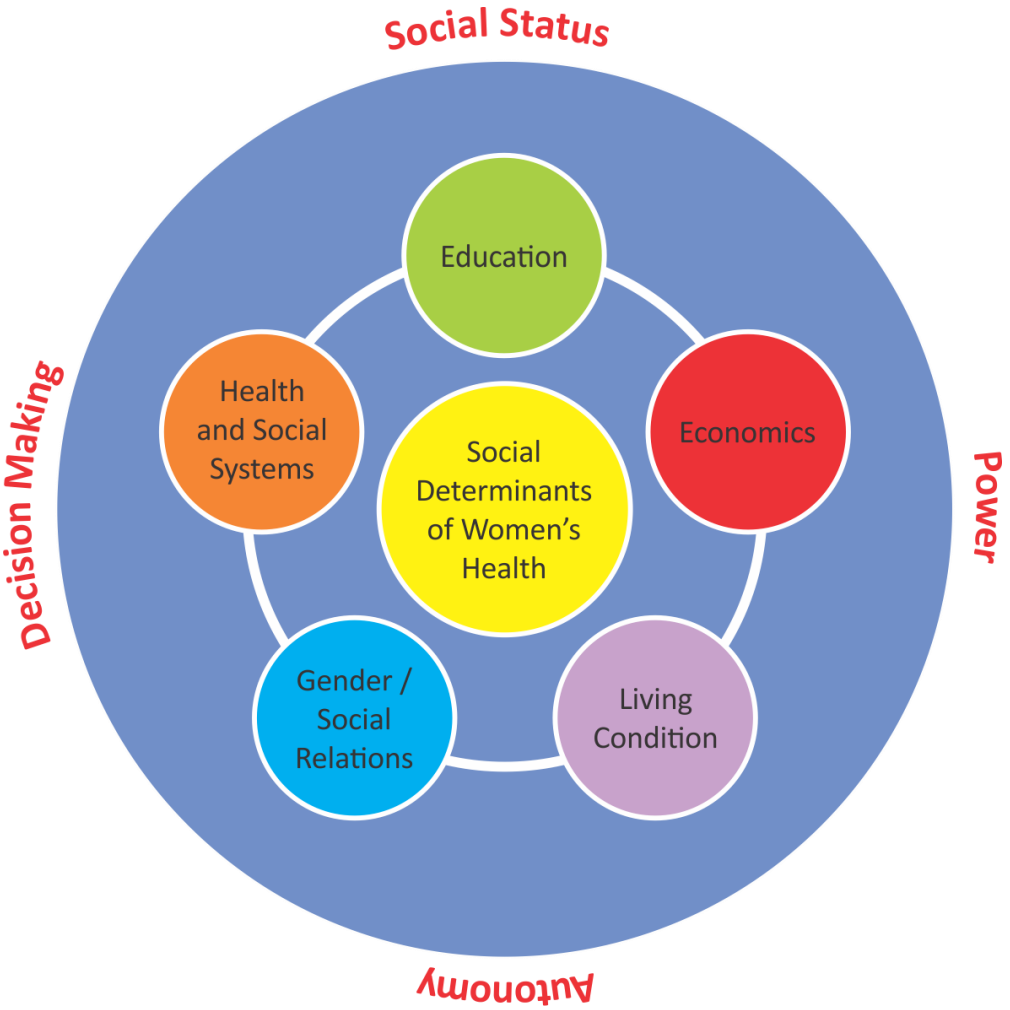


Figure 7.1 Determinants of women's health in Malé city

7.2.1 Social and economic inequalities as determinants of women's health

The findings of this study confirm those of other studies, indicating the depth and influence of social and economic factors (individually and combined) such as low levels of literacy, inadequate income and sub-standardised housing on women's choice and ability in maintaining health and wellbeing.

Consistent with other international studies, the survey results reported in this study demonstrate that women with education below secondary school level (around three in ten women in Malé city) were more likely to self-report poor health compared to

women who obtained secondary education or above. The literature review (Chapter 3) showed plausible reasons for why education is likely to affect women's health. Having low education negatively impacts on income, material access, living conditions, health-related behaviour and health care access, as well as determining relational and psychosocial health and wellbeing (M. Marmot, Bell, & Goldblatt, 2013; Montez & Zajacova, 2013; Murphy-Graham, 2010).

The survey and qualitative results of this study showed that women with education below the secondary level and who also had no means of attaining personal income or who reported low incomes were mostly older women, which reflects the national statistics (Ministry of Health and Family, 2010b). Additionally, nearly a third of the survey respondents lived in female-headed households, similar to the census data of Malé city (National Bureau of Statistics, 2014b). The background of this study also highlighted how women occupy lower-category jobs compared to men. Moreover, female-headed households were economically poorer than male-headed households in the Maldives, comparable to other countries in both developed and developing nations (Barros, Fox, & Mendonca, 1997; National Bureau of Statistics, 2006; United Nations, 2015, p.08).

A critical theme identified by economically disadvantaged women in the qualitative component of the study was a lack of personal income or minimal income as a major chronic life stressor, compromising access to basic necessities, goods and services. This limited access then leads to health vulnerabilities. Notably, this was not a concern expressed by all women, but was evident in certain groups of women – older and adult women who had basic literacy levels or only primary education, had no personal income or low income, were single mothers, lived in female-headed household or low-income or crowded households, and who had competing demands of household work, care provider roles and low-paid jobs. Previous studies have also highlighted how socioeconomic marginalisation and vulnerability caused by gender inequality limits women's choice, power, autonomy, time, money and opportunities to access basic necessities in life, which unfavourably affects health and wellbeing (Alyaemni et al., 2013; Angus et al., 2013; Hinton & Earnest, 2010a).

Although women's personal or household income did not affect SRH in the final regression analysis of the survey in this study, other dimensions of affordability, such

as limited access to food, an inadequate living environment and not seeking health care during sickness were significantly associated with poor SRH. These findings were also substantiated by respondents in the qualitative study.

Previous research has also articulated food insecurity as a major cause of stress for and depression in women (Bermúdez-Millán et al., 2011; Heflin, Siefert, & Williams, 2005; Laraia, Siega-Riz, Gundersen, & Dole, 2006; Piaseu & Mitchell, 2004; Whitaker, Phillips, & Orzol, 2006) and has linked it to low income (Angus et al., 2013). In particular, the association between female-headed households and food insecurity is established (Felker-Kantor & Wood, 2012; Zekeri, 2013). Additionally, both the qualitative and survey results of this study indicated that women who were sick were less likely to access health services. This could be explained by reflecting on Hart's (1971) inverse care law, which posits that those members of the population who least need health care (e.g. the healthy and wealthy) are more likely to receive it than the poor and the sick. Extensive research supports this notion (Ahmed et al., 2010). For example, in India, the richest quantile used three times more health resources then the poorest quantile (Peters, Rao, & Fryatt, 2003). However, Peters (2002) showed that health outcomes of mortality and fertility rates were lower in states of India where services were pro-poor. Therefore, it is likely that resources used in poorer sectors of society have the greatest benefits. Furthermore, it is well established in the literature that low and limited income compromises living conditions, which in turn affects the health of women. While adequate shelter is recognised as a basic human right (United Nations, 1966), it can be rationalised that there is a significant link between low income and inadequate housing with a negative pathways for women's health.

Although reducing socioeconomic inequalities may be challenging, given its in uplifting women's rights of health and empowerment, it is time to revise existing policies and find implementation gaps that directly addresses this issue. For instance, the World Bank (2016) uses case studies from five middle-income-nations to show how good macroeconomic policies (e.g. in Brazil and Peru) and transformations of outdated economic models (e.g. in Mali and Tanzania) reduced socioeconomic inequalities which in turn increased aggregate productivity and development. In addition, many successful and positive macroeconomic policies are well established in developed nations. Countries such as Denmark offer a combination of active

labour market policies, along with flexible labour markets, generous welfare schemes and lifelong learning opportunities (Commission on Social Determinants of Health, 2008, p.79). The continuing vocational training policies and programs ensure that unskilled workers attain training that is transferrable in the labour market (Commission on Social Determinants of Health, 2008, p.79). This illustrates the importance of using a comprehensive and multi-level education system and skill-building strategies in reaching the development goals.

Additionally, the literature review (Chapter 3) highlighted that in developing countries, microfinance schemes play an important role not only in alleviating poverty, but in bringing a gradual social transformation. Economic transfers to women improve children's health and education (Sraboni, Malapit, Quisumbing, & Ahmed, 2014), increase women's decision-making power and autonomy in getting access to basic resources, increase mobility for employment, and reduce poverty-related stress and vulnerability while improving long-term economic security (Orton et al., 2016). These also lead to healthier relationships and more joint decision making between husband and wife (Krenz et al., 2014). Although microfinance programs exist in the Maldives, this does not necessarily mean there is a pro-poor or gender parity policy, because most of these loans have been unequally and disproportionately received by adult men rather than by women and youth.

While Chapter 2 highlighted a number of macro-economic policies supported by legislation in the Maldives, it is clear from the findings of this study that there is a large policy implementation gap that needs addressing. Policy makers need to understand how socioeconomic vulnerabilities interact with other determinants of health (e.g. gender inequality) to create health vulnerabilities for poor and low-income urban women in Malé city.

Focus needs to be given to developmental policies and strategies that are aligned with increasing women's productivity and income. There is also a need to establish new groups and strengthen existing grassroots women's organisations that could exert pressure on government to implement programs using productivity strategies (e.g. financial management training and skills) and identify areas where women could build their economic empowerment. Additionally, economic restructuring should aim to measure poverty in terms of access to resources rather than the

Millennium Development Goal (MDG) benchmark (US$2 per day). It should also test the applicability of microfinance institutions, which are pro-poor.

The current study findings build on existing research and confirm that social determinants of health interact with other critical factors (e.g. women's powerlessness, gender inequality and women's limited access to resources) and their pathways to women's health. Further, the empowerment argument contends that income, education and land rights all empower women, which are development goals in and of themselves (A. Evans & Nambiar, 2013). These findings support the view that women not only need welfare support, but also a basket of commodities (e.g. housing, reasonably priced food, gender-sensitive and equality polices and empowerment programs) that address the sociocultural powerlessness and subordination of women. A comprehensive, multidimensional and all-inclusive policy framework, addressing education, poverty, employment and housing, is needed to address socioeconomic inequalities and improve the life circumstances of the most disadvantaged women in Malé city.

7.2.2 Social relations: gender inequalities as a major determinant of women's health

The in-depth empirical knowledge obtained from this study is the first data set from the Maldives demonstrating how gender intersects with different dimensions in women's lives, including socioeconomic position, social roles, resource access, social rank, and status in society with its trajectories to health and wellbeing. These findings are similar to the discourse of gender inequality presented in Chapter 3 that suggested how gender-role stereotyping, power imbalances between genders and women's limited autonomy and choice lead either to enhancing or deteriorating women's capability, development, health and quality of life.

More specifically, the findings of the current qualitative study confirm that women's access to resources and ability to protect health is located in a highly gendered context in several areas. Women's equal opportunities for quality education, employment and labour force participation (LFP) are shown to be within gender boundaries and interconnected with several other systematic barriers. Gender-role stereotyping and discrimination within the household were shown as major reasons for increasing women's workload, with negative implications for women's economic

productivity and physical, psychological, social and sexual wellbeing. Furthermore, violence against women, with its burgeoning public health and human rights abuse in Malé city, and structural barriers for women to obtain access to services were highlighted. These findings will be discussed in the next sections.

7.2.1.1 Relevance of quality education to attain gender parity, labour force participation and women's empowerment

The Maldives has achieved the MDGs of gender parity in primary education, and sustains one of the highest Human Development Index (HDI) and Gender Parity Index (GPI) scores in South Asia (United Nations Development Programme, 2013). However, the findings of this thesis challenge the impact of these achievements in Malé city.

The qualitative findings of the current study identified poor-quality education, discriminatory practices and school bullying within the education system. Consistent with the findings of this study, poor-quality education (The World Bank, 2012, 2014), violence and school bullying (Shifa, 2009) have also been reported in official reports from the Maldives.

Previous research has recognised that the psychological stresses that occur during adolescence within and outside schools can trigger negative implications for educational attainment (Juvonen, Graham, & Schuster, 2003; Ystgaard, 1997), due to unfavourable influences on self-esteem and self-confidence (J. D. Brown, Dutton, & Cook, 2001). Moreover, psychological and behavioural problems in adolescents are increasingly being connected to broader social determinant factors (Moor et al., 2014). There is evidence to show that a comprehensive school health program could deliver effective health promotion strategies (Andrade et al., 2016; Hills, Dengel, & Lubans, 2015; Solmon, 2015) as well as increase academic achievements, with positive implications for health and wellbeing (Deschesnes, Martin, & Hill, 2003; Symons, Cinelli, James, & Groff, 1997). Indeed, it has been recognised that a supportive school environment promotes adaptive coping behaviours that lowers school stress and improves wellbeing (Plenty, Ostberg, & Modin, 2015). Several authors recommend that schools need to take an active role in identifying the factors that may influence academic performance (Juvonen et al., 2003; Symons et al., 1997; The World Bank, 2012).

The findings of this study raised the question of whether the existing education model fully recovered the investment being made on schooling in the Maldives. Although it is established that the cost–benefit ratio of primary education is higher than lower or upper secondary education, completion of primary education does not necessarily offer literacy competency development (United Nations Children's Fund, 2015, p.18). In Sub-Saharan Africa, for example, 40% cost-effectiveness of education, measured in terms of delaying childbirth and enhancing access to media for relevant information, has been shown with investment in lower secondary education rather than at primary school level (United Nations Children's Fund, 2015, p.18) It has been shown that in the Maldives, secondary and higher education is a stronger predictor of wealth for females compared to men (The World Bank, 2012, pp.31-32).

It is clear from the qualitative findings of this study that in Malé city, education system policies, labour market constraints, and sociocultural attitudes of relating to gender discrimination reduce higher education opportunities for females. A combination of these factors seems to have negative implications for females' self-development, education and income opportunities (El-Horr & Pande, 2016; The World Bank, 2014).

While adolescence and young adulthood are crucial periods for initiating and establishing the foundation for women's future development, health and wellbeing (World Health Organization, 2009, pp.27-33), the interrelationship between education and health also has important implications for public health policy discourse. The literature review of this thesis indicated that education itself is a resource, and it assists in generating much needed human capital (Ross et al., 2012). The results of this study reveal that educational policies and a supportive school environment are important factors for educational attainment, health and empowerment of young women in Malé city. If women are to be empowered in all aspects of their lives and have equal participation with males in the labour market, there needs to be a solid foundation in secondary school education with appropriate skills taught, as well as policies that address the existent sociocultural barriers and gender disparities (World Health Organization, 2009).

Indeed, the findings of this study suggest that giving education access to girls and achieving gender parity in enrolments to target MDGs and sustainable development goals (SDGs) masks inequalities of education that impact on outcome measures. Inequalities in education attainment need to be measured and monitored against high quality education and gender-sensitive programmes, and by addressing discriminatory social attitudes and practices (Leach, 2000; Organization for Economic Cooperation and Development (OECD), 2012, p.55). The findings of this study therefore suggest an urgent need to focus on structural barriers within the education system and society (addressing broader attitudes of parents, school management, teachers and support staff) to reduce educational inequality for females. They also suggest that there is a need to invest more in high-quality higher education for females, a significant antecedent for increasing employment opportunities for females in the labour market as well as contribute to making sustainable progress in improving their overall health and wellbeing. Furthermore, the existing mainstream education model need to be updated to include a more comprehensive and all-inclusive policy that enhances overall development and empowerment of females. Intensified efforts are needed to eliminate the gender disparity in higher secondary education as well as to improve the quality of secondary education for females in Malé city.

7.2.2.2 Labour force participation

Regardless of the fact that more than half of Maldivian civil service employees are female, the empirical findings of this thesis show multiple issues within the labour market that may limit women's equal opportunity for LFP and productivity. The qualitative results of this study identified several barriers to women's engagement in the labour market. Those who could move beyond some of the major sociocultural restrictions and patriarchal institutions to attain economic gains from the labour market indicated being over-worked, being discriminated against, receiving unfair treatment and wages, and being sexually harassed.

Other studies have also highlighted sex discrimination and sexual harassment (Fineran & Gruber, 2009) as a major cause of job dissatisfaction and a reason to discontinue work (Antecol, Barcus, & Cobb-Clark, 2009; Pina, Gannon, & Saunders, 2009). Moreover, women's own perceptions of discrimination in the workplace affect their health, since the perception of unfairness and discrimination is linked

with poor mental and physical health (M. G. Marmot et al., 1991; Pina et al., 2009). Barnett et al. (2001) argues that while multiple roles (e.g. being mother, wife and employee) are beneficial, the quality of these roles could lead to frustration in the context of low wages, workplace discrimination and sexual harassment.

Although the Maldives has favourable policies in gender equality for increasing women's LFP, positive discrimination policies and positive measures need to be introduced in the labour market and overall in the political and social arena, to ensure greater equality for women. For instance, targeted and proactive steps might be used to ensure more senior level positions are filled by women. In addition, innovative measures such as flexible work hours need to be introduced and tested, to offer working women opportunities to appropriately and effectively manage work and family responsibilities.

Although existing policy implementation gaps are highlighted in this study, there is also a need to study the minimum cost of healthy living in urban Malé city and consider the introduction of policies to establish a minimum wage. Advocacy groups need to exert pressure on the government and parliament for minimum wage legislation. Furthermore, polices should be developed for the recently enacted laws on sexual harassment as well other labour policies and regulations, to ensure and provide an equal and fair employment platform that promotes gender equity. The authorities need to take proactive steps in educating employees on zero-tolerance attitudes on discrimination and sexual harassment in the workplace. Further research is needed to identify the extent of wages and work-based discrimination and sexual harassment, since more than half of the civil service jobs in the Maldives are occupied by females.

7.2.2.3 Gender roles and women's workload

Consistent with national statistics of the Maldives (National Bureau of Statistics, 2014a), this study showed the multiple roles of women in Malé city (e.g. care givers, household worker and paid employee). Although there is an extensive body of literature from developed nations that shows an association between women's roles and their effects on health, so far there is only one study from Malé city that showed a significant association between the lack of domestic and childcare support and an increase in depression among pregnant women (Raheem, 2014). Therefore, this study

provides insights into sociocultural gender-role segregation within the private sphere of the household and its effects on women's health and wellbeing. More specifically in Malé city, another important finding of this study (qualitative) is that multiple workloads (caregiver, household work and paid employment) left little opportunity for women to give attention to their personal needs and health care, and this caused deterioration in women's physical and psychological health. This is also triangulated from the survey results that indicated nearly a third of the women reported that their personal health was their lowest priority in life – more importance was given to other necessities, including children, family, husband/partner, and those people's health.

The findings of this study could be explained by the role strain theory that implies that multiple roles and their combinations may exert negative influences on women's wellbeing (Mui, 1992). This notion is supported by previous studies that suggest that, for example, having young children increases physical strain and fatigue as well as psychological distress for women (Gjerdingen et al., 2000). Additionally, women's physical health is negatively affected when they work in lower-category manual jobs (Gjerdingen et al., 2000; Toch et al., 2014), and women perceive role strain and burn out when they combine low category manual jobs along with household and family chores. Studies also suggest that having multiple roles to supplement family income is a cause of chronic stress for females (Angus et al., 2013; Avotri & Walters, 1999). Moreover, women's perception of unfairness and inequality within the household together with an unsupportive spouse leads to dissatisfaction and marital strain (Alyaemni et al., 2013; Khawaja & Habib, 2007)

Despite the Maldives government reporting increases in women's domestic responsibilities as the main reason of females restricted LFP (Department of National Planning, 2012a, 2012b), there are no social support systems or social and family policies to support working women. A lack of policies and programs in this area is not only a limitation in the Maldives, but is a concern for most LMIC (Didi, 2012; Shetty, 2012). It has been assumed that although there is rapid urbanisation and demographic transition in developing countries, most of these governments are heedless of the growing need for social policies, because for generations they have depended on intergenerational extended families, and more specifically on females, to provide caregiving and welfare support for vulnerable and sick populations (e.g. the elderly) (Didi, 2012; Shetty, 2012). With a lack of adequate social policies and

programs, however, in the long run it will be a major challenge for these nations to provide supportive services for vulnerable populations as well as to provide equal opportunities for women in the labour market that could affirm human capacity development (Sheng & Thuzar, 2012, pp.16-19).

In this regard, urbanisation and development has brought several challenges for women's lives that could impact their empowerment, and health and wellbeing. An ageing population in addition to childcare responsibilities increases women's domestic responsibilities as they take up permanent caregiving roles, fewer women can contribute to the country's economy and development (Sheng & Thuzar, 2012, pp.16-19). At the same time, urbanisation has transformed family structure and women's roles, leaving fewer females available for sole caregiver roles. Urban women are being compelled to move out of their traditional roles to join the labour market, in an attempts to survive and manage the cost of urban living (Sheng & Thuzar, 2012, pp.16-19). More specifically, the findings of the current study showed that in the context of Malé city, women's economic empowerment is greater, with higher divorce rates and an increased number of female-headed households. The absence of formal social support services and family policies in Malé city could increase the risk that women will face a double burden and juggle paid employment and domestic and caregiving roles, increasing physical, psychological and social distress. Moreover, the current study findings suggest that men's support in caregiving and domestic roles was limited, and this imbalance in workload burden was a cause of women's physical and psychological distress.

The findings of this study suggest that Malé city's economic growth is not synchronised with other development (e.g. housing, education, employment and health care and social policies), leaving women with multiple work burdens to manage life and relieve the relative poverty. This is an area that the Maldives needs to tackle in the future if it wants to provide a platform for gender equality and empowerment of women, and to provide an equal, fair and just society for women.

The findings of this study point to a need for comprehensive long-term care policies (e.g. elderly, child and family polices) and programs to support women who provide most of the care to vulnerable groups. There is also a need to test culturally and socially acceptable and realistic strategies and solutions, so that the right of

vulnerable populations (e.g. elderly and children) are met, while women also find better and healthier choices to manage their roles within home and work environments. There is also a need to recognise women's unpaid work within the household and informal care provider work roles as a form of economic benefit to the nation, as has been advocated by the WHO (Commission on Social Determinants of Health, 2008). It is also relevant to create gender consciousness of the matter and create grass-roots level awareness. The power imbalance between women and men and the consequences of that imbalance on women's lives and health need to be a central focus for public health policies and practice. Furthermore, there is a need to integrate gender equality discourse within the mainstream curriculum and media, to inform and to bring a gradual social transformation of the exiting gender norms, stereotyping attitudes and behaviours of society. Thus, involvement of boys and men to promote gender equality and shared responsibilities cannot be overemphasised.

7.2.2.4 Gender (decision making and autonomy)

The association between women's autonomy in decision-making power and SRH yielded mixed results in the final regression analysis of the quantitative survey in this study. Women who made major household decisions with their husband/partner reported better health than those who made these decisions by themselves. On the other hand, women who were not able to participate in decision making for daily household purchases reported poor health when decisions were made by their husband/partner independently, or even if the women made this decision jointly with their husband/partner, rather than having her own decision autonomy. The contradictory findings are similar to those of the published literature on the dynamics of intra-household decision-making power (Mullany et al., 2007; Musheke et al., 2013; M. M. Rahman et al., 2014; Uddin et al., 2016).

Previous research has shown that power in household decision making determines allocation of resources to women as well as their health and wellbeing. Studies from developing countries, which mostly focus on fertility issues, report that in some situations women's independent decisions lead to more modern contraceptive use in Bangladesh (M. M. Rahman et al., 2014) and in Egypt (Alsumri, 2015). On the contrary, studies from developing countries also show that compared to husband-only or wife-only or others' involvement in decision making, couples' concordant decision making increased women's use of maternal and contraceptive services in

Bangladesh (Story & Burgard, 2012; Uddin et al., 2016) and Nepal (Mullany et al., 2007; Mullany et al., 2005). However, Mullany (2010) also explained that although women had the main say in maternal health care practices, often men make the major household decisions in Nepal. These findings suggest that in the Maldivian patriarchal society, similar to its neighbouring countries, men often dominate household decisions related to major purchases. In this situation, women might need to take part in this decision rather than have their own say.

Regardless of the circumstances, the findings of this study support the literature that suggests that women's autonomy and capabilities in resisting patriarchy and male dominance is to a certain degree determined by their ability to have decision-making power within the household and their ability to negotiate power dynamics with their husband/partner. These studies also show that women's autonomy and decision-making power is rooted and linked to their socioeconomic status (education, income and asset ownership).

Independent of the specific cause of agreement, these findings suggest that male inclusion in the policies and interventions designed for women's health and empowerment is paramount. Along with creating pathways for women to access material resources, it is important to develop, test and deliver culturally sensitive programs that promote effective communication between spouses in enhancing healthy communication and behaviours. It is also important to create gender consciousness through education and training, helping women build on interpersonal skills and negotiate within the home (Murphy-Graham, 2010). Traditional gender-based stereotyping roles and power imbalances between genders need to be challenged and effective and workable strategies developed, to offer pathways to enhance women's right to autonomy, choice and resource access. This could be enhanced through grassroots-level training and workshop programs for females and males, something which is presently missing in urban dwellings. It is critical to create awareness of gender inequality, increase the concepts of a social determinants and rights-based approach to women's health and of shared responsibility, and involve more men in enhancing women's health and wellbeing.

7.2.2.5 Intimate partner abuse

This is the second piece of empirical research (qualitative findings) reaffirming the extent of violence against women in the Maldives. Unlike the previous study conducted by Fulu (2007b), this study showed the contextual factors of violence against women in Malé city and underscores abuse happening to older women (≥50 years). The findings highlight the importance of understanding the context of women in the victimisation cycle and better address it, as it is a major short coming in LMIC (World Health Organization, 2013).

Consistent with the extensive body of literature (Ellsberg et al., 2008; Garcia-Moreno et al., 2006) this study showed that women suffered from different forms of physical, psychological, social, sexual (including marital rape) and financial abuse throughout their lives. The extent of abuse reported by women in this study, from mild to severe encounters, and multiple encounters by husband/partners, irrespective of women's age, marital status, income or education, has been indicated in previous studies (Abramsky et al., 2011; Ziaei et al., 2014).

The findings of this study highlighted the contextual factors of power imbalance between men and women, women's subordination status, and social marginalisation as root causes that heightened IPV. Previous studies also reported attempts by husbands/partners to restrict the mobility of and seclude women (Hinton & Earnest, 2010a; Rizvi et al., 2014) and husband/partners having multiple marriages or concurrent partners (Abramsky et al., 2011; Hassouneh-Phillips, 2001; Raheem, 2014), all of which increase victimisation of women. Similar to other studies in the developing world, mixed results were found in terms of women's asset ownership and economic empowerment. While some women suffered abuse as a consequences of their poor economic status (Deuba et al., 2016), economically better-off women also reported abuse as a consequence of their asset ownership (e.g. job or homeownership) in Bangladesh (K. Dalal et al., 2013), India (Koustuv Dalal, 2011; Krishnan, 2005) and Nepal (Adhikari & Tamang, 2010). There is some evidence to suggest that men may retaliate with violence in order to maintain their ego, status and position within society (Krishnan, 2005) if women gain more power and attempt to move away from traditional gender roles, and challenge patriarchal gender order and norms (Jewkes, 2002; Paul, 2016).

Although child marriage is a major cause of IPV in neighbouring countries (Naveed & Butt, 2015), unlike the older women, the young women in this study did not report being married during childhood. This may be because the legal age of marriage is defined in Maldivian law at present. However, some young women reported being date-raped and blackmailed by their boyfriends/partners and the unfavourable consequences on their mental, sexual and physical health (Dardis, Dixon, Edwards, & Turchik, 2015; Pillai et al., 2009). This is an area that needs to be considered for further research, to understand the sociocultural context of IPV and to develop targeted strategies to reduce the potential risk of IPV for young women in Malé city.

Despite Fulu's (2016) argument that the flexibility of divorce and low stigma attached to it in the Maldives (unlike some of its neighbouring nations such as Bangladesh or India) is an advantage for women to move away from a perpetrator husband, the findings of this study showed that separation and divorce does not necessarily limit perpetrator's violence. Rather, for some women it becomes more severe and life threatening. These findings are in concordance with a previous study done in the Maldives and agree with the literature, showing that separation and divorce heightened lifetime prevalence of physical and sexual violence compared to being married (Fulu, 2007b). Despite this, it is clear from the present study that in the absence of a social security system or support services (e.g. safe house and economic empowerment) for female victims in the case of a divorce in Malé city, women were forced to live with perpetrator husbands/partners.

Contrary to findings from the Maldives Demographic Health Survey (2009) and elsewhere in Asia (Aslam et al., 2015; Schuler & Islam, 2008), the Middle East (Boy & Kulczycki, 2008; Linos et al., 2010) and developed nations (Gracia, 2014), none of the women in this study (qualitative results) justified wife beating or other forms of IPV. One possible explanation could be that the nonjudgmental and flexible data collection process allowed women to share their inner thoughts, concerns and suffering in relation to IPV as a major concern in life. Therefore, it is reasonable to assume that women might not rationalise and justify being tortured and abused, and instead perceive these acts as vile and inhuman.

However, the findings of this study suggest victim-blaming attitudes, justification and tolerant attitudes in service providers. The literature showed that violence

escalates in places where there are positive attitudes towards IPV and victims are blamed for abuse. Garcia (2014) affirms that a lack of consideration for victims of violence arises due to attitudes of authoritative figures. This contributes to a social climate in which IPV against women is tolerated and unofficially legitimated. Garcia (2014) further asserts that victim-blaming attitudes strengthen and reinforce perpetrators by publicly justifying their violent acts and making them less fearful of social consequences. Moreover, in these societies, even females are deterred from reporting IPV for fear of facing hostility, isolation and rejection. These claims are supported by studies done in the Middle East, North Africa and Asia (Afifi et al., 2011; Boy & Kulczycki, 2008; Zakar et al., 2012).

7.2.2.6 Strategies for reducing IPV

Intimate partner violence has been identified as a major public health problem and human rights abuse for more than a decade in the Maldives, and there are strong legislative measures to protect victims of violence. However, the most pressing issue identified in this study is that there are limited policies, services and human resources trained to identify and support IPV victims. For instance, the qualitative findings of this study indicated that women recognised by service providers as IPV victims in the emergency department of the hospital are being received and treated the same as others. The findings also imply a shortage of providers to offer therapeutic and individualised care for victims of IPV, and to monitor and follow-up IPV victims, leaving little doubt that this is given a low priority by the government.

There are many examples in the literature of community-based strategies that have been successful in reducing the risk of IPV and measures that have empowered female survivors to improve their quality of life. These include identification of risk factors, community outreach programs, safety planning, emotional support and life-skill training (Jewkes, 2002). It is also clear from Chapter 3 that IPV can be reduced by providing education and employment for women, addressing gender norms (Heise & Kotsadam, 2015), increasing female property ownership, and increasing women's autonomy in intra-household decisions. For example, raising awareness and creating critical consciousness of domestic violence seems to empower and reduce IPV risk (McGirr & Sullivan, 2016). A recent systematic review stresses the relevance of home visit programs by service providers or non-professional mentors (in Australia), paraprofessionals (in Hawaii) and nurses (in Amsterdam) focusing on interventions

that supported abused women significantly reduced IPV (Prosman, Wong, van der Wouden, & Lagro-Janssen, 2015). Another review highlights the relevance of identifying IPV victims in an effort to lower the risk of IPV (O'Doherty et al., 2014). More importantly, there is need to study and develop a service model comprising outreach support, risk assessment, safety and security planning (e.g. temporary safe house), legal support and advocacy.

Beyond these services, there is need to bring change to social norms and attitudes that may condone IPV and male control over women in the general public as well as service providers. For example, the HRCM (2012) reported that compared to their 2005 survey, a 2011 survey showed that both men and women's attitudes towards women's equal rights (e.g. in family matters, courts, inheritance, custody of children, divorce and work) has decreased tremendously. This finding suggests that there is an escalation of gender discrimination attitudes and perceptions within society that may play a significant role in increasing women's powerlessness and male control over women. Additionally, this could also exacerbate social norms that result in IPV being seen as a private issue, rather than a public concern, and reduce the number of women who may report and seek support, thereby increasing the risk of IPV.

It is clear from this study that the limited services available for victims of violence are disjointed and offered in a haphazard manner. It is time to set realistic goals and to develop a multi-sectoral policy to develop a strategic framework to address violence against women as a national movement. It may take time to bring attitudinal change and major gender-based equity within a sociocultural context where women face structural discrimination in their everyday lives. However, there is a need for the authorities (government, and national and international non-government organisations) to address and prioritise this area with genuine interest and effective strategies. One of the most effective strategies is to recognise and incorporate a rights-based approach and social justice attitude into the general community and formal authorities. It is also necessary to sensitise the younger generation by incorporating awareness of the matter within the national school curriculum.

There are many successful social change interventions for strengthening and sensitising the psychosocial and health workforce (e.g. training and workshops) so that they can offer victims of violence appropriate, fair and non-discriminatory

services. The recognition of violence against women (and more specifically IPV as a major risk factor for women's physical and psychological ill-health) must be fully acknowledged by policy makers and program managers and it needs to be integrated into mental health policy (A. Mohamed, 2015). Furthermore, the use of media campaigns to create gender-equitable norms and to promote non-violent behaviour is necessary. Grassroots-level women activist groups need to be strengthened and more groups should be created that can advocate and also be a change agent in Malé society. In this way, several social change interventions need to be studied within the context using both qualitative and quantitative methods.

Much research is clearly needed to fully understand the complex nature of IPV and its effects on women's health and wellbeing, with involvement of both females and males. Future research (through in-depth qualitative methods and longitudinal studies) should also seek to identify how women cope after leaving perpetrators, to understand how women build their resilience and to help survivors move forward in life.

7.2.3 Living conditions

Apart from the individual factors of education, income, and sociocultural gender practices, the findings of this study provide valuable insights into health inequalities created as a result of inadequate housing and the urban built environment of Malé city. These findings are not surprising, given that Malé city's congestion and its negative consequences have been in official reports from the Maldives (Department of National Planning, 2012a; Human Rights Commission of the Maldives, 2008; Ministry of Finance and Treasury & United Nations Development Programme in the Maldives, 2014; I. Mohamed, 2011).

The relationship between low-income, substandard housing and women's health has been discussed in Section 7.2.1. Additionally, women's concerns and stress related to inadequate housing was a major theme in the qualitative part of the study (Chapter 5). Empirical research substantiates these findings, showing how overcrowding and substandard housing is linked to high demand of one's energy and time but low control, which can lead to an increased risk of anxiety and depression (G. W. Evans et al., 2003; Shenassa et al., 2007).

Additionally, the findings of the qualitative study suggest that factors in the neighbourhood and the built environment (e.g. increase in traffic, noise and air pollution; increase in crime and violence; sexual harassment on roads; and an absence of open space) limit women's independent mobility, social activities and opportunities for outdoor exercise. Complementing these findings, the survey results presented here indicated that physically inactive women were significantly more likely to report poor health than others. These finding are supported by a previous survey that reported a high proportion of physically inactive and overweight or obese women in Malé island (Aboobakur et al., 2010). The WHO (2014) further reported that chronic disease risk factors such as a sedentary life style, obesity and tobacco use were higher in the Maldives than other nations in South Asia. There are several possible reasons for women's sedentary lifestyle, including limited health information on the benefits of physical activity, lack of green spaces and public parks, and neighbourhood safety issues. The latter two reasons were indicated in the qualitative results of this study.

Beyond physical ill-health, this study substantiates links between neighbourhood issues of overcrowding, pollution, and crime and violence and their negative effects on women's psychological health. The findings are also consistent with the literature that has established links between neighbourhood factors and depression (Mair et al., 2008). In particular, neighbourhood safety and fear is shown to negatively affect mental health (Meyer, Castro-Schilo, & Aguilar-Gaxiola, 2014; Paczkowski & Galea, 2010). Mair et al. (2008) argues that a deprived built environment was associated with depression more than socioeconomic deprivation, residential stability or racial inequalities. Paczkowshi and Galea (2010) also revealed that neighbourhood poverty, disorder and deterioration of the built environment and violence are risks for health, independent of an individual's characteristics. Stafford and Marmot (2003) further indicated that in deprived neighbourhoods there is a limit to accessing collective resources which negatively affects SRH and mental health. The established links between deprivation and disadvantaged living condition factors and women's increased mental worries could be explained with Lazarus and Folkman's (1984) stress theory. This posits that stressful events lead to emotional stress when individuals recognise an event as a threat, but perceive themselves as having a lack of resources to cope with or control that threat.

The World Health Organization recognises that one of the most underserved populations are urban slum-dwellers (Blas et al., 2011; World Health Organization & UN Habitat, 2010). Policy makers and program managers in the Maldives need to acknowledge the findings of this study and the large body of literature, to understand that living condition factors have implications for women's physical and psychological health and wellbeing. The WHO (2014) advocates offering decent shelter and improving the surrounding environment to support the mental health of the population that allows people to adopt and maintain a healthy lifestyle. More specifically, the area of inadequate shelter cannot be overlooked, since it is a basic human right (United Nations, 1966).

In the context of Malé city, one can argue that the artificially reclaimed island of Hulhumalé may relieve housing issues in Malé island; however, continued internal migration is likely to increase congestion in Malé city in the future. While one cannot control the high internal migration to Malé, the government needs to make genuine efforts to implement, regulate and monitor decentralisation policies. There is a need to study and map the existing services in semi-urban areas of the Maldives, to provide better-quality and acceptable services (e.g. in education and health care) and to create employment opportunities in these regions, to relieve population density in Malé city and provide an adequate, safe and secure environment for its residents.

Attempts to understand, address and reverse the growing health inequalities of women will be hampered without consideration of the critical demographic and social factors that formed the 'slums' in Malé city. These have affected everyone, but predominantly disadvantaged and underprivileged urban women. Although the national health strategy is framed in line with the WHO concept and framework of health in all policies, this study showed the large implementation gap that needs to be considered by politicians, policy makers and programmers. This study demonstrates the needs of health policymakers to move beyond the health sector and integrate health into all policies (e.g. housing, environment and urban development). A more holistic and transdisciplinary approach to achieving health and wellbeing for urban women must be considered, to offer a safe, secure and healthy living environment.

7.2.4 Health system

7.2.4.1 Health care access

The Maldives is experiencing rapid demographic, epidemiological and social transition. However, the findings of this study indicate that health system policies and health care delivery systems are not aligned with these changes – there is a large gap between women's concerns and needs and existing health polices and delivery systems.

The recently established universal health care coverage in the Maldives ensures a major part of the UNDP Sustainable Development Goals (SDGs) for access to affordable health care, and Malé offers the highest available health services in the country. However, the findings of this study suggest that the wide range of health services in Malé city is not necessarily accessible for most women. These findings resonate with studies conducted elsewhere: a publicly funded universal health delivery system alone does not guarantee health care access (Aaltonen et al., 2015; Angier et al., 2014; Angus et al., 2013). For example, Angus et al. (2012) highlighted multiple interlinked structural constraints, barriers and deterrents that created obstacles for women's access to health care in Canada's publicly funded health system, which is based on the concept of equality. Accessible health services are those that are physically accessible, affordable, appropriate, and encompass culturally acceptable and non-discriminatory practices (Baum et al., 2009).

Consistent with international literature (Angus et al., 2013; Ferrer et al., 2014; Leipert & George, 2008; Saftner et al., 2014) women in this study (qualitative) highlighted the difficulties and challenges in getting access to public health services. Some of the reasons highlighted were due to difficult and inconvenient appointment systems, an insufficient number of specialists, dissatisfaction with the doctor–patient relationship, and a mistrust of services. This was linked to women's frustration with services which in turn influenced their uptake of services. Additionally, women's frustration with public health services, leads many to use more costly services from the local private hospital and overseas health services. These findings were triangulated in the survey, showing that those who visited private hospitals and those who travelled overseas reported significantly poorer SRH. This indicates to a certain degree than those who obtained services from private or overseas services needed these services. However, women and men who participated in the qualitative study

stated that costly services were sought from private and overseas facilities often not because of local unavailability. Rather, these respondents spent their own money due to mistrust and an unacceptable public health delivery system. Previous studies show that having trust in the health system and service providers increases service uptake (Saftner et al., 2014) and that if women had a choice they preferred these services irrespective of the cost (More et al., 2011).

Simkhada et al. (2008) argues that having more health centres and health care facilities does not guarantee health care access. Rather, the health systems need to address the existing health disparities within the system itself and link them to social determinants of health to reduce health disparities. For instance, in many parts of the world, urban women have high health literacy relative to rural women, due to getting access to better facilities and resources. The only cross-sectional study conducted in the Maldives that assessed the knowledge, attitude and practice of women in relation to cervical cancer risk showed that there was no significant difference in the knowledge and health literacy of breast and cervical cancer between urban and non-urban women in the Maldives (P. Basu et al., 2014). An unlikely explanation could be that non-urban women were getting access to better services than urban women. The other possible explanation, which is also considered to be the root cause identified by respondents in this study (qualitative), is that limited health education and information is offered to urban women in Malé city through public health programs.

The findings of the current study need to be acknowledged and considered by policy makers and programmers – removing only fiscal barriers to health care access and advancement of technologies alone is not going to remove health care access barriers for women. It is time that the health system takes necessary measures to offer a more approachable and acceptable health service. This could be achieved by following WHO (2010a) recommendations that suggest the nation moves towards a pro-poor and all-inclusive high-quality primary health care model and services that are currently missing in urban dwellings. Additionally, there is a need to provide appropriate in-service training for health professionals in the areas of rights-based health care, gender-sensitive approaches, better communication and client-centred services that are based on the principles of respect, dignity, non-discrimination and joint decision making. It is also necessary for health sector personnel to understand

the multidimensional interplay of factors that influence women's health and the concept of social determinants of health and health equity.

7.2.4.2 Women's health policy agenda – remodel based on social determinants of health and rights-based approach within women's life course

The qualitative and quantitative findings of this study, as well as the literature review in Chapter 3, showed that in addition to biological mediators, women's health and health inequalities may be socially constructed and connected to several other dimensions in women's lives, and not only compartmentalised within the areas of maternal and reproductive health care. This all-inclusive and multidimensional view of women's health is consistent with women's health studies done in both developed and developing nations, such as in rural areas of Papua New Guinea (Hinton & Earnest, 2011), rural Ecuador {Schoenfeld, 2005 #18206), urban slums in India (Alcock et al., 2015), Puerto Rico (Bermúdez-Millán et al., 2011), the UK (Lawrence et al., 2009), Canada (Angus et al., 2013; Leipert & George, 2008), and less privileged urban areas in the US (Doornbos et al., 2013).

The findings of the current study also indicate that although health is affirmed as a basic right of women within the Universal Declaration of Human Rights (United Nations, 1948) and enshrined in the Constitution of the WHO (World Health Organization, 1946), these international targets and goals will not be reached unless a holistic and transdisciplinary approach is used. Additionally, although the most recent health strategy for the Maldives offers pragmatic, focused, comprehensive, rights-based and all-inclusive national health policy goals (Ministry of Health and Family, 2010a), they will not be reached if the social inequalities of women's health are not addressed. This study illuminates shortcomings in health policy and service delivery that includes a range of policy goals within the conventional biomedical approach and limited acknowledgement of social determinant factor of women's health. Moreover, a large gap in policy implementation was highlighted. This is not unique to the Maldives, with a similar situation being reported in Pakistan (Rizvi & Nishtar, 2008) and India (Peters et al., 2003).

The findings of the current study emphasise that there is an urgent need to move away from the biomedical model and curative approach that has compartmentalised women's health into treatable reproductive health issues. Indeed, policy makers need

to acknowledge that women rarely think of their health in terms of a medical disease, and the emphasis of health policies for women within their reproductive years (15 to 49 years) discriminates against younger and older females. This narrow focus on women's health may be why services as well as workable policies are missing for females in other age groups in the Maldives. Urban women's health needs should be considered within their life course and social determinant factors, in an attempt to reduce health inequalities. It is necessary to develop a comprehensive, appropriate, practical and high-quality health care model that meets the needs of women in a continuum of care across their life course.

Achieving health equity is an important health policy goal in the Maldives; however, the health system available to urban women lack the basic principles and integration required. The WHO (1978) clearly indicates that health systems need to maximise empowerment of individuals by offering acceptable and affordable services. Additionally, Marmot (2007) proposes that public health interventions need to move beyond individual behaviour to determine the social context and factors that influence health inequalities. Surely, there is a need to create comprehensive approaches to the health care delivery system that emphasises demand and supply.

Labonte (2010) further suggests strengthening health systems' capacities through five major roles: educator, resource broker, community developer, partnership developer and advocator, all taking action on addressing social determinants of health. The World Health Report (2008) stated that health systems that emphasised the role of primary health care offered more equitable health for poorer and sicker populations than those health systems that focused on specialty care, which favoured mostly wealthier populations. A comprehensive primary health care approach emphasised an interdisciplinary approach with stronger community empowerment and participation (Baum et al., 2009; World Health Organization, 2008). The Ministry of Health must therefore take stewardship of the health of women in developing a fair and just system for women in their life course that is all-inclusive.

In the wake of the women's health concerns and health inequalities identified in this study, the health system needs to empower women in all aspects of their lives, by addressing the existing social determinants of health. It needs to develop a framework for monitoring and evaluating health inequalities through empirical

research, audits and impact assessments. Moreover, there is a need to alleviate the health problems of the disadvantaged, vulnerable and poor urban women, as well as vulnerable younger and older women who are not given priority in policies and programs. Changes are required in the public health sector, which needs to show commitment to innovative measures and collaboration with other sectors (e.g. government sectors and NGOs) to offer urban women their right of public health information and services. Public health programs need to reach the most neglected and vulnerable urban women at grassroots level, to offer community-based health interventions and health promoting activities, education and information. This is necessary for women to realise their rights, improve their social status and make informed decisions in maintaining and leading a healthy life.

7.3 Reflecting on the conceptual framework, methodology and methods: understanding women's health by use of case study research and mixed method design

The conceptual and methodological approaches used in this study are well suited to the task of understanding women's health needs and concerns for several reasons.

