

School of Public Health

DEVELOPING HEALTH PROMOTION METHODS IN  
REMOTE ABORIGINAL COMMUNITIES

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## **ABSTRACT**

This thesis investigates the development and implementation of health promotion strategies and methods in remote Aboriginal communities via the Kimberley Aboriginal Health Promotion Project (KAHPP), a project funded under a grant from the Commonwealth Department of Health and Family Services and conducted by the School of Public Health at Curtin University of Technology. The aim of the project was to investigate the effectiveness of health promotion strategies and methods in remote Aboriginal communities and to develop structures for implementing effective Aboriginal health promotion programs.

There were three main research components in this study: an assessment of health indicators; an assessment of the intervention impact; and an assessment of the media component of the intervention. The research methodology included the development of a culturally appropriate survey instrument and the conduct of cross-sectional surveys of three remote Aboriginal communities with differing historical circumstances in the Kimberley region. The questionnaire and field study methods were piloted in 1990 and the main study conducted in 1991.<sup>1</sup>

A health promotion intervention was conducted based on an approach originally developed in the Northern Territory.<sup>2</sup> The intervention employed community development and mass media strategies. Community members nominated health issues that they wished to address, from which 'storyboards' were created for health promotion advertisements to appear on remote television on a paid schedule.<sup>3</sup> Representative random samples of adult males and females from three remote Aboriginal communities were surveyed according to a range of attitudinal and behavioural health indicators. A post-test survey assessed media reach and impact and pre-post surveys assessed relevant changes in the communities.

The cross-sectional survey of health indicators found differences between communities in terms of self-assessed health and risk behaviours. These are discussed in terms of the historical differences between communities and with respect to each community's current situation. Respondents from all communities

rated environmental factors as important in their contribution to health, and generally more so than individual lifestyle behaviours.

The study demonstrated that television has the potential to reach the vast majority of Aboriginal people in remote communities in the Kimberley. There was some indication that participation in the development of advertisements was associated with higher recognition and more positive assessments of that advertisement. No significant differences in selected indicators of community 'empowerment' were detected following the intervention.

The thesis methodology has contributed to the development of a set of guidelines for the conduct of survey research in remote Aboriginal communities,<sup>4</sup> and has guided the formation of Aboriginal health promotion units in Western Australia and elsewhere.

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## **CHAPTER ONE INTRODUCTION**

### **Aboriginal Health and Health Promotion Interventions**

Aboriginal and Torres Strait Islander people have the worst health of any group in Australia. While non-Aboriginal Australians have experienced longer life expectancy and declining all-causes mortality rates in recent decades, the growing impact of non-communicable diseases – particularly cardiovascular disease and diabetes – while preventable communicable diseases continue to contribute disproportionately to high mortality, is a phenomenon peculiar to Aborigines (Bhatia and Anderson 1995). However, the increasing burden of chronic diseases among Aboriginal people has proven less amenable to clinical interventions than acute and infectious conditions have been. One reason is that chronic diseases have a complex aetiology, due in part to risk factors - health-compromising behaviours and poor physical environments, as well as 'risk conditions', that often lie outside of the health system's responsibility or control, such as housing, welfare and education.

Health promotion programs aim to improve health by making changes in modifiable risk factors and/or risk conditions. While a relatively new discipline, health promotion programs have demonstrated some success in addressing certain risk factors for health in mainstream populations. For example, there is now evidence from randomised controlled trials to show that health promotion interventions have brought about reductions in hypertension, increases in the proportion of people who quit smoking and who present for vaccination (Hawe et al. 1997).

The imperative that is the improvement of Aboriginal health requires the health system to deploy all the means at its disposal. This must include evidence-based approaches to prevention as well as to the treatment of health problems.

Health promotion programs have an important part to play in this response. This thesis is concerned with a health promotion intervention with remote Aboriginal communities in the Kimberley region of Western Australia.

The subject of this thesis, the Kimberley Aboriginal Health Promotion Project (KAHPP), was initiated in 1990 by the School of Public Health at Curtin University of Technology in Perth and ran for two years. The aim of the project was to investigate the effectiveness of health promotion strategies and methods in remote Aboriginal communities and to develop structures for implementing effective Aboriginal health promotion programs. This chapter describes the project rationale, provides some background on the Kimberley region of Western Australia where the study took place, and then lists the study objectives.