Despite emerging studies in women's health, there is a dearth of literature that uses mixed method research within a holistic and rights-based framework to identify issues that are of importance to women in their life course. This is the first study that examined women's health concerns and needs using a case study methodology within the discourse of a sequential mixed method design in Malé city. The literature review (Chapter 3) further affirmed that in South Asia, there is a dearth of literature concerned with women's health and health inequalities other than those compartmentalised within the areas of maternal and reproductive health care.

Conceptualisation of this study beyond the dominance of the biomedical model demonstrated that the contextual drivers of women's health inequalities are interconnected to several other social forces, not merely compartmentalised within the fertility and reproductive abilities of women (Figure 7.1) (Angus et al., 2013; Crooks, 2001; Hinton & Earnest, 2011; Inhorn, 2006). The major health-determining factors for women are not a single event, but take place in the context of many other realities in their lives. Women in this study clearly positioned their health not a

detached and static matter but, rather, in a multidimensional manner interconnected to life circumstances, gender standards, roles and responsibilities, social relations, and broader social, cultural, economic and political spheres. It is therefore time to include the voice of women in understanding their health problems and how they link these with material and social circumstances of their lives and their pathways to health and wellbeing, It is also important to move beyond women's reproductive roles and to use all-inclusive and holistic measures to focus on women's productive roles (e.g. domestic, caregiver and income generation) to address the health concerns and needs of women.

Creswell (2014) argues that the issues explored by social and health scientists are complex, and using either qualitative or quantitative research in isolation is often inadequate to address this complexity. Even though some opponents of mixed method research criticise the weaknesses in combining study methodologies or paradigms, proponents assert that these combinations facilitate a greater and potentially more holistic depth of inquiry (Creswell, 2014; Tashakkori & Teddlie, 2003). The findings of this thesis are suggestive of these claims.

Arguments that have arisen through these dialogues (Baum et al., 2009; Cohen, 1998; Crooks, 2001; M Marmot, 2007; Williams-Brennan et al., 2012) remain a major driver to investigate women's health inequalities at the heart of women's lives in urban dwellings in Malé city using a mixed methods research. This methodological discourse, in addition to the multiple stakeholder input, remains one of the main strengths of this study (Yin, 2014). The combination and triangulation of methodologies as well as the data sources (Creswell, 2014; Tashakkori & Teddlie, 2003) further strengthened the rigour and validity of the findings. These approaches examined the realities of women's health from multiple perspectives, thus indicating that case study research methodology using mixed method design and multiple data sources is highly appropriate for generating greater insight into women's health inequalities.

7.4 Limitations and reflection on the study

Although every effort was taken to establish validity and trustworthiness, it is important to reflect on some limitations that should be considered in interpreting these findings.

7.4.1 Methodology and methods

Although there maybe potential caveats against mixed method studies, which may give more emphasis on one method of study while limiting findings of another, Chapter 4 details how this limitation was minimised by giving equal emphasis, time and effort for research design, data collection and analysis for both qualitative and quantitative research.

Another limitation could be sampling. Purposive sampling was used to select participants; therefore, the findings cannot be generalised to other women in Malé city or the Maldives. Yet, conversely, purposive sampling was considered to be a major strength of the study. This was mostly because as this was the first study that used a holistic approach with empirical methods to study women's health inequalities in Malé city, it seemed relevant to use a sampling measure that recruited women from diverse socioeconomic backgrounds and also from different age groups. This allowed investigation of social determinants of women's health and health inequalities in women's life course, providing some practical and theoretical comparison to the international literature and also suggesting areas for future research.

The other limitation could be that although qualitative data produce much needed in-depth contextual factors, interpretation of results may be subjected to the interviewer's views because respondents may tell interviewers what they think they want to hear (Creswell, 2013). To minimise bias, an open-ended questionnaire and non-direct prompts were used in the qualitative data collection phase. Additionally, data were triangulated with methodologies, methods and sources (see Chapter 4, Section 4.8).

The choice of case study research and mixed method design was discussed in-depth in Chapter 4 and in Section 7.3. Since this study used a single-case study, it cannot be assumed that the findings from this study are likely to be replicated elsewhere in the Maldives. However, the social determinants of women's health identified in this study using multiple perspectives and methodologies revealed unique contextual issues that might not have otherwise been possible.

Perhaps the greatest limitation of the study is that it intentionally restricted the use of violence-based questions in the survey (although the questions were almost not

included due to ethical considerations). Upon completion of the qualitative fieldwork prior to the survey, it was clear that this was one of the most sensitive and psychologically distressing situations for women in this study, where the researcher needed additional time to seek psychological support services for these women, as part of the research ethics procedure. It was obvious that in a survey (which also included online surveys) there would be limited opportunities to approach women who express these concerns, and to offer relevant psychological and social support. Therefore, it seemed irrelevant and unethical to expose women to this stressful situation through the survey, as the qualitative in-depth study provided important insights into the contextual factors of IPV and women's subjective meaning associated with it. As mentioned before, a nationwide survey already existed which provided estimates of prevalence and rates of IPV (Fulu, 2007b).

7.4.2 Survey

Most of the survey questions were taken from previous validated surveys; however, as the combination of questions for this study created a new research instrument that was piloted for the first time in this study, it might have some bias. The survey drew in cross-sectional data that were also based on self-reports and may be subject to reporting bias. In addition, only associations and no causal relationships were examined.

Previous surveys on the subject of health inequality report that the response rate is lower in specific groups (e.g. people from lower socioeconomic groups and those who are less healthy) (Cavelaars et al., 1998). In anticipating the low response rate, and to minimise the bias on non-response, two methods for survey data collection were used (online and field surveys) yielding a 70% response rate for the combination (von dem Knesebeck et al., 2016).

7.4.3 Trustworthiness

The findings of the study are limited by the nature of the qualitative approach used; however, the intention was not to generalise but to understand the intersection of social determinant factors and their influences on different aspects of women's life and health. Additionally, the significant associations between social determinant factors and women's SRH observed from the survey may not be causal – these variables were assessed through women's self-reports and are likely to be

misclassified. However, multiple methodologies, methods, data sources and analyses ensure there is some reliability of the findings derived from this study.

Despite these limitations, the findings documented here represent a crucial first step towards understanding the relationship between social determinant factors and women's health in Malé city.

7.4 Summary

The Maldives has achieved remarkable health and economic development over the years; however, this thesis argues that it is unsuccessful in providing access to health-enhancing resources for the urban women who participated in this study.

Some of the critical social determinants of urban women's health have been highlighted in this chapter. Health and social policies should focus on women's health concerns and needs, and interventions should strengthen and empower women to achieve sustainable goals. Sustainable efforts will need to address women's education inequalities, economic vulnerability, human rights abuse and suffering, substandard housing issues and poor environmental conditions as well as barriers within the health and social welfare systems. Other than providing access to material resources, there is a need to address sociocultural gender disparity, and build on the existing strengths of these women in empowering them to protect themselves from ill-health and live a healthy life. The findings of this thesis should assist policy makers and programmers in developing appropriate, participatory and sustainable health policies, strategies and programs that focus on reducing the health inequity gaps and in channelling resources to the most needy and vulnerable urban women.

The findings of this study also suggest that further investigation into the health inequalities of women in the Maldives is worthy of attention. Specifically, it would be beneficial to replicate this study methodology in regional areas of the Maldives and to compare them with the findings of this study. In addition, it would be worthwhile to allow a larger randomly selected sample to be used, to test the inequalities in women's health and complement it with men's perspectives. The results of this study, therefore, underscore the value of further work in exploring the extent of health inequalities in the Maldives in understanding the social determinant factors of women's health.

Chapter 8 – Conclusion and recommendations

8.1 Introduction

The overall aim of this thesis was to investigate and document women's health needs and concerns in Malé city, Republic of Maldives. This study found critical associations between social determinant factors and their influence on women's health and wellbeing. It revealed that these multidimensional social forces join to create health inequalities for urban women. The challenge remains to translate this new research into policy, by designing and implementing culturally and socially acceptable services and programs to create awareness and sensitivity of the rights of women's health and enshrining them in the Constitution of the Maldives. This chapter will summarise the thesis as a whole, identifying how the study findings contribute to the discourse on women's health and where gaps remain. Some recommendations for policy, research and practice are also provided.

8.2 Overall summary

This thesis began by contextualising women's health and criticising the methodological discourse on understanding and defining women's health within a biomedical model that narrowed down women's health to fertility and reproductive health morbidities. The thesis then moved on to present global, regional and local indicators of women's health and the global treaties that emphasised women's health. Thereafter (Chapter 2), it introduced and detailed some context of women's life within the Maldives, specifically in urban dwellings, highlighting the contextual factors that were needed to understand the findings of this study. Chapter 3 provided a critical review of the literature using four themes that influenced women's health: socioeconomic differences, gender inequalities and gender-role discrimination; social relationships and support and the health system.

After providing a conceptual framework for the study, the thesis discussed the methodology that was used to achieve the research aims and objectives (Chapter 4). The ontological and epistemological position of case study research and mixed method design was proposed. The study was initiated by an exploratory inductive process involving 152 females, 21 males and 55 community leaders selected through purposive sampling and the snow ball technique. Following that, 439 females were

surveyed. Chapters 5 and 6 detailed the qualitative findings and presented the survey results. Chapter 7 provided discussion that triangulated the findings from both stages of the research, explaining and highlighting the significance and implications of the study in the light of the existing literature.

8.3 Contribution

The first three chapters in this thesis (introduction, background and literature review) identified a number of gaps in the literature in relation to women's health concerns and needs. The first of these gaps was that there were no empirical studies on social determinants of health and health inequalities in the Maldives, other than one secondary analysis. Therefore, this thesis focused on and addressed the disparities and inequalities in women's health within the country's context. It has identified new and less apparent issues such as those within the broader social, economic, legal, environmental, and health and social system services where, although policies exist, implementation is not aligned. In this way, this study has presented a paradigm shift in thinking and generating knowledge for the Maldives, to understand health inequalities and link them to women's health. It has also highlighted undervalued and under-deserved vulnerable women populations in urban dwellings, by creating and providing a profile of these women for policy dialogues as well as targeted strategies.

The second gap identified was the lack of empirical studies from developing countries that moved beyond a biomedical and reproductive health approach to study women's health. Previous studies on women's health inequalities were mostly focused on maternal health and, to a certain degree, reproductive health measures, whereas this thesis considered empowerment, decision making and resource access. Therefore, this thesis moved beyond the biomedical model and conceptualised women's health through a holistic, transdiciplinary and all-inclusive approach that contributes to an emerging debate and dialogue of how and why social forces may determine women's health inequalities. The findings underscore the relevance of health policy and public health interventions to promote women's health through more collaborative, interagency and multi-sectoral agencies, to provide more just, participatory and fair systems and processes to reduce the health inequalities of women.

The third gap concerned limited female input in the health policies and programs that affect their health and wellbeing. Centralising this thesis on women as key informants and including their voices of lived perception and experience was valuable. Additionally, understanding and triangulating health disparities of women by involving men and community leaders to address not only individual factors but more broader sociocultural, economic and gender inequalities was an important contribution. The findings attest that women remain the key stakeholders who could provide significant insights into influences on their health. Many global treaties such as the MDGs and SDGs require behavioural change, and this cannot be achieved without an in-depth understanding of the setting and audience (Aboud & Singla, 2012; Popay et al., 1998). Several authors emphasise the significance of understanding local social context when planning targeted policies and strategies to reduce the burden of health inequalities for women (Ahmed et al., 2012; Angus et al., 2013). There is a stronger emphasis from the global community on empowering women by involving more women in the health policy dialogues that address them.

The health care delivery systems of the Maldives and other developing countries predominantly focus on health through a biomedical model, often ignoring the social determinants of health. The findings of this study question the coherence of such a model of health care policy, highlighting how competing priorities have the potential to undermine the health equality of women without addressing its root causes.

8.4 Recommendations

The findings of this study raise a number of recommendations for women's health in policy, practice and research.

Implications	**Recommendations**
Policy	At the policy level: – There is a need for reconceptualisation of women's health within the policy discourse, moving from a predominantly biomedical approach towards social determinants of health, health equity and rights-based approaches across the life span.

	– The Ministry of Health needs to take stewardship in establishing a focus on health in all policies, not only within its own domain but elsewhere (e.g. education, economics, housing, environment, law and social services). – There is a need to foster positive discrimination policies that promote increasing numbers of women in senior, influential and leadership positions. – Flexible work hours policies should be implemented and their applicability tested in urban dwellings.
Policy	At the health care service delivery level – The health policy agenda needs to shift and outline an all-inclusive primary health care model for urban dwellings.
Policy	At the social policy level (infrastructure) – A new social policy agenda is needed that enhances social support systems, with a focus on a rights-based approach and gender equality (family policy, elderly policy and childcare policy). – Policies are needed that recognise and value women's contribution to society, health and welfare within caregiving and domestic roles.
Policy	It is necessary to set up multidimensional 'health in all policies' and gender equality policies that permit the perpetuation of women and men's roles in educational, professional and/or family spheres.
Practice	There is a need for collaborative and multidisciplinary stakeholder participation to achieve a common agenda on women's health.

Practice	It is important to sensitise politicians, policy makers and service providers on the constitutional rights of women's health, aiming for an all-inclusive, equal and fair system.
Practice	In education: – The educational model should have a stronger focus on the social determinants of health and health equity within the secondary education curricula. This should be comprehensive and address physical, psychological, social and sexual health, development and empowerment of young females. – The concepts of social determinants of health, health equity and a rights-based approach across women's life span need to be introduced to government and service providers in post-secondary education, pre- and in-service training curriculums (e.g. for health workers, social service providers, teachers and legislators) – widening the knowledge and skills of service providers and as a measure of capacity building and skill development of services providers.
Practice	In the work place: – Both men and women must be educated on constitutional gender equality in the work place, and laws and legislation that safeguard against work and wage discrimination and sexual harassment.
Practice	There is a role for establishing new and strengthening existing grassroots-level non-government organisations working for women's health and empowerment in critical areas of advocacy and service delivery (e.g. workshops, seminars, short-term training) for urban women.
Practice	There is a need to introduce cultural and gender-sensitive practices that focus on gender-based violence, gender-role

	discrimination and gender stereotyping for both women and men, such as : – programs that promote effective communication, interpersonal skills and negotiation skills between couples – programs that create consciousness of gender-role discrimination and gender-role stereotyping within a rights-based approach – fully integrating violence against women and intimate partner abuse within mental health policy – programs developed and disseminated through multi-sector stakeholder involvement, coordination and collaboration (e.g. health, education, social services, media, etc.)
Practice/Research	More research is needed that directly targets reducing IPV and making a safe and secure environment for women: – Interventions needs to be initiated and piloted to reduce IPV (e.g. creating awareness and consciousness of IPV for victims and survivors, visiting socially isolated and vulnerable females at home, initiating therapeutic interventions). – There is an urgent need for the government to provide safe and secure temporary housing options for women that suffer from IPV. – There is need to empower survivors of IPV through empowerment and skill development programs, giving them a way to move forward in life.
Practice/Research	There needs to be targeted economic interventions and policies for disadvantaged and vulnerable urban women, such as:

	– microfinance institutions which are pro-poor and targeted to disadvantaged vulnerable urban women – studying the cost of healthy living in Malé city to establish a minimum wage – providing skill development training for females – exerting pressure on government and parliament for minimum wage legislation.
Practice/Research	Policy makers and programmers need to be genuine and take the necessary measures to eliminate discrimination against girls and women, empower women, and achieve equality between women and men by understanding and involving boys and men as equal partners in achieving girls and women's health. – Men need to be involved in all levels of women's health (policy, practice and research). – More in-depth knowledge is needed to understand the perspectives and experiences of boys and men in regard to social determinant factor of health inequalities identified by women in this study (economic, education, housing, IPV and health system barriers). – Surveys and longitudinal studies are necessary to understand gender disparities in SRH, health inequalities, health system challenges and barriers, to understand the areas where more resources need to be allocated. – More studies are necessary to understand the topic of inequalities and social determinants of health and wellbeing.
Practice/Research	Evidence needs to be generated to further understand and involve community leaders (politicians, policy makers,

	program managers and services providers) in reducing women's health inequality. – There is an urgent need to carry out a policy implementation gap study, to inform relevant stakeholders of the mismatch between policies and implementation. – Extensive research methods are necessary to generate knowledge on community leaders' perspectives and experiences in specific areas of women's health inequality (e.g. IPV, economic empowerment), to provide a much needed evidence base for sensitising stakeholders as well as planning and resource allocation.
Research	The field of social determinants of women health and health inequality must continue to build on theoretically informed research that addresses the root causes of disparities, through both qualitative and quantitative methods.
Research	More work is needed to provide evidence for the health inequity that exists within and between population groups (e.g. regional and urban areas, women and men, women of different socioeconomic status).
Research	Strategies should be developed and tested to reduce violence against women in the Maldives (e.g. educational and skill development programs).
Research	Data on gender statistics must be established, to monitor and implement the sustainable development goals of girls and women.

8.5 Summary and way forward

This thesis provides substantial evidence on how social, economic, cultural and political contexts create health inequalities for women in Malé city. It confirmed previous studies that show that critical determinants of women's health are multidimensional and embedded within the context and complexities of women's lives, providing a paradigm shift from the biomedical model of health care in the Maldives (and other developing countries) that focuses mostly on women's reproductive health and related morbidities. Policy makers must understand the inherent and all-inclusive factors within the social, cultural, economic and political dimensions in women's lives, so that they can develop a comprehensive policy agenda that reduces health inequalities while achieving the much targeted global sustainable development goals, in particular for disadvantaged and vulnerable women in urban dwellings. It is also important to revitalise the primary health care model for the urban population in Malé city, in an attempt to provide fair, just and acceptable services to all women, without discrimination. The government, in collaboration with its multiple stakeholders, needs to develop a genuine interest in reducing violence against women by establishing a social security system that safeguards and protects victims, and empowers survivors to move forward in life. More empirical research is needed to understand the specific contextual factors and determinants of vulnerable groups of women in society, to develop targeted policies and strategies to reduce health inequalities and offer healthy choices in life.

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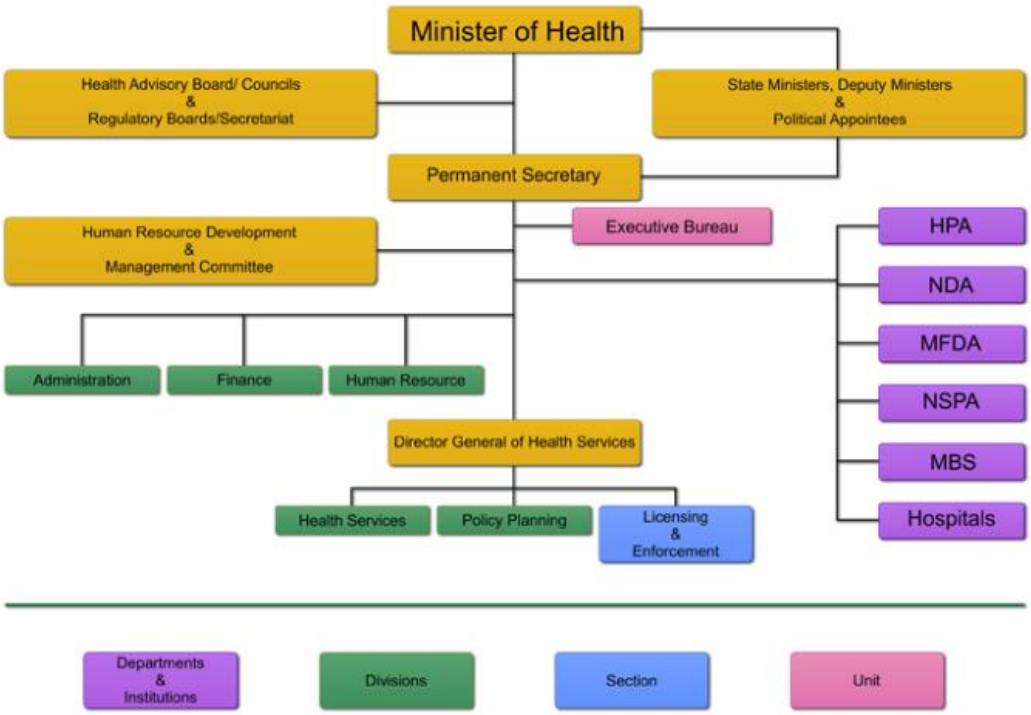
Appendices

Appendix I

Ministry of Health's organisational chart



Source: Ministry of Health (2016) URL:http://www.health.gov.mv/ministry.php?lang=mv

Appendix II

Search strategy for Medline Ovid (updated – 09/12/2016 at 7:35pm)

	Search terms	Medline (Ovid) 1946 to present
#1	exp Women/ OR female*	8072042
#2	health* or healthcare OR 'health concern' OR 'health need' OR 'health service utili?ation' OR 'health care access' OR 'health services access' OR 'delivery of health care'	2924505
#3	social determinants' or 'socioeconomic status' or 'social determinants of health' or politic* or culture* or cultural* or educate* or education* or income or economic* or finance* or financial* or occupation* or work* or job* or employ* or poverty or hous* or 'living condition' or neighbourhood or environment* or 'built environment'	4817320
#4	inequalit* OR inequit* OR disparit* OR barrier* OR 'social exclusion' OR 'social disparit*' OR constrain* OR challeng* OR difficult* OR equit* OR inequit*	1312390
#5	social roles' or 'social status' or 'sexual discrimination' or 'gender discrimination' or 'family life' or 'marital conflict' or 'violence against women' or 'wife beating' or 'battered women' or 'gender-based violence' or 'intimate partner violence' or "gender" or "gender relation*" or 'social capital' or 'social support'	324036
#6	perception* OR experience*	1113837
#7	'Self-rated health' OR 'self-assessed health'	6712
#8	empower* OR autonomy	164151
#9	exp 'decision making'/	153710
#10	1+2+3+4+5	13396
#11	6+7	1367
#12	8+9	8755
#13	11+12	1
#14	6+10	4576
#15	7+10	366
#16	8+10	663
#17	9+10	499
#18	10+11	102
#19	10+12	71
#20	10+13	0
#21	10+11+12+13	0

Appendix III

Country / Region	Source	Author	Aim / Objective / Question / Hypothesis	Participants / Population	Methods / Methodology	Key Findings
Finland	Eur J Public Health, 25 (3), 368-372.	Aaltonen et al. (2015)	Assess cost-related barriers to using health services and prescription medicines in Finland	1770 Finns aged 18-74 years.	Secondary analysis of cross-sectional survey data (postal) from a random sample	Female gender; low income; fair/poor self-assessed health, younger age (18-34 years OR 3.8 compared with 65-74 years), and lower education (primary compared with tertiary) were significantly associated with more frequent cost-related barriers. Low income household were twice more likely to report cost-related barriers compared to above-average income households.
Sweden	J Epidemiol Community Health, 61 (4), 331-336.	Ahnquist, Fredlund and Wamala (2007)	Is cumulative exposure to economic hardships (financial hardship and low income) more hazardous to women's health than men's?	1981 women and 1799 men	A 16-year follow-up study of the Swedish Survey of Living Conditions (ULF) (secondary data analysis)	A dose-related relationship between cumulative economic hardship and health outcomes observed for women but not men. Financial hardship a strong predictor of health than low income. Unlike men, women who had financial hardship were 1.4–1.6 times more at risk for health morbidity. Authors suggest that chronic economic hardship and its stress over years is a stronger predictor of women's health than low income.
Bangladesh, Brazil, Ethiopia, Japan, Namibia, Peru, Republic of Tanzania, Samoa, Serbia and Monte-negro, and Thailand	BMC Public Health, 11 (1), 109.	Abramsky et al. (2011)	Identify the factors associated with abuse across different countries	24,097 women aged between 15-49years	Data from WHO Multi-Country Study on Women's Health and Domestic Violence	Reduction in IPV with secondary education for both women and partner unlike primary education and higher SES; risk increase with if victims/partners mothers experienced abuse; childhood sexual abuse; younger age of women; partners had multiple sexual partners, positive attitudes towards wife beating; if husband/partner or both partners had alcohol problems
India	American Journal of Public Health, 98 (3), 507-514.	Ackerson et al. (2008)	Examine the role of women's education and proximate educational context on IPV	83,627 married women 15-49 years	1998 to 1999 Indian National Family Health Survey	Risk of IPV higher among women who did not have education compared to college educated women. Women with no formal education were nearly five times more likely to report lifetime IPV and nearly six times more likely to report recent IPV in comparison to women who had more than 12 years of education. IPV risk was also higher if husband was uneducated compared to having a college-education; women with higher education than their husbands were more likely to be abused than other who had more gender parity in education.

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Nepal	BMC Women's Health, 10 (1), 1-8.	Adhikari and Tamang (2010)	Examine the prevalence of sexual coercion perpetrated by husbands on their wives in Nepal and to identify the characteristics associated with phenomenon	1,536 married women	Cross-sectional survey	58% (1 in 5) women experienced sexual coercion by husband; 45% (2 in 5) experienced unwanted sexual intercourse. Risk of sexual coercion increased being illiterate than literate; husband's alcohol use; husband's occupation in manual work compared to formal employment; women who experienced more of patriarchal control from husband. Women who made health care decisions jointly with husband were less likely to experience sexual coercion.
Saudi Arabia	Saudi Med J, 32 (6), 612-620.	Afifi et al. (2011)	To identify the prevalence of domestic violence (DV) in Al-Ahsa, and its impact on married women's health.	2000 ever-married women, 15-60 years	Community-based cross-sectional survey	Lifetime prevalence of IPV is 39.3%. Mental abuse 35.9%; physical abuse 17.9% and sexual abuse 6.9%. Lifetime IPV was significantly associated with poor general health, disease, abortion, haemorrhage, and body mass index. Recent (last 4 weeks) IPV raised number of doctors visit, feeling dizzy, vaginal bleeding, pain, moving and activity problems, taking, stress. 41.4% tolerated abuse without seeking help, mostly complained to family or friend rather than getting formal support.
LMIC	PLoS One, 5 (6), e11190.	Ahmed et al. (2010)	Examine relationship between women's economic, educational and empowerment status and maternal health service utilisation in developing countries	women 15-49years	A meta-analysis of demographic health surveys of 31 developing countries (cross-sectional surveys)	Women's low income and education and lower empowerment scores were less likely to get skilled attendant at delivery, have more antenatal check-ups, use modern contraceptives compared to women in highest wealth quintile, completed primary education or had higher empowerment scores. Women who have completed primary level education were five times more likely than less educated women to have a skilled birth attendant during delivery; twice more likely to use modern contraception and nearly three times more likely to have four or more antenatal visits. Women in the lowest wealth quintile, there is 74%,84% and 94% less opportunity to use modern contraception, complete 4 or more antenatal care visits, and access a skilled birth attendant at delivery compared to those in the highest wealth quintile
Oman	Reproductive Health Matters, 12 (23), 144-154.	Al Riyami, Afifi and Mabry (2004)	Define a baseline data on ever-married women's empowerment and the effect of empowerment on unmet need for contraception	1830 married women 15-49 years	A community-based cross-sectional survey	Women's education was the strongest predictor of contraceptive use. Unmet need for contraceptive decreased from 34% for non-literate women to 10% for those with university education. More than half of the employed women used contraception. Most women (58%) who were involved with decision making (8 decisions) used contraception compared to 37.8% involved with only one decision. Nearly half (48%) of women with independent mobility (allowed to go all six places) used contraception compared to those who were not allowed to go out alone.

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India	BMC Pregnancy Childbirth, 15 (1), 1-11.	Alcock et al. (2015)	Quantify the patterns, determinants and choice of maternity care provider in the health facility level in the public and private sectors in Mumbai's informal urban settlements, and exploring reasons underlying these choices	3848 women from census data and 16 in-depth interviews	Mixed method design - quantitative and grounded theory methods	Quantitative results: Economically poor women with less education and recent migrants less likely to access formal pregnancy and delivery care. Higher educated and wealthier women more likely to access private hospitals. Qualitative findings: women explored their provider based on quality of service and previous positive experiences; cost of services and ability to get social and economic support; and it was also enhanced by household SES.
US	Health Services Research, 39 (3), 627-642.	Alemayehu and Warner (2004)	To estimate the magnitude and age distribution of lifetime health care expenditure	data of both males and females	Hypothetical model of individual life table were constructed and age-specific medical expenditures were derived from cross-sectional data on health care spending in a single year.	Female spend more (34% higher) on health care than males mostly due to women's greater longevity
LMIC and HIC	J Fam Violence, 25 (4), 369-382.	Alhabib, Nur and Jones (2010)	Systematically review the worldwide evidence on the prevalence of domestic violence against women, to evaluate the quality of studies, and to account for variation in prevalence between studies.	women aged between 18 and 65 years (exclusion disability, refuge, case reports, reviews, pregnancy, and non-English studies)	Systematic review of 134 studies in English published between 1995-2006	Most studies from North America (41%), Europe (20%), Asia (16%), Africa (11%) and Middle East (5%). Majority studies (n=83, 56%) were population-based, 25 (17%) conducted in primary care and 12 in emergency care setting. Highest physical and emotional violence among Japanese immigrants in North America (47% and 78%, respectively). Mean life time prevalence of physical violence was highest in research done in psychiatric and obstetrics / gynaecology clinic (30-50%), similarly sexual violence was mostly reported in these studies (30-35%). However, emotional violence was mostly reported from accident and emergency and psychiatric departments (65-87%). Violence against women (VAW) is endemic throughout the world, among all racial, ethnic and socioeconomic groups
	Aggression and Violent Behavior, 18 (6), 611-619.	Ali and Naylor (2013)	Provide an integrative review of feminist, social learning and ecological explanations of IPV	Not applicable because this is a theoretical paper	Review of 142 articles (including book reviews) mostly between 1990 - 2011	Mainly three thoughts guide the studies of IPV; feminist theories (e.g. power and control), sociological perspectives (e.g. social learning theory), and ecological models. While feminist theory conceptualises power imbalance and patriarchal structure to IPV; sociological perspectives support those studies which report on the intergenerational roots of IPV, linking it to stress between resources and relationship conflict between couples; ecological framework postulates factors at different levels in the family, community, and society and its links to IPV. Although there is much difference in these paradigms, each of these perspectives has been supported by studies and provides insight into IPV.

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Pakistan (urban)	Glob Health Action, 4 7448.	Ali et al.(2011)	Explore current gender roles in, and how these are reproduced and maintained and influence men's and women's life circumstances in urban Pakistan	28 women	5 Focus group discussion (FGD)	Two major themes: reiteration of gender roles (traditional gender-role suppression which sub-ordinates women; suppression of women's emotions; power imbalance between gender, and men's superior social position, and principal decision makers in family and huge role of extended family. women's major household burden, and subjugation to men's sexual needs - its related stress, powerlessness, depression and anxiety); and agent of change (relevance of education and mass media; and young age more positive towards change than old). Physical aggression and wife beating is socially accepted and men continue these behaviours without fear. Social and religious misconceptions were used to suppress women's rights. Vast gender-role discrimination in household and its psychological stresses noted. Higher education for women as well as support from men seems to be positive towards women's empowerment.
Nepal	World Development, 35 (11), 1975-1988.	Allendorf (2007)	Explore the connections among women's land rights, women's empowerment and child health	4,884 ever-married women between 15-49 years	Secondary analysis of 2001 Nepal demographic and health survey	Majority (70%) of women who owned land have the final say on at least one decision alone or jointly compared to 48% (women in landed households) and 60% (women in landless households). Women's land ownership were significantly associated with household decision making power(50% more empowered if women own land & 60% more likely to have final say in at least one decision alone or jointly). Women having sole autonomy in final decision when they had primary education (41%) and doubles (82%) with secondary education. Women's sole decision-making power when received payment in kind (42%), and increased double when they get paid in cash. Cash employment was a strong & significant predictor of decision-making power. Women's land ownership also linked to children being less severely underweight.
India (urban)	Popul Res Policy Rev, 31 (2), 187-206.	Allendorf (2012)	Examine whether variation in the quality of family's relationships within particular household and kinship structures affects women's agency.	2,444 currently married women aged 15-39 years	Secondary analysis of 2002 Women's Reproductive Histories Survey - cross-sectional survey (which includes some retrospective data)	Women with high-quality relationship with husband (husband having primary loyalty for wives significantly positive effect on women's agency) and parents-in-law (women not having difficult relationship) have greater agency. Family relationship as significant as education and employment in determining women's agency (ability to exercise power by making choices) and wellbeing.

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Egypt	Afr J Reprod Health, 19 (4), 68-77.	Alsumri (2015)	Analyse the association of Egyptian women's decision-making autonomy and use of modern contraception. Test whether women's education and employment act as mediators in this association.	13,734 currently married women 15-49 years	Secondary analysis of 2008 Egypt demographic and health survey	Women with intermediate and high level of autonomy (19% and 32%) were significantly more likely to be use modern contraception compared to those with low autonomy. Women's education and employment were significantly associated with autonomy and contraceptive use.
Saudi Arabia	Women Health, 53 (7), 741-759.	Alyaemni et al. (2013)	Explore how gendered social structures affect health from the perspectives of Saudi Arabia women, with a particular focus on what factors they perceive to influence their health.	66 women 25 years and older	Exploratory qualitative study: both in-depth interviews and FGDs (this was part of a mixed method research)	A large gender-role segregation of household and care provider roles noted; women believed that compared to men they were unhealthy because of their childbearing, domestic roles and when their mobility gets restricted. Poor women related stress to economic hardship, and poverty. All women linked marital conflict and lack of social support from husband as a major stressor and a cause for physical illness.
Bangladesh (rural)	Journal of Development Economics, 90(2), 179-191.	Anderson and Eswaran (2009)	Investigate the relative importance of various factors contributing to female empowerment. Examine empowerment effects of different forms of labour participation, by comparing the effect of labour that generates an independent income for women to that of working on the household farm.	3400 married couples living together with spouse	Secondary data from Matlab Health and Socio Economic survey conducted in 1996 (cross-sectional survey)	The context of employment affects women's autonomy. Women's earned personal income has greater effect on women's autonomy than unearned income. Although employment in husband's farm was a source of income, however in terms of empowerment, it did not add much to women's autonomy (which was more comparable to doing household chores) because in this scenario women did not have control over their earnings.
Laos	Asia-Pacific Journal of Public Health, 27 (2).	Andersson and Lundin (2015)	1) Examine self-rated health (SRH) in relation to socioeconomic inequalities. (2) Examine to what extent the determinants differed in their relation to global SRH without frame of reference, and relative SRH with an explicit comparison with individuals of similar age.	24,162 respondents 20 years and older (51.6% women)	Secondary analysis of Lao Expenditure and Consumption Survey 2007-2008 (cross-sectional survey)	Low SRH was significantly associated with old age, female, illiteracy, Mon-Khmer ethnicity, and rural residents who lived in villages that had no access to road.
Canada (urban, suburban and rural areas of Ontario)	Qual Health Res, 23 (4), 476-494.	Angus et al. (2013)	Understand the conditions and conceptualisations of women's inequitable access to health care. Two main questions (1) How do the reviewed studies describe the conditions under which women engage with the health care system in Ontario? (2) How do these studies conceptualise inequitable access to health care in Ontario?	35 studies (1,225 women)	Qualitative meta-synthesis of 35 studies (part of a mixed method study)	Four major obstacles to health care access were reported: contextual conditions (competing priorities, poverty and homelessness, social marginalisation and violence and victimisation); constraints economic hardship, lacking space for health, and linguistic and cultural tensions). The direct health system barriers (ineligibility for coverage, provider–patient communication and availability and cutbacks) and deterrents (inconveniences and intensification of social vulnerability)

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Pakistan (urban and rural)	PLoS One, 10(6).	Aslam, Zaheer and Shafique (2015)	Estimate prevalence of spousal violence (SV) among Pakistani ever-married women, and explore association of SV with attitudinal acceptance of violence among women and intergenerational transfer of violence.	3545 ever-married women 15-45 years (142 excluded due to missing information on relevant variables)	Secondary analysis of Pakistan demographic and health survey 2012-2013 (cross-sectional survey)	37.9% women reported SV; 22.4% reported their mothers also suffered SV; 35.8% justified wife beating if wife argued with her husband; 68% women who reported their mothers experienced SV also suffered from SV and 47% who justified wife beating also suffered SV. Authors indicate SV was significantly associated with intergenerational transfer and acceptable attitudes of SV by women
Ghana, West Africa	Soc Sci Med, 48 (9), 1123-1133.	Avotri and Walters (1999)	Document ways in which women themselves trace link between their work and their health	75 women, 20 years and above	Interviews and participants selected by snow ball technique	Authors challenge studies that focus on reproductive issues as defined by health care professionals and policymakers to characterise health problems of women. Women's account of their health needs and concerns were related to gender-role discrimination in labour, heavy workloads, financial insecurity and their responsibility over children's welfare. Women linked these factors to physical and psychosocial health consequences of stress and worries.
Pakistan (urban and peri-urban)	Food Nutr Bull, 27 (2), 114-127.	Baig-Ansari et al. (2006)	(1) Assess the prevalent care and feeding practices among children aged 6 to 18 months residing in the squatter settlements of Karachi and (2) Identify care and feeding practices, as well as any other underlying factors, associated with stunting	399 mother-child pairs	Community-based cross-sectional survey	Stunted children were more likely to be females (nearly three times more likely than males) living in crowded household; and households where food insecurity was reported (nearly three time more likely than others) and when their mother's had no formal schooling.
US (mostly white Americans)	American Psychologist, 56 (10), 781-796.	Barnett and Hyde (2001)	Develop a new and more accurate theory to fill the theoretical gap by conceptualising gender, work, family roles influence mental, physical and relationship health to guide research and clinical practice	Not applicable, a theoretical paper	Review of mostly correlational studies and some quasi-experimental studies	Authors challenge role conflict theory to develop a theory (expansionist theory) to explain the notion that multiple roles (marital, parental and job) are beneficial to mental, physical and relationship health through eight processes: buffering, added income, social support, increased opportunities for success, expanded frame of reference, increased self-complexity, increased similarity of experiences for women and men, and gender-role ideology. It is shown that multiple roles are beneficial for both men and women, role quality are more important for health (e.g. low wages, work discrimination and sexual harassment can lead to frustration and failure).

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Bangladesh (rural)	Int Fam Plan Perspect, 30 (4), 190-199.	Bates et al. 2004)	Examine prevalence, nature and potential determinants of domestic violence (DV). Explore the pathways through which women's social and economic circumstances may influence their vulnerability to violence in marriage.	1,200 married women in survey and 76 in-depth interviews and 4 FGDs with married women	Mixed method study: qualitative data includes semi-structured, in-depth interviews and group discussions, and a cross-sectional survey	Survey findings: 67% experienced DV, 35% suffered DV in past year and 18% during pregnancy. Injuries interfered with work and getting medical attention. Qualitative findings: marriage dowry system is a cause of IPV; women forced to marry early to relieve higher dowry prices that come with older age compromising girls' education. Women perceived education was prominent for their status and opportunities, and their ability to reject oppression and abuse and also get employment and earnings. Some women's earning spent on husband and children if husband does not earn.
LMIC	PLoS Med, 9(6), e1001244.	Basu et al. (2012)	Evaluate available data on public and private sector performance across the key domains of health systems competencies.	populations from the LMIC	Systematic review of 102 studies (qualitative studies, cohort and cross-sectional studies, meta-analysis, case reports and reviews)	Both poor and wealthy preferred private providers. Convenience (time and short distance), getting treated respectfully, greater timelines during consultation, and presence of doctors were considered reasons for private sector preference (e.g. even in rural Nigeria). However, health providers in the private sector more frequently violated medical standards of practice, offered poor-quality care and had poorer patient outcomes. While public sector tend to be less responsive to patients and had limited facilities.
Indonesia (urban and rural)	Stud Fam Plann, 32 (2), 130-146.	Beegle, Frankenberg and Thomas (2001)	(Examine the) Association between a series of indicators of the relative power of individual partners within a couple and the woman's reproductive health behaviours in Indonesia.	3,991 married couples (women aged 15 to 49 years and their husbands)	Data collected for a longitudinal survey	Women's economic empowerment and asset ownership within the household significantly determines maternal health care uptake (prenatal care), hospital delivery, and get skilled care (by midwife) with home deliveries. Women with no assets were less likely to use these services. Better educated women than their husband's more likely to obtain prenatal care. Women from higher social status family also more likely to get prenatal care and deliver in health centre or in midwives office.
Puerto Rican	Health Care Poor Underserved, 22 (4), 1315-1330.	Bermúdez-millán et al. (2011)	Understand social determinants of health by Puerto Rican women	29 women 18 years and above	Qualitative research with 5 FGDs that explored major topics on stress, income / poverty, food insecurity, education, health care access and treatment, physical environment / safe, working conditions and perceived discrimination / racism	Women's experience of stress was an outcome of several interlinked social and environmental factors (unemployment, economic hardship, food insecurity, limited social support, unsafe physical environment, violence, crime, discrimination/racism and lack of health care access, not having health insurance) which affected women's mental (crying, depression, suicidal thoughts) and physical health (weight loss and chest pain).

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US	Journal of Family Practice. 49(2):147-52, 2000 Feb.	Bertakis (2000)	Investigate gender differences in the use and cost of health care services	509 adult patients recruited (315 women and 194 men); 417 completed follow-up questionnaire.	Prospective study: Participants were interviewed on the initial visit and after one year when they participated in an exit interview. Medical records, physician's review notes, and medical charge for services were obtained from the health facilities and reviewed.	Compared to men women had significantly lower SRH, low education, and income. Women used and also spend more on medical health care services than men.
LMIC and HIC	Trauma Violence & Abuse, 16 (1), 16-47.	Beyer, Wallis and Hamberger (2015)	Review of the literature on the relationship between neighbourhood environment and IPV, with the following question: ''what is the status of scholarship related to the association between neighbourhood environment and IPV occurrence?''	men and women	Systematic review of 36 articles from 1995 to 2012 (mostly cross-sectional data and few longitudinal studies)	Most studies were from US (11), and some from India (4) Bangladesh (2). Majority of studies (30) reported neighbourhood level characteristics associated with physical and/or sexual IPV. Most US studies reported community socioeconomic status of unemployment, per capita income, poverty rate and education and its association with IPV. On the other hand, studies in India and Bangladesh reported IPV in association with community norms of violence and attitudes towards women, women's literacy, education and murder rates.
Italy	American Journal of Public Health, 93 (9), 1559 - 1563.	Bonnefoy et al. (2003)	Establish links between housing conditions and health	1172 completed questionnaire	Housing questionnaire completed with face-to-face interview; observations of housing conditions and completion of a health questionnaire	Some physical housing conditions (such as adverse stairway conditions, mould growth, noise, air quality and draft) seem to affect health and wellbeing of children, adolescents and adults health negatively. Those who live near parks more likely to engage in physical activity, in contrast others who live far from parks had higher body mass index (BMI).
US	Am J Prev Med, 30(6), 458 - 466.	Bonomi et al. (2006)	Describe the relationship between women's health and the timing, type and duration of IPV exposure	3429 women aged 18 to 64 years	Secondary analysis of data (primary data includes a telephone survey conducted with randomly selected women)	IPV women victims were older, employed, not in a current intimate relationship, had lower annual household income, and had higher BMI compared to women with no IPV. IPV victims were also more likely to smoke and drink alcohol. Compared to women who did not report IPV, victims of IPV were twice more likely to report depressive symptoms. Also victims have low involvement in voluntary groups, and reported distrust of their community members. While recent physical and/or sexual IPV women were four times more likely to report severe depressive symptoms, and 3 times more likely to report minor depressive symptoms, and three times more likely to report fair or poor health and less likely to participate in voluntary work and more likely to distrust community members. More than 10 years of IPV suffers reported worst health compared to never abused women.

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India	PLoS One, 10 (11), e0141953.	Bora and Saikia (2015)	Examine the gender differential in SRH and self-rated disability (SRD) among adults in India	10,736 participants above 18 years	Secondary analysis of WHO Study on Global Ageing and Adult Health (cross-sectional survey) data in India	Women reported significantly higher levels of poor health and higher prevalence of severe and extreme disability than men. Women of all ages spent a larger proportion of life with disability and disability life expectancy.
India (rural)	Soc Sci Med, 58 (9), 1719-1731.	Borooah (2004)	Examine the extent to which girls between 1 and 2 years were neglected relative to boys of the same age in two aspects; (1) being immunised against tuberculosis, polio, diphtheria-pertussis-tetanus, and measles, (2) receiving nutritious diet containing milk, cereals and pulses and vegetables / fruit.	4000 children between ages 1 and 2 years	Econometric estimates based on vaccination records of children and survey of children's diet records	Girls were neglected in both aspects; the probability of girls being fully vaccinated was 5 percentage points less than for boys. As for providing nutritious food, illiterate mothers were 5 percentage points less likely to well-feed girls relative to their male siblings, and the father's literature did not matter much. However, there was no gender discrimination between children of literate mothers.
Middle East and North Africa	Violence Against Women, 14 (1), 53-70.	Boy and Kulczycki (2008)	Discuss attitudes and beliefs regarding acceptability of IPV and difficulties victims face when trying to seek health.	22 studies	Review of peer-reviewed studies	In the Middle East and North Africa there is high prevalence of IPV, however, there is limited number of studies and knowledge to understand the context of it. A major finding was the widespread acceptance of IPV and its tolerance by women as well as men. 87% of Jordanian women, 86% of Egypt women, and 40% of Turkish women, justified abuse. Most victims do not seek or are not willing to receive help from formal authorities.
Canada	Patient Education and Counseling, 48(3), 225-231.	Brown et al. (2002)	Examines the process that women undergo in making an important decision about their health and wellbeing including: where and how they acquire the necessary information to make a decision; what factors influence their decision; who supports them in the decision-making process; and how do they reconcile confusing or conflicting information.	152 women	Secondary analysis of three qualitative studies that used FGDs	Women obtained reliable and accurate information from social networks, trusted health care providers and independent research to make health care decisions. Women desired active participation in health care decision making.
European countries (Austria, Germany, Sweden, Netherlands,	Journal of Affective Disorders, 193 157-164.	Calvó-Perxas et al. (2016)	Describe the variables associated with incident and persistent depression and pain in men and women separately by using longitudinal design in a population-	22, 280 participants 50 years and above	Data from the waves 4 and 5 of a European cross-national and longitudinal research (Survey of Health, Ageing and Retirement in Europe), where those who	More than half of the sample was women (58.2%). Depression was significantly higher among women (34.5%) compared to men (20.3%). Co-occurrence of depression and pain was also more frequent in women than men (25.3% vs.14.0%). Women also used more of anxiolytics/antidepressants than men.

Spain, Italy, France, Denmark, Switzerland, Belgium, Czech Republic, Slovenia, and Estonia)			based sample from 13 different European countries		answered 12 item of the depression scale was used	
Canada, Uganda and Yemen	International Journal of Gynaecology & Obstetrics	Chamberlain, et al. (2007)	Describe women's perception of their health care seeking behaviour and attitudes	303 women, 15 years and above	Cross-sectional survey in the three university hospitals in the three countries	Women from Yemen delayed health care access unlike women from Canada and Uganda. Issues for delaying health care access were linked to lack of money and their own belief that they should not be receiving medical care even when ill. Yemen women also suffered from food insecurity. While almost all Canadian women made decisions for their own health care education on their own, none from Yemen and 58% Uganda women made this decision on their own. Similarly, more Canadian women valued themselves and were ware about their own rights on health and education, unlike Yemeni women.
United Kingdom (UK)	Soc Sci Med, 58 (8), 1501-1509	Chandola et al. (2004)	Investigates the meaning of control at home, the effect of control at home on incident coronary health disease (CHD) events and whether this explains some of the social inequalities in CHD events in men and women.	7470 aged between 35-55 years	Data from phases 3-5 of Whitehall II study which used longitudinal measures and involved cohort of civil servants in London	The meaning of low control at home was poor physical and mental health for women, and poor mental health for men. Caring for aged relative and children, lower household social position and domestic demands for women were also predictors of low control at home, unlike men. Low control at home predicts CHD among women but not among men, and low control at home is also linked to association between household social position and CHD among women.
China and India	The Lancet, 388 (10042), 376-389	Charlson et al. (2016)	Estimate disease burden associated with mental, neurological, and substance use disorders in China and India as reported in Global Burden of Disease (GBD) 20136 and compare these findings with those from developed regions and other developing regions of the world. Also report changes in the burden due to mental, neurological, and substance use disorders from 1990 to 2013 and project estimated burden up to 2025.	not mentioned	Systematic review of community-based epidemiological studies (Global Burden of Disease study)	Increase in non-communicable diseases burden seen in India (50%), while in China (80%) it is almost similar to developed nations (85%). A third of the disability-adjusted-life-year (DALYs) accounts for mental, neurological and substance abuse disorders were found in China and India. Depressive disorders were the leading cause of mental, neurological and substance abuse disorder in both developed and developing countries. The proportion of depression and anxiety burden was significantly higher in women: 54% in China and 63% in India compared with men: 33% in China and 42% in India. In both countries population is projected to increase over the next decade and also mental, neurological and substance abuse disorders. Mental health disorders are projected to increase in both nations over the next decade (China, 10% and India, 23%).

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Lebanon, Beirut	Quality of Life Research, 22 (6), 1371-1379	Chemaitelly et al. (2013)	Examine gender variations in the association of self-rated health (SRH) with social capital, social support, and economic security among older adults from three deprived communities in the suburbs of metropolitan Beirut.	412 older women and 328 older men aged 60 years and older	Secondary analysis of a population-based cross-sectional survey (Older adult component of an urban health survey)	Women were significantly more likely to report poor SRH than men, however, positive social capital seems to decrease risks of poor health for both men and women. Social support was substantiative with women's rating of SRH, but not among men.
UK	Health Soc Care Community, 10(5), 339-347	Chew-Graham et al. (2002)	The main study examined suicide and self-harm services in relation to South Asian women	31 women between 17-50 years	Qualitative research: 4 FGD with women (as a part of a larger study)	Women's associated their culture and social norms of oppression stop them from seeking formal supportive services, despite suffering from mental and psychological distress. Most women accessed formal mental services when in desperation rather than when the need arise.
Nepal (rural)	BMC Psychiatry, 14	Clarke et al. (2014)	Understand community perceptions and mothers experience of distress, and explore how mothers manage distress in Dhanusha, Nepal	22 women who were distressed (interviews), 1 traditional healer and 105 women (FGDs)	Qualitative grounded study (interviews and FGDs)	Women's linked distress to several life circumstances, several affective and physical symptoms and five women contemplated suicide. Main cause of distress was poor health, lack of sons, and fertility problems. The root causes of women's distresses were linked to their lack of autonomy and role burden as a result of their responsibilities for family. These women relieved distress by seeking health care from doctors or traditional healers, attempting several pregnancies in hope of getting a son, manipulating household circumstances, and accepting their life circumstances. These coping strategies were linked to their negotiation power with in-laws and husband.
LMIC and HIC	Int J Equity Health, 9 13	Collins and Hayes (2010)	Monitor thematic trends in health inequities knowledge over time, and track scholarly prescriptions for municipal government intervention on local health inequities	Not mentioned	Meta-narrative mapping analysis of 1004 journal abstracts published between 1986 and 2006	The number of studies in the field had increased over the years, but most of them used a biomedical and behavioural approach. Most of the abstracts were from HIC in Europe, and Canada and the US and a limited number of (11 of the 171 abstracts) addressed municipal government action on health issues from LMIC in Asia, Africa, and the Middle East.
Spain	Health Place, 14 (3), 478-491	Costa-Font (2008)	Examines the empirical association between health and disability and housing characteristics including housing tenure and housing wealth.	729 individuals aged 55 years and above	Secondary analysis of cross-sectional survey	A strong link between an individual's housing equity and older age health was observed, such that housing equity was more important for older age than even the effect of income in positive health outcomes and reducing disability in old age.
US	Journal of Marriage and Family, 75 (2), 300-313	Cui et al. (2013)	Examine continuity in IPV from adolescence to young adulthood with three main hypothesis	3563 participants from Wave III and 4,048 participants	Secondary analysis of data from the National Longitudinal study of adolescent health	There is continuity of IPV from adolescence to young adulthood. Being a victim of violence in romantic relationship during adolescence was a significant predictor of getting victimised in romantic relationship in adulthood. Women reported significantly

				from Wave IV of the study	(nationally representative sample of adolescents in grades 7-12)	higher levels of perpetration and lower levels of victimisation than men. Couples living together reported higher levels of IPV than dating couples.
India	Journal of Injury and Violence Research, 3 (1), 35-44	Dalal (2011)	Explore the relationship between women's economic empowerment, their exposure to IPV and their help-seeking behaviour.	69,432 ever-married women	Cross-sectional survey	A higher prevalence (twice more) of IPV was noted among working women than non-working women. Women who travelled away from home for work suffered more emotional and physical abuse from husband than women who worked at home. Seasonal workers (women) were more likely to be sexually abused than women who were in regular employment. Women who earned more than their husband suffered more abuse than those who earned less or equal. Working women sought more help for IPV than non-working women. Mostly help was sought from family members, the least likely from formal services such as police.
Bangladesh	BMJ Open, 3 (12), e002941	Dalal, Dahlström and Timpka (2013)	Examine the associations between microfinance programme membership and intimate partner violence (IPV) in different socioeconomic strata of a nationally representative sample of women in Bangladesh.	4465 ever-married women,15 - 49 years	Cross-sectional survey	51% of women suffered IPV. Risk of IPV increased with having no formal education and being economically poor. In terms of those who participated in microfinance programs; a two to threefold increase in exposure to IPV was reported for women who had secondary or higher education, at the same time women's wealth also increased the risk of IPV. Additionally, women with equal or higher decision-making power about their own health issues in relation to their spouses also suffered more IPV. However, there was no association reported of being a member of the microfinance program of those women with low education and income.
Jordan	J Fam Violence, 30 (6), 807-816 810p.	Damra et al. (2015)	Explore the experiences of pregnant women disclosing Intimate Partner Violence (IPV) and seeking help from Health Care Professionals (HCPs) at public Hospitals in Jordan.	25 pregnant women	Qualitative study with in-depth interviews	Women disclosed being dissatisfied with the health care provider's attitude, responses and treatment in their attempts to seek services. Some of the major themes were victim blaming attitudes, poor communication, lack of privacy and lack of continuity of care from the health services that withheld women from seeking services and continuing health care access. Women were more comfortable and safe in disclosing IPV with the confidence they had with the services.
Spain	Scand J Public Health, 36 (5), 504-515.	Daponte-Codina et al. (2008)	Assess trends in inequalities in SRH in Spain, according to gender and to the individual's social position, to estimate the impact of Spanish municipal areas' socioeconomic characteristics on their residents' SRH, and to explore the shape and magnitude of trends in inequalities in SRH for residents in municipalities with different socioeconomic context.	84,567 participants	Secondary analysis of cross-sectional survey data from National Health Surveys of Spain (1987,1993,1995 and 2001)	Women's SRH was determined by level of education, municipal area deprivation, and individual social position. Those with no formal education reported poor health compared with women who had graduate level education. SES also determined women's health in deprived neighbourhoods. Women with no formal education as compared to women with graduate level education in municipal areas with the highest deprivation reported poor SRH.

Country / Region	Source	Author	Aim / Objective / Question / Hypothesis	Participants / Population	Methods / Methodology	Key Findings
Canada	Soc Sci Med, 58 (12), 2585-2600	Denton, Prus and Walters (2004)	Examines the extent to which inequalities reflect the different social experiences and conditions of men's and women's lives (self-rated health, functional health, chronic illness and distress)	18,000 participants (men and women)	Secondary analysis of Canadian National Population Health Survey	Women reported low levels of SRH and functional health, and more of chronic health problems and higher levels of distress than men. Women also reported higher levels of stressful life events and lower levels of self-esteem, mastery and coherence. Chronic stressors contribute more to women's health than men. Financial stress more linked to chronic illnesses for women only. Environmental stress more linked to women's poor functional health and distress for women only. Unattached women who live alone report more chronic ill-health unlike their male counterparts. Women in lower skilled occupations and unskilled jobs report more of distress. Job strain negatively associated with distress for women unlike men. Social support is linked to lower distress for both men and women; however, it is more beneficial for women's functional health.
Nepal (urban slums)	BMC Women's Health, 16 (1), 1-10	Deuba et al. (2016)	Understand pregnant women's perception and experiences of IPV, in identifying coping and support strategies and to ask women about the opportunities of reducing IPV	20 pregnant women	Qualitative study with in-depth interviews	Pregnant women were more likely to suffer different forms of IPV, such as psychological, physical and sexual, if they refused to have sex, gave birth to a girl, if the foetal gender was of female sex, and if the husband was under alcohol intoxication. Women's limited autonomy and power in intimate relationships is evident. The main coping strategies adopted by women who were financially dependent of their husband were tolerance and acceptance of abuse. Women all sought informal support from family members. Women suggested several measures to reduce IPV risk: ban the methods to identify foetal gender; more education to girls and women, improving their self-esteem, becoming economically independent and increasing awareness of IPV as a major public health concern and human right abuse.
LMIC (mainly) Zona da Mata de Pernambuco, Japan; Windhoek, Namibia; Brazil, Ethiopia, Japan, Namibia, Peru, Samoa, Serbia, Thailand and Tanzania	Soc Sci Med, 73 (1), 79-86	Devries et al. (2011)	Examine the prevalence of suicidal thoughts and attempts, and relationships between suicide attempts and mental health status, child sexual abuse, partner violence and other variables.	20,967 women aged 15-49 years	Secondary analysis of WHO multicountry study data on women's health and violence against women (cross-sectional household surveys) in 13 sites	Study reported high prevalence of suicidal thoughts and attempts and its strong association with violence against women. The risk factors for suicide attempts were reported to be IPV, non-partner violence, ever being divorced, separated or widowed, childhood sexual abuse, and having mother who experienced IPV. 25-50% women with suicidal thoughts also visited health worker at the time.

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LMIC and HIC (mostly US studies, Australia, Sweden, India, Nicaragua, South Africa)	PLoS Med, 10(5), 11	Devries et al. (2013)	Investigate the extent to which IPV experience is associated with incident depression and suicide attempts, and vice versa, in both women and men	36,163 women and men	Systematic review and meta-analysis of 16 longitudinal studies	A significant association between IPV and depressive symptoms, and IPV and incident of suicide attempts was reported for women, but for men, although association between IPV and depressive symptoms were reported, there was no association with suicide attempts.
Multi-country from LMIC and HIC	Science, 340 (6140), 1527-1528	Devries et al. (2013)	Estimate women's lifetime prevalence of IPV	Women 15 years and above (no of women not reported)	Systematic review of all available global prevalence data at national and subnational level - included 141 studies from 81 countries	30% of women aged 15 and above experienced physical and/or sexual IPV around the world in the year 2010.
India (urban slums)	J Interpers Violence, 31 (12), 2227-2239	Donta et al. (2016)	Understand the relationship between domestic violence and women's empowerment in a slum community in Mumbai, India.	1,136 married women, 18 to 39 years	Secondary analysis of a cross-sectional survey	While 21% women suffered IPV, 16.8% reported physical abuse, 12.4% emotional abuse and 4.8% sexual abuse. 22.8% of women were not allowed to go out alone. 93% to 97% women disagreed to the statement of wife beating by husband. Women's younger age and lower social status were associated with having less autonomy in decision making. Women who justified wife beating were twice more likely to suffer IPV relative to women who disagree with wife beating.
US (urban)	Arch Psychiatr Nurs, 27 (6), 278-284	Doornbos et al. (2013)	Identify social determinants of mental health and barriers to help-seeking	61 Women 18 years and above	Qualitative design with community-based participatory approach with 6 FGDs	Major themes: Contributing factors: economic (unemployment, bills/expenses), cultural (discrimination, separation from family), neighbourhood (decline of neighbourhood, safety issues, crime, gang activity), and family issues (marital and IPV, single parenting, behavioural problems of children, caregiving stress and death). Barriers to help-seeking: practical (lack of clinics for low income person, lack of transportation, lack of awareness of existing resources, lack of insurance and lack of financial resources), psychological (stigma, lack of trust of existing services) and cultural discrimination.
Sweden	Scand J Public Health, 43 (2), 176-182	Eek and Axmon (2015)	Explore whether an unequal distribution of responsibilities in the home was related to various health-related outcomes among women	837 women	Secondary analysis of a cross-sectional survey	Women in relationships and who perceived a higher level of unequal distribution of responsibility for household duties showed significantly greater levels of perceived stress, fatigue, physical/psychosomatic symptoms, and work–family conflict compared with women living in more equal relationships. These women also reported increased work-related stress and work-related demands and decreased wellbeing and lower level of satisfaction with their life situation.

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Multi-country, mainly LMIC (Bangladesh, Brazil, Peru, Thailand, United Republic of Tanzania, Ethiopia, Japan, Namibia, Serbia and Montenegro, and Samoa)	The Lancet, 371 (9619), 1165-1172	Ellsberg et al. (2008)	Presents findings on partner violence and women's self-reported physical and mental health.	19,568 ever-partnered women 15-49 years	Secondary analysis of population-based survey in 15 sites and ten countries (extension of the WHO multicountry study on women and violence)	15%-71% suffered physical or sexual violence or both forms of IPV. Women who suffered IPV reported higher levels of poor or very poor health, difficulties walking or daily activities, pain, memory loss, dizziness and vaginal discharge. Women who suffered IPV were significantly more likely to have thoughts and attempted suicide. Women suffered more than one incidence of IPV. Serious injuries to eyes, ears, fractures broken teeth and loss of consciousness as a result of violent incidents were reported by women. Between 23% and 80% women needed health care for injuries at least once.
India	Soc Sci Med, 72(3), 327-337.	Ergler (2011)	Examines access to health care by poorer residents in Chennai, India.	72 participants	Case study research with use of qualitative designs (interviews with 14 residents and 58 stakeholders involved with caring for poor people)	Poor people who have physical access to public health services seek private provider despite higher costs, if they considered that the quality of care was better. The poor resident borrow or pawn their assets to get money to access private provider, often from their social networks because there is a general perception that quality and effective care is provided in private sector, when they get access to doctors. They avoid public facilities due to long waiting hours and inconvenient system that delay access of treatment. However, it was also noted from stakeholder interviews that doctors who work in the private sector violate medical standard of practice.
Sweden	Soc Sci Med, 130 250-258	Eriksson and Ng (2015)	(i) To assess the level of individual structural social capital over time, and (ii) To investigate whether changes in access to social capital during a 10-year period influence SRH differently in men and women.	33,621 (15,822 men and 17,799 women)	Secondary analysis of a longitudinal study database	Access to structural social capital was significantly associated with SRH, such that no/low level of informal socialising increased the poor SRH for women and men. However social capital changes on SRH differed for men and women, such that higher social participation was stress enhancing for some middle-aged women. Authors suggest that women's increase distress could be due to gender-role segregation where women are perceived to be the main provider of social support rather than who receive it from others.
Sweden	Soc Sci Med, 73 (2), 264.	Eriksson et al. (2011)	Investigate the association between collective social capital and self-rated health for men and women, after controlling for individual sociodemographic and socioeconomic variables, and individual social capital.	3225 women and 2543 men 18-84 years	Secondary analysis of cross-sectional survey data	The effect of collective social capital or neighbourhood factors had no effect on men's SRH. However, collective and higher social capital (in terms of neighbourhood measures) had significantly positive health rating for women, compared to those women who lived in very low social capital areas.

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HIC (Australia, Canada, England, Germany, Hong Kong, Ireland, Israel, Japan, US and UK)	Journal of Social Issues, 59 (3), 475-500.	Evans et al. (2003)	Explores the relationship between housing and mental health.	Men, women and children	Secondary analysis of 63 studies	Substandard housing and overcrowding increases adult's and children's psychological stress due to multiple interacting factors, such as limited parent–children interaction, restriction of children's mobility; limited space for children to play, and safety and security concerns. Women who stay at home with children have an increased risk of being socially isolated, which increases psychological distress. Women who reside in high-rise housing report low social contacts and support from neighbours and more loneliness.
US	Oncol Nurs Forum, 34 (1), 117-123	Farmer et al. (2007)	To explore psychosocial correlates of older African American women's adherence to annual mammography screening.	198 African American women aged 50 - 98 years living in low-income housing	Cross-sectional survey	Social support was significantly related to uptake of mammography screening.
HIC (USA, UK, Canada, Australia, Sweden and Hong Kong)	BMC Public Health, 14 (1), 1-22	Ferrer et al. (2014)	Examine decision making relating to the HPV vaccination of young women in high-income countries.	Sample size range from 10 -522 in studies	Secondary analysis of qualitative systematic review of 41 studies (mostly IDI and FGDs)	Main themes: financial consideration, social norms and values relating to sexual activity, trust in vaccination programs and health providers. Health provider's attitude maybe a barrier to young women's access to vaccine. Parent's attitude and belief was also a barrier for young women's access to vaccine.
US	J Community Health, 36 (5), 785-796.	Ford and Dzewaltowski (2011)	Determine whether the association between neighbourhood deprivation and BMI is mediated by the availability of retail food stores, and whether this relationship varied across the urban rural continuum.	21,166 women (low-income)	Secondary analysis of cross-sectional dataset	Women who lived in highly deprived metropolitan neighbourhoods had increase BMI, indicating urbanity and its effects of women's BMI for low-income women. Presence of retail food stores or supermarkets had no association between deprivation and BMI.
Maldives	Ministry of Gender and Family	Fulu (2007)	To assess the prevalence, determine health outcomes, document women's coping strategies and explore the impact of the tsunami.	1900 women 15-49 years	WHO standardised multicountry questionnaire on women and violence was modified, tested and adapted to local context with qualitative IDIs, FGDs and a stakeholder workshop. A nationally representative sample of women participated in a cross-sectional survey.	1 in 3 women aged 15-49 have experienced some form of physical and/or sexual abuse during their lifetime. Around 1 in 8 women reported been sexually abused before age of 15 years. Similarly, 1 in 8 women reported physical and/or sexual abuse by someone other than an intimate partner.

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HIC (Europe and non-US countries, and the US)	The European Journal of Public Health, 18(4), 417-421	Furnée et al. (2008)	Determine the magnitude of the effect of education on self-reported health.	male and females, number of participants not mentioned	Two meta-analyses using a random-effect (35 studies) and a fixed-effect (10 studies) model to quantifying the effect of a year of education on individual health status in monetary terms.	Strong link between education and health. A year of education improved quality adjusted life years (QALY) by 0.036 that is equal to 28 years of education for 1 QALY. Investing in education have larger positive cost–benefit ratio.
Nepal	Int Fam Plan Perspect, 32 (1), 17-27	Furuta and Salway (2006)	Examine the influence of four indicators of women's household position on the receipt of skilled antenatal and delivery care: their involvement in decision making about their own health care and about large household purchases, their employment and control over their own earnings, and their discussion of family planning with their husbands.	4,695 women 15-49 years	Secondary analysis of 2001 Nepal demographic and health survey dataset (cross-sectional survey)	Gender dimensions, women's social position, education and autonomy were significantly associated with health care access. Women had limited participation in intra-household decision-making power as well as autonomy and control over their own earnings. However, if women discussed contraception with their husband, they were significantly more likely to receive antenatal and delivery care. Secondary and higher education was significant for women to get access to antenatal and delivery care, and get involved with decision over their own health care and on household purchases compared to those with no education.
Developing countries	Social Science & Medicine,	Galloway et al. (2002)			Qualitative studies in eight developing countries	Qualitative studies conducted in eight developing countries on women's perceptions of iron deficiency anaemia prevention and control stated that women's beliefs and cultural context were a strong determinant for using iron to prevent anaemia.
Singapore	BMC Public Health, 15 (1), 1-9	Gao et al. (2015)	Examine the impact of sex and its interaction with age and diabetes on long-term mortality following acute myocardial infarction (AMI) in a large Asian cohort.	13,389 individuals who survive AMI (3420 women and 9,969 men)	A prospective follow-up study (12 years or until death)	Higher prevalence of diabetic among women than men. Diabetic women <60 years higher risk of mortality than diabetic men.
Multi-country	The Lancet, 368(9543), 1260-1269	Garcia-Moreno et al. (2006)	Estimate the extent of physical and sexual intimate partner violence against women in 15 sites in ten countries.	24,0097 women aged 15- years	Standardised population-based household survey (cross-sectional) of 15 sites in 10 countries	15% and 71 % of ever-partnered women experienced physical or sexual IPV, or both, in their lifetime. IPV was lowest in in Japan, while higher prevalence was reported by women living in settings in Bangladesh, Ethiopia, Peru, and the United Republic of Tanzania. Men's controlling behaviours and seclusion norms and attitude were reported to increase the risk of IPV.

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Mostly HIC (Europe, UK, Netherlands, US and Oceania, and Latin America)	Int J Environ Res Public Health, 12 (4), 4354-4379	Gascon et al. (2015)	Systematically review the available literature on the long-term mental health benefits of residential green and blue spaces by including studies that used standardised tools or objective measures of both the exposures and the outcomes of interest.	Children and adults (size of study populations range from around 100 to 345,143)	Systematic review of 28 studies (longitudinal, ecological and cross-sectional studies)	Limited evidence to suggest long-term benefits of green and blue spaces on mental health. Some evidence of green space and mental health of adults however not in children. Authors suggest limitation of the review which did not include experimental, qualitative and observational studies and suggest for further studies. No studies published in Asia or Africa on this topic.
Bangladesh, India, Nepal, Pakistan and Sri Lanka	Women's Health Issues, 21 (1), 12-18	Gill and Stewart (2011)	(1) Compare women's health indicators across the five countries, (2) measure the congruence between policies and indicators and identify implications for new policy development, and (3) identify implications for implementation and monitoring of existing policies.	Not applicable - this is a review of policy indicators	Document review (review of gender-sensitive policies and health indicators)	Gender-sensitive policies exist that could be measured by several indicators; however there is a large mismatch between existing policies and gender -equitable health outcomes. Authors argue that beyond policies, there needs to be better monitoring system to ensure policies are implemented to alleviate poverty and gender-role discrimination in the private and public sphere.
US, Sweden and Netherlands	Women Health, 31 (4), 1-20	Gjerdingen et al. (2000)	(1) to synthesise data on the distribution of women's work efforts in the areas of paid employment, household chores, and childcare; (2) to outline research which addresses the impact of women's workload on their wellbeing and careers; and (3) to make international and gender comparisons regarding women's work responsibilities.	men and women	Secondary analysis and review of empirical studies and data from Swedish Bureau of Statistics and National Office of Statistics in the Netherlands	Women contribute more than men to household and care provider roles, and less to paid employment in these 3 countries. Less women in higher occupations such as management or administrative positions and more in low category jobs (e.g. clerical). Women work approximately 5-10 hours more per week than men. Having small children increases physical strain and fatigue and psychological distress of women. Multiple work burdens negatively affect women physical and psychological wellbeing. Women's work role burden related to cardiovascular risk (in Sweden) but this was not reported for men. Women's perception of unfairness and inequality within the household with unsupportive spouse leads to dissatisfaction and marital strain.
Australia	International Journal of Nursing Practice, 15(3), 172-184	Griffiths et al.(2009)	Aim: (1) Complete a baseline survey of young women living in an area of high social and economic disadvantage to determine the impact of that environment on physical and mental health, social supports and social cohesion. 2. Develop and implement a nurse-	Baseline: 327 participants and follow-up study: 328 participants	Cross-sectional survey design, administered at two time points (2001 and 2003), to measure the effect of a community capacity-building programme implemented by Women's Health Nurses.	Demonstrates the effectiveness of a community development initiative that builds on the strength of the community. Most of the women reported fair physical and mental health, and positive attitudes and attachment to their community. Authors suggest that strong social networks and social cohesion may assist to alleviate disadvantages of living in deprived neighbourhood and also protect from health inequalities in terms of significantly improving women's physical and mental health). More specifically, unemployed women's mental health status was shown to improve.

			led community capacity building programme. 3. Repeat the survey to determine the effectiveness of the community support programme.			
UK	J Epidemiol Community Health, 70 (7), 710-715.	Hakulinen et al. (2016)	Examine associations between structural and functional aspects of social support and future mental and physical health from an adult life course and its possible bidirectional effects	6797 participants (4788 men and 2009 women) 40 to 77 years	Secondary analysis of data from the Whitehall II study (longitudinal, prospective cohort study)	There is a bidirectional association between social support and health. Social support and health varies over adult life course. Married and cohabiting was associated with positive mental health however not physical health.
	Public Health, 123(10), 689-693	Hammarstrom et al.(2009)	Analyse the scientific quality of different gender-related explanatory models of depression in the medical database PubMed.	Theoretical paper	Qualitative and quantitative analysis of 82 PubMed articles	Biomedical model was the most frequently used discourse to explain the phenomenon, followed by sociocultural and then psychological models. The authors further argue that the biomedical framework could least explain the difference in depression between the genders, unlike the social and psychological models.
US	Health Care Women Int, 22 (8), 735-748.	Hassouneh-Phillips (2001)	Examine the significance of polygamy in shaping American Muslim women's experience of abuse and describe ways that polygamy and can sometimes be interwoven phenomena	17 women (between 20-59 years)	Interpretive phenomenology (qualitative research)	The authors argue that although polygamy is prescribed as beneficial for the provision of support and assistance for vulnerable groups of widows and orphans, however, some men seems to practice far from it. Significant themes: polygamy as a form of abuse, unequal/unjust treatment of wives, and co-wives as both witness and perpetrators of abuse.
Multicountry	Lancet Global Health, 3 (6), E332-E340.	Heise and Kotsadam (2015)	Analyse macro-level predictors of partner violence at the level of the country and survey year with highly similar outcome data.	481,205 women (women 15 to 49 years in DHS and WHO studies)	Secondary analysis of multiple data sources: 54 separate demographic health surveys, 15 population-based surveys in 10 countries, and some additional prevalence surveys. National-level statistics compiled by UN, World Bank and OECD.	Gender-based institutions such as male authority over females, norms justifying wife abuse, and laws and practices that disadvantage women's access to land, property and productive resources are significant predictors of physical and sexual IPV. In nations where wife abuse is a norm (compared to countries where it is not), girls education seems to be a strong a predictor to reduce the risk of IPV. Increase in the number of women in formal labour market seems to reduce IPV risk, however, when women earn cash in nations where there is less females in labour market, seems to be a trigger that increase IPV risk.
Sweden	Soc Sci Med, 61 (3), 637-647	Hemström (2005)	Explore the mediating role made by work environment to health inequalities by wage income in Sweden.	5982 participants (2955 men and 3027 women) aged 16-84 years	Secondary analysis of cross-sectional data from Swedish Survey of Living Conditions	Income and work environment is a strong predictor of SRH for both men and women. Compared to men, women's personal income from work is a stronger determinant of SRH.

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US	Trauma, Violence, & Abuse, 5 (2), 123-142	Hickman, Jaycox, and Aronoff (2004)	Describe the major national data sources on prevalence of dating violence and summarise the studies that also provide a source of prevalence estimates	males and females (number of participants between 200 to 13,600)	Secondary analysis of national survey data, published reports, and surveillance system	Physical victimisation among girls range from 8%to 57% compared to 6-38% for boys. Sexual victimisation is higher among girls than boys (14 to 43% vs 0.3 to 36% for boys). More girls report being the perpetrator of physical violence (28% to 33%) than boys (11%to 20%). On the other hand, more boys perpetrate sexual violence (3% and 37%) than girls (2% -24%). Several programs have been delivered to address and reduce dating violence (e.g. school-based prevention programs), but effectiveness of these programs have been rarely studied.
Papua New Guinea (rural)	Women's Studies International Forum, 33 (3), 180-187.	Hinton and Earnest (2010)	Examine key determinants of women's poor health and the level of access to appropriate healthcare in relation to the right to health.	70 women, 18 years and above)	Qualitative research (IDIs, FGDs, photo narratives and ranking exercises)	Major themes: Violence against women, workload burden and lack of economic opportunities and barriers to access to health services. The patriarchal institutions, power imbalance, women's limited autonomy, subordination, gender-based discrimination and limited access to resources were some of the root causes identified.
Papua New Guinea (rural)	Qual Health Res, 20 (2), 224-238	Hinton and Earnest (2010)	Describe the factors that contribute to variation in rural Papua New Guinea women's psychosocial adaptation to adversity, and in particular their ability to cope with and develop strategies to manage experiences associated with poverty, inequity, and a lack of resources.	70 women, 18 years and above)	Interpretive ethnography (qualitative research)	Combination of social, economic and culturally embedded gender discrimination constrained women's physical and emotional health. Women used multiple coping strategies with psychological stressors: developing reliance on their own agency and seeking social and spiritual support. Some women used avoidance with limited control over life matters; however these women as others reported severe distress.
Papua New Guinea (rural)	Asia Pacific Viewpoint, 52 (2), 178-193	Hinton and Earnest (2011)	Examine adult and older women's perceptions of health and wellbeing using a multi-method qualitative interpretative approach to identify priority areas for public service interventions	27 women, 26 to 74 years	Interpretive ethnography (qualitative research)	Women's health was linked with social, economic, cultural, and spiritual dimensions of their lives, such that access to economic resources and supportive interpersonal relationships was identified by women with good health. A mismatch between women's priority of their health issues and that of the social and health policies were noted.
Bangladesh (rural)	American Journal of Public Health, 78 (10), 1349-1350	Hossain and Glass (1988)	Examine drug purchases for children less than give years of age from privately owned pharmacies in Matlab, a rural area in Bangladesh.	children below 5 years	Cross-sectional survey (calculated average incidence of drug purchases as the number of purchases per 1,000 persons -weeks for subgroups of children aged less than 5 years). The Matlab Demographic Surveillance Area data was used to estimate children below 5 years (n=28,6600)	Age-specific drug purchases were significantly higher for males than females (51.1 and 100.3 / 1,000 person-weeks vs 30.9 and 54.8 / 1,000 person- weeks). The male to female incidence rate ratio was 1.71 for overall drug purchases and 2.94 for purchases of physician prescribed drugs.

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Pakistan	Health Policy Plan, 28 (2), 176-184	Hou and Ma (2013)	Examine the influence of household decision making on women's uptake of maternal health services.	7,163 women, 15 to 49 years	Secondary analysis of cross-sectional survey data from the Pakistan Social and Living Standards Measurement Survey.	Women's intra-household decision-making power improved with older age, female-headed households, urban living, living in higher income household, being employed and having higher educational attainment. Women's decision-making power, as well as education and employment were strongly linked to maternal health care service uptake (prenatal, postnatal and getting skilled birth attendance for delivery)
	Med Anthropol Q, 20(3), 345-378.	Inhorn (2006)	Summarises a dozen major messages about women's health that emerge from the ethnographic literature, now consisting of more than 150 volumes	Theoretical	Critical analysis of 157 ethnographic studies to provide thematic messages about women's health	Author provides 12 main themes/definitions of women's health and argues that women's health was mostly defined within the narrow view of biomedical (e.g. cost and benefit of hormone replacement therapy) and public health interventions (fertility control). The major 12 themes/definitions of women were, power to define women's health, the reproductive essentialisation of women's lives, the cultural construction of women's bodies, the increasing medicalisation of women's lives, the increasing biomedical hegemony over women's health, the production of health by women, the health-demoting effects of patriarchy, the intersectionality of race, class, gender (etc.) in women's health, the state intervenes in women's health, the politics of women's health, the importance of women's local moral worlds and the importance of understanding women's subjectivities.
African countries (Burkina Faso, Burundi, Malawi, Mozambique, Rwanda, Senegal, Uganda and Zimbabwe)	BMC Pregnancy Childbirth, 14	Jennings et al. (2014)	Examines whether a woman's empowerment status, in sum and across economic, socio-familial, and legal dimensions, is associated with male partner accompaniment to antenatal care.	7902 women, 15 to 49 years	Secondary analysis of demographic and health surveys in 8 sub-Saharan African countries	Highly empowered women (compared to women who scored low in empowerment measures) were more likely to seek ANC with their male partner in Burkina Faso, and Uganda. On the contrary, in Malawi, women's higher empowerment lowered male partner's involvement with ANC services. There was no significant difference reported from other nations.
Bangladesh	Violence Vict, 30 (6), 984-1003	Jesmin (2015)	Examine association of community attitudes and women's individual attitudes towards wife beating	13,611 married women, 15- 49 years	Secondary analysis of cross-sectional data from the Bangladesh demographic and health survey	One-third of women justified wife beating, while majority (67%) did not justify any reasons for wife beating by husband. Women with increased number of children, non-Muslim women, with below secondary education justified wife beating, compared to their counterparts. Having secondary or higher levels of education and media usually affected towards a reduction in positive attitudes towards wife beating. Similarly, increase in women independence of mobility and decision-making power reduced

						wife beating justification attitudes. Employment or NGO membership did not affect IPV attitudes. Women living in communities with positive attitudes towards wife beating were nearly five times (4.5) more likely to justify wife beating.
HIC (Denmark, Finland, UK, Germany, Netherlands, Australia and US)	Cochrane Database of Systematic Reviews,(2)	Joyce et al (2010)	To evaluate the effects (benefits and harms) of flexible working interventions on the physical, mental and general health and wellbeing of employees and their families.	Participants worked in a range of jobs	Ten studies included: six controlled before and after studies, randomised controlled trails and interrupted time series studies	Flexible work interventions are favourable for an individual's health compared to restricted or dictated environments. The flexibility in work environment increases worker's control and choice which in turn positively impacts health.
US	Ann Epidemiol, 25 (5), 323-328	Kaplan et al. (2015)	Analyse the relationship between educational attainment and life expectancy	29,657 participants more than or equal to 45 years	Secondary analysis of data from a large prospective cohort study (Reasons for Geographic and Racial Differences in Stroke (REGARDS))	Significant relationship between education and mortality, such that those with lower educational attainment had higher risk of all-cause mortality for all age categories, other than 85 years and elderly population. Low income, higher cardiovascular risk factors and poor health behaviours explained to a certain extent the relationship between education and health.
Africa, Asia, and Latin America	BMC Public Health, 11(1), 1-10	Karlsen et al. (2011)	Examine the relationship between maternal education and maternal mortality among women giving birth in health care institutions and investigate the association of maternal age, marital status, parity, institutional capacity and state-level investment in health care with these relationships.	287,035 women	Secondary analysis of cross-sectional studies of WHO Global Survey from 24 countries	Lower levels of maternal education were associated with higher maternal mortality even among women who were able to access intrapartum care facilities. Women with no education had almost four times the risk of maternal mortality and those with between one and six years of education had almost twice the risk of maternal mortality compared with women with 12 years of education. Married and cohabiting was protective against maternal mortality, such that unmarried and single women without partners had nearly twice the risk of maternal death compared to others.
Australia	J Epidemiol Community Health, 59 (11), 934-940.	Kavanagh et al. (2005)	To estimate variation between small areas in the levels of walking, cycling, jogging, and swimming and overall physical activity and the importance of area level socioeconomic disadvantage in predicting physical activity participation.	2349 participants 18 to 74 years (55.1% men and 61.8% women)	Cross-sectional postal survey	Living condition factors determined physical activity outcome. Living in socioeconomically deprived areas was significantly associated with lower levels of performing physical activity (e.g. jogging or being physical activity that deemed adequate for maintaining active health)

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Lebanon	American Journal of Public Health, 97 (5), 860-866	Khawaja and Habib (2007)	Examine the association between husbands' involvement in housework and the psychosocial health of their wives using data on married couples living in poor neighbourhoods.	1691 married women, 15 to 59 years.	Secondary analysis of cross-sectional data from the urban health study	High level of support from husband with household work significantly increased their wives SRH, marital satisfaction and overall happiness. However, lower levels of husband involvement with household work was significantly associated with higher levels of distress, marital dissatisfaction, and unhappiness of women. Women with low income and those who smoked were more likely to report distress, marital dissatisfaction and unhappiness. Employed women were also more likely to report distress than unemployed women. Women with no education reported more of distress than those with secondary education and above.
South Africa (rural)	Am J Public Health, 97(10), 1794-1802	Kim et al. (2007)	Explain the scope of women's empowerment and mechanisms underlying the significant reduction in intimate partner violence documented by the Intervention With Microfinance for AIDS and Gender Equity (IMAGE)	Quantitative study: 430 women who received loan and equal number of women in control group aged 18 to 96 years. Qualitative study: 46 women	Mixed methods study. An initial cluster-randomised trial that provided microfinance loan and skilled based leadership training programs for women, followed by a community mobilisation intervention to engage youth and men. Two survey questionnaires assessed empowerment and IPV experience. After this, 7 FGDs conducted with women	Physical and sexual IPV reduced by more than half after two years. Women's empowerment increased on all dimensions along with economic empowerment. Women in the FGD revealed several ways they challenged IPV - by not accepting abuse, better negotiation skills with partner, leaving abusive relationships, supporting others who suffer IPV, advocating and creating community awareness of IPV.
Sweden	Soc Sci Med, 81, 26-33	Kjellsson (2013)	Investigate the accumulated health effects of class experiences during adulthood	2315 participants (1207 men and 1108 women), 35 to 65 years	Secondary analysis of data from the longitudinal panel survey (Swedish Level of Living Survey)	Occupation class experience and its association with health are both accumulative and lasting. The duration, in terms of number of years spent in working class (accumulated experience) is significantly associated with higher risk for less than good SRH. While social inequalities differ between men and women, an individual's past employment experiences in working class are associated with health disparities in the present.
India (urban)	Affilia-Journal of Women and Social Work, 29 (3), 310-325	Krenz, Gilbert, and Mandayam (2014)	Explore the empowering effects of Annapurna Pariwar's microfinance model through the stories and perspectives of women who participate in the program.	10 women, 18 to 55 years (poorest of the poor women)	Qualitative research which used a feminist standpoint theory	Major themes: Women's participation in the microcredit loans improved psychosocial health which enhanced social capital and access to resources and self-esteem. It also increased economic empowerment of women to get access to capital assets, financial management skills which in turn reduce poverty, improved household consumption and improve standard of housing, and

						education of children. Microcredit loans also improved women's household gender empowerment that increased women's control over household resources and intra-household financial decision-making power, and decreased women's vulnerability and dependence on their husband's income. Authors suggest that along with access to resources, women's sense of agency need to be improved to challenge women's gender subordination status in the society and household.
Mostly HIC and some LMIC	Acta Psychiatrica Scandinavica, 108 (3), 163-174	Kuehner (2003)	Provide an update on epidemiological findings on sex differences in the prevalence of unipolar depression and putative risk	333,500 participants (males and females between 12 to 65 years)	Systematic review of epidemiological studies	Women has higher incidence of unipolar depression and higher relapse rates across different nations. Among the risk factors, gender-role factors and its related biological (endocrine stressors) and psychosocial causes are noted
Britain and Finland	Soc Sci Med, 54 (5), 727-740	Lahelma et al. (2002)	(1)Examine whether, and to what extent, the multiple burden hypotheses and the multiple attachment hypotheses explain health variations among British and Finnish women of childbearing age in the mid-1990s. (2) Assess whether health variations between women with different role combinations are because of the differences in their socioeconomic status and related material circumstances.	7731 women aged 20 to 49 years	Secondary analysis of two cross-sectional surveys	Married / cohabiting women with dependent children reported better health compared to other family types or those women who lived alone. Single mothers reported the poorest health of all groups. Authors posit this health disadvantage is secondary to their poor socioeconomic status (no education and low income). Women who were in paid employment reported better health than housewives. Authors suggest that findings support the multiple attachment theory.
Finland	Soc Sci Med, 79 66-75	Lallukka et al. (2013)	Examine longitudinally (5 year) the influence of work–family conflicts on subsequent sleep medication.	2929 women and 793 men aged 40 to 60 years	Secondary analysis of Helsinki Health Study baseline mail surveys (longitudinal survey). Four items were used to measure work to family conflict and four items to measure family to work conflict taken from US National Study of Midlife Development survey. Data on sleep medication used was obtained from Finnish Social Insurance Institution's registers.	More women (17%) compared to men (10%) purchased sleep medication over the study period. Work- family conflict and family- work conflict was associated with sleep medication use by only women. This association was not observed for men. Women used sleep medication to relieve worry and stress related to work role burden and strain. Lack of energy and lack of time for relaxation were and its stress also leads to sleep medication use.