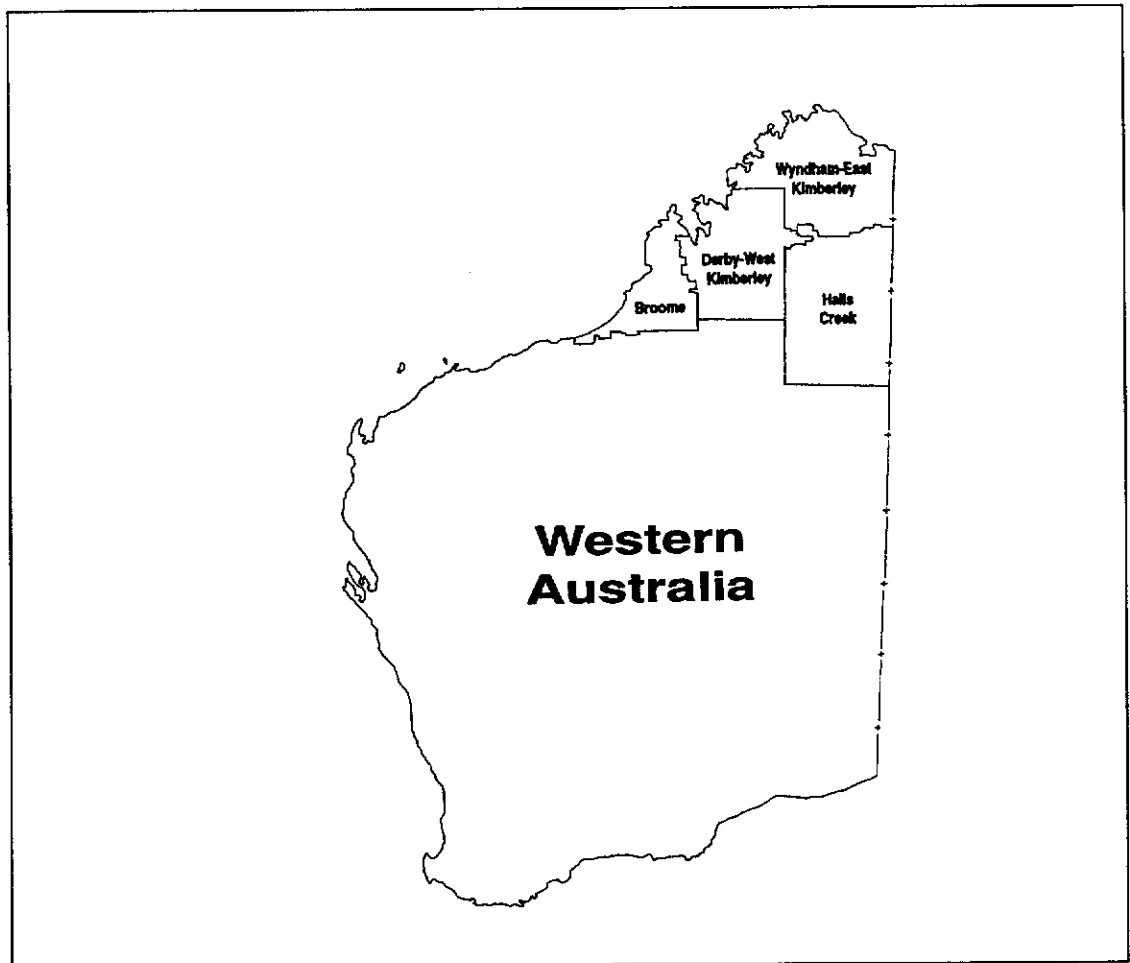
### **The Study Setting: The Kimberley Region of Western Australia**

#### **Location and Landscape**

The Kimberley region of Western Australia is vast and remote, even by Australian standards. The region covers an area of some 421,130 square kilometres, an area equivalent to approximately half the land area of New South Wales. It includes the small towns of Broome, Derby, Fitzroy Crossing, Halls Creek, Wyndham and Kununurra, and a considerable number of relatively large, remote Aboriginal communities and many outstations. It is over 2,000 kilometres by road from Perth to Broome in the south-west Kimberley and a further 1000 kilometres to Kununurra in the north-east Kimberley near the Northern Territory border. From a local government perspective, the Kimberley region is divided into four shires: Broome, Derby-West Kimberley, Halls Creek and Wyndham-East Kimberley (Figure 1). The study took place in the Broome and Derby-West Kimberley areas.