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Nepal	Int J Equity Health, 12	Lam et al. (2013)	Assess the relationship between literacy and healthcare-seeking among Nepali women of low educational attainment	7,020 women 15 and 49 years	Secondary data analysis of the 2011 Nepal demographic and health survey.	Compared to illiterate women, literate women were nearly twice more likely to seek health care for STI symptoms; can participate more in decision making about their own health care and less likely to perceive getting permission as a barrier to access care, and also found it less a barrier to go out alone.
UK	Psychology and Health, 24 (9), 1003-1020.	Lawrence et al. (2009)	Identify the factors that influence the food choices of women with lower educational attainment	56 women 18 - 44 years	Qualitative research: 11 FGDs (8 FGD with 42 women with lower education and 3 FGD with 14 women of higher education)	Compared to highly educated women who had more control and balance over their meals and food choices, women with lower education identified the cost of food, time constraints and caring role demands that limited their ability to exercise food preference or shop for healthy foods, limited support from partners and children to eat healthy, low control over meal preference and motivation, and little knowledge of the benefits of healthy eating.
Canada (rural)	The Journal of Rural Health, 24 (2), 210-218	Leipert and George (2008)	To explore the determinants of health and their influence on rural women's health	65 women aged 26 years and older	Qualitative research (9 FGDs and 3 individual interviews)	Women identified health connected to their employment (long distance to access off-farm jobs, limited skill development opportunities), gender (multiple workloads burdens and forced to tolerate IPV with limited options and choice), health care services (discrimination, limited services and health promotion activities (e.g. female providers), biased view of health only on reproductive matters) and social support received from work and community social networks. Women also perceived the rurality and its resource access as a major determinant of their health.
Jordan	Violence Vict, 25 (3), 409-419	Linos et al. (2010)	Examine attitudes among married women toward wife beating and to investigate the hypothesis that female individual empowerment is associated with such attitudes within a broader context of societal patriarchy in Jordan.	5,390 married women, 15 to 49 years	Secondary analysis of cross-sectional survey data	87.5% justified wife beating by their husband. Women with primary and less education were nearly seven (6.8) times more likely to support wife beating than women with higher than secondary education. Additionally, women with primary and lower education were nearly 7 times (6.8) more likely to justify wife beating compared to those with more than secondary education. Women with limited decision on any matters of life were nearly 2 times (1.8) more likely to support wife beating than those who participated in all decisions.
Canada	Health Soc Care Community, 22(6), 575-587 513p.	Lombardo et al. (2014)	(2) How do these studies describe women's agency in engaging with the healthcare system in Ontario?	adolescent, young adult, recent mothers, middle-aged and older women	Qualitative meta-synthesis of 50 studies	Women demonstrate agency and multiple strategies to access health services (e.g. mobilise financial, social support networks, having good relationships with health providers , and living out of shortfalls, emotional self-management, avoiding illness and maintaining health). The success of their actions depends on their social support networks and socioeconomic status.
UK	Diversity in Health and Social Care	Low, et al. (2007)	Examine women's experiences of barriers to access contraceptive services	19 women from Pakistan ancestry and 6 health and	Qualitative study: In-depth-interviews	Providers' biased attitudes remain a main barrier for some South Asian women in Britain to access contraceptive services

				community workers		
Country / Region	**Source**	**Author**	**Aim / Objective / Question / Hypothesis**	**Participants / Population**	**Methods / Methodology**	**Key Findings**
Europe (6 countries)	Int J Epidemiol, 32(5), 830-837.	Mackenbach et al. (2003)	Analyse recent trends in socioeconomic inequalities in mortality in a range of European countries.	Women and men mostly between 30–74 years.	Secondary analysis of data (education, occupational class) from longitudinal mortality follow-up of population censuses (5 years) that were carried out around 1981-1985 and around 1991-1995.	Inequalities in mortality increased from 1981 to 1995 in all countries. A higher decline in mortality was observed for those in higher SES, and especially for cardiovascular disease mortality, except in Italy. Increase in mortality of those in lower SES (lower education and manual occupations) was highlighted.
HIC (USA, UK, Canada, Netherlands)	Epidemiol Community Health, 62(11), 940	Mair et al. (2008)	A review of observational studies to examine whether neighbourhood characteristics are associated with depressive symptoms	117 to 56,428 participants	Secondary analysis of cross-sectional and longitudinal studies (a total of 45 studies)	Majority of the studies (37) reported at least one neighbourhood characteristics with depression and depressive symptoms of which built environment was the most common structural feature that seemed to be associated with depression.
UK	The Lancet, 350(9073), 235-239	Marmot et al. (1997)	Analysis of 5-year coronary health disease (CHD) incidence rates from the Whitehall II study to assess the contribution to the social gradient of psychosocial work environment, social support, coronary risk factors, and physical height.	7,372 men and women, between 35 and 55 years	A cohort study (length of follow-up was 5·3 years on average, range 3·7–7·6)	Job control was associated to the employment position. Psychological work characteristics of low control at work are linked to CHD frequency. Increased risk for CHD for both men and women who worked in the lowest category jobs (clerical and office support staff as a result of the psychosocial factors)
US	Am J Prev Med, 50(4), 543-549	McKinnon et al. (2016)	Summarise cost–benefit/cost-effectiveness studies of obesity-related policy/environmental interventions	No given	Systematic review of 27 studies	Authors suggest that a dearth of studies evaluated cost–benefit assessments of obesity-related policies and different environmental strategies. Some studies that investigated strategies to improve nutrition, physical activity, and lower obesity such as community and built environment, nutrition-related policy/education changes, implementation of US Expanded Food and Nutrition Education Program, school environments and social marketing and media interventions.
HIC and LMIC (US, Canada, UK, Spain, India, Paraguay, Tajikistan, Vietnam, Bangladesh, Multicountry study)	Clin Psychol Rev, 32(8), 677-689	McLaughlin et al. (2012)	Examine the nature of the relationship between intimate partner abuse and suicidality.	40,934 participants	Systematic review of 37 studies - cross-sectional (most studies), case-control and longitudinal studies. Most studies included females, expect for two studies that included both sexes.	Irrespective of nationality, all the studies reported a strong and significant association between IPV and suicidality. Abused women had a greater risk of suicide. Abused women were significantly more likely than non-abused women to be pregnant at the time of the suicide attempt

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Nepal	World Development, 78, 360-371	Mishra & Sam (2016)	Examine the role of women's land ownership, either alone or jointly, as a means of improving their intra-household bargaining power in the areas of own healthcare, major household purchases, and visiting family or relatives.	7133 women	Secondary analysis of cross-sectional household survey data from the Nepal demographic and health surveys in 2001 and 2011	Overall, women's bargaining power in household decision-making power increased over the years from 2001 to 2011. Women who owned land had significantly higher decision-making power compared to non-land owners. Additionally, women's land ownerships significantly improved women's empowerment measures and decision over household purchases and mobility outside home.
US	Journal of Health and Social Behavior, 36(3), 259-273	Moen et al. (1995)	Demonstrates the utility of incorporating a life course, role context approach in investigations of the ties between particular roles and psychological wellbeing, using the links between women's caregiving and wellbeing as a case in point.	293 women, 53 to 81 years	Secondary analysis of panel data from the Women's Roles and Wellbeing Project which was collected in 1986	Caregiving roles were beneficial for women than having a non-caregiver role. Caregiving provides a higher sense of mastery for women, college educated caregivers reported higher levels of self-esteem, compared to non-caregivers. Multiple roles lead to role strain; however, caregivers in multiple roles reported positive self-esteem and life satisfaction and less of depression. Longer duration of caregiving is unfavourable for women's health. Women psychological health depends on the relationship between roles, and how altered roles and behaviours affect it.
US	Demography, 49(1), 315-336	Montez et al. (2012)	Conduct a thorough examination of the association between educational attainment and adult mortality in the United States.	1,008,215 male and females	Systematic analysis of the National Longitudinal Mortality Study 1979-1998	There is a steady decrease in mortality risk from 0 to 11 years of education, thereafter, a steeper reduction in mortality risk in a gradient manner was observed following a high school diploma qualification.
US	Journal of Health and Social Behavior, 54(2), 166-182.	Montez and Zajacova (2013)	Examine the extent to which the three categories of mechanisms (social-psychological factors, economic circumstances and health behaviours) account for the widening education gap in all-cause mortality risk from 1997 to 2006 among non-Hispanic white women aged 45 to 84 years in the United States.	46,744 women aged 45-84 years (4,053 deaths)	Secondary analysis of cross-sectional survey data (annual cross-sectional waves of the death record in the National Death Index and vital status information)	Women's economic circumstances (employment, occupation, poverty, home ownership, and health insurance) and health behaviours (smoking, obesity and alcohol consumption) jointly increased the growing education gap in mortality. Employment and smoking were the most important individual components. Authors argue that increasing high school graduation rates, reducing smoking prevalence, and designing work–family policies which allowed women to maintain employment choice may reduce mortality inequalities among women.
India (slums)	Glob Public Health, 6(7), 746-759.	More (2011)	Document pregnant women's self-reported symptoms and care-seeking, to quantify the choice of sector, health provider, care-seeking delays and referrals between providers. Test the hypothesis: chosen care-seeking sites for maternal morbidity mirror those used for antenatal care.	10,754 women	Longitudinal study	Majority of pregnant women (>80%) sought institutional health care. Women from higher socioeconomic status preferred private health care for pregnancy care.

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Multi-country	World Bank Research Observer, 22(1), 25-51	Morrison et al. (2007)	Identify good practice responses to gender-based violence in three thematic areas that encompass the principal responses to gender-based violence: increasing access to justice for survivors of gender-based violence, providing support to women who have been affected by violence, and preventing gender-based violence	Not applicable, a theoretical paper	Critical review of literature	Although studies reporting prevalence and risk factors of gender-based violence has increased, there is dearth of literature available on the context of gender-based violence from different countries. Limited evidence of high-quality interventions in developing countries and dearth of studies on the evaluations of interventions from developed countries noted. Moreover, authors suggest rather than searching for a single workable intervention, multiple interventions models at different levels, (e.g. individual, community, legal, policy) are necessary to reduce the risk of gender-based violence. Authors caution on the risk of developing policies and programs in the light of limited knowledge on the matter.
US	Gerontologist, 32(2), 203-212.	Mui (1992)	Examine the emotional strain of caregivers from role theory perspective	581 women (117 black women and 464 white women)	Secondary analysis of cross-sectional data of National Long Term Care Channeling Demonstration (1982-1984).	Although there were differences noted for the determinants of roles strain for black and white women, in general, a higher prevalence of role strain associated with caregiving roles was identified. Poor health of women linked with limited respite support for elderly noted by authors.
Nepal	Health Educ Res, 22(2), 166-176	Mullany et al. (2007)	Evaluate the impact of including husbands in antenatal health education session on birth preparedness and maternal health care utilisation in urban Nepal	442 women participated in the study, but 386 women who completed the post-partum questionnaire were included in the analysis	Randomised control study. Intervention group (both husband and wife) received health education on maternal health topics on a pre-tested curriculum while women in one control group received only a brief health education messages, and the other did not receive any education	Women in the intervention group, who received education with their spouses were two times more likely than those women in the control group to indicate making three or more birth preparations plans. Women who received education with their spouses were also more likely to attend a post-partum visit than women who received education alone, or no education. No significant differences were seen between having complications or mother-in-law's relationship and health care utilisation.
Nepal	Soc Sci Med, 61(9), 1993-2006	Mullany et al. (2005)	Investigate patterns of household decision making and the context of male involvement behaviours on women's autonomy	14 couples and 3 women participated in IDIs, and 17 couples and 6 women participated in FGDs, and 399 women completed the survey	Mixed method study: Qualitative research (IDIs and FGDs) and a questionnaire survey	Male involvement in decision making is significantly associated with women's increased access to maternal health care service of antenatal care, and birth preparedness, compared to women who made decisions about these services on their own.

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Pakistan (rural)	Soc Sci Med, 68(7), 1349-1356	Mumtaz and Salway (2009)	Present systematic assessment of the adequacy of the autonomy paradigm for understanding the gendered influences on women's reproductive health within Asian context (rural Punjab, Pakistan).	women and men	Secondary analysis of ethnographic data (171 observation and informal interviews; 35 IDIs with 15 women, 15 husbands and 5 mothers-in-law. 4 FGDs with women and 2 FGDs with men)	Authors present an alternative and contrasting view to the autonomy paradigm. The authors argue and present inadequacies of the autonomy concept that over emphasis on women's independent, autonomous action however disregarding attention to men and masculinities and the multiple and cross-cutting gender relations and gender inequality that persist in the society; assumption that uptake of reproductive health services is an indicator of autonomy; and a failure to explore the interplay of other disadvantage that results due to caste, class or socioeconomic position of women.
Pakistan (rural)	Sociology of Health & Illness, 29(1), 1-26	Mumtaz and Salway (2007)	Explore the gendered influences on women's uptake of antenatal care services in Punjab, Pakistan.	women and men	Cross-sectional community-based survey followed by an ethnographic study (171 observations and informal interviews, 35 IDIs with 15 women, 15 husbands and 5 mothers-in-laws. 4 FGDs with women and 2 FGDs with men)	Pregnancy related decisions are connected to gendered ideologies where usually the mother-in-law (as a wise and female elder) has much power and final decision over it than even the husband or wife. Males had limited knowledge, were uninterested and rarely participated in their wife's pregnancy care, authors relate it more to the social and cultural norms where males are excluded from pregnancy which falls socially within female domain. Pregnant woman also exerts their autonomy if they have better interpersonal relationships with husband, natal and marital families. Women's education was positive factors towards maternal service uptake, but not income. Public health services were reported to offer discriminatory and poor services, especially for poor, uneducated and those in the lower social class and a reason why women turned to private sector services.
Honduras (rural), Central America	International Journal of Educational Development, 30(3), 320-331	Murphy-Graham (2010)	Examine how women who participated in an innovative secondary education program negotiate more equitable roles in their intimate relationships.	18 women and 12 men	Qualitative study - IDIs (3 IDIs with women and one IDI with men) and 200 hours of field observation of women and men's work roles and domestic activities	Author suggest that women who participated in a tailored secondary education program increased gender consciousness, and accessed better relational and structural resources empowering women in all aspects of their lives.
Sub-Saharan Africa	BMC Public Health, 13, 16	Musheke et al. (2013)	Examine the factors that determine HIV testing uptake in Sub-Saharan Africa	males and females (no of participants not mentioned)	Systematic review of qualitative studies (30 peer-review qualitative studies and 12 mixed method studies)	Enabling factors: poor health or death of a sexual partner or child, availability of life-prolonging antiretroviral therapy, prior to getting married, positive reinforcement from service providers and getting access, social networks and support. Deterrent factor: perceived low risk of infection, stigma, fear of social exclusion and gender power imbalance and women's limited autonomy, perceived low quality services, such as lack of confidence on service providers and test results, service provider attitudes, and

						unacceptability of services, and lack of trust in health system, financial barriers, and the perceived barriers and mental distress with finding the HIV status.
Maldives (Southern region)	Contraception, 68(2), 125-134	Nagase et al. (2003)	Aim (1) to clarify the current state of contraceptive use; (2) to explore sociocultural factors influencing modern contraceptive use and (c) to identify obstacles to modern contraceptive use in the Maldives.	205 women 15-49 years of age	Cross-sectional survey and focus group discussions	Users and non-users of modern contraception had good knowledge of contraception, access to services and social support. However. Those who were not using modern contraception indicated reasons for non-use to their husbands' disapproval and negative attitude, and fear of side effects and dissatisfaction with sexual sensation.
Afghanistan (rural)	Glob Public Health, 9 Suppl 1, S93-109	Newbrander et al. (2014)	Determine traditional beliefs and practices (both harmful and beneficial) of women, families and communities about maternal and newborn care.	household and community members	Qualitative study which used three main approaches for data collection - 30 IDI with household members, 29 FGDs with community members and 15 direct observation of community infrastructure and resources for maternal and newborn care	Community practices and beliefs were prominent in health-seeking behaviour and health care access. Barriers to health care access: not seek care even during an emergency because not able to leave house without husband's permission, unaffordable transport and long distance; poor-quality services and mistrust on the services. Postnatal depression was significant, and distress was increasingly linked to having a girl baby, or sickness of children, young age of mother, poverty and inability to access basic necessities to manage family. Women suffered IPV from spouses if she delivered a female child. Women coped with social (both formal and informal) and spiritual support. While some also turned to harmful practices of substance abuse.
Western Europe (Spain, UK, Netherlands, Turkey, Belgium, Ireland, Norway, Switzerland)	Public Health Nutr, 17(5), 1031-1045	Novakovic et al. (2014)	To provide the evidence base for targeted nutrition policies to reduce the risk of micronutrient / diet-related diseases among disadvantaged populations in Europe, by focusing on: folate, vitamin B12, Fe, Zn and iodine for intake and status; and vitamin C, vitamin D, Ca, Se and Cu for intake.	Children, adults and elderly (> 69,196 subjects of both sexes)	Systematic review of 18 studies	10 studies used education as an indicator of SES, 3 used income and 2 occupation, and remaining three studies used more than one indicator. Micronutrient intake differed significantly between those with higher SES (education, income and occupation) and lower social class. The most prominent disparity in micronutrient intake was observed between differences in education of the females.
HIC and LMIC	PLoS One, 11(3)	Onarheim et al. (2016)	Systematically investigate the broader economic benefits of investing in women's health	women (number of participants not mentioned)	Systematic review of 124 articles that focused on women, health and economic (exclusion of studies on men's health outcomes)	Healthy women contribute to better-educated and more productive societies. In nations that protect and promote women's health (e.g. maternal health care) and provides women the autonomy and control over their own fertility (e.g. contraceptive access) makes positive contributions to the health and development of future generations (e.g. decreasing infant mortality, low birth weight), as well as increase the economic growth and productivity. However, authors note that most of these studies used biological perspectives to examine women's health and focused on women's reproductive rather than productive roles, with little emphasis on social determinants of health that emphasises women's productivity.

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Northern Ireland	Soc Sci Med, 67(8), 1282-1290	O'Reilly et al. (2008)	Examines the health of caregivers and their mortality	1,137,334 participants aged 16 and over	Secondary analysis of data from the Northern Ireland Statistics and Research Agency (NISRA) which includes 2001 Northern Ireland Census data and the NISRA based deaths registered in the four years following census	Majority of caregivers were females. A dose-response association was observed between amount of care provided and levels of poor health, such that those (males and females) who provided 20 hours or more care/week were more likely than non-caregivers to report “not good” or “fairly good” general health. Death rates for those who lived in deprived conditions were high, as well as for single compared to married individuals. However, caregivers had lower mortality rates and long-term illness than non-caregivers.
US	American Journal of Public Health, 103(4), e122-e129	Ortiz and Zimmerman (2013)	Examine whether race/ethnicity moderates the relationship between homeownership and health outcomes among racial / ethnic minority populations compared with non-Latino Whites	131,114 participants both females and males (Latino, African American and Non-Latino White)	Secondary data from 2003, 2005, 2007 and 2009 California Health Interview Survey (a population-based random-digital dial landline and cellular telephone survey of California population)	Although non-significant association between homeownership and self-perceived health, medical care and obtaining prescriptions were reported for racial/ethnic minorities, however for the whites, there was a positive and statistically significant relationship between home ownership with self-rated health, in getting timely medical care and prescribed medications. Perceived neighbourhood safety and positive self-perceived health was significant for both whites and racial/ethnic minorities.
LMIC	Bull World Health Organ, 94(9), 694-704A	Orton et al. (2016)	Assess the impact on health-related outcomes, of group microfinance schemes based on collective empowerment.	Women and children	Systematic review of 23 studies (one cluster-randomised controlled trail and 22 quasi-experimental study)	Nearly all of the interventions were targeted for poor women in LMIC. Most focused on Bangladeshi women in rural communities. Children of those women who participated in microfinance programs were shown to have lower mortality rates (both infants and child) compared to non-members, such that the mortality risk was reduced to children of richer non-members. It also increased voluntary counselling and test for HIV and reduced risk of unprotected sex (South Africa), improved empowerment, contraceptive use , compared to women who lived in villages without microfinance scheme (Bangladesh), health promotion (India), reduced IPV (South Africa and Bangladesh), better nutrition for women and children in Bangladesh and increased women's use of health care (India)
India	Journal of Applied Gerontology	Pandey and Ladusingh (2015)	(1) Is there any significant difference in self-assessed health (SAH) among older men and women in India? (2) Do the differences between older men and women with respect to demographic, social support, social-economic, and health status variables result in differences in	17,750 males and 17,081 females 60 years and older	Secondary analysis of data from the cross-sectional data from the National Sample Survey Organization	Older females were 30% more likely to report poor SRH than older men. Females reported poor SRH 4.2% more than males. Socioeconomic difference between males and female gender explained most of these difference in SRH. Most of the SRH gap between genders were explained due to difference between work status (larger difference), education inequalities (being illiterate) and economic dependence of females.

			self-assessed health? (3) Which of the socioeconomic and demographic factors contributes the most in explaining the gender differential in self-assessed health among the older adults?			
India	Journal of South Asian Development, 11(2), 224-250	Paul (2016)	Explore the relationship between women's labour force participation and IPV	69,704 women between 15 to 49 years	Secondary analysis of cross-sectional survey (National Family Health Survey III)	Married working women compared to unemployed women or 'homemakers' were more likely to suffer physical and emotional IPV. Unemployed men were also more likely to abuse their working wives compared to employed males.
India	Journal of Affective Disorders, 102(1-3), 209-218	Pereira et al. (2007)	Describe the explanatory models of illness in depressed women, in particular, their idioms of distress, and their views of their social circumstances and how this related to their illness	35 married women between 18-45 years (who suffered from depressive disorders)	Qualitative study (two in-depth interviews - 35 completed the first interview and 28 completed the follow-up second interview)	Although several somatic problems were reported by women who also suffered from depression, most women reported economic difficulties and marital issues, with IPV as the major cause of their poor mental health. Excessive workload, issues with in-laws, inadequate housing and poor social support from neighbours were other issues that were linked to women's depression. Few women shared their worries with others, while most women either internalised their worries, or were engaged with activities that distracted them from it.
Brazil	BMC Public Health, 15, 8.	Pessoa et al. (2015)	Estimate associations between environmental factors and the consumption of fruit and vegetables among adults in a Brazilian urban context.	5611 men and women 18 years and older	Secondary data from cross-sectional telephone survey conducted between 2008 to 2010 (A telephone monitoring surveillance system for risks and protective factors for chronic non-communicable diseases) was used	Consumption of fruits and vegetables (FV) intake higher among women, more educated people, those aged 65 years and older and who were physically active. Lower FV intake was reported by those who reported poor self-perceived health, physically inactive and who consumed higher amount of fatty meat and sugary sweet beverages. Additionally, lower FV consumption was observed by those who lived in neighbourhoods with greater density and access of unhealthy food outlets, compared to high FV intake with those who lived in neighbourhood with more healthy food outlets and higher income.
India (rural and urban)	Int J Epidemiol, 38(2), 459-469	Pillai et al. (2009)	Estimate the prevalence and risk factors for suicidal behaviour in young people in India	3662 males and females between 16 to 24 years	Cross-sectional study	4% youth reported recent suicidal behaviour. Suicidal behaviour risk increased nearly seven times with being female, twice for those not attending school or college, nearly three times for those who made independent decision, three time for those who had premarital sex, and three time with those who suffered physical abuse or life time experience of sexual abuse. Alcohol use was also identified as an independent risk factor for suicidal beahviour among youth.

Country / Region	Source	Author	Aim / Objective / Question / Hypothesis	Participants / Population	Methods / Methodology	Key Findings
Multicountry	The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 62(2), P126-P137.	Pinquart and Sörensen (2007)	Integrate the available research on association of physical health of caregivers with sociodemographic characteristics, stressors, resources, and psychological distress	Number of participants in the studies range between 14 and 5627 (median=111)	Meta-analysis (176 studies)	Majority of caregiver were females. Older caregivers lower SES (low income and educational attainment) and lower levels of informal support compared to those with higher income and education level, and increased formal and informal support reported poor health. Higher caregiver burden and more severe depressive symptoms were significantly associated with poor physical health.
Bangladesh	Economic Development & Cultural Change, 54 (4), 791-831.	Pitt et al. (2006)	Estimates the impact of participation in microcredit programs on an index of empowerment and its proxy indicators using a large set of qualitative responses to questions that characterise women's autonomy and gender relations within the household with due attention to heterogeneity bias.	women and men (2064 household respondents)	Secondary analysis of cross-sectional household survey conducted in 1998 - 1999	Women who participated in microcredit programs increased bargaining power with their husbands, decision making within their households, improved access to economic assets and social networks, and had greater mobility and freedom. In contrast, male microcredit programs negatively affected on women's empowerment measures.
LMIC (Bangladesh, Cambodia, India, Indonesia, Nepal and Philippines)	Health Policy Plan, 29 Suppl 1, i38-47.	Pomeroy et al. (2014)	(1) Examine trends in growth of delivery care provided by private facilities and (2) describe who is using private sector within the healthcare system. Hypothesis: In health systems where the public sector fails to provide for all subgroups of the population, if the private sector competes for clients based on perceived quality, then we expect their clientele will be wealthier, more educated and likely live in an area where there are enough health facilities to allow for competition.	Data of births (women and children)	Secondary analysis of demographic and health surveys (cross-sectional studies)	An increase in the trend of women using private health care facilities for birth reported. Higher socioeconomic status (higher education level and greater wealth), urban residence, and higher education of husband associated with private sector access, however, it was not universally observed across for all nations. Authors argue that these findings fits their hypothesis that women with choice will increasingly use more of private care with their perceived increase in quality of care which was measured based on availability of trained doctors.
India (urban)	PLoS One, 4(9), 6.	Poongothai et al. (2009)	Determine the prevalence of depression in an urban south Indian population.	25,455 (12,898 females and 12,557 males) 20 years or more of age	Cross-sectional survey	Prevalence of depression: 15.1% and higher in females (16.3%) than males (13.9%) with an increase in trend reported for both sexes. Depressed mood was the most common symptom reported followed by tiredness. Suicidal thoughts and speech and motor retardation were also reported. Prevalence of depression higher among those in lower socioeconomic groups (low income and lower levels of education), and also among divorced and widowed compared with married individuals, as well as older age groups.

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US	Soc Sci Med, 72(7), 1169-1176.	Puri et al. (2011)	Explore immigrant Indian women's narratives about the pressure they face to have sons, the process of deciding to utilise sex selection technologies, and the physical and emotional health implications of both son preference and sex selection.	65 women	Qualitative study: In-depth interviews conducted with women who immigrated to US from India	Major themes: sociocultural roots of son preference; women's early socialisation around the importance of sons; family pressure to have sons (from female in-laws and husbands); verbal and physical abuse that women faced when they could not conceive male children and/or when they found out they were carrying a female foetus; and women's limited autonomy and decision over their reproductive choices (previous terminations of pregnancies (40%) and current abortions (89%) if the foetus was identified of female sex.
Pakistan	BMC Public Health, 11(1), 745	Qadir et al. (2011)	Hypothesise: Among women of childbearing age, gender disadvantage is an independent risk factor for psychological morbidity	525 women 18 to 35 years	Population-based cross-sectional survey	Women's perceived gender disadvantage increased if they lived in low SES areas, had less education, married in an early age, reported lower marital satisfaction and lower degrees of autonomy. Some of these effects e.g. education-related psychological morbidity was totally mediated through gender disadvantage. Nearly a third of women did not have their own preference for a son as first child; however, most preferred male children. This association was shown to be strongly predicted by their perceptions of having experienced gender disadvantage and that also if women's perception of their own parents would have preferred her to have male sons.
US	Soc Sci Med, 75(8), 1539-1546	Qiu et al. (2012)	Hypothesis: While psychosocial work resources mediate the relationship between education and health, psychological work demands suppress this relationship	2476 working females and males aged 24 to 64 years	Secondary analysis of cross-sectional survey which involved a telephone survey of working adults	Working females reported higher level of perceived stress than working males. Although higher educated employees reported more job autonomy and control, they worked for longer hours in demanding jobs and increasingly work–family conflict for highly educated women. Work resources benefit highly educated men and women, however, work demands lead to stress and depression for women, unlike men. Rather working overtime was beneficial for men which decreased risks of depression.
Bangladesh	Asia-Pacific Journal of Public Health, 26(2), 160-168	Rahman et al. (2014)	Explores the association between adolescent marriage and intimate partner violence (IPV) among young adult women	2174 young women between 20 to 24 years	Secondary analysis of cross-sectional data from the Bangladesh demographic health survey 2007	Strong and significant association between adolescent marriage and experience of physical IPV. Lower socioeconomic status and rural residence significantly increase early marriage, and physical IPV. Early marriage during adolescence period also increased risk of IPV in adulthood.

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Bangladesh	PLoS One, 8(12)	Rahman et al. (2013)	Examine association between multidimensional aspects of gender inequity and the risk of IPV	4,467 married women between 15 to 49 years	Secondary analysis of cross-sectional data from the Bangladesh demographic health survey 2007	Older women more likely to report IPV, as well as illiterate women who lived in rural areas compared to young women, and literate women who lived in urban areas. Employed women, as well as those who lived low income (poverty) households reported more frequent IPV. Women with higher autonomy in making decisions over economic measures reported lower risk of IPV. Women negative and unsupportive attitudes towards wife beating also lowered their risk of IPV. Risk of IPV also increased (nearly two times) if only the women were employed, however, risk of IPV reduced if only the husband was employed.
Bangladesh	Sexual & Reproductive Healthcare, 5(1), 9-15	Rahman et al. (2014)	Explore women's decision-making autonomy as a potential indicator of the use of contraception in Bangladesh.	8456 women aged 15-40 years	Secondary analysis of cross-sectional data from the Bangladesh demographic health survey 2007	More than a third of women had limited autonomy in decision making in their own or child's health care, buying household items and mobility outside home for visiting family/relatives. Women's greater autonomy in household decision making increases their likelihood to discuss contraception use with husband and future use of contraception. Women from higher socioeconomic status (educated, working, and from rich households) were significantly more likely to participate in contraception decision making with husband.
Bangladesh, India, and Nepal	Matern Child Health J, 19(1), 217-226	Raj et al. (2015)	Examine associations of sibling indicators (birth order, birth spacing between siblings, and number and sex of siblings) and under-5 malnutrition, and whether these associations are similar for boys and girls in South Asia.	children under-5 years (Bangladesh n = 7,861; India n = 46,655; Nepal n = 2,475) and ever-married mothers (Bangladesh n = 7,639; India n = 41,265; Nepal n = 2,335)	Secondary analysis of cross-sectional data from the demographic and health surveys in Bangladesh (2011), India (2005-06) and Nepal (2011): anthropometric data of children and ever-married mothers interviews	The risk for severe wasting increased for girls compared to boys when the number of her male siblings was more. Severe stunting also increased for girls unlike for boys if she had three or more sisters. Similarly, underweight for girls increased with having three or more sisters, but this was not observed for boys.
England and Wales	J Epidemiol Community Health, 67(8), 655-660	Ramsay et al. (2013)	Examine the relative health status of carers at baseline. Assess the relationship between care provision status and mortality, and whether this pattern differs in subsamples where the carer and non-carer groups are faced with stress of living with a sick household member.	178,368 males and females	Secondary analysis of a longitudinal dataset to investigate the mortality risk of carers (identified in 2001 census) by the end of 2009	Carers report lower mortality rates than non-cares. Although carers significantly report poorer health at baseline, they had lower risk of mortality.

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India	Social Psychiatry and Psychiatric Epidemiology, 47(12), 1967-1975	Rao et al. (2012)	Understand interpersonal and sociocultural factors that are associated with depressive symptoms among women seeking treatment at a South Indian psychiatric clinic	32 women	Qualitative research (In-depth interviews and observations)	Women linked depression to their lower social status, autonomy and choice in life and IPV, poor education and economic status and social system of dowry, husband's alcohol abuse, and lack of social support from marital in-laws and neighbourhood. Women also disclosed of suffering from structural and social violence. Women talked about how their stresses was a reason they attempted suicide.
Spain	BMC Public Health, 6, 9.	Redondo-Sendino et al. (2006)	Examine potential determinants of gender differences in the utilisation of health care services among the elderly.	3030 participants (1672 women and 1358 men) aged 60 years and over	Cross-sectional study	The proportion of women using health care services (visit to medical practitioners, home medical visits, too more than or equal to 3 medications and overall utilisation) was significantly more than that of men.
Pakistan	Health Policy, 88(2–3), 269-281	Rizvi and Nishtar (2008)	(1) Analyse the national health policy 2001 with regard to its relevance and appropriateness to Pakistani women's health needs, (2) identify strengths and weaknesses in the policy and (3) suggest strategic directions for the development of health policy responsive to women's needs.	Not mentioned, theoretical paper	Secondary analysis of national research and policy documents	Although women's health is reflected as a priority in the health policy, it fails to acknowledge the multiple gender dimensions and gender inequalities that are pivotal in women's health, health-seeking behaviour and health care utilisation. Additionally, gender equity is presented as a an isolated entity, thus the gender dimensions and discriminations within the health system and social norms that may influence women's health-seeking behaviour (e.g. barriers to access male health providers) are not acknowledged because the health system functions through a biomedical model which focused on reproductive health issues. Authors suggest using health policy need to centralise its policies from gender perspectives and to adopt a life cycle approach to address women's health issues.
Pakistan	BMC Women's Health, 14, 53	Rizvi et al. (2014)	Determine the reasons for reiteration of gender roles; describe the societal processes and mechanisms that reproduce and reinforce them; and identify their repercussions on women's personality, lives and health especially reproductive health.	250 women	Secondary analysis of qualitative research that used 30 focus group discussions	Major themes: Women's perceived and responsibilities linked to reproduction, and although they desire education, employment and autonomy, mostly women are given limited power and autonomy in decision making. Those who challenge patriarchal norms are controlled by means of violence. Multiple constraints (e.g. limited resources and restriction of production, lack of guidance and no access to information, restriction of mobility, and socialisation), and risks (e.g. early marriage, violence, reproductive morbidity, complication) reported.
US	Demography, 49(4), 1157-1183	Ross et al. (2012)	Hypothesis: Do women depend more on education for their health and survival than men?	men and women 25 years and older	Secondary analysis of cross-sectional waves of mortality data from the National Health Interview Survey-Linked Mortality Files (annual household	The effect of education on women's self-rated health is more than that on men's self-rated health. Women had lower mortality than men, and well-educated had lower mortality than poorly education. A larger effect of education on men's mortality was observed than on women.

					surveys using a nationwide sample) from 1986 to 2002, over 16 years period	
India	Soc Sci Med, 66(9), 1951-1962	Roy and Chaudhuri (2008)	Explores the association between direct measures of financial empowerment and gender disparities in health status and healthcare utilisation among older adults in India	34,086 men and women aged 60 years and older	Secondary analysis of cross-sectional survey data from the National Sample Survey	Women reported significantly worse health than men when controlled for demographics and social support factors, however, these difference are not significant when controlled for economic independence. But when property ownership was controlled, financially empowered older women reported better functional health than otherwise similar men. Women also reported more of disabilities, but low utilisation of health care services than men. Authors posit economic independence (property ownership and financial independence) explains the health disadvantage among older females, because this seems to be the main empowerment indicator for males.
US	American Journal of Public Health, 93(9), 1471-1477	Saegert et al. (2003)	Evaluate the success of current public health interventions related to housing.	Targeted interventions for children, adolescents, senior and other adults (both males and females)	Secondary analysis of 72 US studies from 1990 to 2001	Most research was quantitative studies. Housing interventions mostly carried out in urban settings that focused on housing-related issues of children's health. Most of the studies also focused on primary and secondary public health interventions, or both (e.g. lead paint hazards, safety hazards, air quality, etc.) and a one-time treatment (e.g. single training, single cleaning etc.), and strategies for environmental improvements (e.g. educating participants, or improving environment, or both). The outcomes were psychological changes (change behaviour, attitudes, or knowledge) at individual level or environmental changes or both. Most studies reported statistically significant improvements, but only 14% of studies reported that these interventions were highly successful.
US	J Indig Soc Dev, 3(1), 1-15	Saftner et al. (2014)	Explore perceptions of American Indians adolescent girls living in an urban, Midwest area about health care providers, health care systems, and access to health care as related to sexual health care	20 females 15 to 19 years	Grounded theory research	Two major themes: Trust health providers and health system and access to health care. The adolescents perceived positive service uptake when they believed their provider to be honest and truthful, nonjudgmental, maintain confidentiality and provide comprehensive health care needs. However, negative services and mistrust was linked to when provider gives false information, or ignore their needs. Also these participants were uncomfortable to receive sexual health services from males, and seek female providers. Health care access was enhanced with getting easy and flexible appointments, having access to transport and low cost or no cost of services.
India	Soc Sci Med, 139, 80-89	Sahoo et al. (2015)	Understand the psychological, social, and health impacts of sanitation routines among women	56 women	Grounded theory research (women in four different stages of life course:	Women's connected physical and psychological distress to physical and social environmental issues (e.g. poor sanitation facilities, limited access to sanitation facilities near home, lack of

			of reproductive age in three distinct socio-geographic settings in Odisha, India: urban slums, rural villages and indigenous villages.		adolescent, newly married, pregnant and adult)	privacy, being socially restricted and isolated by their husband and husband's family that limited independent mobility, and being sexually harassed and abused by other men in women's routine sanitation practices outside home environment).
India	PLoS One, 11(7)	Saikia et al. (2016)	Examine the gender difference in health care expenditure (HCE) in short-term and major morbidity in India, and understand the role of factors underlying the difference.	41,554 households participated in IHDS I and 42,152 in IHDS II (males and females)	Secondary analysis of nationally representative longitudinal survey data from the India Human Development Survey (IHDS), 2004-2005 (IHDS I) and 2011 -2012 (IHDS II).	Women suffered more from short-term and major morbidities than men. After controlling for demographic and socioeconomic factors, women significantly reported lower health care expenditure for acute and chronic health morbidities. It was recognised that women had significant disadvantage over the two study period, with the gender gap between male and female increasing from Indian Rupees (INR) 1298 to INR 4172. The gender gaps in HCE between the people in the wealthiest quintile was seven time to that of those in the poorest quantile.
Pakistan	European Journal of Contraception and Reproductive Health Care, 13(1), 83-89	Saleem and Pasha (2008)	Determine the impact of women's reproductive autonomy, spouses' educational background and other factors on the use of contraception in Pakistan.	6579 women aged 15- 49 years	Secondary analysis of cross-sectional data from Pakistan reproductive health and family planning survey 2000	Women's education level (6 or more years) was strongly and significantly associated with reproductive autonomy (decisions over number of children, delay birth) and contraceptive use. Husband's education (11 or more years rather than less number of years of education) was positively associated with women's autonomy on reproductive measures and contraceptive use.
Pakistan	Reprod Health, 2(1), 8.	Saleem and Bobak (2005)	Investigate the relation between women's autonomy and contraception use, and assess the extent to which women's autonomy mediates the association between education and contraception use	6579 women aged 15- 49 years	Secondary analysis of cross-sectional data from Pakistan reproductive health and family planning survey 2000	The two most important determinant of women's contraceptive use were number of living children and women's education level. Women decision-making autonomy was also significantly associated with lifetime and current contraceptive use. However, this study did not find women's autonomy as a significant mediator of the link between education and contraceptive use.
India	Int Perspect Sex Reprod Health, 36(3), 132-139	Santhya et al. (2010)	Compare marital, reproductive and other characteristics and experiences of young women who had married before age 18 with those of young women who had married at age 18 or older.	8,314 married young women aged 20-24 years	Secondary analysis of nationally representative cross-sectional survey	Young age of marriage (<18 years) compared to females who got married 18 of age and older, had limited reproductive choice and autonomy, positive attitude towards wife beating, and suffered more from sexual and physical IPV, and miscarriage or still birth.
India	Indian J Med Res, 133(5), 479-486.	Sauvaget et al. (2011)	Study the impact of socioeconomic level on life expectancy in individuals living in Kerala, India.	1,31,242 women and men 34 and 37 years	Secondary analysis of data from a cohort study (cluster-randomised community-based oral cancer screening trail that evaluated efficacy of oral visual inspection on oral cancer incidence and mortality)	Longevity increased with higher educational attainment and increased income level. Unemployment was a risk factor for premature mortality then blue-collar workers and those involved in business. Household assets, physical quality of house and number of residents also determined longevity. Working women in white collar jobs lived longer (6 months) than housewives.

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19 European countries	Soc Sci Med, 68(7), 1271-1278 1278p	Schaap et al. (2009)	Describe the education-related inequalities in ever-smoking among adult women in 19 European countries and to explore the correlation between female ever-smoking rates and two societal characteristics: gross domestic product (GDP) per capita and the gender empowerment measure (GEM).	151,313 females 25 years and older & 42,298 males between 25-39 years	Secondary analysis of country level cross-sectional survey data from 19 European countries	National ever-smoking rates differed between northern, western and eastern European countries (e.g. less educated women were more likely to smoke than highly educated women) and southern European countries where higher educated women were more likely to smoke than less educated women. Ever-smoking rates were significantly associated with GDP among the females between 25 to 39 years. In this age group less educated women were more likely to smoke compared to higher educated women in all countries.
Ecuador (rural)	Health Care Women Int, 26(10), 957-977	Schoenfeld and Juarbe (2005)	Describe the perspectives of Ecuadorian women on their health needs and resources within the social, political, economic, and cultural context of their lives.	19 women between 18 to 64 years of age	Ethnographic study with use of in-depth interviews	Major themes: most common concern and stress was poverty and fear of getting sick which will stop their work and income. Women also raised concern over cost of medical care as barriers to health care access, inadequate access to food, and cost of education. IPV and its suffering was the other main concern. Women linked it to their husband's alcoholism, emotional and physical abuse, neglect, partner's infidelities, and most women reported IPV was a common within their own family and community. The third main issue was women's multiple workload burden and its related physical and emotional ill-health. Women described suffering or self-sacrifice to maintain health and wellbeing of their families.
Bangladesh	Stud Fam Plann, 39(1), 49-58.	Schuler and Islam (2008)	This study presents survey results suggesting that an extremely high proportion of women in rural Bangladesh view intimate partner violence as acceptable and draws from qualitative data to examine the psychosocial underpinnings of the survey findings	Survey: women (n=1,212) and men (n=239, response rate, 75%).	Mixed method study: secondary analysis of qualitative data (IDIs with 107 women 3 men, and 13 FGDs exclusively with married women and one with mixed group of both men and women) and a quantitative survey data	Most women (84%) and men (92%) condoned husband's physical abuse against their wives. Most women (67%) reported being beaten by their husband. However, the qualitative findings revealed that women did not condone it, and many abused women said that it was injustice for their husband to abuse them and the perpetrators of abuse should be face harsh punishment (e.g. hanged) and the government need to take necessary legal actions against the dowry system that exist.
Bangladesh	Stud Fam Plann, 44(3), 243-257.	Schuler et al. (2013)	Investigate the individual- and community-level mechanisms by which women's empowerment is associated with their risk of experiencing IPV in rural Bangladesh.	women and men	Qualitative study: 11 FGD (6 with men and 5 with women), 6 IDI with men and 62 women's life history narratives	Both men and women believed that violence against wives has reduced. Participants perceived positive changes were related to increase in female education, expansion and increase in women's income generation roles and earnings, more gender equality within the households, women's awareness and access to informal and formal resources, and having stronger sense of their rights.

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Europe	Scand J Public Health, 41(1), 51-57.	Schütte et al. (2013)	Examine educational differences in self-reported health (SRH) among men and women in Europe.	35,634 participants (15,362 men and 20,272 women)	Secondary analysis of the cross-sectional data from the European Quality of Life Survey (nationally representative samples) in 31 countries	In most of the countries women reported poor health. Inverse relationship between education and SRH reported – lower educational attainment resulted in poorer SRH.
	The Lancet, 377(9761), 200-201.	Sen (2011)	Expert perspectives on the topic, 'learning from others' taking examples from India and China	Not applicable - scholarly perspective	Not applicable	Author compares economic, social, health and health systems of China and India. Author critically views the multiple interacting factors (e.g. economic and social inequality) and its influence on the poor populations in getting access to health care in India. Author argues that low funding for public health in India is the major factor driving the poor to private doctors, despite low quality and fraudulent services offered from the private health sector in India.
	Social Choice & Welfare, 39(2/3), 259-272.	Sen (2013)	A scholarly perspective that critically discusses the discourse of 'sustainability' and what social choice theory offers to the theory of justice	Not applicable - critical piece of view	Not applicable	Author argues that sustainability need to move beyond fulfilling materialistic needs to giving people the independence, autonomy and choice to 'define and pursue' their individual aims and goals in life. Within this discourse author discusses the concept of 'interactive agency' – individuals need freedom to decide their needs and to do what they want. Author points out that this could be achieved by a democratic social process and public discussion and participation that involve giving others the role of reasoning and decision-making power within a more holistic approach.
Pakistan	J Public Health (Oxf), 27(1), 49-54	Shaikh and Hatcher (2005)	Review the relationship of factors affecting health-seeking behaviour on use of health services in the developing world including Pakistan, encompassing public as well private sector.	Not applicable - critical review of literature	Literature review	Lower autonomy, socioeconomic status (education and poverty) and lack of access to primary health care postulated by authors as barriers to health-seeking behaviour.
Europe (France, Germany, Slovakia, Hungary, Portugal; Italy, Switzerland and Lithuania)	American Journal of Public Health, 97(10), 1893-1899	Shenassa et al. (2007)	Evaluate association between residence in a damp and mouldy dwelling and the risk of depression and investigate whether depression was mediated by perception of control over one's home or mould-related physical illness.	5882 adult respondents from 2982 households (aged between 18 and 104 years)	Secondary analysis of cross-sectional surveys conducted in 8 European cities (The Large Analysis and Review of European Housing and Health Status)	Women, older individuals, unemployed were more likely to report depressive symptoms than young, men and employed. The risk of depression was also linked to crowded households. Dampness or mould in the house was significantly associated with a moderate elevated risk of depressive symptoms.

US	Pediatrics, 114(2), e220-e225.	Silverman et al. (2004)	To assess the annual prevalence of physical violence from dating partners among a representative sample of sexually experienced adolescent girls attending US public and private high schools, as well as sexual risk behaviours and pregnancy among this population.	6864 females	Cross-sectional survey data from the 2001 National Youth Risk Behaviour Survey	Around one in five females suffered dating violence of physical IPV. Although a low prevalence of sexual IPV was reported, it was highlighted that these females had high risk for sexual behaviours (e.g. having multiple sexual partners) and pregnancy.
LMIC	J Adv Nurs, 61(3), 244-260	Simkhada et al. (2008)	Identify and analyse the main factors affecting the utilisation of antenatal care in developing countries.	Females	Systematic review of 28 studies (22 quantitative, and 4 qualitative and 2 that combined qualitative and quantitative studies)	Married women used more antenatal care services than single women. Cost of services was an important determinant of antenatal care service uptake. The authors suggested that free and subsidised services increased antenatal care uptake among urban slum-dwelling women. Women's education and employment status were the two major determinants of timely and adequate antenatal care, while financial constraints were the most significant factor limiting these services. Additionally, husband's education, household income, cost and availability of services, and exposure to media were factors that determined uptake of antenatal care services. Authors argue that establishing health centres is not merely going to increase the uptake of ANC, rather socioeconomic factors need to address in developing countries.
LMIC and HIC	BMC Public Health, 15 (1), 1-12.	Sommer et al. (2015)	Assess the available evidence on socioeconomic inequalities in relation to morbidity and mortality of NCDs and their risk factors.	Adults and children from general population (both males and females), and those with disease conditions (e.g. patients with stroke)	Meta-analysis of 22 systematic review	There is a high risk for cardiovascular death, lung and gastric cancer , type 2 diabetes and COPD for those with low SES (education, income and occupation), and live in LMIC compared to high SES and those who lived in HIC. However, authors highlight that there is limited literature available from LMIC (seven systematic reviews).
India	J Interpers Violence, 26(10), 1963-1981.	Speizer et al. (2011)	Examines the hypothesis that women who marry before the legal age at marriage (age 18) will be at increased risk of IPV than women who married at age 18 or older.	women 15 to 49 years (adults, n=50,213 and youth, n=9,628)	Secondary analysis cross-sectional data of 2005-2006 India National Family Health Survey (nationally representative survey of households in India)	Women who married before 18 years were more likely to suffer recent (in the last 12 months) and lifetime IPV than women who married later. However, the association between early marriage and IPV was significant in Rajasthan state and not in Bihar state.
LMIC	BMC Pregnancy Childbirth, 15, 12	Srivastava et al.(2015)	Identify determinants of women's satisfaction with maternity care in developing countries.	women (not mentioned number of participants)	Systematic review of 54 studies (42 quantitative, 6 qualitative and 6 mixed method studies)	Women's satisfaction with maternal care services enhanced their service uptake and it was interlinked to several factors such as having positive interpersonal relationships with health providers, and getting treated in a respectful, courteous and non-abusive manner; having an

						adequate and clean environment; privacy, emotional and cognitive support from providers, receiving care on time, provider competency and getting access to female providers.
UK	Soc Sci Med, 60(8), 1681-1692	Stafford et al (2005)	Explore whether associations with neighbourhood characteristics (infrastructure and social cohesion) are different for men and women.	8437 participants (4611 women and 3826 men)	Secondary analysis of three datasets (health surveys, neighbourhood social cohesion data by postal questionnaire and information of neighbourhood and socio-political context data from service providers and central government statistics)	Positive associations between public recreational facilities and social cohesion (e.g. trust, attachment and practical help). Unemployment and living in the lower social class were related to more self-perceived poor health. Socio-political environment, services, physical environment, and economics (e.g. unemployment and deprived neighbourhood) were significantly associated poor SRH, but more profoundly with women's poor SRH than men.
UK	Int J Epidemiol, 32(3), 357-366	Stafford and Marmot (2003)	Hypothesis: People living in neighbourhoods with a lower deprivation index score (less deprived); (1) have better health and (2) report fewer problems with their neighbourhood than people living in neighbourhoods with a high index score (3) The effect of deprivation is greater for individuals occupying lower socioeconomic positions.	5539 participants (males and females)	Secondary analysis of data from the Whitehall II study (longitudinal, prospective cohort study)	Individual level deprivation (e.g. decreasing employment level) as well as neighbourhood deprivation was associated with an increased risk of poor SRH and poor mental health, irrespective age and sex. Waist/hip ratio increased with increasing neighbourhood deprivation and lower individual SES. Those who lived in deprived neighbourhoods were also more likely to be dissatisfied with their standard of living. Authors highlight the notion of collection resources deprivation for those who live in deprived neighbourhood and its links to poor health outcomes.
LMIC	BMC Public Health, 14(1), 751	Stöckl et al. (2014)	Estimate the prevalence of IPV among women aged 15 to 24 and to explore the risk factors associated with it in nine countries and 14 sites, by analysing data from the WHO Multi-country Study	Ever-partnered women 15-24 years	Secondary analysis of cross-sectional survey data from nine countries of the WHO Multi-country Study on Women's Health and Domestic Violence against Women	Lifetime prevalence of IPV between 19%-66%. Risk factors for IPV was significantly associated with participants witnessing violence against their mother, partner's heavy alcohol use or if partners get involved with physical fights with other men, women's experience of forced first sexual relations, quarrels and partner's controlling behaviour. In some countries acceptance of wife beating was significantly associated with increased IPV risk.
England	J Epidemiol Community Health, 69(9), 873-879.	Stone et al. (2015)	(1) Produce and describe a taxonomy of the trajectories of economic activity among women in England who are currently in the later life age group (2) investigate the association between these trajectories and health in later life.	2160 women aged 64 -98 years	Secondary analysis of data from the English Longitudinal Study of Ageing	Women's economic activity ranged from full-time workers, family carers, full-time returners, part-time returns and those who were economically inactive throughout. Women who balanced work and family responsibilities had more positive health outcomes in later life, indicating that women's trajectories of economic activity had favourable health outcomes in older age. Of the accumulated economical resources housing and occupation showed significant relationship with SRH, such that those in routine/manual occupation reported poor SRH, while increase in wealth accumulated from housing significantly decreased those who reported poor SRH.

Country / Region	Source	Author	Aim / Objective / Question / Hypothesis	Participants / Population	Methods / Methodology	Key Findings
LMIC and HIC	Bull World Health Organ, 88(2), 131-138	Subramanian et al. (2010)	Assess the value of self-rated health assessments by examining the association between education and self-rated poor health.	219,713 women and men 65 years and older	Secondary analysis of the cross-sectional data from the 2002 World Health Survey (69 countries)	An inverse association between years of schooling and SRH was significant is all countries and did not depend on a nation's economic development or geography. Individuals in the lowest quantile was twice more likely to report poor SRH compare to those in the highest educational level quantile.
India and Asia	Development and Change, 30(3), 585-618	Sudha and Rajan (1999)	Examine whether bias against girls children persist during periods of development and fertility decline, and whether prenatal sex selection had spread in India and elsewhere in Asia, and whether female vs. male child mortality risks have changed	not mentioned	Secondary analysis of 1981 and 1991 census data of India, previous research studies and NGO reports	Although an overall decline in female mortality rates were observed, there was also an increase in male sex ratio at births, presenting a demographic and survival disadvantage for females increasing female child mortality compared to males. Irrespective of socioeconomic development of some nations (e.g. India) prenatal sex selection and son preference persisted because of its roots linked to a culture bias that favoured males and discriminated against females.
Denmark	Health Place, 35, 187-195	Thomas (2015)	Examine how experiences in different types of green and blue space provide important health and wellbeing benefits for women in Copenhagen, Denmark.	women aged 18 - 60 years	Qualitative study (25 IDI and 4 FGDs with women and interviews with policy makers)	Provides insight to how women connected their health with natural environment. Women described how their environment enhanced physical exercise (e.g. walking), social capital (e.g. positive family relations) and recreation that helped to restore mental wellbeing by reducing stress and anxiety.
HIC and LMIC	Cochrane Database Syst Rev(2), 385	Thomson et al. (2013)	To assess the health and social impacts on residents following improvements to the physical fabric of housing.	children and adult	Systematic review of 39 studies (qualitative and quantitative, or both)	Adequate size and space within the house for the number of residents and affordable thermal comfort is linked to beneficial effects on physical, social and emotional health of its residents within the home environment beyond the household. Affordable and adequate warmth is also linked lowering school and work absenteeism.
Europe (France, Germany, Slovakia, Hungary, Portugal; Italy, Switzerland and Lithuania)	International Journal of Health Services, 44(2), 285-305	Toch et al. (2014)	Examine the contribution of both psychosocial and physical risk factors to occupational inequalities in self-assessed health in Europe.	21,803 men and women, aged 16-60 years	Secondary analysis of cross-sectional survey data from the 2010 European Working Conditions Survey (27 countries)	In addition to psychological working conditions, the effects of physical working conditions (occupational inequalities) of women health were significant - those in unskilled manual jobs had poorer health than those who worked in white collar jobs.
India	BMC Women's Health, 14.	Travasso et al. (2014)	Examine life stressors as well as stress mitigating factors among low-income working mothers in Bangalore, in order to understand factors affecting mental health in this growing population, and inform strategies to address them.	48 working women, aged 19-40 years (mothers of children birth - 8 years)	Qualitative study (In-depth interviews followed by the administration of Kessler psychological distress questionnaire)	Mental health issues were highlighted to be common (e.g. depression, hopelessness, suicide ideation and attempts, uncontrollable crying) and its negative consequences on their own health, work performance and social relations. The main causes of mental distress was related to spouses heavy alcohol drinking behaviour, and IPV and children's abuse that followed it and a reason linked to suicide attempts and ideation. Financial hardship and lack of financial and child care support was another main

						distress. Poor working conditions, abuse by drunken male co-workers and physical strain of manual work was also highlighted. Women described how support spouses with child and household responsibilities and supportive working environment helped to alleviate mental distress.
Spain	Environment International, 77, 35-41.	Triguero-Mas et al. (2015)	Investigate the association between natural outdoor environments (separately for green and blue spaces) and health (general and mental) and its possible mediators and modifiers	8793 men and women	Secondary analysis of data from cross-sectional study	Those who were exposed to higher green space or were surrounded by green environment were less likely to report poor self-perceived health or poor mental health. A slight gender difference was observed, positively favouring women. However, there were no association found between green space and social or physical health.
South Asia	Journal of Affective Disorders, 102(1–3), 219-225	Trivedi et al. (2007)	Present the various factors affecting the presentation of depression among women in South Asia	Theoretical paper discussing the factors associated with depression	Review of studies from internet	Significant factors associated with depression were violence against women, stigma and discrimination, reproductive health issues of postnatal depression, pregnancy loss and infertility, and the biological factors (malnutrition, tropical diseases and child marriage and its consequences)
Multi-country	PLoS One, 7(12).	Trevillion et al. (2012)	Aim: (1) The prevalence (lifetime and past year) of being a victim of domestic violence in men and women with mental disorders (2) The odds of being a victim of domestic violence in men and women with mental disorders compared with non-mentally disordered controls	Men and women aged 16 years or more	Systematic review and meta-analysis of 41 observational and interventional studies	Both men and women with mental disorders had higher prevalence of being a victim of domestic violence (DV). However, women who suffered depressive disorders, anxiety disorders and post-traumatic disorders were more likely to suffer IPV than women who did not suffer from a mental disorder.
LMIC	Cochrane Database Syst Rev (1), 141.	Turley et al. (2013)	Examine the effectiveness of slum upgrading strategies involving physical environment and infrastructure interventions for improving the health and quality of life	Populations living in urban or peri-urban slums in LMIC (not restricted to age, gender, cast or class)	Systematic review of 5 studies: one randomised controlled trail, four controlled before and after studies and	Within the included studies, water supply, sanitation, drainage, roads and paved footpaths were the most commonly delivered strategies. Slum upgrading reduced waterborne diseases and some indications for financial poverty. Slum communities value infrastructure upgrading (namely water and sanitation interventions) as top priorities for slum improvement, even above health, education or financial interventions. Once the physical living environment had been improved residents valued health and education facilities.
Bangladesh	Contraception, 94(1), 18-26.	Uddin et al. (2016)	Examine the association between couples' concordant and discordant decision makings, and wife's unmet need for contraception in Bangladesh	3336 couples	Secondary analysis of cross-sectional data from the Bangladesh DHS of 2007	Couple who share decision-making power were more likely to meet the unmet need for contraception. Rather than husband-only, or others involvement, a couple's concordant joint decision making, increased contraception use. Wives exposed to family planning information discussed family planning more often with husbands, and those from richest households were less likely to have unmet need for contraception.

Country / Region	Source	Author	Aim / Objective / Question / Hypothesis	Participants / Population	Methods / Methodology	Key Findings
LMIC	Campbell Systematic Reviews, 10(8)	Vaessen et al. (2014)	To provide a systematic review of the evidence on the effects of microcredit on women's control over household spending in developing countries.	women	Systematic review of 25 studies (randomised design, quasi-experimental matching, or regression analysis included)	Overall there is no statistically significant effect of microcredit on women's control over household spending. However, authors note that most studies were weak in methodologically, and recommend to undertake systematic review of qualitative studies to provide the context-based information on how microcredit may influence women's decision-making power within the household.
Europe	Soc Sci Med, 71(2), 305-313	Van de Velde et al. (2010)	(1) Determine cross-national variation in the gender gap in depression in 23 European countries. (2) Examine to what extent socioeconomic factors and family-related factors explain the gender difference. (3) Study how social risk factors associated with depression vary across countries and between genders.	36,436 men and women 18-75 years	Secondary analysis of cross-sectional survey data from the European Social Survey	Women report significantly higher levels of depression than men in all nations. Individuals in better socioeconomic position (high income and more years of education) and were married or living with a partner reported lower levels of depression, regardless of their gender. However, higher educational attainment and better mental health was significantly associated with women's health than men.
LMIC and HIC	American Journal of Public Health, 103(11)	Van Der Kooi et al. (2013)	Investigate how much the Human Development Index (HDI), a global measure of development, modifies the effect of education on self-reported health.	217,642 adults 18 years or older	Secondary analysis of cross-sectional survey data from the World health Survey from 49 countries	A strong and positive correlation between education and self-reported health was reported with increasing Human Development Index (HDI). A nation's higher human and socioeconomic development returned more benefit for the educated in terms of SRH. Additionally, relationship between education and health was in a gradient manner, such that the higher an individual's education level better perceived SRH, which in turn was positively modified and correlated with HDI.
LMIC and HIC	Int J Equity Health, 15	von dem Knesebeck et al. (2016)	(1) to analyse national and welfare state variations in the public perception of income-related health care inequalities (2) to analyse associations of socio-demographic, socioeconomic, health-related, and health care factors with the perception of health care inequalities.	37,228 participants both males and females	Secondary analysis of cross-sectional survey data (module health and health care) based on nationally representative samples of 23 countries (the International Social Survey Program)	Although there were large differences between countries, the majority (67.4%) of the respondents viewed that it was unfair for those with higher income to enjoy better health while lower-income individuals cannot. This group comprised mostly women, and those in the lower SES and who have insufficient insurance coverage as well as those who reported their health to be poor.
LMIC	J Int Dev, 21(5), 577-602.	Vyas and Watts (2009)	To identify whether individual and household economic empowerment is associated with lower intimate partner violence in	Most women between 15-49 years	Secondary analysis of 30 studies. Most studies were population-based-cross-sectional surveys from 40 sites.	Although there were large variation in sampling methods and the measures that were used to determine IPV, SES was associated with IPV risk. Completion of secondary education or more compared to women with no education was shown as having a protective effect from the risk of IPV. Women's employment and

			low and middle income country settings.			IPV risk was indefinite, in some places being employed increased IPV risk and in other places it was protective.
USA	Journal of Health and Social Behavior, 39(3), 216-236.	Waldron et al. (1998)	Test the effects of multiple roles on women's health by evaluating the contribution of income as a mediating factor for the effects of employment and marriage on health.	3,331 women	Secondary analysis of data from National Longitudinal Surveys of Young women	Multiple roles (marriage and employment) were beneficial for women's health rather than harmful.
Australia	Journal of Affective Disorders, 75(2), 155-162.	Wilhelm et al. (2003)	To determine the prevalence of mental disorders in the Australian population.	10,641 men and women 18 years and over	Secondary data derived from a national sample surveyed using computerised version of the Composite International Diagnostic Interview Version	Prevalence of current major depression 3.2 and highest in middle age females (5.2%). Other risk factors correlated with depression were unemployment, smoking cigarettes, having a medical condition and female sex. Married and cohabiting showed lower risk for depression.
LMIC	Arch Gynecol Obstet, 286(6), 1487-1505	Williams-Brennan et al. (2012)	To identify social determinants of health (SDH) associated with cervical screening for women living in middle and low-income countries, to inform responses to improve SDH and screening coverage, and to identify research gaps...	Most women and in few studies men and also health professionals	Scoping review of 37 studies in LMIC	Major obstacles for cervical cancer screening identified as: sociocultural values and beliefs, psychological stress with stigma attached with pap smear testing, black and mixed race, lower education and income, behaviour and attitudes (e.g. negligence), health system factors such as cost of pap smear testing, lack of healthcare insurance, lack of health insurance, a shortage of cervical cancer screening facilities, lack of referrals by health care professionals and lack of confidence and trust in health care professionals. Positive social support from family, friends and spouse increased women's uptake of screening. Married women more likely to have a pap smear test than single women.
Multi-country (HIC and LMIC)	World Health Organization	WHO (2013)	Estimate the global prevalence of two forms of violence against women: IPV and sexual violence by someone other than a partner (non-partner violence)	women 15 years and above	Systematic review of population-based studies (primary data obtained from 79 countries) with prevalence estimates of IPV were included.	Global prevalence of physical and /or sexual IPV among all ever-partnered women was 30%. Highest prevalence of IPV estimated (37%) for Africa, Eastern Mediterranean, and South-East Asia. Prevalence lowest in HIC (23%), European and Western Pacific Regions (25%). Around the world younger women (15-19 years) at higher risk for IPV than older age women. However, the authors report that data on women aged 49 years and above were scare and tended to be from high-income countries, than LMIC.
USA	Soc Work Health Care, 53(5), 478-502	Wu et al. (2014)	Examine the relationships between comprehensive measures of employment hardships and self-rated health of single mothers.	967 women 18 years and above	Secondary analysis of data from the 2007 and 2009 Panel Survey of Income Dynamic	Economic hardship resulting from underemployment (but not unemployment) was significantly associated with poor SRH. Lower family income, chronic diseases, binge drinking and women who reported poor SRH in the past were also more likely to report poor SRH. However, women involved with strength-building physical activity reported significantly better SRH.

Country / Region	Source	Author	Aim / Objective / Question / Hypothesis	Participants / Population	Methods / Methodology	Key Findings
Thailand	BMC Public Health, 12	Yiengprugsawan et al. (2012)	Investigates the physical and mental health of Thai adult caregivers.	60,569 men and women 20 years and above	Secondary analysis of data from a cohort study (2009 dataset)	27.5% reported being part-time caregivers and 6.6% reported being full-time caregivers. Female caregivers (full-time & part-time), compared to non-caregiving females, suffered lower back pain and psychological distress, and had poorer self-assessed health. The authors further indicated that full-time caregivers reported poorer health compared to part-time caregivers and non-care-givers.
US	Soc Sci Med, 63(8), 2176-2190	Zajacova (2006)	Does schooling have comparable returns in terms of men's and women's mortality? Can the effect of education on mortality for men and women be explained by these mediators (health behaviours and economic status)?	12,036 white adults aged between 25 and 74 years.	Secondary analysis of three follow-up waves data from the panel study National Health and Nutrition Examination Survey (20 years follow-up period)	Each additional year of schooling was associated with 5% lower mortality rates for both men and women.
Pakistan	J Interpers Violence, 27(16), 3268-3298.	Zakar et al. (2012)	Explore how women cope with spousal violence in the complex and paradoxical setting of Pakistan	21 women aged between 15 to 49 years	Qualitative research: IDI	Most women could not use problem-based coping strategies (e.g. inform police) because of social constraints. Therefore, their time and energy were spent on seeking emotion-focused coping strategies, e.g. spiritual therapies and avoidance. Only few used problem-focused strategies of seeking help from formal institutions. Abused women often get silenced and shunned by their own family if there is a case of IPV, and they often hesitate to seek formal services in fear of escalating violence. Women who fought against IPV reported gender biased legal system that favours males. Women described how some families and neighbourhood that negatively view IPV protected them against it.
Greece	Eur J Public Health, 23(2), 206-210.	Zavras et al. (2013)	Determine whether there is an association among economic crisis, demographic and socioeconomic factors in Greece and self-rated health (SRH).	10,572 adults 18 years and above	Secondary analysis of two cross-sectional survey done in 2006 and 2011	Females (compared to males), housewives (compared to employed women), pensioners and those in the lower SES (education and income) have lower probability of rating their health as good or very good health.
USA	Psychol Rep, 113(1), 1187-1191.	Zekeri (2013)	Examine the effect of educational attainment on self-rated health status.	300 single mothers	Secondary analysis of empirical data collected two times over a one-year period	Lower educational attainment and low income were significant predictors of less than good self-rated health for single mothers, while unemployment and food insecurity had moderate effects on SRH.
Bangladesh	Matern Child Nutr, 10(3), 347-359	Ziaei et al. (2014)	Evaluate the association between ever-married Bangladeshi women's lifetime exposure to violence by their spouses and their	2024 ever-married women between 15 to 49 years and 2480	Secondary analysis of cross-sectional survey data from the Bangladesh 2007	More than half of the women reported lifetime experience of either sexual/physical or both form IPV. Lifetime prevalence of physical IPV (49.4%) and sexual IPV (18.4%). IPV prevalence higher for working women; husband had lower levels of education and

			pre-school children’s nutritional status.	children under 5 years	Demographic Health Survey	malnourished women. A significant association between children's stunting and women's lifetime experiences of physical and sexual or both type of IPV were reported.

Appendix IV

In-depth interview guide for women

Part I: Demographic and socioeconomic characteristics

Age: Residence: Male'/Hulhumalé', Villimale'

How long have you been living in this place: Residence: Own house/renting/host family

Educational Level: Illiterate/Primary/Secondary/Tertiary/Technical

Occupation:

Employment status: Unemployment/self-employed/ government/ private

Income:

Marital Status: Never married /Married / Divorced/Separated / /Widow

Number of times married: Number of living children:

Living conditions: Nuclear /Extended family

No of people residing with:- Children: Adults:

Part II – In-depth interview guide

- I would like to explore aspects relating to your everyday life. Can you please share with me your daily routines?
- How about you're living and working conditions? Do you have any concerns? If yes, can you please share with me your concerns?
- How important is health for you among other life necessities?
- What are your main health needs and concerns? How do you manage these? What facilitators help you meet your health needs and concern? What barriers prevent you from meeting your health needs and concerns?
- Do you think you need to have control over your own life circumstances? If yes how much? If yes, why do you think you need to have control? If yes, what do you do to have control? If no, why do you think you don't need to have control?
- Can you please share with me your experiences with health services? Have you had any positive experiences, if yes please explain? Have you had any negative experiences, if yes please explain. Have you done anything about the negative experiences? If no, why not? If yes, what have you done?
- What are your suggestions for improving health care services for you and women like you?
- Is there anything else you would like to say about looking after your health or health care provision for women?

Appendix V

In-depth interview guide for community leaders

- What is your role in this institute/community in relation to women's health?
- What do you think are the health issues of women in your community? What do you feel are the reasons for these health issues?
- Do you feel that current health issues of women are addressed through existing policies/programs? If no, why not? If yes, why? If yes, how?
- Are there any specific health-related policies/programs/activities drawn up for women specifically living in Male'? If yes, can you please share?
- Do you think that the existing polices/program have salient effects on improving women's health? If yes how?
- How much evidence on local women's health is incorporated to draw up policies/programs/activities?
- Are women's perspectives of their health incorporated when policies/programs/activities are being developed? If no, why not? If yes, how much?
- Are there any women's empowerment programs/activities conducted for women in Male'? If yes, can you name them?
- Are there any facilitators to implementing? Can you please share? Are there any barriers to implementing? Can you please share?
- What are your recommendations for improving women's wellbeing in Male' city?

Appendix VI

Focus group discussion guide for women

Part I – Demographic details

No	Age	Residence Male' / HulhuMale / Villingili	How long have you been living in Male' city? Years/Months	Living in own house / renting / sharing with others	Living with number of people (Adults and children)	Educational Level: Illiterate / Primary / Secondary/Higher Secondary / Tertiary / Technical	Occupation	Employment status: employed / Unemployed	Marital Status (Optional)	Number of children (optional)
1					A: C:					
2					A: C:					
3					A: C:					
4					A: C:					
5					A: C:					

Part II – Discussion points

- What do you think about the living conditions of women in this community? What do you think women enjoy about them? Do you think women have any concerns? If no, why not? If yes, what do you think women are concerned about?
- What do you think about the working conditions of women in this community? What do you think women enjoy about the working conditions? Do you think women are concerned about their working conditions? If no, why not? If yes, why?
- How important is health for women in this community, among other necessities in life?
- Are there any resources women use to stay healthy? If yes, can you list those resources? Do all women have access to these resources? If no, who might not have? Why wouldn't these women have access?

- What do you think are the main health needs and concerns of women? How are these managed? What are the facilitators that help women meet their health needs and concerns? What are the barriers that hinder/distract women from meeting their health needs and concerns?
- Do you think women have control over their life circumstances? If yes, how much control do you think they have? If yes, why do women need to have control? if no, why do you think they don't have control? If yes, what do women do to get control?
- What sort of experiences do women have with health services?
- Can you tell me what health services women use?
- Can you think of any positive experiences women have with health services – if yes, please tell me about them? Why do you think women have positive experiences with health services?
- Can you think of any negative experiences – if yes, please tell me about them? Why do you think women have negative experiences with health services?
- Are there any other forces which might affect health of women in this community? For example, culture, politics, gender disparities.
- Do you think women get better health services because they are females? If no, why not? If yes, why?
- Do you think women are treated better in their workplace because they are females? If no, why not? If yes, why?
- Do you have any suggestions for improving health care services for you and women like you? If yes, can you tell me about them?
- Is there anything else you would like to say about looking after your health or health care services for women in this community?
- Is there anything else you would like to say about looking after your health or health care services for women in this community?

Appendix VII

Focus group discussion guide for men

Part I – Demographic details

No	Age	Residence Male'/Hulhumalé'/ Villingili	How long have you been living in Male' city? Years/Months	Living in own house/renting/sharing with others	Living with number of people (Adults and children)	Educational Level: Illiterate/Primary/ Secondary/Higher Secondary/ Tertiary/ Technical	Occupation	Employment status: employed/Unemployed	Marital Status (Optional)	Number of children (optional)
1					A: C:					
2					A: C:					
3					A: C:					

Part II – Discussion points

- Do you think women are important in this community? If yes, how important? If yes, why are they important? If no, why aren't women important?
- What is the position of men in women's life in your community?
- Do you think men have an impact on women's health? If no, why not? If yes, how much of an impact? If yes, why do they have an impact?
- Do women in your community have any health concerns? If no, why don't they? If yes, why do they have concerns? If yes, what do you think are the health concerns of women in your community?
- Do you think men have a role in women's health concerns? If no, why not? If yes, tell me about the role that you think they have. What are some facilitators that help men with women's health concerns? What do you think are some barriers that stop men from being involved with women's health concerns?
- Do you think men should control women and their lives? If no, why not? If yes, why? How much control do you think men should have over women? What do men do to control women? Do you feel that in this community men take the responsibility of looking after women's health? If no, why not? If yes, why? If yes, how much responsibility? If yes, can you give some examples?

- Do you have any suggestions for improving health care services for women? If yes, can you tell me about them?
- Is there anything else you would like to say about health care provision for women?

Appendix VIII

Focus group discussion for community leaders

Discussion points

- What are your roles in this institute/community in relation to women's health?
- What do you think are the health issues of women in your community? What do you feel are the reasons for these health issues?
- Do you feel that current health issues of women are addressed through existing policies/programs? If no, why not? If yes, why? If yes, how?
- Are there any specific health-related policies/programs/activities drawn up for women specifically living in Male'? If yes, can you please share?
- Do you think that the existing polices/program have salient effects on improving women's health? If yes how?
- How much evidence on local women's health is incorporated to draw up policies/programs/activities?
- Are women's perspectives of their health incorporated when policies/programs/activities are being developed? If no, why not? If yes, how much?
- Are there any women's empowerment programs/activities conducted for women in Male'? If yes, can you name them?
- Are there any facilitators to implementing? Can you please share? Are there any barriers to implementing? Can you please share?

SAMPLE

Appendix IX

Participatory Activities for Focus Group Discussions

Instruction: In the FGD there will be a 5-15 women. Women will be divided into groups and each group will be asked to complete the following activity.

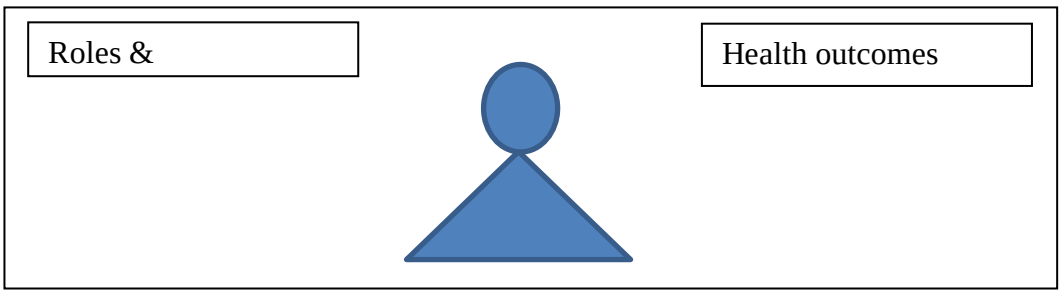
Participatory Exercise 1 - Participatory mapping of living and working environment and effects on health (15minutes)

- Can you please draw a map of living conditions (home environment) of women your age? Can you please identify those areas/issues which could impact your health? Can you please prioritise in order?
- Can you please draw your working conditions? Can you please identify issues/areas which could impact your health?
- Can you please map out your surrounding environment outside your home? Can you please identify issues/areas which could impact your health?
- Let us discuss more about these drawings.

Participatory Exercise 2 - Women roles and effect on health (15 minutes)

- Picture a woman your age in this community - (I might use a real picture if possible, or else just a drawing as on the diagram 1)
- List down all the task she carries out, and her roles and responsibilities?
- Which ones are mostly shared and which ones are not? Please indicate individual activities in red?
- Please point out those roles in blue that could be shared.
- Let us discuss the barriers in this community for women.
- Do you think they affect women's health? How and Why?

Diagram 1



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Appendix X

Curtin University Human Research Ethics Committee Approval

Curtin University

Memorandum

To	A/Prof Maryanne Doherty, Sexology, School of Public Health, Public Health
From	Professor Stephan Millett, Chair, Human Research Ethics Committee
Subject	Protocol Approval **HR 143/2012**
Date	6 December 2012
Copy	Ms Asrath Usman, School of Public Health Dr Kathryn Sauer, School of Public Health A/Prof Suzanne Robinson, School of Public Health

Office of Research and Development
Human Research Ethics Committee

TELEPHONE 9266 2784
FACSIMILE 9266 3793
EMAIL hrec@curtin.edu.au

Thank you for your application (4380) submitted to the Human Research Ethics Committee (HREC) for the project titled *"A Case Study of Women's Health in Male', Republic of Maldives"*. Your application has been reviewed by the HREC and is **approved**.

- You have ethics clearance to undertake the research as stated in your proposal.
- The approval number for your project is **HR 143/2012.** *Please quote this number in any future correspondence.*
- Approval of this project is for a period of twelve months **04-12-2012** to **04-12-2013**. To renew this approval a completed Form B (attached) must be submitted before the expiry date **04-12-2013**.
- It is your responsibility, as the researcher, to meet the conditions outlined above and to retain the necessary records demonstrating that these have been completed.

Applicants should note the following:

It is the policy of the HREC to conduct random audits on a percentage of approved projects. These audits may be conducted at any time after the project starts. In cases where the HREC considers that there may be a risk of adverse events, or where participants may be especially vulnerable, the HREC may request the chief investigator to provide an outcomes report, including information on follow-up of participants.

The attached **FORM B** should be completed and returned to the Secretary, HREC, C/- Office of Research & Development:
When the project has finished, or

- If at any time during the twelve months changes/amendments occur, or
- If a serious or unexpected adverse event occurs, or
- 14 days prior to the expiry date if renewal is required.
- An application for renewal may be made with a Form B three years running, after which a new application form (Form A), providing comprehensive details, must be submitted.

Yours sincerely

Professor Stephan Millett
Chair Human Research Ethics Committee

Appendix XI

COPY

Maldives National Health Research Committee Approval

بسم الله الرحمن الرحيم

National Health Research Committee
Ministry of Health and Family
Male'
Republic Of Maldives

31st December 2012

Ms. Asrath Usman
Male,
Republic of Maldives,

Approval of Research Proposal

Title of Study Proposal:	"A Case Study of Women's Health in Male,' Respublic of Maldives."
Researcher:	Ms. Asrath Usman

Dear Ms Asrath Usman

The members of the National Health Research Committee have reviewed your research proposal "A Case Study of Women's Health in Male,' Respublic of Maldives."

The members of the committee after reviewing have approved the proposed study.

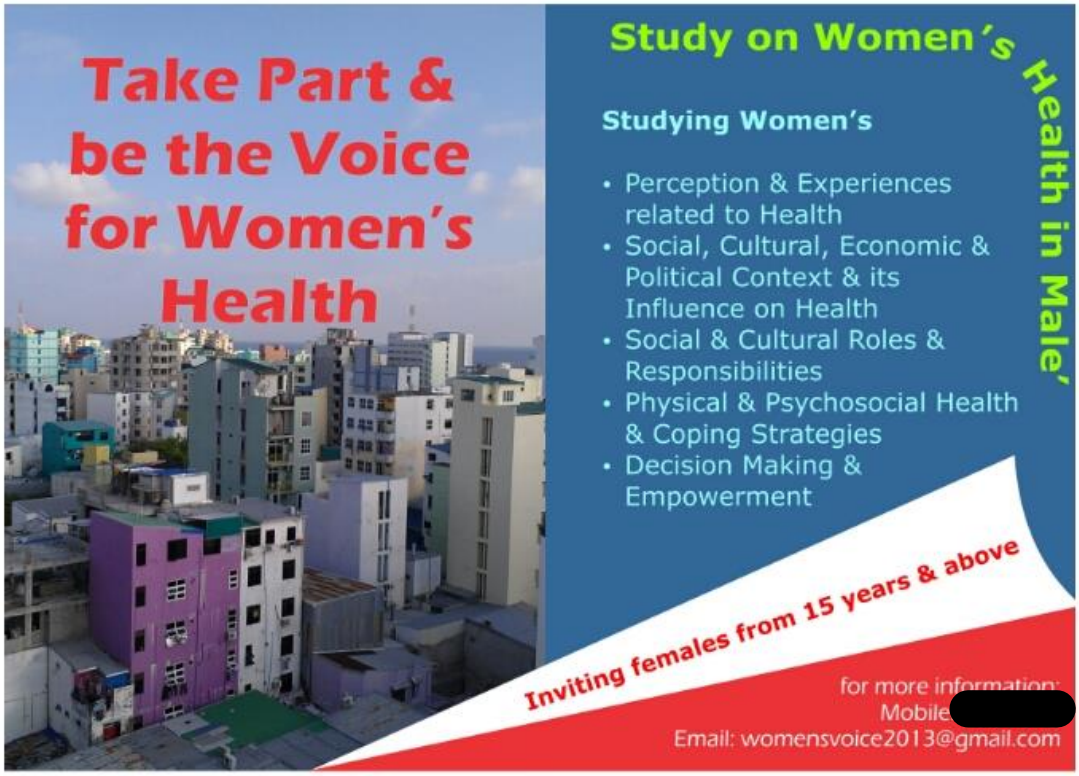
It is requested that the final report of the research to be forwarded to Ministry of Health for future local reference and use.

MINISTRY OF HEALTH
Male' Republic of Maldives

Policy Planning Division (Health Information & Research)
Ministry of Health
(Secretariat of the National Health Research Committee)

Appendix XII

Study Advertisement



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Appendix XIII

Invitation to schools

Ms. Asrath Usman
PhD Student
Curtin University of Technology
Bentley Campus, WA 6102
Australia
Email: asrath.usman@postgrad.curtin.edu.au
Mobile: [redacted]

31st January 2013

[redacted]

[redacted]

Male'

Republic of Maldives

Respected Sir/Madam,

Subject: Support and assistance for obtaining data for a Case Study Research on Women's Health in Male', Maldives

I am studying for Doctor of Philosophy in Public Health at Curtin University of Technology, Australia. My research involves "A Case study of Women's Health in Male', Republic of Maldives."

The main data collection strategy includes collecting relevant health-related information from girls more than 15 years of age, through in-depth interviews, focus group discussions and a survey.

For girls less than 18 years of age, I will be obtaining one of their parent/guardian's voluntary informed consent along with girls informed assent.

In addition, I will be taking interviews from key informants who experience everyday health-related issues of girls in this age group. In the schools, I have identified them as the school health nurse/assistant and school counsellors.

I would be grateful if you could facilitate and assist me in recruiting participants.

Attached with this letter please find Ministry of Education's approval letter.

Thank you

Yours sincerely

Ms. Asrath Usman

Student ID No. 15682024 (Curtin University of Technology)

Appendix XIV

COPY

Letter of from the Ministry of Education

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މާލެ، ދިވެހިރާއްޖެ

ރިސާރޗް ސަބްޖެކްޓް:

Research Topic:

A Case Study of Women's Health in Male', Republic of Maldives

Definition of terms:
Women: Maldivian women who are more than 15 years of age.
Male': The capital island of Maldives, including Hulhumale' and Villimale', two administratively considered as wards of Male'.
Health:complete physical, mental and social wellbeing and not merely the absence of disease and infirmity. (WHO 1946).
Reference: WHO 1946. Constitution of the WHO, 45th ed. Supplement, October 2006.

މައިގަނޑު މަޤްސަދު:

Main Objectives:

Aim

The aim of this research is to investigate and document a comprehensive explanation of women's health needs and concerns and the health system services in Male', Republic of Maldives. The purpose is to provide an evidence-based account that emerges from an analysis of women's, men's and key informants' lived perceptions and experiences, published documents/reports and relevant media coverage.

Objectives

This study will address four overall objectives, two with supporting sub-objectives as follows:

1. To investigate how women, aged 15+ years, in Male' present their health needs and concerns, and the services provided by the health system:
   a. To determine women's perceptions and experiences related to their health needs and concerns and the health services provided;
   b. To investigate women's decision making process and empowerment;
   c. To determine women's roles and responsibilities in the context of family, the community and society, and the impact these have on women's health;
   d. To evaluate women's social, cultural, economic and political context and the influence on women's health; and

e. To assess physical and psychosocial vulnerabilities experienced by women and related coping strategies.

2. To investigate how men and key informants report:
   a. women's health needs and concerns; and
   b. The services provided by the health system.

3. To assess similarities and difference among women's, men's and key informants' reports of women's health including needs and concerns, and the services provided by the health system.

To provide recommendations for the health system services to better meet the health needs and concerns of women; thereby reducing inequities for women.

Data Needed: ބޭނުންވާ މައުލޫމާތު ބާވަތް:

Interviews of girls more than 15years of age

Focus group discussion of girls more than 15years of age

Completion of a survey girls more than 15years of age

If available, records of common health issues of girls more than 15years of age.

Information from girls less than 18 years will be obtained only after providing them detailed information regarding the research and getting voluntary informed consent from their parent/guardian and by the minor, herself.

Interviewee/s: އިންޓަވިއުކުރަން ބޭނުންވާ ފަރާތް/ތައް:

Girls more than 15 years of age

School Counselors / School health nurse or assistant (who take care of health (physical, mental and social) issues related to girls more than 15years)

ވީމާ، މިރިސާރޗަށް ބޭނުންވާ މަޢުލޫމާތު އެއްކުރުމުގައި ތިޔަފަރާތުގެ އެހީތެރިކަމާއި އެއްބާރުލުމެއް ލިބުމަށް އެދެމެވެ.

23 ޖެނުއަރީ 2013

SAMPLE

Appendix XV

Information Page and Informed Consent Form for Women 18 years and above - Focus Group Discussion

This Information Page and Informed Consent Form is for women 18 years and above in Male' city and who we are inviting to participate in a Case Study Research on Women's Health in Male' city, Republic of Maldives.

Information Page

Name of Student Researcher: Ms Asrath Usman
Name of Supervisor: Associate Professor Maryanne Doherty, Associate Professor Suzanne Robinson, Senior Lecturer Kay Sauer
Name of Organization: Curtin University of Technology, Western Australia
Name of Research Study: A Case Study of Women's Health in Male', Republic of Maldives

Introduction

My name is Asrath Usman. I am doing my PhD in Public Health at Curtin University of Technology, Australia. My supervisors are Associate Professor Maryanne Doherty, Associate Professor Suzanne Robinson and Senior Lecturer Kay Sauer. We are doing a research on Women's Health in Male', Republic of Maldives. I am going to give you information and invite you to be part of this research. You can choose whether or not you want to participate. You do not have to decide today whether or not you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research.

This information page may contain words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you can ask them of me.

Purpose of the research

The purpose of this research is to understand women's health within the social, cultural, economic and political context in the urban island Male', Maldives. A woman in this research has been defined as those above 15 years of age. I will be asking you to share with me your views and experiences on health. I will be also asking about health issues, how do you take care of them, barriers to achieve healthy life and what is being done to overcome these barriers. I will further ask you to share with me about your views and experiences on health care services.

I hope that this information will help to improve our understanding of the realities of women's health and their health needs in Male'. This will help to reduce the gap between what is presently done for women and assist in planning better services for women of your age in the future.

Participant Selection

We want to ask many women of your age about women's health issues, their management and barriers and about the health care services. You are being invited to take part in this research because we feel that your experience as a woman living in this urban island can contribute much to our understanding and knowledge of local women's health.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate all services you receive will continue and nothing will change. If you change your mind about not sharing your audio-taped recording or wanting to stop midway in the discussion, upon such request we will not use the information shared with us and we respect your wish.

Procedures

We are asking you to help us learn more about women's health in your community. If you accept you will be asked to take part in a group discussion and group activities. There will be 5-15 women of your age in this group. The discussion will be guided by me and a research assistant will help in recording and taking notes.

The group discussion will start with me making sure that you are comfortable. We will start with some general introduction, and then ask each topic and give you time to share your views and experiences. There is no right or wrong answer to any questions that will be asked. The questions will be about women's perception and experiences related to health, its management, and barriers and on health care services.

We will ask about community practices more generally because this will give us a chance to understand more about women's health in different ways. We will not ask you to share personal beliefs, practices or stories and you do not have to share any information that you are not comfortable sharing.
In addition, we will ask you take part in group activities of presenting your views by means of writing, drawing and mapping. This is to understand the living and working conditions of women and listing down factors which might impact on their health. Please remember there is no right or wrong answers.

The discussion and activities will take place in Reproductive Health Centre, IGMH or Youth Centre. And no-one else but the people who take part in the discussion, me and one research assistant will be present during this discussion. The entire discussion will be audio-tape recorded, but no-one will be identified by name on the tape. The audio tape and group activity sheets will be kept securely locked in a cabinet in a public institution and taken out for transcribing only. The information shared and recorded is confidential and no-one else except me, my supervisors and research assistant will have access to the audio tapes and activity sheets. The information collected will be transported and locked in a cabinet in my supervisor's office at Curtin University. All information will be destroyed after 5 years.

Duration

The fieldwork of the research takes place from January 2013 to August 2013. During this time, you will be asked to take part in one of the focus group discussions for approximately two hours.

Risks

There is risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. However, we do not wish for this to happen. You do not have to answer any question if you feel the question(s) are too personal or if talking about them makes you uncomfortable. During the discussion if sensitive topics may disturb you or cause you any stress, and if you want to talk to someone or feel that you want any counselling services, the opportunity for that is available. You can contact any places listed in the Information Sheet listing "Local resources available for counselling in Male', Republic of Maldives" and ask for an appointment.

Benefits

There will be no direct benefit to you, but participation is likely to help us find out more about realities of women's lives and impact on their health in Male' city.

Confidentiality

We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number and it will not be shared with or given to anyone, and kept locked in a cabinet in storage in a public institution. The information will be transported and locked in a cabinet in my supervisor's office at Curtin University until destroyed after 5 years.

We will ask you and others in the group not to talk to people outside the group about what was said in the group and to keep what was said in the group confidential. You should know, however, that we cannot stop or prevent participants who were in the group from sharing things that should be confidential.

Sharing the results

The information that you share with us today will not be shared with anybody outside the research team, and nothing will be attributed to you by name. Once the research is completed, we will share the results so that other interested people may learn from the research. We will do this by writing and sharing reports and by going to meetings with people who are interested in the work we do. We will also publish the results.

Right to refuse or withdraw

You do not have to take part in this research if you do not wish to do so, and choosing not to participate will not affect you in any way or any other benefits that you may receive. You may stop participating in the group discussion or group activities at any time that you may wish. There will be no effect of this action on any services that you are eligible to receive.

Who to contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact any of the following: Asrath Usman, mobile number: [redacted]; Email address**:** asrath.usman@postgrad.curtin.edu.au.

Maryanne Doherty, Supervisor, 08-9266-3707. Email address: M.Doherty@curtin.edu.au. This study has been reviewed and approved by Maldives National Health Research Committee. The committee is comprised of members from public, academic, lawyers, doctors, nurses and religious scholars. If you wish to confirm approval of the study by National Health Research Committee, you need to formally request it from Ministry of Health, Male', Republic of Maldives, telephone number 3328887.

This study has been also approved by the Curtin University Human Research Ethics Committee (Approval Number HR 143/212), Australia. The committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University, GPO Box U1987, Perth 6845 or by telephoning 9266-9223 or by emailing hrec@curtin.edu.au.

Appendix XVI

SAMPLE

Consent Form

I have been invited to participate in research about women's health and health inequity in capital city Male'. I have read the foregoing information /or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

My name is……..

My address is…….

Date:……

Day/month/year

If illiterate [1]

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of witness_____ Thumb print of participant

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands information on the Information Sheet.
I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Day/month/year

[1] A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb print as well.

Appendix XVII

SAMPLE

Certificate of Assent

I have been invited to participate in research about women's health in capital city Male'. I have read the foregoing information /or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I agree to take part in the study.

My name is……..
My address is…….
Date:……
Day/month/year

If illiterate [2]

I have witnessed the accurate reading of the assent form to the child, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freel

Name of witness_____ Thumb print of participant

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read or witnessed the accurate reading of the assent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the child was given an opportunity to ask questions about the study, and all the questions asked by him/her have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.
Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Day/month/year

Copy provided to the participant _____(initialised by researcher/assistant)

Parent/Guardian has signed an informed consent ___Yes ___No _____(initialised by researcher/assistant)

[2] A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb print as well.

Appendix XVIII

SAMPLE

Parent/guardian consent form

I have been asked to give consent for my daughter to participate in this research study on women's health in Male', which involve her completing one interview. I have read the foregoing information /or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily for my daughter to participate in this study.

Name of Guardian……..

Signature of Guardian…….

Date:……

Day/month/year

If illiterate [3]

I have witnessed the accurate reading of the consent form to the parent of the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of witness_____ Thumb print of participant

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the parent of the potential participant, and to the best of my ability made sure that the person understands information on the Information Sheet.
I confirm that the parent was given an opportunity to ask questions about the study, and all the questions asked by him/her have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Day/month/year

[3] A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb print as well.

Appendix XIX

List of Community leaders were recruited from the following organisations

Community leader	In-depth interview	FGD
Ministry of Health	x 4	
Ministry of Gender, Family and Human Rights	x 2	x 1
Ministry of Education	x 3	
Ministry of Human Resources, Youth and Sports	x 1	x 1
Health Protection Agency – CCHDC	x 3	
Maldives Police Services	x 2	
Family Court	x 1	
Ministry of Islamic Affairs	x 1	
Religious scholars (formal authorities)	x 2	
National Social Protection Agency	x 1	
Human Rights Commission of the Maldives	x 1	x 1
Ministry of Information, Arts and Culture (Media)		x 2
Indira Gandhi Memorial Hospital (Family Protection Unit and Reproductive Health Centre)	x 2	
Member of Parliament	x 1	
Male' City Council	x 1	
School counsellor and health assistant	x 1	x 1
Diabetic Society of Maldives (NGO)	x 1	
Journey (NGO)	x 1	
Care Society (NGO)	x 1	
UNFPA (INGO)	x 1	
Community leader liaised with NGO and government	x 1	

Appendix XX

COPY

Invitation to NGOs

Ms. Asrath Usman
PhD Student
Curtin University of Technology
Bentley Campus, WA 6102
Australia
Email: asrath.usman@postgrad.curtin.edu
Mobile: [redacted]

7th January 2013

[redacted]

Male', Maldives

Respected Sir,

Subject: Need assistance for a Case Study Research on Women's Health in Male', Maldives

I am studying for Doctor of Philosophy in Public Health at Curtin University of Technology, Australia. My research involves "A Case study of Women's Health in Male', Republic of Maldives."

The proposed data collection period starts from January 2013 and will continue till May 2013.