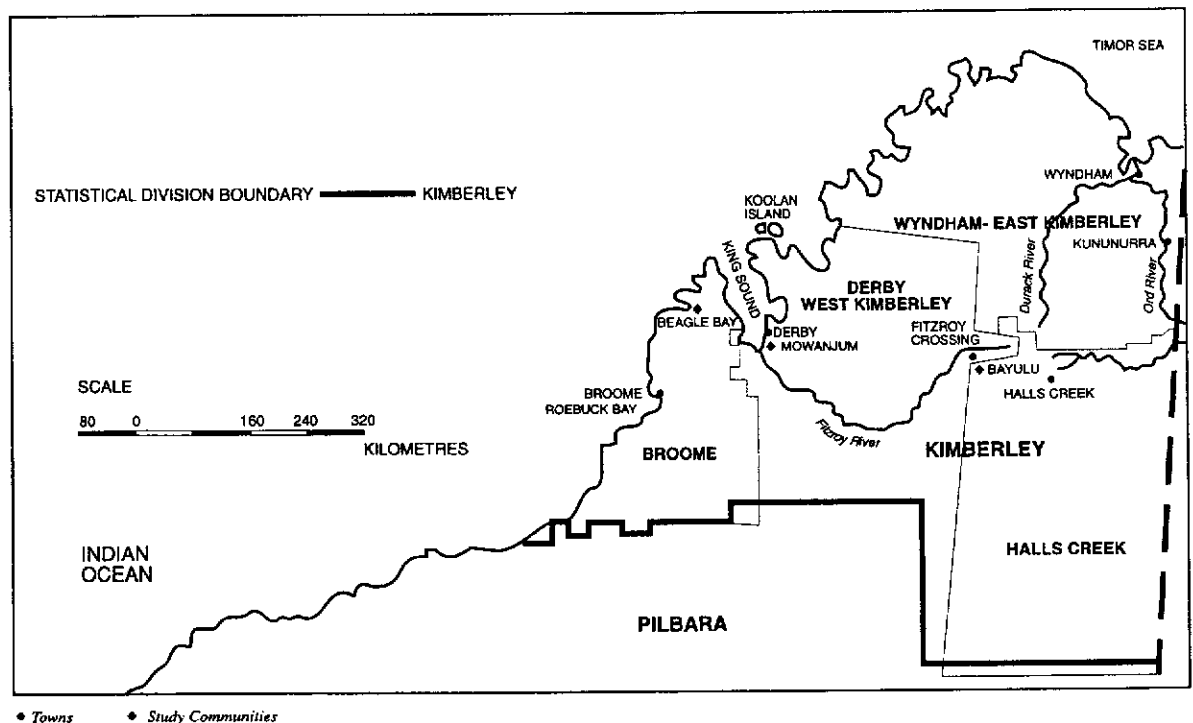
**Figure 1: Map of Kimberley Region, showing local government boundaries**



The major town in the Broome Shire is Broome itself (pop. 8,000). In the south-west area around Broome the red dust of the desert plain (pindan) extends all the way to the sand dunes that border the long white sandy beaches along the coast. The town of Broome was proclaimed in 1883. Broome has had a long association with Asia due to Asian involvement in the pearling industry, in which it was once a world leader. Today Broome has become a tourist destination, attracting those seeking escape from a southern winter to its balmy 'winter' season climate and increasingly, those seeking exposure to Indigenous culture and the colourful history of the town and surrounding hinterland. A third and growing market is 'adventure tourists', who spend longer amounts of time in both the accessible and more inaccessible parts of the region through the development of four-wheel drive vehicles and their availability to a wide section of the population (Gracey and Spargo 1996).

Moving into the Derby-West Kimberley shire to the north (Figure 2), the coastline of the Dampier Peninsula gives way to the muddy mangroves of King Sound on which lies the government centre of Derby (pop. 5,000). As well as an administrative centre, Derby was significant during the boom days of the pastoral industry as a port from which cattle from the stations of the Fitzroy Valley were loaded for southern markets. The pastoral industry was the major reason for the white settlement of the Fitzroy Valley and the Ord Valley further to the north in the early 1880's. To the east of Derby, boab trees dot the plain until it rises to form the ranges of the Kimberley plateau, 800 metres above sea level. The only major town in the Fitzroy Valley is Fitzroy Crossing (pop. 1,000), 250 kilometres inland.