I would greatly appreciate if a focal point from your organization could be arranged for me to contact for the following purpose.

1. Obtain official documents on women's health
2. Identify key personnel(s) for in-depth interview(s) on women's health
3. Identifying potential research participants (girls and women) for in-depth interviews and focus group discussion

Attached with this letter please find National Health Research Committee's approval, aim and objectives of the study and the interview guide for key informant.

Thank you,

Yours sincerely

Ms. Asrath Usman
Student ID No. 15682024 (Curtin University of Technology)

Appendix XXI

COPY

Invitation to community leaders from formal organisations

Ms. Asrath Usman
PhD Student
Curtin University of Technology
Bentley Campus, WA 6102
Australia
Email: asrath.usman@postgrad.curtin.edu
Mobile: [redacted]

7th January 2013

[redacted]

Male', Maldives

Respected Sir,

Subject: Need assistance for a Case Study Research on Women's Health in Male', Maldives

I am studying for Doctor of Philosophy in Public Health at Curtin University of Technology, Australia. My research involves "A Case study of Women's Health in Male', Republic of Maldives."

The proposed data collection period starts from January 2013 and will continue till May 2013.

I would greatly appreciate if a focal point from your Ministry could be arranged for me to contact for the following purpose.

4. Obtain official documents on women's health
5. Identify key personnel(s) for in-depth interview(s) on women's health

Attached with this letter please find National Health Research Committee's approval, aim and objectives of the study and the interview guide for key informant.

Thank you,

Yours sincerely

Ms. Asrath Usman
Student ID No. 15682024 (Curtin University of Technology)

COPY

Appendix XXII

Invitation to individual community leaders

Ms. Asrath Usman
PhD Student
Curtin University of Technology
Bentley Campus, WA 6102
Australia
Email: asrath.usman@postgrad.curtin.edu
Mobile: [redacted]

12th January 2013

[redacted]
Male', Maldives

Respected Madam,

Subject: Need assistance for a Case Study Research on Women's Health in Male', Maldives

I am studying for Doctor of Philosophy in Public Health at Curtin University of Technology, Australia. My research involves "A Case study of Women's Health in Male', Republic of Maldives."

One of the proposed data collection strategies includes collecting information from key community leaders on women's health.

I would like to invite you to participate in the study as a key community leader and share your opinion.

Attached with this letter please find National Health Research Committee's approval, aim and objectives of the study and interview guide for key informant.

Thank you

Yours sincerely

Ms. Asrath Usman
Student ID No. 15682024 (Curtin University of Technology)

COPY

Appendix XXIII

[redacted]

މާލެ، ދިވެހިރާއްޖެ

[redacted]

[redacted]

ވެދުންސަލާމަށްފަހު ދަންނަވަމެވެ.

އަޅުގަނޑަކީ، ޕަބްލިކް ހެލްތު ދާއިރާއިން އޮސްޓްރޭލިއާގެ ކާޓިން ޔުނިވަރސިޓީގައި ޕީ.އެޗް.ޑީ ހާސިލްކުރަމުންދާ ދަރިވަރިޔާއެއް. އަޅުގަނޑުގެ ދިރާސާ ބިނާވެފައިވަނީ މާލޭގައި ދިރިއުޅެމުންގެންދާ އަންހެންބޭބެފުޅުންގެ ސިއްހަތާއި ގުޅޭ ގޮތުންނެވެ.

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ވީމާ، ޖެނުއަރީ 2013 ން ފެށި 2013 އަށް މި އިންޓަރވިއުތަކާއި މަޝްވަރާ ބައްދަލުވުން ކުރިއަށްގެންދިއުމަށް މާފަންނު ހެލްތު ސެންޓަރ ކިބައިން ހުއްދަވައި ދެއްވުން އެދި ދަންނަވަމެވެ.

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23 ޑިސެމްބަރ 2012

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Appendix XXIV

Local resources available for counselling services in Malé city

If you find that you want to further talk about your concerns, there are certain places where counselling services are offered. Please do not hesitate to contact these places and ask for an appointment

- **Society for Health Education**
  M. Kulunu Vehi,
  Buruzu Magu, Male', Maldives.
  Telephone: 332-7117, Fax: 332-2221,
  Email: she8804@dhivehinet.net.mv

- **Youth Centre**
  Maldives Youth Centre, Mafannu,
  MCSE Building,
  Majeedhee Magu, Malé, Maldives
  Telephone number: 332-3860

- **Mind Matters Psychology & Consulting Services**
  H.Thila, First Floor,
  Bodufungandu Magu, Malé, Maldives
  Telephone: 3010008
  Email: mindmatters.maldives@gmail.com

- **Maldives Institute for Psychological Services, Training and Research**
  5B, 5th floor, H.Bandosge
  Dhubigas Magu, Malé, Maldives
  Telephone number: 3335758, Mobile:7442626

Appendix XXV

Adverse Events Protocol

If any adverse event emerges the researcher and research assistants are prepared with the knowledge and skills to address it.

Research Documents: Information

At the beginning of all data collection face-to-face activities including the in-depth interview with women and key informants, and the focus group interviews with women, men and community leaders, the researcher and /or research assistants will review by reading aloud the voluntary participation section with the potential participant(s) noting that participants can "…stop midway in the interview…"

"Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate, all the services you receive at this institution or anywhere else will continue and nothing will change. If you change your mind later, about not sharing your audio-taped recording or want to stop midway in the interview, upon such request we will not use the information shared with us and we respect your wish." (This is a section from the information pages)

Following this, completed assent and/or consent form (s) will be gathered before data collection commences. In addition, a list of local counselling resources will be given to the participants (Please see Appendix XXIV)

Moreover, the two formats of the Survey will have information for participants who are uncomfortable with responding to question(s) and may become distressed. For example, the beginning page on the computer based Survey for women, which will be delivered using Qualtric online program, will contain the explanation that participants can chose to not respond to any question(s) that they are not comfortable answering. In addition, the list of local counselling resources will be attached at the beginning and at the end of the Survey (Please see Appendix XXIV). Similarly the hard copy of the Survey will include this information.

In the events of any adverse events, the following protocol will be followed.

Adverse Events Protocol

Research participants	Potential adverse event	Intervention
Women 15-24 years Women 25-49years Women>50years	Mental distress: anxiety, irritable and anger which is recognised by verbal and non-verbal language such tears, easily startled by noises, movement, grief, difficulty in concentrating on questions being asked and thinking, speaking, and communicating	Steps The researcher and research assistant will stop the interview/focus group discussion or survey Stop the audio-tape recordings and any other activities Acknowledge women's condition Demonstrate empathy Allow her to verbalise her distress if she wants to, in privacy Listen to her Again provide the list of local resources available for counseling in Male', Republic of Maldives (Please refer to Appendix XXIV) Follow up on her two days later to investigate her condition Provide her with further information and advice Repeat step 5 & 6 once more. Invite her to participate in the research once more If she wants to continue, invite her on a day and time most convenient for the her and researcher If she does not want to participate further, demonstrate empathy and appreciate her willingness and strength After informing to her, destroy information she shared during the data collection procedure

	Physical distress: recognised by verbal and non-verbal language of looking pale and tired and exhausted, malaise, listless and lack of energy	Steps The researcher and research assistant will stop the interview/focus group discussion or survey Stop the audio-tape recordings and any other activities Acknowledge women's condition Demonstrate empathy Provide her with fresh air, water, refreshment, and a 45 minutes to one hour rest from the data collection activities Assess her condition after one hour Invite her to continue data collection procedure, if she verbalises feeling better and demonstrates recovery of physical strength and energy Otherwise postpone to another day and time most convenient for the woman and researcher Repeat steps 1 to 7 if similar behavior of physical distress is recognised and observed during the second attempt in data collection. Provide the list of local resources available for counseling in Male', Republic of Maldives (Please refer to Candidacy Appendix XXIV, page 69) Follow up on her two days later to investigate her condition If she does not want to participate further, demonstrate empathy and appreciate her willingness and effort After informing to her, destroy information she shared during the data collection procedure
Men > or equal to 18years	Mental distress: recognised by verbal and non-verbal language such as anxiety, irritable and anger which could not be controlled, easily startled by noises, movement, grief, tearful, difficulty in concentrating on questions being asked and thinking, speaking, and communicating	Follow intervention steps 1-13 for mental distress as for women participants. Please note that focus groups discussions for men will be conducted by a trained male interviewer. In an incident of adverse events he will be trained to provide support, counseling and guidance according to the above mentioned steps. In addition, the male interviewer will have to immediately inform, Ms. Asrath Usman (researcher) who will be leading the field work activities, after carrying our Intervention Step 6 for mental distress.
	Physical distress: recognised by verbal and non-verbal language of looking pale and tired and exhausted, malaise, listless and lack of energy	Follow intervention steps 1-12 for physical distress as for women participants. Please note that focus groups discussions for men will be conducted by a trained male interviewer. In an incident of adverse events he will be trained to provide support, counseling and guidance according to the above mentioned steps. In addition, the male interviewer will have to immediately inform, Ms. Asrath Usman (researcher) who will be leading the field work activities, after carrying out intervention Step 4 for physical distress.
Community leaders	Mental & Physical distress	Follow intervention steps 1-13 in any incident of mental distress and intervention steps 1-12 in any incident of physical distress

SAMPL

Appendix XXVI

Confidentiality Agreement for Research Assistant

This confidentiality agreement is for Research Assistants who will be assisting in data collection and transcribing the recorded interviews and focus group discussions for the Case Study Research on Women's Health in Male', Republic of Maldives.

Name of Student Researcher: Ms Asrath Usman
Name of Supervisor: Associate Professor Maryanne Doherty
Name of Organization: Curtin University of Technology, Western Australia
Name of Research Study: A Case Study of Women's Health in Male', Maldives.

Introduction
My name is Asrath Usman. I am studying for PhD in Public Health at Curtin University of Technology, Australia. My supervisor is Associate Professor Maryanne Doherty. We are doing a research study on Women's Health in Male', Republic of Maldives. In this study, we will be doing interviews, focus group discussions and a survey from January 2012, till 5 months.

We want you to be part of this research as a Research Assistant. Your responsibility as a Research Assistant includes the following;

- Completing three(3) focus group discussion with men
- Record focus group discussions
- Transcribe audio recordings

The information shared with us by the research participants is confidential. This includes audio tapes, contents in the tapes, transcribed documents; any notes/pictures/diagrams obtained through the interactive activities in focus group discussions and filled survey questionnaires. In addition, those who share this information with us, as research participants should remain anonymous.

Before we ask you to take this responsibility and your agreement, we must obtain your explicit consent for the following;

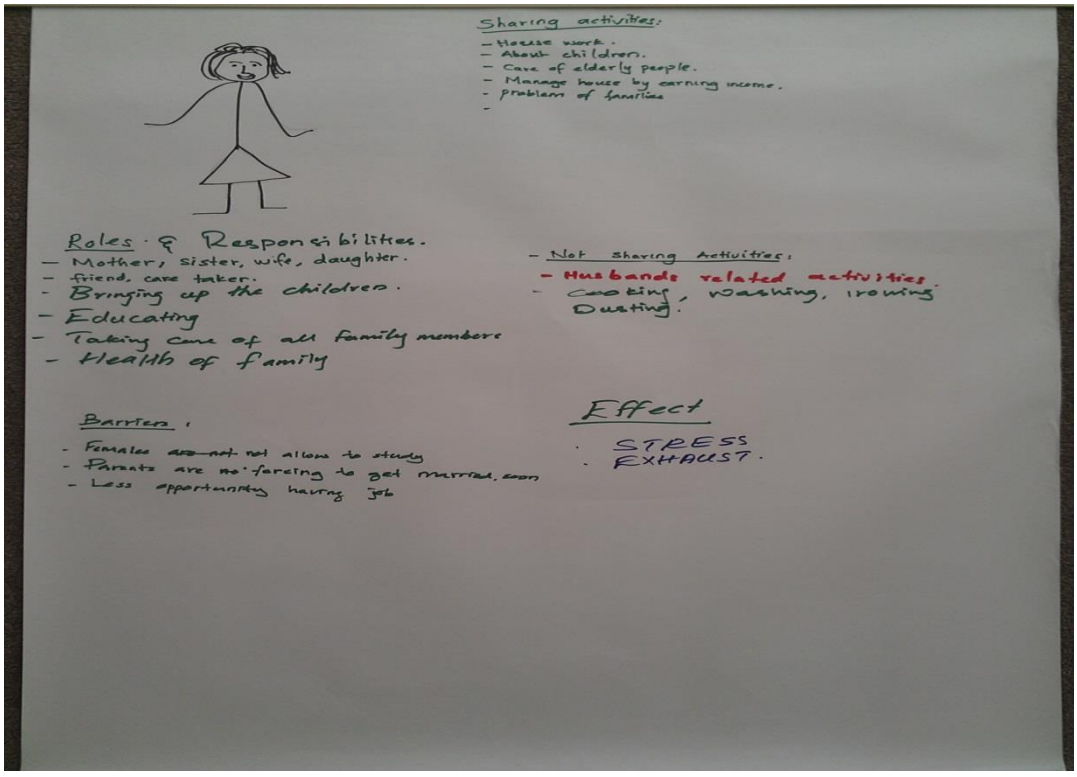
- ☐ I will not reveal any of the contents.
- ☐ I will not reveal identities of the participants (women, men and community leaders and stakeholders).
- ☐ I will not keep any copies of the information nor allow third party to access them.
- ☐ I will delete interviews or any other relevant files from my computer after transcription.

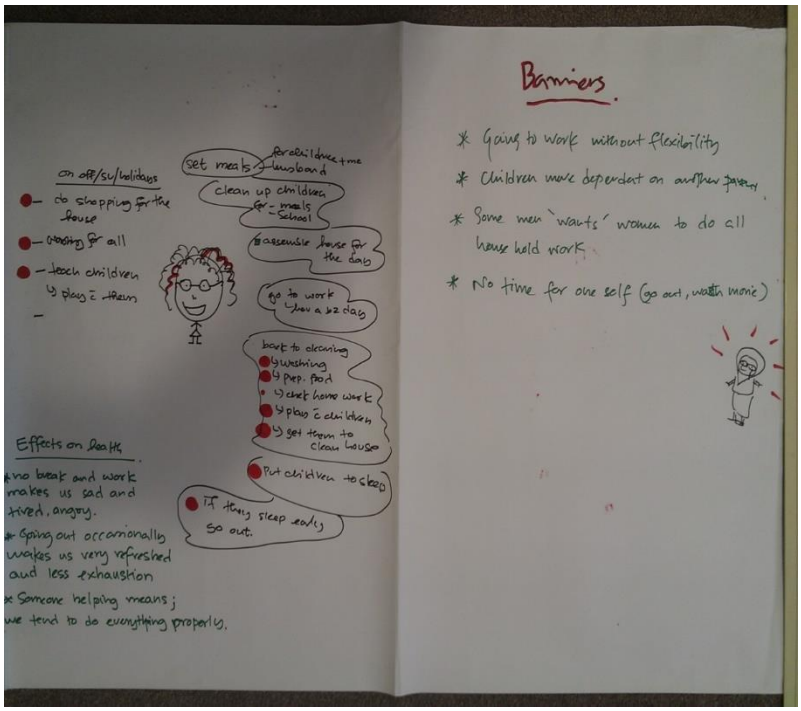
If you agree to these conditions, please provide your signature below
Research Assistant's Signature: _____
Research Assistant's Name and National ID Number:
Date: _____
Signature of Principal Investigator: _____
Name of Principal Investigator:
_____Date:_____

Note: The Research Assistant will be given a copy of this form to retain for her/his records.

Appendix XXVII

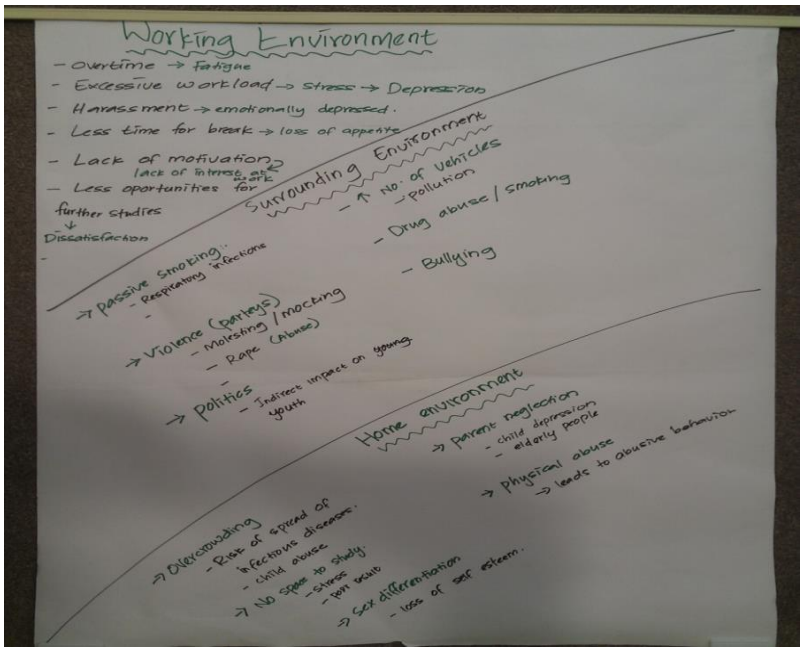
Some posters prepared by young women (FGD participants)

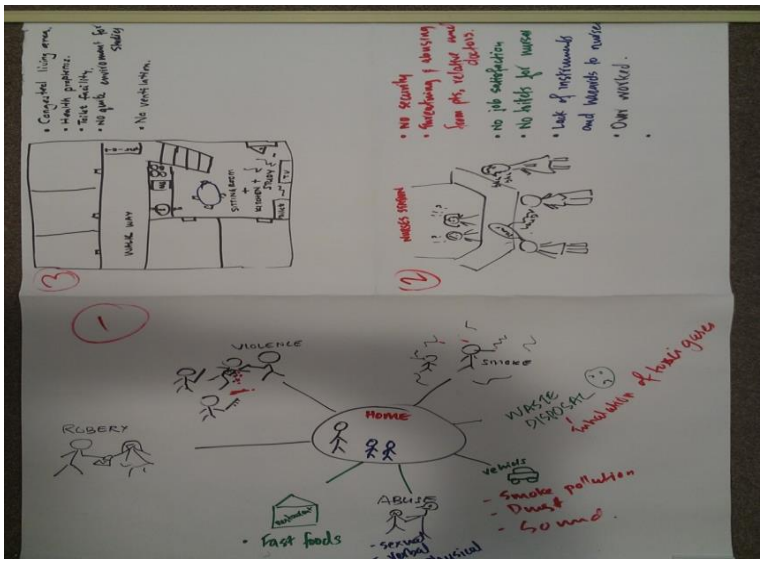




Barriers

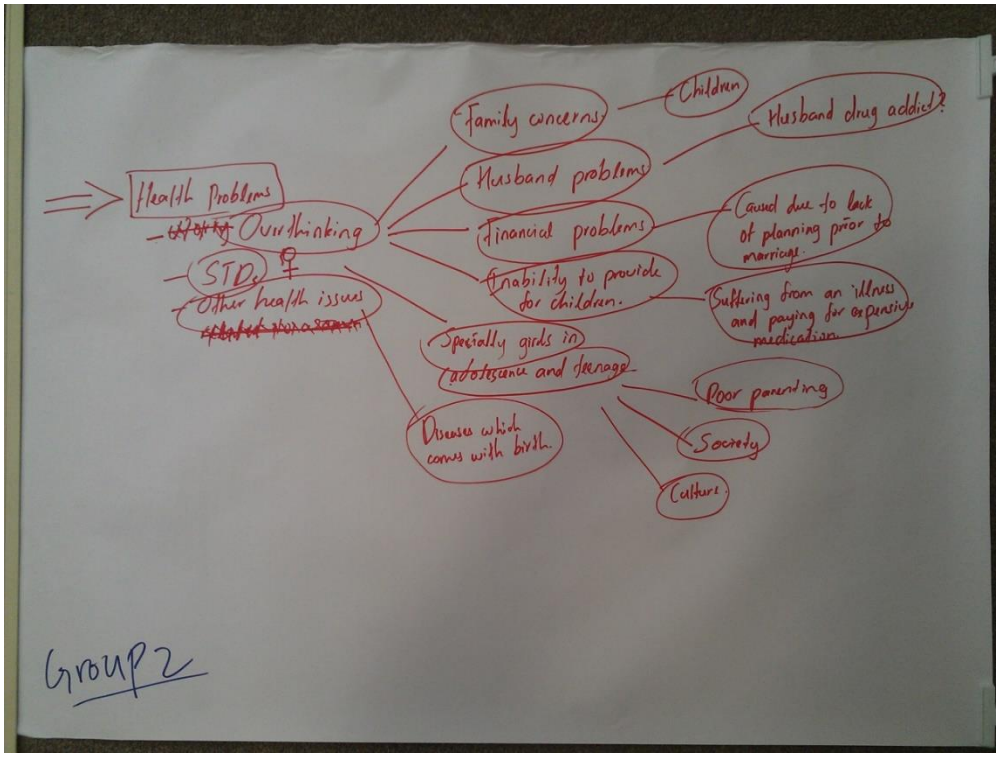
* Going to work without flexibility
* Children more dependent on another parent
* Some men 'wants' women to do all house hold work
* No time for one self (go out, watch movie)

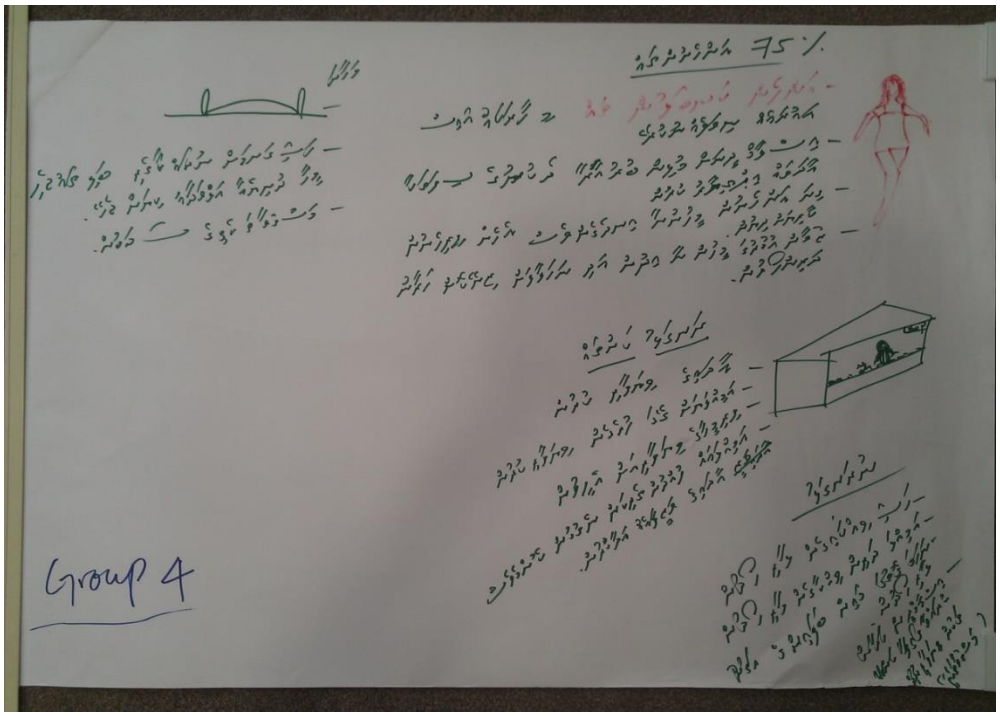



Home
Violence
Robery
Fast foods
Vehicles
Abuse
Smoke

Appendix XXVIII

Some posters prepared by men (FGD participants)





Appendix XXIX

Survey Questionnaire: Women's Health in Male' City

SECTION 1 - PARTICIPANT DETAILS

1. How old are you?

2. What is the highest level of education you have completed?

- o Non-formal education
- o Primary
- o 'A' Level
- o First Degree
- o Certificate
- o Pre-school
- o 'O' Level
- o Diploma
- o Master's certificate/ Above

3. What is your current marital status? (Tick the appropriate response)

- o Never married
- o Widowed
- o Separated
- o In a committed relationship, not living with partner
- o Married
- o Divorced
- o In a committed relationship, living with partner

4. Do you have children?

- o Yes
- o No

5. If you have children, please indicate the number of children in each age group?

- o Birth – 6 Years
- o 13 years – 18 Years
- o 7 Years – 12 Years
- o > 18 Years

6. Which one of the following best describes your main work status over the past 12 months?
(Tick more than one)

- o Government employee
- o Non-government employee
- o Self-employed
- o Non-paid (family business, volunteer organization)
- o Student
- o Homemaker (primary activity household task without pay)
- o Retired
- o Unemployed (able to work) - excluding homemaker
- o Unemployed (not able to work due to health status)

7. Is there any other way that you get an income?

- o Yes (If yes, please specify how you get the income, examples include pension allowance, single parent allowance, disability allowance, etc.)
- o No

8. **Taking the past year, can you tell me what your personal average monthly earnings have been?**
The amounts are in Maldivian Rufiyaa.

- o < 2,000
- o 5,000 – 9,999
- o 15,000 – 19,999
- o 25,000 – 29,999
- o 2,000 – 4,999
- o 10,000 – 14,999
- o 20,000 – 24,999
- o >30,000

9. How much of the money that you earn do you give for household expenses?
(Tick one box)

- o Nothing
- o About half
- o Nearly all / All
- o Less than half
- o More than half

10. Taking the past year, can you tell me what the <u>average monthly earnings of the household</u> have been?
The amounts are in Maldivian Rufiyaa.

- o <2,000
- o 10,000 – 14,999
- o 25,000 – 29,999
- o 40,000 – 44,999
- o 2,000 – 4,999
- o 15,000 – 19,999
- o 30,000 – 34,999
- o 45,000 – 49,999
- o 5,000 – 9,999
- o 20,000 – 24,999
- o 35,000 – 39,999
- o >50,000

11. During the past 4 weeks, how many hours in a typical day did you spend on the following activities?
(Please tick one box against each activity)

	None	Less than 4 hours	4 – 8 hours	9 – 16 hours	17 – 24 hours
Household activities (preparing meals, washing clothes, cleaning, shopping for household items, etc.)	○	○	○	○	○
Taking responsibility and care of children in the family	○	○	○	○	○
Taking responsibility and care of elderly family member (s)	○	○	○	○	○
Taking responsibility and care of disable family member(s)	○	○	○	○	○
Taking responsibility and care of siblings (own brothers and sisters)	○	○	○	○	○
Education/Studying/Training	○	○	○	○	○
Paid employment including overtime & secondary jobs (employer or self-employed)	○	○	○	○	○
Leisure/ Social life in the home (watching TV, reading, relaxing, thinking)	○	○	○	○	○
Leisure/ Social life outside the home(visiting friends, parks, sports)	○	○	○	○	○

12. The following 6 statements describe some major life decisions.

Please indicate who is mainly involved in making the decision, whether it is you, your husband/partner or both of you jointly, and a family member or by someone else.

	You	Husband/Partner	You and your Husband/ Partner jointly	Family member	Someone else
Who usually decides how the money that you earn will be used?	○	○	○	○	○
Who usually decides how the money that your husband/partner earns will be used?	○	○	○	○	○
Who usually makes decision about health care for yourself?	○	○	○	○	○
Who usually makes decisions about making major household purchases?	○	○	○	○	○
Who usually makes decisions about making major purchases for daily household needs?	○	○	○	○	○
Who usually makes decision about visits to your family or relatives?	○	○	○	○	○

SECTION 2 - LIVING CONDITION

13. How many years have you been living in Male' city (Male', Hulhumalé and Villimale)?

14. What are your current living arrangements, in regard of who you are living with or who is living with you?

- ○ Live with my parents and/or siblings
- ○ Live with husband/partner
- ○ Live with host family (relative)
- ○ Live alone
- ○ Live with my own children
- ○ Live with husband/partner and children
- ○ Live with host family (non-relatives)

15. Do you own or rent your home?

- ○ Own
- ○ Rent
- ○ Other (please specify)

16. Is the head of the household a male or a female?
(The person you generally consider responsible for the household)

- ○ Male
- ○ Female

- ○ Both

17. How many people currently live in your household?
(Including yourself, children, domestic servants, helpers, lodgers or friends who live and share food)?

18. How many rooms in your household are used exclusively for sleeping?

19. What is the approximate size of your living and sleeping area?

- ○ <100 Square Feet
- ○ 100 – 299 Square Feet
- ○ 300 – 499 Square Feet
- ○ 500 – 699 Square Feet
- ○ 700 – 999 Square Feet
- ○ 1,000 – 1,299 Square Feet
- ○ 1,300 – 1,499 Square Feet
- ○ >1,500 Square Feet

20. The following 12 statements indicate living conditions.

Please read each statement carefully and indicate the degree to which you agree or disagree. There are no right or wrong answers. We are just interested in your view point.

Consider the following;

	Strongly Agree	Agree	Disagree	Strongly Disagree
Adequate space/area for washing clothes, cooking and bathroom facilities	○	○	○	○
Adequate supply of pure and clean water	○	○	○	○
Adequate sleeping facilities	○	○	○	○
Adequate facilities for relaxing and spending time with family	○	○	○	○
Adequate facilities for storing personal belongings (such as clothes, jewelleries, books, etc.)	○	○	○	○
Adequate ventilation and movement of clean and fresh air	○	○	○	○
Adequate drainage system for removing waste water safely from home	○	○	○	○
Adequate waste disposable and safety at home	○	○	○	○
Adequate waste disposable and safety in the community	○	○	○	○
Adequate arrangement of living condition to prevent breeding of mosquito, flies, mice, rats and other harmful pests	○	○	○	○
Adequately designed home environment to prevent from life- threatening dangers such as electrocution, gas explosion, and asphyxia, injury from fire, and structural collapse (buildings)	○	○	○	○
Adequate infrastructure to easily move around (lifts, stairs)	○	○	○	○
Adequate measures to prevent	○	○	○	○
crime and provide a safe and secure neighbourhood	○	○	○	○

The next 5 questions ask about your diet and eating habits.

21. During the past 30 days, how often did you go hungry because there was not enough food in your home?

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Most of the time
- ○ Always

The next 2 questions ask about eating breakfast.

22. During the past 30 days, how often did you eat breakfast?

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Most of the time
- ○ Always

23. What is the main reason you do not eat breakfast?

- ○ I always eat breakfast
- ○ I do not have time for breakfast
- ○ I cannot eat early in the morning
- ○ There is not always food in my home
- ○ Other, please specify

24. During the past 30 days, how many times per day did you eat the following food?

	I did not eat fruit/vegetable during past 30 days	Less than one time per day	1 – 2 times per day	3 – 4 times per day
Vegetables such as pumpkin	○	○	○	○
Fruit such as bananas	○	○	○	○

25. Why did you not eat fruits and vegetables?

- ○ Too expensive
- ○ Don't like taste
- ○ Doesn't keep for very long
- ○ They're boring
- ○ Difficult / can't be bothered to prepare or cook
- ○ Others in household / family don't like the taste
- ○ No convenience place to buy
- ○ Other (please specify)

The next 4 questions ask about physical activity.

26. Physical activity is any activity that increases your heart rate and makes you get out of breath some of the time. Physical activity can be done in sports, playing with friends, or walking. Some examples of physical activity are running, fast waking, biking, dancing, football, and swimming.

Can you please indicate the time you spend in physical activity in the past 7 days?

	0 days	1 – 2 days	3 – 4 days	5 – 7 days
How many days were you physically active for a total of at least 60minutes per day?	○	○	○	○
During a typical or usual week, on how many days are you physically active for a total of at least 60 minutes per day?	○	○	○	○
During the past 7 days, on how many days did you do stretching exercises, such as toe touching, knee bending, or leg stretching?	○	○	○	○
During the past 7 days, on how many days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting?	○	○	○	○

SECTION 3 - HEALTH AND HEALTH SERVICES

The next two questions, we are interested to understand how much importance you give to your own health.

27. Please tick the statement that best describes your views of your own health

- ○ When I am sick, I usually go to a health practitioner
- ○ When I am sick, I may go and see a health practitioner
- ○ When I am sick, I am unlikely to go to see a health practitioner
- ○ When I am sick, I will not see a health practitioner

28. The following statements may reflect your view and behaviour towards health.

Please tick all statements that best describes it.
There are no right or wrong answers.

- ○ I give more priority to my children and their health than my own health
- ○ I give more priority to my husband/partner's health than my own health
- ○ I give more priority to my parents/ family members (other than own children's) health
- ○ I am too busy doing household chores to bother about my own health
- ○ I am too busy in my job to take care of my health
- ○ I am too busy studying to take care of my health
- ○ I don't have adequate information about health service providers/places
- ○ I don't have adequate information about health living
- ○ I don't have easy access to health services
- ○ My husband/partner does not approve of me seeking health care
- ○ My husband/partner does not support me in seeking health care
- ○ Not able to give much importance to health, it's the lowest priority in my life
- ○ Other (please specify)

29. Access to health information and services.

How often do you use the following sources to obtain health information?

	Not At All	Occasionally	Frequently
Newspaper	○	○	○
Magazine	○	○	○
Television	○	○	○
Radio	○	○	○
Internet	○	○	○
Family	○	○	○
Friend	○	○	○
Teachers/Counselors	○	○	○
Health provider	○	○	○
Religious leader	○	○	○
Other (please specify)	○	○	○

30. Do you feel that there are adequate health services close to your home?

○ Yes ○ No

31. When was the last time you visited a doctor or a health provider?
(Tick one box)

○ Within the last week
○ Within the last month
○ Within the last 6 months
○ Within the last one year
○ Within the last 2 years
○ Never

32. Was the visit for any of the following reason(s)?
In this question please tick one or more boxes that reflect your behaviour.

○ Your own health
○ Your family member's health
○ Household member's health
○ Friend's health
○ Other (please specify)

I would now like to ask few questions about your own health and use of health services.

33. In general, would you describe your overall health as excellent, very good, good, fair, poor or very poor?

○ Excellent
○ Very Good
○ Good
○ Fair
○ Poor
○ Very poor

34. **During the past 6 weeks did you consult a doctor, health professional or others because you yourself were sick?**
(Tick more than one)

○ I was not sick
○ I was sick, but consulted no-one
○ Specialist doctor
○ General doctor
○ Nurse/Midwife
○ Pharmacist
○ Psychologist/Psychiatrics
○ Counsellor
○ Community/Family Health worker
○ Traditional Dhivehi beys Practitioner (Dhivehi beys)
○ Traditional Sorcery (Fandithaverikan)
○ Other (please specify)

35. Where do you seek health care?
Please tick on the boxes, it could be one or more than one source.

	Never	Rarely	Sometimes	Often	All of the Time
Indira Gandhi Memorial Hospital	○	○	○	○	○
ADK Hospital	○	○	○	○	○
Private Clinic	○	○	○	○	○
Health Centre	○	○	○	○	○
Pharmacy	○	○	○	○	○
Hospital/Health Centre Aboard(India, Sri-Lanka, Singapore, etc)	○	○	○	○	○
Traditional Dhivehi Beys Practitioner (Dhivehi beys)	○	○	○	○	○
Traditional Sorcery(Fandithaverikan)	○	○	○	○	○

Visit pharmacy and tell them about my health problem and follow their advice/treatment	○	○	○	○	○
Don't go to anyone/place, but search the health problem on the Internet and follow website advise/treatment	○	○	○	○	○
Other (please specify)	○	○	○	○	○

36. In considering the health facilities in your community. How satisfied are you with the care you received from the following facilities?

Please indicate the degree to which you agree or disagree. There are no right or wrong answers. We are just interested in your view point.

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Indira Gandhi Memorial Hospital	○	○	○	○	○
ADK Hospital	○	○	○	○	○
Private Clinic	○	○	○	○	○
Health Centre	○	○	○	○	○
Pharmacy	○	○	○	○	○
Hospital/Health Centre Aboard (India, Sri-Lanka, Singapore, etc)	○	○	○	○	○
Traditional Dhivehi BeysPractitioner (Dhivehi beys)	○	○	○	○	○
Traditional Sorcery(Fandithaverikan)	○	○	○	○	○
Other (please specify)	○	○	○	○	○

37. Do you feel that Aasandha (National Health Insurance Scheme) covers your necessary health needs?

○ Yes ○ No

○ I have never used Aasandha for my health needs

38. If No or you have not used Aasandha please select statement(s) below to give us reasons.

Please make sure that there are no right or wrong answers. We are just interested in your view point.

○ Aasandha is inadequate to meet my basic health needs
○ Aasandha is inadequate to meet my inpatient care services
○ Aasandha is inadequate to meet my outpatient care services
○ It is difficult to obtain health services through Aasandha (National Health Insurance Scheme)
○ The necessary doctor's consultation is not accessible from Aasandha
○ The necessary medications and injections are not accessible from Aasandha
○ The necessary laboratory tests and other medical tests are not accessible from Aasandha
○ Other (please specify)

39. During the past 6 weeks, did you spend your own money or anyone else spend their own money (other than Aasandha and health welfare fund) for obtaining health services for you and/or any of your household members?

Try to be as exact as possible. If you are not sure, however, please give us your best estimates of the total amount that was paid.
The amounts are in Maldivian Rufiyaa (MVR).

	None	< 1,000	1,000 – 2,999	3,000 – 4,999	5,000 – 6,999	7,000 – 8,999	9,000 – 9,999	> 10,000
Visit /Consult health care providers	○	○	○	○	○	○	○	○
Hospital admission	○	○	○	○	○	○	○	○
Prescription medicines	○	○	○	○	○	○	○	○
Laboratory tests	○	○	○	○	○	○	○	○
Medical tests or procedures	○	○	○	○	○	○	○	○
Non-prescription (over-the-counter) medicines	○	○	○	○	○	○	○	○
Transport in getting health care services	○	○	○	○	○	○	○	○

Food/Meals during the time of receiving health care	○	○	○	○	○	○	○	○
Accommodation during the time of receiving health care	○	○	○	○	○	○	○	○

40. If you or a member of your family has received medical care from aboard (for example, Sri-Lanka, India, Singapore, Malaysia, etc) while living in Male' City, why did you choose the hospital / health centre aboard?
Please tick on the appropriate boxes.
(Tick more than one)

- ○ Never went aboard for medical care
- ○ A specialist doctor was available
- ○ Special hospital care was required that was not available in Male' City
- ○ Health services are available in the Male' city, but not satisfied with the services
- ○ Difficulties in getting an appointment to general doctor / specialist doctor in Male' City
- ○ Wanted a second opinion from another doctor/specialist doctor
- ○ Cost of health care is high in Male' City
- ○ Easy access to services aboard than in Male' City
- ○ Health problem was not getting better with the services available in Male' City and there was no other choice
- ○ Ensure to maintain confidentiality and anonymity of ourselves, illness and treatment
- ○ Other (please specify)

41. Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical care was any of the following a problem or not.

Please read each statement carefully and indicate the degree to which each statement reflects your view.
Please make sure there are no right or wrong answers

	Never	Rarely	Sometimes	Most of the Time	Always
Getting permission to go	○	○	○	○	○
Family members negative attitude towards medical care	○	○	○	○	○
Husband/partner's negative attitude towards medical care	○	○	○	○	○
Getting money needed for the treatment	○	○	○	○	○
Distance to the health facility	○	○	○	○	○
Having to take transport	○	○	○	○	○
Not wanting to go alone	○	○	○	○	○
Not able to leave my dependents (children, elderly or disable family member) alone at home and seek health care for my own self	○	○	○	○	○
Difficulties in getting a doctor's appointment	○	○	○	○	○
Concern that there may not be any health provider	○	○	○	○	○
Concern that there may not be a female health provider	○	○	○	○	○
Concern that necessary medicines may not be available	○	○	○	○	○
Concern that necessary laboratory or medical investigation facilities may not be available	○	○	○	○	○
Concern that health practitioner will be rude and unfriendly	○	○	○	○	○
Concern that health practitioner will not listen and be uncaring	○	○	○	○	○
Other (please specify)	○	○	○	○	○

42. What do you think should be improved in providing better health care for women in Male' city? Please be specific?

Appendix XXX

Outline of the survey questionnaire and number of questions

Section / Question	Questions	No of questions
1: Demographics / Roles and responsibilities / Decision making Q01 - Q12	Demographics – information obtained; age, education (MDHS), marital status, number of children, occupation (question from WHO STEPS Instrument) , personal income, income expenditure (MDHS), household income	10
	Roles and responsibilities over nine dimensions in daily life in relations to the number of hours spent on these activities (Adapted from the Q98. Survey on Poverty and Social Exclusion)	9
	Decision making over six dimensions in life in relation to who made decision on personal income expenditure, husband's income expenditure, health care for own self, major household purchase, daily household purchase, visits to family or relatives (MDHS)	6
2: Living condition Q13 - Q20	Number of years lived in Male' city, Current living arrangements, accommodation tenure ship, gender of the head of household, number of people accommodating household, rooms used exclusively for sleeping in the household. Size of living and sleeping area	7
	13 items explored on a Likert scale to identify living condition factors and perception on whether these factors were adequate	13
3: Diet and physical activity Q21 - Q26	One question asking about food accessibility during past 30 days, two questions on consumption of breakfast and reason for not having it	3
	Two questions on frequency of vegetable and fruit consumption and one question on reasons why these two food items not included in diet	2
	Four questions asked on frequency and duration of physical activity in the past seven days	4
4: Health and health care access Q27 - Q42	View and behaviour towards health and health priority	2
	Health information access	11
	Perception on health services; last time visited a doctor or health provider; reasons for last visit; self-assessed health; health-seeking behaviour during sickness	5
	Facilities where health care were accessed and	11
	Satisfaction with the facilities	9
	Perception on National Health Insurance Scheme, Perception why National Health Insurance Scheme did not cover necessities,	2
	Out of pocket health expenditure,	9
	Reasons for getting medical care aboard,	1
	Barriers to health care access,	16
	Recommendations to improve women's health in Male' city	1
	Total questions	**121**

Appendix XXXI

Details of questions obtained from previous surveys

Section	No	Question	MDHS (Ever-Married Women's questionnaire)	MDHS (Youth and Young Adult Questionnaire)	Women's Health and Life Experiences Survey	Global School Health Survey	WHO STEPS survey	World Health Survey (WHO)	Survey on Poverty and Social Exclusion (UK)
1	1	How old are you				GSHS (Q1)	CORE: Demographic Information (C3)		
	2	What is the highest level of education you have completed?	MDHS (Q106)	MDHS (Q105)				Q1003	
	3	What is your current marital status? (Tick the appropriate response)					EXPANDED: Demographic information, (C7 modified)	Q1008	
	4	Do you have children?	Q201 (modified)						
	5	If you have children, please indicate the number of children in each age group?			Q417 modified				
	6	Which one of the following best describes your main work status over the past 12 months?					EXPANDED: Demographic information (C8)		
	7	Is there any other way that you get an income?							

	8	Taking the past year, can you tell me what your personal average monthly earnings have been?							
	9	How much of the money that you earn do you give for household expenses?		Q119 (option 1- "nothing" is added)					
	10	Taking the past year, can you tell me what the average monthly earnings of the household have been?					C10b - options givens		
	11	During the past 4 weeks, how many hours in a typical day did you spend on the following activities? (9 measures)							Q98 (answer options modified to categorical scale of hours) page 27
	12	The following 6 statements describe some major life decisions. Please indicate who is mainly involved in making the decision, whether it is you, your husband / partner or both of you jointly, and a family member or by someone else. (6 sub-questions)	MDHS (Q818, Q820, Q821, Q822, Q23, Q824) option of family member is added in the current survey						
2	13	How many years have you been living in Male' city (Male', Hulhumalé and VilliMale)?							
	14	What are your current living arrangement, in regard of who you are living with or who is living with you?			MVD Q2				
	15	Do you own or rent your home?							

	16	Is the head of the household a male or a female?			Q2 (Household Selection Form)				
	17	How many people currently live in your household?					C9 - age not limited		
	18	How many rooms in your household are used exclusively for sleeping?			Q7				
	19	What is the approximate size of your living and sleeping area?							
	20	The following 12 statements indicate living conditions. Please read each statement carefully and indicate the degree to which you agree or disagree. (13 measures statements - Likert scale)			Q8 modified				
3	21	During the past 30 days, how often did you go hungry because there was not enough food in your home?				GSHS (Q10)			
	22	During the past 30 days, how often did you eat breakfast?				GSHS (Q11)			
	23	What is the main reason you do not eat breakfast?				GSHS (Q12)			
	24	a) During the past 30 days, how many times per day did you eat the following food? a)Vegetables such as pumpkin (last two options modified)				GSHS (Q14)			
		b) During the past 30 days, how many times per day did you eat the following food? b)Fruit such as bananas (last two options modified)				GSHS (Q13)			
	25	Why did you not eat fruits and vegetables?							
	26	a) How many days were you physically active for a total of at least 60minutes per day? (last three options consolidated and modified)				GSHS (Q81)			
		b) During a typical or usual week, on how many days are you physically active for a total of at least 60 minutes per day? (last three options consolidated and modified)				GSHS (Q82)			

		c) During the past 7 days, on how many days did you do stretching exercises, such as toe touching, knee bending, or leg stretching? (last three options consolidated and modified)				GSHS (Q83)			
		d) During the past 7 days, on how many days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting? (last three options consolidated and modified)				GSHS (Q84)			
4	27	The next two questions, we are interested to understand how much importance you give to your own health. Please tick the statement that best Describes your views of your own health (4 options)							
	28	The following statements may reflect your view and behaviour towards health. (12 options - multiple response answers)							
	29	How often do you use the following sources to obtain health information? (10 sources)	Q108-111 - modified	Q122, Q123, Q124, Q125 - question modified and additional subcategories included & also Likert scale altered					
	30	Do you feel that there are adequate health services close to your home?							
	31	When was the last time you visited a doctor or a health provider?						Q7000 (modified)	
	32	Was the visit for any of the following reason(s)?						Q7001 (modified)	

	33	In general, would you describe your overall health as excellent, very good, good, fair, poor or very poor?			Q201 - option of very good added				
	34	During the past 6 weeks did you consult a doctor, health professional or others because you yourself were sick?	Q334 modified		Q208 - modified only duration from 4 weeks to 6 weeks			Q7302 (modified)	
	35	Where do you seek health care?						Q7300 & Q7301 (modified)	
	36	In considering the health facilities in your community. How satisfied are you with the care you received from the following facilities?							
	37	Do you feel that Aasandha (National Health Insurance Scheme) covers your necessary health needs?							
	38	If No or you have not used Aasandha please select statement(s) below to give us reasons.							
	39	During the past 6 weeks, did you spend your own money or anyone else spend their own money (other than Aasandha and health welfare fund) for obtaining health services for you and/or any of your household members?	Q216-Q222 (Health expenditure form)					Q7Q7309-Q7313 (modified)	
	40	If you or a member of your family has received medical care from aboard (for example, Sri Lanka, India, Singapore, Malaysia, etc.) while living in Male' City, why did you choose the hospital / health centre aboard?						Q7005-Q7015 (modified according to qualitative findings)	

	41	Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical care was any of the following a problem or not?	MDHS Q1014 - 8 sub-questions (added 7 more sub-questions from the qualitative findings)						
	42	What do you think should be improved in providing better health care for women in Male' city? Please be specific?							

Key:

Maldives Demographic and Health Survey 2009(MDHS), Ever-married women's questionnaire (Ministry of Health and Family, 2010b).

Maldives Demographic and Health Survey 2009(MDHS), Youth and Young Adult Questionnaire (Ministry of Health and Family, 2010b).

The Maldives study on Women's Health and Life Experiences Survey (Fulu).

Global School Health Survey (Shifa, 2009).

WHO Steps Survey (World Health Organization, 2005).

World Health Survey (World Health Organization, 2002).

Poverty and Social Exclusion Survey (UK) (Bradshaw et al., 1998).

Appendix XXXII

Population distribution in Maldives and Male'

Source: Census (2006)

Total population of Maldives: 298,968

Total population in the capital island Male': 103,693 (34.7% of the total population)

Sex Ratio(Whole Population)

Male	Female	Sex Ratio
151,459 (50.7%)	147,509 (49.3%)	103

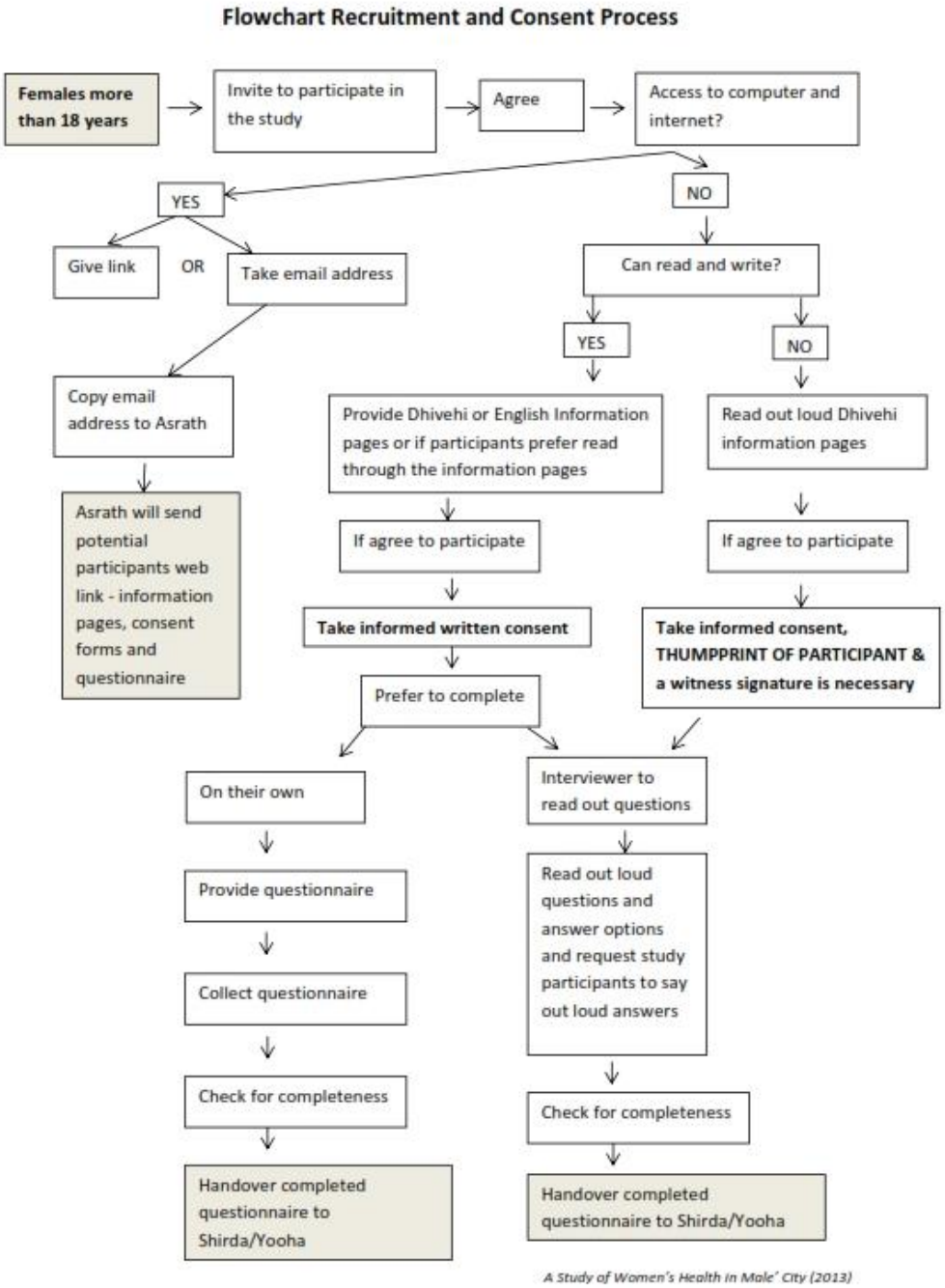
Male' Population distribution:

Age	15-24years	25-44yrs	45-64yrs	65+
%	30.6	30.4	11.1	2.7

Sex Ratio - 100 (in the capital island Male')
Media Age: 22years

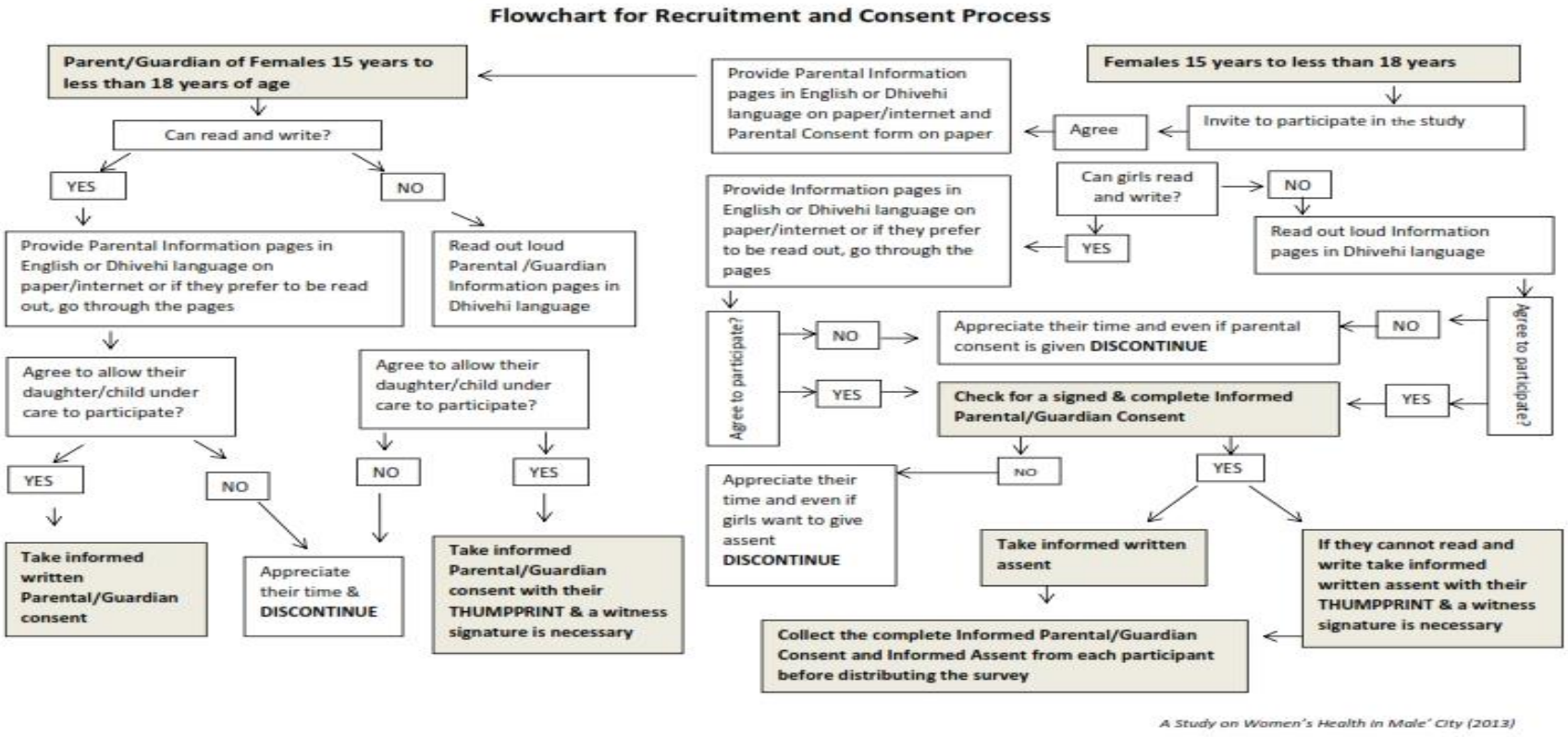
Appendix XXXIII

Flow chart 1



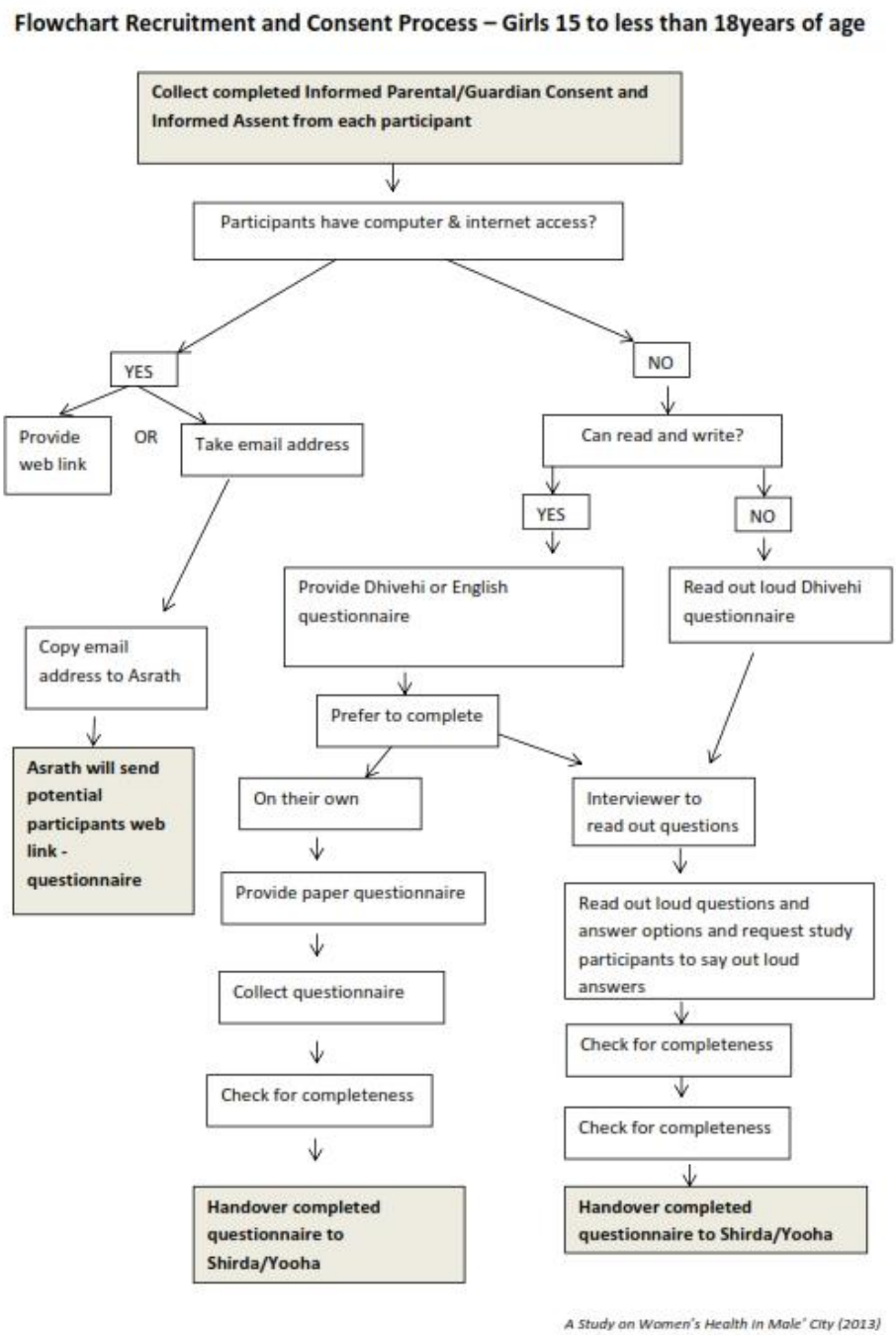
Appendix XXXIV

Flow chart 2


Flowchart for Recruitment and Consent Process
Parent/Guardian of Females 15 years to less than 18 years of age
Can read and write?
YES
NO
Provide Parental Information pages in English or Dhivehi language on paper/internet or if they prefer to be read out, go through the pages
Read out loud Parental /Guardian Information pages in Dhivehi language
Agree to allow their daughter/child under care to participate?
YES
NO
Take informed written Parental/Guardian consent
Agree to allow their daughter/child under care to participate?
NO
YES
Appreciate their time & DISCONTINUE
Take informed Parental/Guardian consent with their THUMPPRINT & a witness signature is necessary
Provide Parental Information pages in English or Dhivehi language on paper/internet and Parental Consent form on paper
Females 15 years to less than 18 years
Agree
Invite to participate in the study
Provide Information pages in English or Dhivehi language on paper/internet or if they prefer to be read out, go through the pages
Can girls read and write?
NO
YES
Read out loud Information pages in Dhivehi language
Agree to participate?
NO
YES
Appreciate their time and even if parental consent is given DISCONTINUE
Agree to participate?
NO
YES
Check for a signed & complete Informed Parental/Guardian Consent
NO
YES
Appreciate their time and even if girls want to give assent DISCONTINUE
Take informed written assent
If they cannot read and write take informed written assent with their THUMPPRINT & a witness signature is necessary
Collect the complete Informed Parental/Guardian Consent and Informed Assent from each participant before distributing the survey
A Study on Women's Health in Male' City (2013)

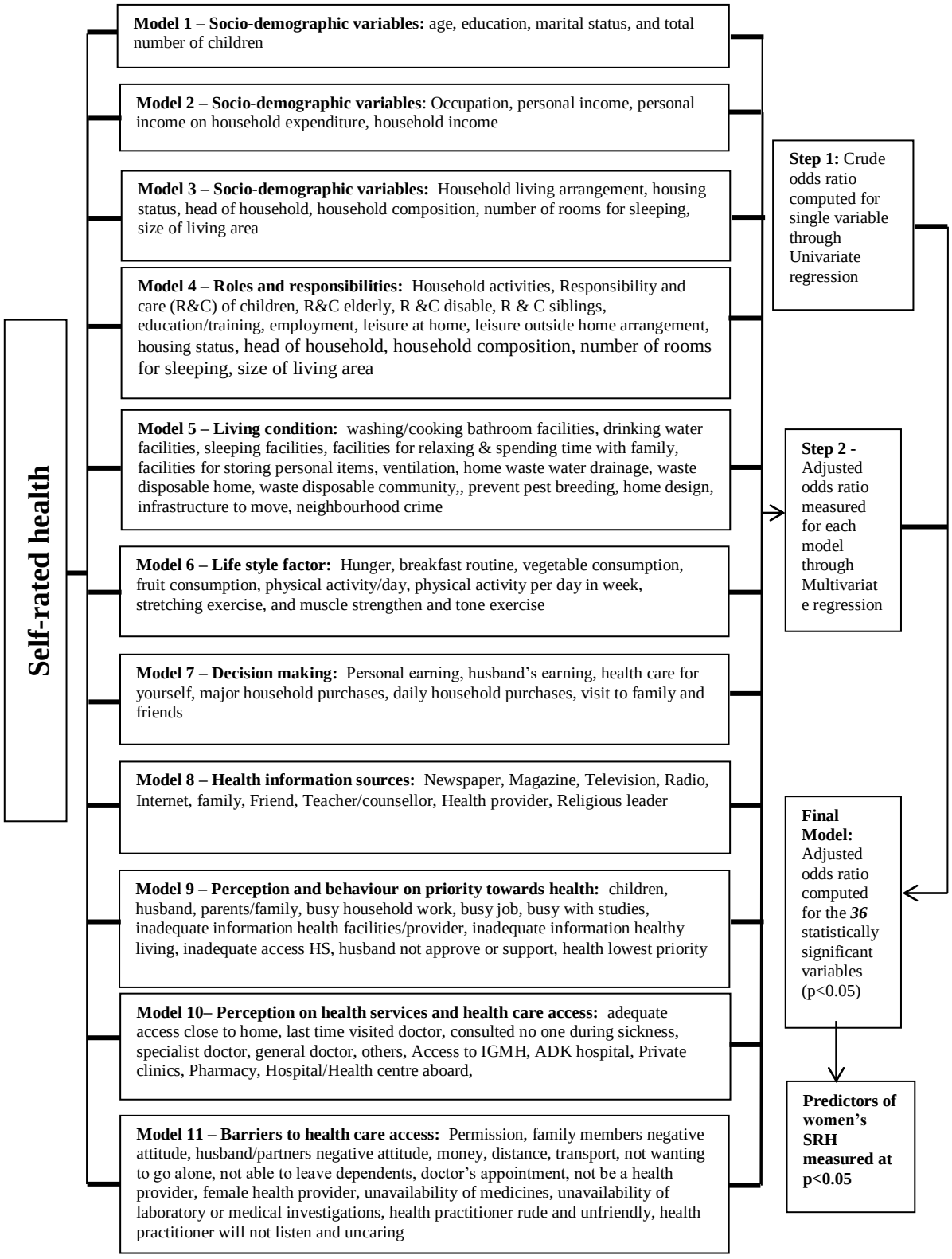
Appendix XXXV

Flow chart 3



Appendix XXXVI

Figure 1: Model predictors of self-rated health (SRH) among women



Appendix XXXVII

Duration of IDIs and FGDs

No.	Women		Men	Community Leaders	
	IDI	FGD	FGD	IDI	FGD
1	3:07:07	1:37:31	1:53:43	1:58:20	1:59:00
2	1:35:16	1:56:26	1:47:47	2:36:18	2:11:42
3	2:02:33	1:33:31	1:09:30	2:16:59	2:07:55
4	2:25:44	2:09:00		1:53:46	1:46:08
5	1:32:15	2:07:13		2:19:43	1:55:02
6	1:39:41	2:18:43		1:14:24	2:01:55
7	1:41:17	0:55:52		1:29:54	
8	1:57:41	1:30:47		2:36:45	
9	1:15:08	1:28:33		2:11:41	
10	1:45:27	1:23:48		2:06:19	
11	2:48:00	1:58:52		1:55:35	
12	1:43:41	1:36:48		1:25:39	
13	2:02:25	1:43:36		2:01:14	
14	2:12:55	2:14:47		0:45:31	
15	1:49:32	1:35:43		1:36:48	
16	1:18:45			1:24:49	
17	2:15:05			1:43:17	
18	2:15:23			1:01:08	
19	1:35:20			1:46:28	
20	2:06:57			2:26:09	
21	1:18:30			1:52:06	
22	1:06:22			1:19:10	
23	2:21:51			1:13:05	
24	1:58:20			0:54:39	
25	1:33:58			3:30:50	
26	1:52:02			2:00:22	
27	2:36:00			2:12:40	
28	1:52:22			1:48:16	
29	1:52:52			2:11:28	
30	2:45:38			1:09:17	
31	1:33:58			0:55:43	
32	2:46:35				
33	2:37:14				
34	1:48:51				
35	1:11:28				
36	2:09:57				
37	2:19:37				
38	2:16:53				
39	1:41:40				
40	1:59:09				
41	2:47:47				
42	1:59:15				
43	1:15:03				
44	2:28:20				
45	1:24:44				
46	1:44:03				
47	2:00:41				
48	1:29:05				
49	1:02:11				
50	2:04:27				
51	1:38:22				
52	1:30:26				
53	1:25:09				
54	0:59:07				
55	2:24:47				
Average duration:	**1:54:40**	**1:44:45**	**1:37:00**	**1:48:20**	**2:00:17**

Appendix XXXVIII

Table A1 Demographic characteristics of women

	Girls and young women		Adult women		Old women		Total (n = 157)		Overall Total n = 152
	IDI n = 20 Frequency (%)	FGD n = 40 Frequency (%)	IDI n = 20 Frequency (%)	FGD n = 39 Frequency (%)	IDI n = 15 Frequency (%)	FGD n = 23 Frequency (%)	IDI n = 55 Frequency (%)	FGD n = 102 Frequency (%)	Frequency (%)
Age									
Mean (SD)	19.1 ± 2.7	20.1 ± 2.8	36.8 ± 7.2	34.2 ± 7.0	57.6 ± 7.2	54.3 ± 4.1	36.0 ± 16.4	33.2 ± 14.0	34.2 ± 14.9
Range	16 – 24	15 – 24	25 – 49	25 – 48	50 – 70	50 – 65	16 – 70	15 – 65	15 – 70
Highest qualification									
No formal education (basic literacy)	-	-		6 (15.4)	7 (46.7)	17 (73.9)	7 (12.7)	23 (22.5)	29 (19.1)
Primary	-	7 (17.5)	11(55.0)	9 (23.1)	4 (26.7)	4 (17.4)	15 (27.3)	20 (19.6)	35 (23.0)
Secondary	18 (90.0)	33 (82.5)	5(25.0)	12 (30.8)	2 (13.3)	-	25 (45.5)	45 (44.1)	67 (44.1)
Certificate / Diploma	2 (10.0)	-	2 (10.0)	11 (28.2)	2 (13.3)	1 (4.3)	6 (10.9)	11 (10.8)	17 (11.2)
First degree or above		-	2 (10.0)	1 (2.6)		1 (4.3)	2 (3.6)	3 (2.9)	4 (2.6)
Marital status									
Never married	16 (80)	34 (85.0)	1 (5)	1 (2.6)	-	-	17 (30.9)	35 (34.3)	51 (33.6)
Married	2 (10)	6 (15.0)	11 (55)	34 (87.2)	7 (46.7)	14 (60.9)	20 (36.4)	54 (52.9)	70 (46.1)
Divorced	2 (10)	-	8 (40)	3 (7.7)	8 (53.3)	4 (17.4)	18 (32.7)	7 (6.9)	25 (16.4)
Widow	-	-	-	1 (2.6)	-	5 (21.7)	-	6 (5.9)	6 (3.9)
No of marriages	**(n = 4)**		**(n = 19)**		**(n = 15)**		**(n = 38)**		
One	4 (100)	Na	9 (47.4)	Na	4 (26.7)	Na	17 (44.7)	Na	Na
Two	-	-	5(26.3)	Na	4 (26.7)	Na	9 (23.7)	Na	Na
Three or more	-	-	5 (26.3)	Na	7(46.6)	Na	12 (31.6)	Na	Na
No of living children									
None	19 (95)	39 (97.5)	3 (15.0)	Na	1 (6.6)	Na	23 (41.8)	Na	Na
1 – 2	1 (5.0)	1 (2.5)	8 (40.0)	Na	2 (13.2)	Na	11 (20.0)	Na	Na
3 – 4	-	-	8 (40.0)	Na	4 (26.7)	Na	12 (21.9)	Na	Na
5 or more	-	-	1 (5.0)	Na	8 (53.3)	Na	9 (16.4)	Na	Na
Type of family									
Nuclear	8 (40.0)	12 (30.0)	5 (25.0)	19 (48.7)	5 (33.3)	8 (34.8)	18 (32.7)	37 (36.3)	56 (36.8)
Extended	1(5.0)	6 (15.0)	8 (40.0)	17 (43.6)	6 (40.0)	13 (56.5)	15 (27.3)	38 (37.3)	48 (31.6)
Single parent and / or extended	3 (15.0)	6 (15.0)	6 (30.0)	1 (2.6)	2 (13.3)	2 (8.7)	11 (20.0)	10 (9.8)	20 (13.2)
Host family / Relative	8 (40.0)	16 (40.0)	1 (5.0)	1 (2.6)	1 (6.7)	-	10 (18.2)	16 (15.7)	26 (17.1)
Alone		-		1 (2.6)	1 (6.7)	-	1 (7.3)	1 (1.0)	2 (1.3)
Area of residence									

Male	18 (90)	37 (92.5)	17 (85)	21 (53.8)	15 (100)	15 (65.2)	50 (90.9)	73 (71.6)	119 (78.3)
Hulhumalé	1 (5)	-	1 (5)	9 (23.1)	-	7 (30.4)	2 (3.6)	16 (15.7)	17 (11.2)
VilliMale	1 (5)	3 (7.5)	2 (10)	9 (23.1)	-	1 (4.3)	3 (5.5)	13 (12.7)	16 (10.5)
Duration lived in Malé city									
Mean (SD)	11.5 ± 9.1	10.4 ± 7.0	29.3 ± 13.2	18.9 ± 15.2	49.2 ± 15.5	30.6 ± 20.4	28.3 ± 20.2	18.2 ± 16.0	21.9 ± 18.2
Range	1.0 – 24	1.0 – 21	8.0 – 49	1.0 – 46.0	6.0 – 70	0.2 – 59	1.0 – 70.0	0.20 – 59	0.2 – 70
Accommodation									
Own	5 (25)	11 (27.5)	9 (45.0)	17 (43.6)	11 (73.3)	11 (47.8)	25 (45.5)	39 (38.2)	62 (40.8)
Rent	15 (75)	29 (72.5)	11 (55.0)	22 (56.4)	4 (26.7)	12 (52.2)	30(54.5)	63 (61.8)	90 (59.2)
Number of people sharing accommodation									
< than 7	12 (60.0)	18 (45.0)	13 (65.0)	26 (66.7)	8 (53.3)	9 (39.1)	33 (60.0)	53 (52.0)	72 (47.4)
> than or equal to 7	8 (40.0)	22 (55.0)	7 (35.0)	13 (33.3)	7 (46.7)	14 (60.9)	22 (40.0)	49 (48.0)	80 (52.6)
Employment status									
Unemployed	11 (55.0)	32 (80.5)	8 (40.0)	21 (53.8)	4 (26.7)	6 (26.1)	23 (41.8)	59 (57.8)	80 (52.6)
Employed (formal sector)	9 (45.0)	4 (10.0)	10 (50.0)	14 (35.9)	6 (40.0)	15 (65.2)	25 (45.5)	33 (32.4)	55 (36.2)
Self-employed	-	4 (10.0)	2 (10.0)	4 (10.3)	5 (33.3)	2 (8.7)	7 (12.7)	10 (9.8)	17 (11.2)
Main occupation									
Professional	1 (5.0)	2 (5.0)	3 (15)	12 (30.8)	2 (13.3)	3 (13)	6 (10.9)	17 (16.7)	22 (14.5)
Clerical / Admin / Others	8 (40.0)	4 (10.0)	5 (25)	-	1 (6.7)	-	14 (25.5)	4 (3.9)	17 (11.2)
Labourers	-	-	2 (10)	3 (7.7)	3 (20)	13 (56.5)	5 (9.1)	16 (15.7)	20 (13.2)
Landlords	-	-	1 (5)	-	5 (33.3)	-	6 (10.9)	-	6 (3.9)
Housewives	2 (10)	2 (5.0)	9 (45)	15 (38.5)	4 (26.7)	7 (30.4)	15 (27.3)	24 (23.5)	38 (25.0)
Student	9 (45)	32 (80.0)	-	9 (23.1)	-	-	9 (16.4)	41 (40.2)	49 (32.2)
Personal monthly income									
No Income	11 (55)	33 (82.5)	8 (40.0)	21 (53.8)	4 (26.7)	6 (26.1)	23 (41.8)	60 (58.8)	81 (53.3)
< MVR4,999 (<A$333)	4 (20)	7 (17.5)	6 (30.0)	5 (12.8)	5 (33.3)	15 (65.2)	15 (27.3)	27 (26.5)	40 (26.3)
MVR5,000 - MVR9,999 (A$333.33 - 666.66)	4 (20)	-	3 (15.0)	1 (2.6)	4 (26.7)	1 (4.3)	11 (20.0)	2 (2.0)	13 (8.6)
>MVR or equal to 10,000 (A$ 666.66)	1 (5)	-	3 (15)	12 (30.8)	2 (13.3)	1 (4.3)	6 (10.9)	13 (12.7)	18 (11.8)

Table A2 Demographic characteristics of FGD males

		Frequency (n=21)	Percentage (%)
Age			
	Mean ± SD)	28.3 ± 7.3	
	Range	18 – 40	
Education			
	Secondary (10 to 12years)	11	52.4
	Certificate / Diploma	6	28.6
	First Degree and above	4	19
Marital status			
	Never married	8	38.1
	Married	12	57.1
	Divorced	1	4.8
No of marriages			
	None	8	38.1
	1	11	52.4
	2	2	9.5
No of living children			
	None	8	38.1
	1 – 2	11	52.4
	3 – 4	2	9.5
Occupation past 12 months			
	Employed (government / private)	14	66.7
	Self-employed	3	14.3
	Unemployed	4	19
Main occupation			
	Professional	5	23.8
	Clerical and administrative work	9	42.9
	Student	1	4.8
	Self-employed	2	9.5
	Unemployed	4	19
Living			
	Male	20	95.2
	Hulhumalé	1	4.8
Duration lived in Malé city			
	Mean ± SD	17.6 ± 13.8	
	Range	1 – 37	
	Missing	5 (2.8)	
Type of family			
	Nuclear	11	52.4
	Extended	8	38.1
	Host family	1	4.8
	Alone	1	4.8
Housing tenure			
	Own	7	33.3
	Rent	13	61.9
	Dormitory	1	4.8
Household composition			
	Less than 7	16	76.2
	> than or equal to 7	5	23.8
	Mean (±SD)	6.5 ± 6.6	
	Range	2 – 32	

Table A3 Demographic characteristics of community leaders

	Interviews (total number of participants)	FGD (total number of participants)	Total Frequency (%)
Gender			
Female	19	20	39 (70.9)
Male	12	4	16 (29.1)
Total	31	24	55 (100)
Occupation			
Service provider	5	19	24 (43.6)
Program coordinator/ manager (Civil service / NGO / INGO)	13	5	18 (32.7)
Policy makers / Politician	7	-	7 (12.7)
Religious / Justice / Law Scholars	6	-	6 (10.9)
Speciality area			
Health and its related areas	14	-	14 (25.5)
Gender / Human rights / Youth / Social services	6	15	21 (38.2)
Education	4	4	8 (14.5)
Law / Religion / Justice	7	-	7 (12.7)
Media	-	5	5 (9.1)

Appendix XXXIX

Pattern of violence reported by women

Perpetrators	Description of violence
Intimate partner violence	Husband/ex-husband/boyfriend - physical, emotional, material, financial and sexual abuse such as verbal attacks, marital rape or rape by boyfriend; inappropriately utilising women's property, income and monetary savings; having extra-marital affairs or getting additional wives as means of torture; isolation, excessive possessiveness and social isolation; deprivation of physical and emotional resources; (e.g. food); verbal degradation and belittling, social humiliation, withholding sexual intimacy; emotional, physical and financial black mail; life threats and attempts to murder. Young and adult women – blackmail, rape, sexual assaults, physical beating, cigarette burns, verbal degradation and belittling, excessive possessiveness and social isolation; monopolisation of perception
Family members	isolation, neglect with lack of care and affection, material and financial abuse, verbal attacks and intimidation by siblings and extended family members, deprivation of physical and emotional resources by parents and siblings; father's sexual abuse to daughter, grandfather's sexual abuse to son, males relatives sexual abuse and molestation Young women: sexual abuse; parental neglect, lack of care, affection and attention; bullying and harassment in schools, roads and host families Old women: physical and emotional care neglect; severe forms of verbal and emotional abuse from adult children; withholding affection by siblings and children; financial abuse; and host family harassment
Community members	sexual harassment and abuse by co-workers or boss at workplace; emotional and verbal abuse by colleagues and classmates; verbal, physical and sexual harassment on streets, within closed spaces such as public transport; office environment by men in influential positions; financial abuse by private employers – with holding wages, unexpected

Appendix XL

Survey questions and response categories with question-specific response rates

Question	Response rate (%)
Q1.	100
Q2.	98.6
Q3.	99.5
Q4.	99.1
Q5.	99.1
Q6.	98.6
Q8.	96.8
Q9.	96.8
Q10.	84.4
Q11a.	97.6
Q11b.	98
Q11c.	97.1
Q11d.	97.6
Q11e.	97.1
Q11f.	96.2
Q11g.	97.3
Q11h.	98.2
Q11i.	98.2
Q12a	89.1
Q12b	96.5
Q12c	94
Q12d	92.4
Q12e	93.5
Q12f	95.1
Q13.	97.3
Q14.	98
Q15.	98.7
Q16.	98
Q17.	97.8
Q18.	98
Q19.	86
Q20a.	98.2
Q20b.	97.8
Q20c.	97.1
Q20d.	97.3
Q20e.	98.4
Q20f.	98.2
Q20g.	97.6
Q20h.	97.8
Q20i.	97.8
Q20j.	97.1
Q20k.	97.6
Q20l.	98
Q20m.	97.3
Q21.	98
Q22.	98.4
Q23.	100
Q24a.	97.6
Q24b.	96.2

Question	Response rate (%)
Q25.	100
Q26a.	98.2
Q26b.	98
Q26c.	98
Q26d.	98
Q27.	98.2
Q28.	100
Q29a.	94.7
Q29b.	94.2
Q29c.	94.9
Q29d.	93.3
Q29e.	96.4
Q29f.	94.7
Q29g.	94.4
Q29h.	92.9
Q29i.	93.1
Q29j.	93.1
Q30.	97.8
Q31.	97.3
Q32.	100
Q33.	98
Q34.	100
Q35a.	95.5
Q35b.	95.3
Q35c.	94.2
Q35d.	91.1
Q35e.	91.3
Q35f.	93.1
Q35g.	91.8
Q35h.	91
Q35i.	91.8
Q35j.	89.3
Q37.	97
Q38.	100
Q40.	94
Q41a.	100
Q41b.	100
Q41c.	100
Q41d.	100
Q41e.	100
Q41f.	100
Q41g.	100
Q41h.	100
Q41i.	100
Q41j.	100
Q41k.	100
Q41l.	100
Q41m.	100
Q41n.	100
Q41o.	100

Appendix XLI

Descriptive frequencies and percentages

Table A4 Age distribution

Age	Frequency	Percentage
16 - 19	74	16.5
20 - 24	106	23.6
25 - 29	55	12.2
30 - 34	60	13.4
35 - 39	33	7.3
40 - 44	17	3.8
45 - 49	15	3.3
50 - 54	45	10
55 - 59	14	3.1
60 - 64	10	2.2
65+	20	4.5
Total number	**449**	

Table A5 Sociodemographic characteristics

	Girls and young women n=180 Frequency (%)	**Adult woman n=180** Frequency (%)	**Old woman n=89** Frequency (%)	**Total n=449** Frequency (%)
Age (mean ± SD)	20.23 ±7.3	33.49 ±6.5	57.5 ±7.32	32.93 ±14.6
Range	16-24	25-49	50-83	16-83
Proportion of females	40.1	40.1	19.8	
Education (n=443)				
No formal education/basic literary	1 (0.6)	19 (10.8)	75 (84.3)	95 (21.4)
Primary	4 (2.2)	21 (11.9)	8 (9.0)	33 (7.4)
Secondary (10 to 12years)	116 (65.2)	48 (27.3)	1 (1.1)	165 (37.2)
Certificate/Diploma	44 (24.7)	33 (18.8)	3 (3.4)	80 (18.1)
First Degree and above	13 (7.3)	55 (31.3)	2 (2.2)	70 (15.8)
Missing	*2 (1.1)*	*4 (2.2)*	-	*6 (1.3)*
Marital status (n=447)				
Never married	109 (60.9)	20 (11.1)	1 (1.1)	130 (29.1)
Married	40 (22.3)	134 (74.9)	52 (58.4)	226 (50.6)
Divorced / Separated	2 (1.1)	23 (12.9)	22 (24.7)	47 (10.5)
In a committed relationship	28 (15.6)	2 (1.1)	-	30 (6.7)
Widow	-	-	14 (15.7)	14 (3.1)
Missing	*1(0.6)*	*1(0.6)*	-	*2 (0.4)*
No of living children(n=445)				
None	173 (96.6)	60 (33.9)	4 (4.5)	237 (53.3)
1 – 2	6 (3.4)	90 (50.8)	16 (18.0)	112 (25.2)
3 – 4	-	22 (12.4)	23 (25.8)	45 (10.1)
≥5	-	5 (2.8)	46 (51.7)	51 (11.5)
Missing	*1 (0.6)*	*3 (1.7)*	-	*4 (0.9)*
Occupation past 12 months (n=443)				
Employed (government/private)	69 (39.4)	102 (57.0)	23 (25.8)	194 (43.8)
Student	71 (40.6)	11 (6.1)	1 (1.1)	83 (18.7)
Homemaker (UE / retired / SE)	35 (20.0)	66 (36.9)	65 (73.0)	166 (37.5)
Missing	*5 (2.9)*	*1 (0.6)*	-	*6 (1.4)*
Average monthly personal income (n=435)				
No Income	70 (41.4)	30 (16.9)	32 (36.4)	132 (30.3)
<MVR10,000 (<AUD666.7)	90 (53.3)	89 (50.0)	42 (47.7)	221 (50.8)
≥MVR10,000 (≥AUD666.7)	9 (5.3)	59 (33.1)	14 (15.9)	82 (18.9)
Missing	*11 (6.5)*	*2 (1.1)*	*1 (1.1)*	*14 (3.1)*
Personal income expenditure on household (n=307)				
Nothing/less than half	56 (53.3)	40 (27.4)	20 (35.7)	116 (37.8)
About half	25 (23.8)	32 (21.9)	1 (1.8)	58 (18.9)
Nearly all/more than half	24 (22.9)	74 (50.7)	35 (62.5)	133 (43.3)
Missing	*5(4.5)*	*4 (2.7)*	*1 (1.8)*	*10 (3.2)*
Average monthly household income (n=379)				
Less than 10,000 (<AUD666.7)	47 (38.2)	27 (15.9)	33 (38.4)	107 (28.2)
10,000 – 29,999 (AUD666.7 – AUD1945.5)	54 (43.9)	88 (51.8)	26 (30.2)	168 (44.3)
≥MVR 30,000 (≥AUD1945.5)	22 (17.9)	55 (32.4)	27 (31.4)	104 (27.4)
Missing	*57 (31.7)*	*10 (5.6)*	*3 (3.4)*	*70 (15.6)*
Duration lived in Malé city (n=437)				
Mean ± SD	10.3 ± 7.8	23.2 ±13.6	34.3 ±22.4	20.2 ± 16.7
Range	0.2-24	0.1-49	0.1 -75	0.1-75
Missing	5 (2.8)	4 (2.2)	3 (3.4)	12 (2.7)
Type of family (n=440)*				
Parents and/or siblings	94 (53.1)	51 (29.3)	1 (1.1)	146 (33.2)
Own children	-	10 (5.7)	40 (44.9)	50 (11.4)
Husband / partner & children	20 (11.3)	80 (44.4)	39 (43.8)	139 (31.6)
Host family	58 (32.8)	14 (8.0)	5 (5.6)	77 (17.5)
Alone	2 (1.1)	6 (3.4)	3 (3.4)	11 (2.5)
Missing	*3 (1.7)*	*6 (3.3)*	-	*9 (2.0)*

Housing tenure (n=443)				
Own	43 (24.4)	61 (33.9)	45 (50.6)	149 (33.6)
Rent	113 (64.2)	94 (52.8)	36 (40.4)	243 (54.9)
Other	20 (11.4)	23 (12.9)	8 (9.0)	51 (11.5)
Missing	*4 (2.2)*	*2 (1.1)*	-	*6 (1.3)*
Head of Household (n=440)				
Male	76 (43.2)	86 (48.6)	48 (55.2)	210 (47.7)
Female	58 (33.0)	62 (35.0)	33 (37.9)	153 (34.8)
Both	42 (23.9)	29 (16.4)	6 (6.9)	77 (17.5)
Missing	*4 (2.2)*	*3 (1.7)*	*2 (2.2)*	*9 (2.0)*
Household composition (n=439)				
<7	61 (35.1)	95 (53.7)	35 (39.8)	191 (43.5)
≥7	113 (64.9)	82 (45.6)	53 (60.2)	248 (56.5)
Mean (+/- SD)	9.7 (+/-6.6)	7.6 (+/- 5.1)	8.6 (+/-5.5)	8.6 (+/-5.9)
Missing	*6 (3.3)*	*3 (1.7)*	*1 (1.1)*	*10 (2.2)*
Size of living area (n=388)				
<700sqft	108 (77.7)	110 (67.1)	47 (55.3)	265 (68.3)
≥700sqft	31 (22.3)	54 (32.9)	38 (42.7)	123 (31.7)
Missing	*41 (22.8)*	*16 (8.9)*	*4 (4.5)*	*61 (13.6)*
Rooms exclusively used for sleeping (n=440)				
<three rooms	112 (64.0)	97 (54.8)	61 (69.3)	270 (61.4)
≥three rooms	63 (36.0)	80 (45.2)	27 (30.7)	170 (38.6)
Mean (+/- SD)	3.3 (+/-2.1)	3.0 (1.8)	3.9 (+/-3.1)	3.3 (+/-2.3)
Missing	*5 (2.8)*	*3 (1.7)*	*1 (1.1)*	*9 (2.0)*

*Multiple response categories Key -UE: unemployed, SE: self-employed

Table A6 Roles and responsibilities

Roles and responsibilities	**None** Frequency (%)	**< 8 hours** Frequency (%)	**> 8 hours** Frequency (%)	***Missing***
Household activities (n=438)	37 (8.4)	351 (80.1)	50 (11.4)	*11 (2.4)*
Responsibility and care of children (n=440)	215 (48.9)	139 (31.6)	86 (19.5)	*9 (2.0)*
Responsibility and care of elderly (n=436)	338 (77.5)	81 (18.6)	17 (3.9)	*13 (2.9)*
Responsibility and care of disable (n=438)	410 (93.6)	24 (5.5)	4 (0.9)	*11 (2.4)*
Responsibility and care of siblings (n=436)	304 (69.7)	102 (23.4)	30 (6.9)	*13 (2.9)*
Education / Studying / Training (n=432)	225 (52.1)	156 (36.1)	51 (11.8)	*17 (3.8)*
Paid employment (n=437)	262 (60.0)	108 (24.7)	67 (15.3)	*12 (2.7)*
Leisure / social life in the home (n=441)	46 (10.4)	359 (81.4)	36 (8.2)	*8 (1.8)*
Leisure / social life outside home (n=441)	92 (20.9)	333 (75.5)	16 (3.6)	*8 (1.8)*

Table A7 Perception and experiences on living condition

Perception and experiences on living condition	**Agree / strongly agree** Frequency (%)	**Disagree / strongly disagree** Frequency (%)
Adequate space/area for washing, cooking and bathroom facilities (n=441)	324 (73.5)	117 (26.5)
Adequate supply of pure and clean water (n=439)	364 (82.9)	75 (17.1)
Adequate sleeping facilities (n=436)	329 (75.5)	107 (24.5)
Adequate facilities for relaxing and spending time with family (n=437)	317 (72.5)	120 (27.5)
Adequate facilities for storing personal belongings (n=442)	321 (72.6)	121 (27.4)
Adequate ventilation and movement of clean and fresh air (n=441)	294 (66.7)	147 (33.3)
Adequate home drainage system for safely removing waste water (n=438)	353 (80.6)	85 (19.4)
Adequate waste disposable and safety at home (n=439)	336 (76.5)	103 (23.5)
Adequate waste disposable and safety in community (n=439)	184 (41.9)	255 (58.1)
Adequate living arrangement to prevent pest breeding (n=436)	317 (72.7)	119 (27.3)
Adequately designed home environment to prevent from life-threatening dangers (n=438)	313 (71.5)	125 (28.5)
Adequate infrastructure to easily move around (lifts, stairs) (n=440)	360 (81.8)	80 (18.2)
Adequate measures to prevent crime and provide a safe and secure neighbourhood (n=437)	224 (51.3)	213 (48.7)

Table A8 Diet and Physical activity

	Girls and young women Frequency (%)	**Adult women** Frequency (%)	**Old women** Frequency (%)	**Total** Frequency (%)
Past 30 days in hunger due to not enough food at home (n=440)				
Never	147 (83.5)	160 (91.4)	77 (86.5)	384 (87.3)
Rarely	9 (5.1)	9 (5.1)	3 (3.4)	21 (4.8)
Sometimes	17 (9.7)	4 (2.3)	2 (2.2)	23 (5.2)
Most of the time	3 (1.7)	2 (1.1)	6 (6.7)	11 (2.5)
Always	-	-	1 (1.1)	1 (0.2)
Missing	*4 (2.2)*	*5 (2.8)*	-	*9 (2.0)*
Frequency of breakfast consumption in the past 30 days (n=442)				
Never	16 (9.1)	5 (2.8)	6 (6.7)	27 (6.1)
Rarely	35 (19.9)	10 (5.6)	7 (7.9)	52 (11.8)
Sometimes	50 (28.4)	27 (15.3)	5 (5.6)	82 (18.6)
Most of the time	23 (13.1)	29 (16.4)	3 (3.4)	55 (12.4)
Always	52 (29.5)	106 (59.9)	68 (76.4)	226 (51.1)
Missing	*4 (2.2)*	*3 (1.7)*	-	*7 (1.6)*
*Main reason did not have breakfast (n=438)				
I do not have time for breakfast	46 (39.0)	25 (37.9)	2 (10.5)	73 (36.0)
I cannot eat early in the morning	40 (33.9)	22 (33.3)	8 (42.1)	70 (34.5)
There is not always food in my home	10 (8.5)	1 (1.5)	3 (15.8)	14 (6.9)
Others	22 (18.6)	18 (27.3)	6 (31.6)	46 (22.7)
Missing	*9 (5.0)*	*8 (4.4)*	*2 (2.2)*	*19 (4.2)*
Vegetable consumption in the past 30 days (n=438)				
Did not eat vegetables past 30 days	54 (30.7)	24 (13.9)	23 (25.8)	101 (23.1)
Less than one time per day	77 (43.8)	77 (44.5)	27 (30.3)	181 (41.3)
1 – 2 times per day	39 (22.2)	66 (38.2)	36 (40.4)	141 (32.2)
3 – 4 times per day	6 (3.3)	6 (3.5)	3 (3.4)	15 (3.4)
Missing	*4 (2.2)*	*7 (3.9)*	-	*11 (2.4)*
Fruit consumption in the past 30 days(n=432)				
Did not eat fruits past 30 days	42 (24.7)	17 (9.8)	21 (23.6)	80 (18.5)
Less than one time per day	78 (45.9)	87 (50.3)	33 (37.1)	198 (45.8)
1 – 2 times per day	34 (20.0)	60 (34.7)	31 (34.8)	125 (28.9)
3 – 4 times per day	16 (9.4)	9 (5.2)	4 (4.5)	29 (6.7)
Missing	*10 (5.6)*	*7 (3.9)*	-	*17 (3.8)*
*Reasons not consumed fruits and vegetables (n=353)				
Too expensive	53 (38.4)	77 (53.5)	54 (76.1)	184 (52.1)
Difficult/cant' be bothered to prepare or cook	18 (13.0)	19 (13.2)	8 (11.3)	45 (12.7)
Don't like taste	48 (34.8)	17 (11.8)	7 (9.9)	72 (20.4)
Others in household/family don't like the taste	4 (2.9)	5 (3.5)	2 (2.8)	11 (3.1)
Doesn't keep for very long	7 (5.1)	10 (6.9)	1 (1.4)	18 (5.1)
No convenience place to buy	15 (10.9)	17 (11.8)	9 (12.7)	41 (11.6)
Boring	18 (13.0)	15 (10.4)	8 (11.3)	41 (11.6)
Number of days physically active for at least 60 minutes per day in past 7 days (n=441)				
0 days	38 (21.5)	59 (33.7)	25 (28.1)	122 (27.7)
1 – 2 days	37 (20.9)	23 (13.1)	10 (11.2)	70 (15.9)
3 – 4 days	20 (11.3)	25 (14.3)	8 (9.0)	53 (12.0)
5 – 7 days	82 (46.3)	68 (38.9)	46 (51.7)	196 (44.4)
Missing	*3 (1.7)*	*5 (2.8)*	-	*8 (1.8)*
Number of days physically active for at least 60 minutes per day in a week(n=439)				
0 days	36 (20.5)	54 (30.9)	26 (29.5)	116 (26.4)
1 – 2 days	40 (22.7)	25 (14.3)	5 (5.7)	70 (15.9)
3 – 4 days	22 (12.5)	27 (15.4)	9 (10.2)	58 (13.2)
5 – 7 days	78 (44.3)	69 (39.4)	48 (54.5)	195 (44.4)
Missing	*4 (2.2)*	*5 (2.8)*	*1 (1.1)*	*10 (2.2)*

Number of days stretching exercises done, in past 7 days (n=439)				
0 days	85 (48.6)	91 (51.7)	28 (31.8)	204 (46.5)
1 – 2 days	48 (27.4)	33 (18.8)	7 (8.0)	88 (20.0)
3 – 4 days	15 (8.6)	24 (13.6)	5 (5.7)	44 (10.0)
5 – 7 days	27 (15.4)	28 (15.9)	48 (54.5)	103 (23.5)
Missing	*5 (2.8)*	*4 (2.2)*	*1 (1.1)*	*10 (2.2)*
Number of days exercises done to strengthen or tone muscles, in past 7 days(n=439)				
0 days	138 (78.4)	132 (75.0)	54 (62.1)	324 (73.8)
1 – 2 days	16 (9.1)	18 (10.2)	5 (5.7)	39 (8.9)
3 – 4 days	5 (2.8)	17 (9.7)	5 (5.7)	27 (6.2)
5 – 7 days	17 (9.7)	9 (5.1)	23 (26.4)	49 (11.2)
Missing	*4 (2.2)*	*4 (2.2)*	*2 (2.2)*	*10 (2.2)*

*multiple response questions - percentages may add up to more than 100

Table A9 Decision making

Decision making	**You** Frequency (%)	**Husband** Frequency (%)	**You and husband jointly** Frequency (%)	**Family or others** Frequency (%)	**Someone else** Frequency (%)
Decides how money you earn will be used (n=400)	237 (59.3)	20 (5.0)	112 (28.0)	30 (7.5)	1 (0.3)
Decides how the money your husband / partner's earns will be used (n=306)	42 (13.7)	119 (38.9)	138 (45.1)	4 (1.3)	3 (1.0)
Decides health care for yourself (n=422)	208 (49.3)	39 (9.2)	106 (25.1)	68 (16.1)	1 (0.2)
Decides on major household purchases (n=415)	80 (19.3)	56 (13.5)	137 (33.0)	131 (31.6)	11 (2.7)
Decides on major purchases for daily household needs (n=420)	183 (43.6)	36 (8.6)	114 (27.1)	84 (20.0)	3 (0.7)
Decides on visits to your family or relatives (n=427)	301 (70.5)	11 (2.6)	91 (21.3)	23 (5.4)	1 (0.2)

Table A10 Health information sources

	Girls and young women (%)			Adult women			Older women			Total		
	N	O	F	N	O	F	N	O	F	N	O	F
Newspaper	93 (55.0)	66 (39.1)	10 (5.9)	90 (53.9)	57 (34.1)	20 (12.0)	64 (71.9)	21 (23.6)	4 (4.5)	247 (58.1)	144 (33.9)	34 (8.0)
Missing	*11 (6.1)*			*13 (7.2)*			-			*24 (5.3)*		
Magazine	103 (60.9)	56 (33.1)	10 (5.9)	96 (58.2)	52 (31.5)	17 (10.3)	77 (86.5)	11 (12.4)	1 (1.1)	276 (65.2)	119 (28.1)	28 (6.6)
Missing	*11 (6.1)*			*15 (8.3)*			-			*26 (5.8)*		
Television	43 (25.1)	86 (50.3)	42 (24.6)	45 (26.9)	81 (48.5)	41 (24.6)	23 (26.1)	48 (54.5)	17 (19.3)	111 (26.1)	215 (50.5)	100 (23.5)
Missing	*9 (5.0)*			*13 (7.2)*			*1 (1.1)*			*23 (5.1)*		
Radio	101 (60.5)	55 (32.9)	11 (6.6)	83 (50.9)	57 (35.0)	23 (14.1)	51 (57.3)	23 (25.8)	15 (16.9)	235 (56.1)	135 (32.2)	49 (11.7)
Missing	*11 (6.1)*			*17 (9.4)*			-			*30 (6.7)*		
Internet	19 (11.0)	74 (43.0)	79 (45.9)	45 (26.2)	39 (22.7)	88 (51.2)	82 (92.1)	3 (3.4)	4 (4.5)	146 (33.7)	116 (26.8)	171 (39.5)
Missing	*8 (4.4)*			*8 (4.4)*			-			*16 (3.6)*		
Family	27 (16.0)	100 (59.2)	42 (24.9)	34 (20.4)	98 (58.7)	35 (21.0)	43 (48.3)	38 (42.7)	8 (9.0)	104 (24.5)	236 (55.5)	85 (20.0)
Missing	*11 (6.1)*			*13 (7.2)*			-			*24 (5.3)*		
Friend	34 (20.0)	100 (58.8)	36 (21.2)	33 (19.9)	100 (60.2)	33 (19.9)	51 (58.0)	32 (36.4)	5 (5.7)	118 (27.8)	232 (54.7)	74 (17.5)
Missing	*10 (5.6)*			*14 (7.8)*			*1 (1.1)*			*25 (5.6)*		
Teachers / Counsellors	80 (47.9)	71 (42.5)	16 (9.6)	109 (67.3)	45 (27.8)	8 (4.9)	81 (92.0)	6 (6.8)	1 (1.1)	270 (64.7)	122 (29.3)	25 (6.0)
Missing	*13 (7.2)*			*18 (10.0)*			*1 (1.1)*			*32 (7.1)*		
Health Provider	72 (43.6)	77 (46.7)	16 (9.7)	49 (29.9)	94 (57.3)	21 (12.8)	30 (33.74)	45 (50.6)	14 (15.7)	151 (36.1)	216 (51.7)	51 (12.2)
Missing	*15 (8.3)*			*16 (8.9)*			*16 (8.9)*			*31 (6.9)*		
Religious Leader	116 (69.5)	48 (28.7)	3 (1.8)	115 (71.0)	43 (26.5)	4 (2.5)	65 (73.0)	22 (24.7)	2 (2.2)	296 (70.8)	113 (27.0)	9 (2.2)
Missing	*13 (7.2)*			*17 (9.4)*			-			*31 (6.9)*		

N – Never, O – Occasionally, F – Frequently, Missing value

Table A11 Health care access and health-seeking behaviour

	Girls and young women Frequency (%)	Adult women Frequency (%)	Old women Frequency (%)	Total Frequency (%)
Health-seeking behaviour during sickness(n=441)				
I usually go to a health practitioner	48 (27.3)	46 (26.1)	44 (49.4)	138 (31.3)
I may go to a health practitioner	77 (43.8)	93 (52.8)	26 (29.2)	196 (44.4)
I am unlikely to go to a health practitioner	38 (21.6)	29 (16.5)	19 (21.3)	86 (19.5)
I will not go to a health practitioner	13 (7.4)	8 (4.5)	-	21 (4.8)
Missing	*4 (2.2)*	*4 (2.2)*	-	*8 (1.8)*
Health Priority*				
Not able to give much importance, health is lowest priority in life	50 (31.8)	51 (31.9)	25 (30.5)	126 (31.6)
More priority to my children and their health than my own health	8 (5.1)	99 (61.9)	66 (80.5)	173 (43.4)
More priority to my parents / family members (except children) health	59 (37.6)	61 (38.1)	22 (26.8)	142 (35.6)
More priority to my husband / partner's health than my own health	30 (19.1)	69 (43.1)	20 (24.4)	119 (29.8)
Too busy in my job to care of my health	38 (24.2)	39 (24.4)	4 (4.9)	81 (20.3)
Too busy doing household chores to bother about my own health	10 (6.4)	47 (29.4)	21 (25.6)	78 (19.5)
Too busy studying to take care of my health	53 (33.8)	14 (8.8)	-	67 (16.8)
Do not have easy access to health services	37 (23.6)	36 (22.5)	26 (31.7)	99 (24.8)
Do not have adequate information about health service providers / places	7 (4.5)	9 (5.6)	8 (9.8)	24 (6.0)
Do not have adequate information about healthy living	4 (2.5)	8 (5.0)	12 (14.6)	24 (6.0)
Husband / partner does not approve of me seeking health care	-	3 (1.9)	-	3 (0.8)
Husband / partner does not support me in seeking health care	-	1 (0.6)	2 (2.4)	3 (0.8)
Adequate health facilities close to home				
Yes	104 (59.4)	88 (50.0)	51 (58.0)	243 (55.4)
No	71 (40.6)	88 (50.0)	37 (42.0)	196 (44.6)
Missing	*5 (2.8)*	*4 (2.2)*	*1 (1.1)*	*10 (2.2)*
Last visit to a doctor or health provider				
Within the last week	42 (23.9)	45 (26.0)	39 (44.3)	126 (28.8)
Within the last month	57 (32.4)	49 (28.3)	28 (31.8)	134 (30.7)
Within the last 6 months	34 (19.3)	48 (27.7)	14 (15.9)	96 (22.0)
Within the last one year	21 (11.9)	21 (12.1)	4 (4.5)	46 (10.5)
With the last 2 years	8 (4.5)	7 (4.0)	2 (2.3)	17 (3.9)
Never	14 (8.0)	3 (1.7)	1 (1.1)	18 (4.1)
Missing	*4 (2.2)*	*7 (3.9)*	*1 (1.1)*	*12 (2.7)*
Main reason for the last visit*				
Own health	103 (63.2)	105 (61.4)	56 (64.4)	264 (62.7)
Family member's health	69 (42.3)	90 (52.6)	30 (34.5)	189 (44.9)
Household member's health	10 (6.1)	11 (6.4)	2 (2.3)	23(5.5)
Friend's health	13 (8.0)	12 (7.0)	8 (9.2)	33 (7.8)
Others	4 (2.0)	10 (5.8)	1 (1.1)	15 (3.6)
Missing	*17 (9.4)*	*9 (5.0)*	*2 (2.2)*	*28 (6.2)*
Perception on own health				
Excellent	19 (10.8)	6 (3.4)	2 (2.3)	27 (6.1)
Very good	29 (16.5)	29 (16.5)	7 (8.0)	65 (14.8)
Good	73 (41.5)	63 (35.8)	19 (21.6)	155 (35.2)
Fair	51 (29.0)	67 (38.1)	44 (50.0)	162 (36.8)
Poor	3 (1.7)	7 (4.0)	14 (15.9)	24 (5.5)
Very poor	1 (0.6)	4 (2.3)	2 (2.3)	7 (1.6)

Missing	*4 (2.2)*	*4 (2.2)*	*1 (1.1)*	*9 (2.0)*
Behaviour following sickness in the past 6 weeks*				
Sick, but consulted no-one	26 (22.2)	18 (16.5)	4 (5.6)	48 (16.2)
Specialist doctor	52 (44.4)	66 (60.6)	57 (80.3)	175 (58.9)
General doctor	40 (34.2)	33 (30.3)	12 (16.9)	85 (28.6)
Others (Pharmacist / Nurse / Midwife / Psychologist / Psychiatrist / Counsellor / Community / Family Health Worker / Traditional Dhivehi beys Practitioner / Sorcerer)	16 (13.7)	19 (17.4)	8 (11.3)	43 (14.5)

*multiple responses, percentages may add more than 100

Table A12 Use of facilities for health care

	All the time Frequency (%)	**Often** Frequency (%)	**Sometimes** Frequency (%)	**Rarely** Frequency (%)	**Never** Frequency (%)
Indira Gandhi Memorial Hospital	25 (5.8)	99 (23.1)	119 (27.7)	148 (34.5)	38 (8.9)
ADK Hospital	21 (4.9)	106 (24.8)	141 (32.9)	125 (29.2)	35 (8.2)
Private clinic	28 (6.6)	69 (16.3)	118 (27.9)	121 (28.6)	87 (20.6)
Health Centre	4 (1.0)	11 (2.7)	30 (7.3)	62 (15.2)	302 (73.8)
Pharmacy	29 (7.1)	40 (9.8)	78 (19.0)	91 (22.2)	172 (42.0)
Hospital / Health Centre Aboard	9 (2.2)	43 (10.3)	97 (23.2)	123 (29.4)	146 (34.9)
Traditional Dhivehi beys Practitioner	1 (0.2)	5 (1.2)	23 (5.6)	53 (12.9)	330 (80.1)
Traditional Sorcerer	-	-	10 (2.5)	17 (4.2)	380 (93.4)
Visit pharmacy and tell them about health problem and follow their advice / treatment	3 (0.7)	12 (2.9)	45 (10.9)	73 (17.7)	279 (67.7)
Don't go to anyone / place, but search the health problem on the internet and follow website advise / treatment	4 (1.0)	17 (4.2)	36 (9.0)	54 (13.5)	290 (72.3)

Table A13 Satisfaction with care received from health facilities and services

	Very satisfied Frequency (%)	**Satisfied** Frequency (%)	**Neutral** Frequency (%)	**Dissatisfied** Frequency (%)	**Very dissatisfied** Frequency (%)
Indira Gandhi Memorial Hospital	5 (1.2)	74 (17.5)	127 (30.0)	123 (29.0)	95 (22.4)
ADK Hospital	18 (4.4)	137 (33.2)	158 (38.3)	65 (15.7)	35 (8.5)
Private clinic	18 (5.0)	137 (38.3)	147 (41.1)	39 (10.9)	17 (4.7)
Health Centre	4 (1.5)	36 (13.4)	136 (50.6)	38 (14.1)	55 (20.4)
Pharmacy	7 (2.3)	77 (25.8)	135 (45.3)	39 (13.1)	40 (13.4)
Hospital / Health Centre Aboard	81 (24.5)	155 (46.8)	68 (20.5)	10 (3.0)	17 (5.1)
Traditional Dhivehi beys Practitioner	8 (3.3)	35 (14.6)	114 (47.5)	22 (9.2)	61 (25.4)
Traditional Sorcerer	1 (0.2)	4 (1.8)	77 (35.3)	15 (6.9)	121 (55.5)

Table A14 Perception on National Health Insurance services

	Total (%)
Aasandha covers necessary health needs	
Yes	252 (58.1)
No	143 (32.9)
Never used Aasandha* for health needs	39 (9.0)
Missing	15 (3.3)
Reasons Aasandha did not cover the necessary needs (n=150)	
Difficult to obtain health services through Aasandha	79 (52.7)
Necessary medication and injections not accessible from Aasandha	70 (46.7)

Necessary doctor's consultation not accessible from Aasandha	58 (38.7)
Inadequate to meet my basic health needs	38(25.3)
Necessary laboratory test and other medical tests not accessible from Aasandha	31 (20.7)
Inadequate to meet my outpatient care services	25 (16.7)
Inadequate to meet my inpatient care services	13 (8.7)

*Percentages may add up to more than 100 as respondents may have given multiple responses

Table A15 Out-of-pocket health expenditure past 6 weeks

Care Domain	<MVR1000 (<AUD67) Frequency (%)	≥MVR1000 (≥AUD67) Frequency (%)
Consult health care providers (n=226)	150 (66.4)	76 (33.6)
Hospital admission (n=82)	47 (57.3)	35 (42.7)
Prescription medicines (n=219)	151 (68.9)	68 (31.1)
Laboratory tests (n=147)	81 (18.0)	66 (44.9)
Medical tests or procedures (n=119)	65 (54.6)	54 (45.4)
Non-prescription (over-the counter) medicines (n=175)	153 (87.4)	22 (12.6)
Transport in getting health care services (n=197)	145 (73.6)	52 (26.4)
Accommodation while receiving health care (n=88)	29 (33.0)	59 (67.0)

*Amount in Maldivian Rufiyaa

Table A16 Reason for travelling aboard for health care

	Frequency (%)
Travelled aboard for health care	
Yes	326 (77.6)
No	94 (22.4)
Missing	29 (6.5)
Reasons travelled aboard for health care* (n=322)	
A specialist doctor was available	194 (60.2)
Specialist hospital care required not available in Malé city	139 (43.2)
Not satisfied with health services available in Malé city	134 (41.6)
Needed second opinion from another doctor/specialist	125 (38.8)
No choice, as health problem not improved with services in Malé city	103 (32.0)
Easy access to services aboard than in Malé city	96 (29.8)
Difficulties getting doctor / specialist appointment in Malé city	81 (25.2)
Cost of health care high in Malé city	39 (12.1)
Ensure to maintain confidentiality and anonymity of self, illness and treatment	35 (10.9)

*Percentages may add up to more than 100 as respondents may have given multiple responses

Table A17 Perception of barriers to health care access

	Never	Rarely	Sometimes	Most of the time	Always	Missing
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Getting permission to go	364 (88.6)	21 (5.1)	7 (1.7)	3 (0.7)	16 (3.9)	38 (8.5)
Family members negative attitudes towards medical care	374 (92.3)	20 (4.9)	8 (2.0)	1 (0.2)	2 (0.5)	44 (9.8)
Husband's / partners negative attitude towards medical	342 (93.4)	15 (4.1)	7 (1.9)	-	2 (0.5)	83 (18.5)
Getting money needed for the treatment	239 (59.2)	73 (18.1)	58 (14.4)	14 (3.5)	20 (5.0)	45 (10.0)
Distance to the health facility	252 (63.0)	65 (16.3)	53 (13.3)	19 (4.8)	11 (2.8)	49 (10.9)
Having to take transport	258 (64.7)	47 (11.8)	45 (11.3)	20 (5.0)	29 (7.3)	50 (11.1)
Not wanting to go alone	242 (61.0)	55 (13.9)	59 (14.9)	21 (5.3)	20 (5.0)	52 (11.6)
Not able to leave my dependents alone at home and seek health care for my own self	306 (80.1)	26 (6.8)	31 (8.1)	10 (2.6)	9 (2.4)	67 (14.9)
Difficulties in getting a doctor's appointment	106 (26.0)	41 (10.0)	104 (25.5)	70 (17.2)	87 (21.3)	41 (9.1)
Concern that there may not be a health provider	243 (61.2)	72 (18.1)	56 (14.1)	11 (2.8)	15 (3.8)	52 (11.6)
Concern that there may not be a female health provider	228 (57.7)	70 (17.7)	66 (16.7)	18 (4.6)	13 (3.3)	54 (12.0)
Concern that necessary medicines may not be available	187 (47.2)	100 (25.3)	83 (21.0)	16 (4.0)	10 (2.5)	53 (11.8)
Concern that necessary laboratory or medical investigation facilities may not be available	206 (52.2)	77 (19.5)	83 (21.0)	23 (5.8)	6 (1.5)	54 (12.0)
Concern that health practitioner will be rude and unfriendly	237 (59.3)	75 (18.8)	63 (15.8)	17 (4.3)	8 (2.0)	49 (10.9)
Concern that health practitioner will not listen and be uncaring	268 (67.0)	64 (16.0)	48 (12.0)	11 (2.8)	9 (2.3)	49 (10.9)

Appendix XLII

Cross tabulations

Table A18 Sociodemographic factors associated with self-rated health

	Good health Frequency (%)	**Poor health** Frequency (%)	**p-value** (Chi-Square)
Women's Age(n=440)			
Old (50 years or older)	28 (11.3)	60 (31.1)	**<0.001 (32.52)**
Adult (25-49 years)	98 (39.7)	78 (40.4)	
Young (16-24years)	121 (49.0)	55 (28.5)	
Education (n=434)			
Below year 10 (primary education)	36 (14.8)	91 (47.9)	**<0.001 (56.68)**
Year 10 or above (secondary education or above)	208 (85.2)	99 (52.1)	
Marital Status (n=438)			
Ever married	143 (58.1)	139 (72.4)	**0.002 (9.57)**
Never married	103 (41.9)	53 (27.6)	
Total number of children (n=436)			
None	154 (63.1)	78 (40.6)	**<0.001(26.83)**
< three	56 (23.0)	53 (27.6)	
≥ three	34 (13.9)	61 (31.8)	
Employment status in the past 12 months (n=434)			
Employed	116 (47.9)	75 (39.1)	**<0.001 (20.31)**
Student	57 (23.6)	24 (12.5)	
Homemaker / self / unemployed / retired	69 (28.5)	93 (48.4)	
Average monthly personal income (n=426)			
No income	68 (28.3)	64 (34.4)	**0.031 (6.95)**
< MVR 10,000 (<AUD666.7)	116 (48.3)	97 (52.2)	
≥ MVR 10,000 (≥AUD666.7)	56 (23.3)	25 (13.4)	
Personal income on household expenditure (n=299)			
Nearly all / more than half	63 (36.2)	66 (52.8)	**0.017 (8.17)**
About half	37 (21.3)	20 (16.0)	
Less than half / nothing	74 (42.5)	39 (31.2)	
Household income (monthly) (n=371)			
<MVR 10,000 (<AUD 666.7)	52 (25.1)	51 (31.1)	0.40 (1.85)
MVR10,000 – MVR 29,999	93 (44.9)	71 (43.3)	
More than or equal to MVR 30,000	62 (30.0)	42 (25.6)	
Type of family			
Live with parents and / or siblings **(n=435)**			
Yes	104 (42.3)	59 (31.2)	**0.018 (5.58)**
No	142 (57.7)	130 (68.8)	
Live with own children **(n=435)**			
Yes	21 (8.5)	34 (18.0)	**0.003 (8.65**)
No	225 (91.5)	155 (82.0)	
Live with Husband / partner & children **(n=435)**			
Yes	81 (32.9)	72 (38.1)	0.26 (1.25)
No	165 (67.1)	117 (61.9)	
Live with host family **(n=435)**			
Yes	52 (21.1)	25 (13.2)	**0.03 (4.59)**
No	194 (78.9)	164 (86.8)	
Live alone **(n=435)**			
Yes	4 (1.6)	7 (3.7)	0.17 (1.87)
No	242 (98.4)	182 (96.3)	
Housing status (n=439)			
Rent / Other	165 (67.1)	126 (65.3)	0.69 (0.16)
Own	81 (32.9)	67 (34.7)	
Head of Household (n=436)			
Female / Both	53 (21.5)	23 (12.1)	**0.01 (6.64)**
Male	193 (78.5)	167 (87.9)	

Household composition (n=435)			
> or equal to 7	135 (55.3)	112 (58.6)	0.49 (0.48)
<7 members	109 (44.7)	79 (41.4)	
Number of rooms for sleeping (n=436)			
< three rooms	152 (62.0)	116 (60.7)	0.78 (0.08)
≥ three rooms	93 (38.0)	75 (39.3)	
Size of living area (n=384)			
<700sqft	142 (67.3)	122 (70.5)	0.50 (0.46)
≥700sqft	69 (32.7)	51 (29.5)	

Table A19 Women's daily activities and roles associated with self-rated health

Daily activities and roles	**Good health** Frequency (%)	**Poor health** Frequency (%)	**p-value** (Chi-Square)
Household activities (n=430)			
None	22 (9.1)	14 (7.4)	**0.001 (13.55)**
≤8 hours	204 (84.6)	142 (75.1)	
>8 hours	15 (6.2)	33 (17.5)	
Responsibility and care of children (n=432)			
None	132 (54.1)	81 (43.1)	**0.015 (8.43)**
≤8 hours	76 (31.1)	60 (31.9)	
>8 hours	36 (14.8)	47 (25.0)	
Responsibility and care of elderly (n=428)			
None	187 (77.6)	146 (78.1)	0.66 (0.82)
≤8 hours	46 (19.1)	32 (17.1)	
>8 hours	8 (3.3)	9 (4.8)	
Responsibility and care of disable (n=430)			
None	226 (93.0)	176 (94.1)	0.74 (0.60)
≤8 hours	14 (5.8)	10 (5.3)	
>8 hours	3 (1.2)	1(0.5)	
Responsibility and care of siblings (n=428)			
None	164 (68.0)	137 (73.3)	0.42 (1.73)
≤8 hours	62 (25.7)	38 (20.3)	
>8 hours	15 (6.2)	12 (6.4)	
Education/studying / training (n=424)			
None	99 (41.6)	123 (66.1)	**<0.001 (25.20)**
≤8 hours	107 (45.0)	48 (25.8)	
>8 hours	32 (13.4)	15 (8.1)	
Paid employment (n=429)			
None	134 (55.6)	122 (64.9)	0.13 (4.03)
≤8 hours	64 (26.6)	42 (22.3)	
>8 hours	43 (17.8)	24 (12.8)	
Leisure/social life at home (n=433)			
None	21 (8.6)	24 (12.6)	0.37 (1.99)
≤8 hours	202 (83.1)	153 (80.5)	
>8 hours	20 (8.2)	13 (6.8)	
Leisure/social life outside home (n=433)			
None	42 (17.2)	48 (25.4)	0.07 (5.27)
≤8 hours	192 (78.7)	137 (72.5)	
>8 hours	10 (4.1)	4 (2.1)	

Table A20 Living condition factors associated with self-rated health

Living condition factors	Good health Frequency (%)	Poor health Frequency (%)	p-value (Chi-Square)
Adequate space / area for washing, cooking and bathroom facilities (n=437)			
Disagree / Strongly disagree	58 (23.8)	58 (30.1)	0.14 (2.18)
Strongly agree / Agree	186 (76.2)	135 (69.9)	
Adequate supply of pure and clean drinking water (n=435)			
Disagree / Strongly disagree	28 (11.5)	47 (24.5)	< **0.001 (12.62)**
Strongly agree / Agree	215 (88.5)	145 (75.5)	
Adequate sleeping facilities (n=432)			
Disagree / Strongly disagree	48 (19.8)	58 (30.5)	**0.010 (6.57)**
Strongly agree / Agree	194 (80.2)	132 (69.5)	
Adequate facilities for relaxing and spending time with family (n=433)			
Disagree / Strongly disagree	47 (19.3)	72 (37.9)	< **0.001 (18.42)**
Strongly agree / Agree	196 (80.7)	118 (62.1)	
Adequate facilities for storing personal belongings (n=438)			
Disagree / Strongly disagree	58 (23.7)	62 (32.1)	0.05 (3.88)
Strongly agree / Agree	187 (76.3)	131 (67.9)	
Adequate ventilation and movement of clean and fresh air (n=437)			
Disagree / Strongly disagree	69 (28.2)	77 (40.1)	**0.009 (6.90)**
Strongly agree / Agree	176 (71.8)	115 (59.9)	
Adequate drainage system for removing waste water safely from home (n=434)			
Disagree / Strongly disagree	39 (16.1)	46 (24.0)	**0.041 (4.18)**
Strongly agree / Agree	203 (83.9)	146 (76.0)	
Adequate waste disposable and safety at home (n=435)			
Disagree / Strongly disagree	48 (19.8)	54 (28.1)	**0.041 (4.19)**
Strongly agree / Agree	195 (80.2)	138 (71.9)	
Adequate waste disposable and safety in community (n=435)			
Disagree / Strongly disagree	131 (53.9)	122 (63.5)	**0.043 (4.09)**
Strongly agree / Agree	112 (46.1)	70 (36.5)	
Adequate arrangement in living condition to prevent breeding of harmful pests (n=432)			
Disagree / Strongly disagree	53 (22.0)	63 (33.0)	**0.01 (6.56)**
Strongly agree / Agree	188 (78.0)	128 (67.0)	
Adequately designed home environment to prevent life-threatening dangers (n=434)			
Disagree / Strongly disagree	54 (22.2)	70 (36.6)	**0.001 (10.91)**
Strongly agree / Agree	189 (77.8)	121 (63.4)	
Adequate infrastructure to easily move around (lifts, stairs) (n=436)			
Disagree / Strongly disagree	41 (16.7)	38 (19.9)	0.40 (0.72)
Strongly agree / Agree	204 (83.3)	153 (80.1)	
Adequate measures to prevent crime and provide a safe and secure neighbourhood (n=433)			
Disagree / Strongly disagree	108 (44.8)	103 (53.6)	0.07 (3.34)
Strongly agree / Agree	133 (55.2)	89 (46.4)	

Table A21 Diet and physical activity associated with self-rated health

	Good Health Frequency (%)	**Poor Health** Frequency (%)	**p-value** (Chi-Square)
Past 30 days in hunger due to not enough food at home (n=437)			
Most time / Always/sometimes	11 (4.5)	24 (12.5)	**0.002 (9.37)**
Never / Rarely	234 (95.5)	168 (87.5)	
Frequency of breakfast consumption in the past 30 days (n=439)			
Never / Rarely	36 (14.6)	43 (22.3)	**0.04 (4.28)**
Most time / Always/Sometimes	210 (85.4)	150 (77.7)	
Vegetable consumption in the past 30 days (n=435)			
Did not eat last 30days	44 (18.0)	57 (30.0)	**0.003 (8.70)**
One time or more	201 (82.0)	133 (70.0)	
Fruit consumption in the past 30 days (n=429)			
Did not eat last 30days	39 (16.3)	41 (21.6)	0.17 (1.93)
One time or more	200 (83.7)	149 (78.4)	
Number of days physically active for at least 60 minutes / day (n=439)			
0 days	60 (24.3)	61 (31.8)	0.08 (3.03)
One day or more	187 (75.7)	131 (68.2)	
Number of days physically active for at least 60 minutes per day in a week (n=437)			
0 days	51 (20.8)	64 (33.3)	**0.003 (8.70)**
One day or more	194 (79.2)	128 (66.7)	
Number of days stretching exercises done in past 7 days (n=437)			
0 days	100 (41.0)	103 (53.4)	**0.01 (6.64)**
One day or more	144 (59.0)	90 (46.6)	
Number of days exercises done to strengthen or tone muscles in past 7days (n=437)			
0 days	175 (71.4)	148 (77.1)	0.18 (1.79)
One day or more	70 (28.6)	44 (22.9)	

*p-value <0.05 **p-value <0.01 ***p-value <0.001

Table A22 Decision making associated with self-rated health

Decision-making domains	**Good health** Frequency (%)	**Poor health** Frequency (%)	**p-value** (Chi-Square)
Decides how money you earn is used (n=395)			
Husband / partner	3 (1.4)	17 (9.7)	**0.003 (14.24)**
You and husband / partner jointly	61 (27.9)	49 (27.8)	
Family or someone else	18 (8.2)	13 (7.4)	
You	137 (62.6)	97 (55.1)	
Decides how husband's earning is used (n=302)			
Husband / partner	63 (38.0)	54 (39.7)	0.93 (0.44)
You and husband / partner jointly	74 (44.6)	62 (45.6)	
Family or someone else	4 (2.4)	3 (2.2)	
You	25 (15.1)	17 (12.5)	
Decide health care for yourself (n=417)			
Husband / partner	17 (7.3)	21 (11.4)	**0.011 (11.18)**
You and husband / partner jointly	51 (22.0)	54 (29.2)	
Family or someone else	32 (13.8)	35 (18.9)	
You	132 (56.9)	75 (40.5)	
Decides major household purchases (n=410)			
Husband / partner	20 (8.8)	36 (19.7)	**0.017 (10.20)**
You and husband / partner jointly	80 (35.2)	55 (30.1)	
Family or someone else	81 (35.7)	58 (31.7)	
You	46 (20.3)	34 (18.6)	
Decides major purchases for daily household needs (n=415)			
Husband / partner	10 (4.3)	26 (14.1)	**0.001 (16.92)**
You and husband / partner jointly	56 (24.3)	57 (30.8)	
Family or someone else	53 (23.0)	32 (17.3)	
You	111 (48.3)	70 (37.8)	
Decides about visit to your family and relatives (n=422)			
Husband / partner	4 (1.7)	7 (3.7)	0.36 (3.19)
You and husband / partner jointly	53 (22.6)	38 (20.3)	
Family or someone else	16 (6.8)	8 (4.3)	
You	162 (68.9)	134 (71.7)	

Table A23 Health information sources associated with self-rated health

Health information sources	Good health Frequency (%)	Poor health Frequency (%)	p-value (Chi-Square)
Newspaper (n=424)			
Not at all	126 (52.9)	121 (65.1)	**0.012 (6.30)**
Occasionally / Frequently	112 (47.1)	65 (34.9)	
Magazine (n=422)			
Not at all	140 (59.1)	135 (73.0)	**0.003 (8.85)**
Occasionally / Frequently	97 (40.9)	50 (27.0)	
Television (n=425)			
Not at all	53 (22.4)	58 (30.9)	0.05 (3.91)
Occasionally / Frequently	184 (77.6)	130 (69.1)	
Radio (n=418)			
Not at all	130 (55.6)	105 (57.1)	0.76 (0.10)
Occasionally / Frequently	104 (44.4)	79 (44.4)	
Internet ((n=432)			
Not at all	56 (23.0)	89 (47.1)	**<0.001(27.56)**
Occasionally / Frequently	187 (77.0)	100 (52.9)	
Family (n=424)			
Not at all	39 (16.4)	64 (34.4)	**<0.001(18.44)**
Occasionally / Frequently	199 (83.6)	122 (65.6)	
Friend (n=423)			
Not at all	50 (21.1)	67(36.0)	**0.001 (11.60)**
Occasionally / Frequently	187 (78.9)	119(64.0)	
Teacher / Counsellor (n=416)			
Not at all	135 (57.7)	134 (73.6)	**0.001 (11.38)**
Occasionally / Frequently	99 (42.3)	48 (26.4)	
Health Provider (n=417)			
Not at all	86 (37.1)	65 (35.1)	0.68(1.17)
Occasionally / Frequently	146 (62.9)	120 (64.9)	
Religious leader (n=417)			
Not at all	155 (66.5)	141 (76.6)	**0.02 (5.09)**
Occasionally / Frequently	78 (33.5)	43 (23.4)	

Table A24 Perception and behaviour towards health associated with self-rated health

Health-seeking behaviour	Good health Frequency (%)	Poor health Frequency (%)	p-value (Chi-Square)
When I am sick, I usually go to a health practitioner	83 (33.7)	54 (28.0)	0.62 (1.77)
When I am sick, I may go to a health practitioner	105 (42.7)	90 (46.6)	
When I am sick, I am unlikely to go to a health practitioner	46 (18.7)	40 (20.7)	
When I am sick, I will not see a health practitioner	12 (4.9)	9 (4.7)	
Perception and behaviour towards health			
Give more priority to my children and their health than my own health (n=424)			
Yes	79 (33.8)	93 (48.9)	**0.002 (10.03)**
No	155 (66.2)	97 (51.5)	
Give more priority to my husband/partner's health than my own health (n=424)			
Yes	72 (30.8)	47 (24.7)	0.17 (1.89)
No	162 (69.2)	143 (75.3)	
Give more priority to my parents/family members health (n=424)			
Yes	80 (34.2)	62 (32.6)	0.74 (0.11)
No	154 (65.8)	128 (67.4)	
Too busy doing household chores to bother about my own health (n=424)			
Yes	36 (15.4)	42 (22.1)	0.08 (3.16)
No	198 (84.6)	148 (77.9)	
Too busy in my job to take care of my health (n=424)			
Yes	46 (19.7)	34 (17.9)	0.64 (0.21)
No	188 (80.3)	156 (82.1)	
Too busy studying to take care of my health (n=424)			
Yes	48 (20.5)	19 (10.0)	**0.003 (8.71)**
No	186 (79.5)	171 (90.0)	
Do not have adequate information about health service providers/places (n=424)			
Yes	12 (5.1)	12 (6.3)	0.60 (0.28)
No	222 (94.9)	178 (93.7)	
Do not have adequate information about healthy living (n=424)			
Yes	9 (3.8)	15 (7.9)	0.07 (3.22)
No	225 (96.2)	175 (92.1)	
Do not have easy access to health services (n=424)			
Yes	44 (18.8)	55 (28.9)	**0.01 (6.03)**
No	190 (81.2)	135 (71.1)	
Husband does not approve or support in seeking health care (n=421)			
Yes	1 (0.4)	5 (2.6)	0.06 (3.65)
No	233 (99.6)	185 (97.4)	
Unable to give much importance to health, health is the lowest priority in my life (n=424)			
Yes	58 (25.0)	68 (36.0)	**0.01 (5.99)**
No	174 (75.0)	121 (64.0)	

Table A25 Health care access and health-seeking behaviour associated with self-rated health

	Good health Frequency (%)	**Poor health** Frequency (%)	**p-value** (Chi-Square)
Adequate health services close to home (n=439)			
No	94 (38.2)	102 (52.8)	**0.002 (9.38)**
Yes	152 (61.8)	91 (47.2)	
Last time visited a doctor or health care provider (n=419)			
Within the last one week	57 (24.4)	69 (37.3)	**0.004 (10.92)**
Within the last one month	74 (31.6)	60 (32.4)	
Prior to one month and within last 2 year	103 (44.0)	56 (30.3)	
Consultation with sickness in the past 6 weeks			
Sick, but consulted no-one **(n=426)**			
Yes	24 (10.0)	24 (12.8)	0.37 (0.82)
No	215 (90.0)	163 (87.2)	
Specialist doctor **(n=426)**			
Yes	88 (36.8)	87 (46.5)	**0.04 (4.08)**
No	151 (63.2)	100 (53.5)	
General doctor **(n=426)**			
Yes	39 (16.3)	46 (24.6)	**0.03 (4.50)**
No	200 (83.7)	141 (75.4)	
Others (nurse, pharmacist, counsellor) **(n=426)**			
Yes	17 (7.1)	26 (13.9)	**0.02 (5.33)**
No	222 (92.9)	161 (86.1)	
Facilities and resources used for health care access			
IGMH (Public hospital) **(n=429)**			
All the time / Often	59 (24.7)	65 (34.2)	0.10 (4.71)
Sometimes	71 (29.7)	48 (25.3)	
Never / Rarely	109 (45.6)	77 (40.5)	
ADK Hospital (Private hospital) **(n=428)**			
All the time / Often	62 (25.8)	65 (34.6)	0.06 (5.57)
Sometimes	89 (37.1)	52 (27.7)	
Never / Rarely	89 (37.1)	71 (37.8)	
Private clinic **(n=423)**			
All the time / Often	51 (21.5)	46 (24.7)	0.55 (1.21)
Sometimes	64 (27.0)	54 (29.0)	
Never / Rarely	122 (51.5)	86 (46.2)	
Health centre **(n=409)**			
All the time /Often	6 (2.6)	9 (5.1)	0.36 (2.07)
Sometimes	16 (6.9)	14 (8.0)	
Never / Rarely	211 (90.6)	153(86.9)	
Pharmacy **(n=410)**			
All the time /Often	43 (18.5)	26 (14.6)	0.56 (1.15)
Sometimes	44 (19.0)	34 (19.1)	
Never / Rarely	145 (62.5)	118 (66.3)	
Hospital / Health Centre Aboard **(n=418)**			
All the time / Often	32 (13.7)	20 (10.8)	0.22 (3.04)
Sometimes	47 (20.2)	50 (27.0)	
Never / Rarely	154 (66.1)	115 (62.2)	
Traditional Dhivehi beys (Maldivian) Practitioner **(n=412)**			
All the time / Often	3 (1.3)	3 (1.7)	0.88 (0.25)
Sometimes	12 (5.2)	11 (6.1)	
Never / Rarely	216 (93.5)	167 (92.3)	
Traditional Sorcerer **(n=407)**			
Sometimes	6 (2.6)	4 (2.2)	0.81 (0.06)
Never / Rarely	223 (97.4)	174 (97.8)	

Table A26 Barriers to health care access during sickness associated with self-rated health

	Good health Frequency (%)	**Poor health** Frequency (%)	**p-value** (Chi-Square)
Getting permission to go (n=411)			
Always / Most of the time	14 (6.0)	5 (2.8)	0.13 (2.34)
Sometimes / Rarely / Never	219 (94.0)	173 (97.2)	
Family members negative attitude towards medical care (n=405)			
Always / Most of the time / Sometimes	9 (3.9)	2 (1.1)	0.09 (2.94)
Rarely / Never	220 (96.1)	174 (98.9)	
Husband / partner's negative attitude towards medical Care (n=366)			
Always / Most of the time / Sometimes	6 (2.9)	3 (1.9)	0.56 (0.34)
Rarely / Never	203 (97.1)	154 (98.1)	
Getting money needed for the treatment (n=404)			
Always / Most of the time	17 (7.5)	17 (9.7)	0.43 (0.63)
Sometimes / Rarely / Never	211 (92.5)	159 (90.3)	
Distance to the health facility (n=400)			
Always / Most of the time	11 (4.8)	19 (11.0)	**0.02 (5.33)**
Sometimes / Rarely / Never	216 (95.2)	154 (89.0)	
Having to take transport (n=399)			
Always / Most of the time	22 (9.8)	27 (15.5)	0.08 (3.00)
Sometimes / Rarely / Never	203 (90.2)	147 (84.5)	
Not wanting to go alone (n=397)			
Always / Most of the time	18 (8.0)	23 (13.5)	0.08 (3.16)
Sometimes / Rarely / Never	208 (92.0)	148 (86.5)	
Not able to leave my dependents alone at home and seek personal health care (n=382)			
Always / Most of the time	12 (5.5)	7 (4.3)	0.58 (0.30)
Sometimes / Rarely / Never	206 (94.5)	157 (95.7)	
Difficulties in getting a doctor's appointment (n=408)			
Always / Most of the time	81 (35.5)	76 (42.2)	0.17 (1.91)
Sometimes / Rarely / Never	147 (64.5)	104 (57.8)	
Concern that there may not be a health provider (n=397)			
Always / Most of the time	13 (5.8)	13 (7.5)	0.49 (0.47)
Sometimes / Rarely / Never	211 (94.2)	160 (92.5)	
Concern that there may not be a female health provider (n=395)			
Always / Most of the time	17 (7.7)	14 (8.1)	0.87 (0.03)
Sometimes / Rarely / Never	205 (92.3)	159 (91.9)	
Concern that the necessary medicines may not be available (n=396)			
Always / Most of the time	12 (5.4)	14 (8.0)	0.31 (1.05)
Sometimes / Rarely / Never	209 (94.6)	161 (92.0)	
Concern that necessary laboratory or medical investigations may not be available (n=395)			
Always / Most of the time	22 (9.8)	7 (4.1)	**0.03 (4.68)**
Sometimes / Rarely / Never	202 (90.2)	164 (95.9)	
Concern that health practitioner will be rude and Unfriendly (n=400)			
Always / Most of the time	17 (7.6)	8 (4.6)	0.22 (1.50)
Sometimes / Rarely / Never	208 (92.4)	167 (95.4)	
Concern that health practitioner will not listen and be uncaring (n=400)			
Always / Most of the time	14 (6.2)	6 (3.4)	0.20 (1.62)
Sometimes / Rarely / Never	211 (93.8)	169 (96.6)	