**Figure 2:** Map of South-west Kimberley with towns and study communities



The climate of the Kimberley region is one of extremes. Overnight temperatures in winter can drop almost to zero in the inland areas adjoining the Great Sandy Desert. On summer days in the same places the temperature regularly reaches the mid-forties with accompanying high humidity. The seasons are not the usual four of temperate Australia, but just two: the Dry (May to October) and the Wet (November to April). However the predictability of the Wet is less than consistent. Therefore a long dry spell of nine months can produce just a few thunderstorms, bringing little useful rain, so that dust storms prevail and the country becomes parched and cracked.

Alternatively the monsoon's arrival may turn dry creek beds into swollen rivers and the dusty plains into an inland sea, cutting communications and isolating communities for weeks.

### **Demography and Economy**

The ratio of Aboriginal to non-Aboriginal people in the Kimberley is significantly higher than most other regions in Australia, yet what once was a majority has been steadily reducing over the past 100 years as non-Aboriginal people have moved into the region. At the 1996 Census, Aboriginal people accounted for approximately one-third of the Kimberley's population of 33,028 (Australian Bureau of Statistics 1997).

However, if Aborigines in the Kimberley almost equal non-Aborigines in population, they are unequal in most other respects. For example, while approximately half of the non-Aboriginal population of the Kimberley is employed, only one quarter of the Aboriginal population is employed and a high proportion of this number are employed through the Community Development Employment Program (CDEP) (which is the equivalent of unemployment benefits paid to individuals who perform community work). This is reflected in income data for the region, which show that over 80% of Aboriginal people received incomes in the range \$0-20,000, compared with 42% of the non-Aboriginal population (Crough and Christopherson 1993).

The major industries providing employment in the region are mining, fishing and pearling, pastoralism, agriculture and tourism. The employment offered by these industries favours non-Aborigines, who hold over 90% of the jobs in them. Of these industries, in terms of measured activity, the mining industry is the largest in the region. However the economic impact of the industry on the region is relatively limited as the economic benefits from the mining projects flow to interests outside of the Kimberley:

*"Although the mines employ a significant number of workers, the nature of the employment arrangements severely curtails the regional impact of the wages and salaries paid to the employees. Aboriginal participation in the industry workforce in the region, despite good intentions and efforts on behalf of the mining companies, is less than 5% of the workforce." (Crough and Christopherson 1993, p.64)*

A further, less obvious 'industry' in the region is that of the provision of government services. Government spending is particularly important in the region, to both Aboriginal and non-Aboriginal residents, due to the region's limited economic base, the seasonal nature of some industries, the relative remoteness, and the high cost structure of some industries. Overall the Aboriginal economy of the region is primarily domestic, static, and based on welfare.

### **Communications**

The remoteness of the Kimberley was a factor that delayed non-Aboriginal intrusion into the region for almost a hundred years after white settlement at Port Jackson in 1788. For most of the next hundred years, the Kimberley's isolation insulated the region to some degree from the pace of change occurring in the metropolitan centres to the south. However in the past 20 years the world-wide technological revolution has all but eliminated the 'tyranny of distance' between the Kimberley and the population centres of the south. This change, particularly in the area of communications, is having, and will continue to have, a significant effect on all of the Kimberley population, including Aborigines.

Daily jet air services to the towns of Broome, Derby and Kununurra mean that these centres are only a matter of hours away from the major cities of Perth and Darwin (although the transport of most goods and services is still dependent on long-distance road haulage with days or weeks in transit). Satellite communications have played an important role in removing the barriers of isolation. Facsimile and STD telephone services are now in place in most Aboriginal communities and some outstations. Since 1988 the Australian Broadcasting Commission (ABCTV) and the Golden West Network (GWN) have broadcast via satellite, mainstream television to the remotest of Aboriginal communities in the Kimberley.

### **Health Services**

Health services in the Kimberley Region are delivered through a dual system: the Kimberley Aboriginal Health Services Council (KAMSC), an Aboriginal community-controlled health service, based in Broome, and (ii) the Health Department of Western

Australia (HDWA) which at the time of the study had a Regional Office in Derby. The result is that health centres incorporating medical, nursing and Indigenous health worker services are operated in some Aboriginal communities by KAMSC and in other communities by the HDWA. The hospitals in Kununurra, Broome and the Regional Hospital in Derby are all operated by the HDWA. The Royal Flying Doctor Service (RFDS) based in Derby, also provides medical clinics and emergency evacuations for remote communities.

For all of the above health services, the Aboriginal people of the Kimberley are the main client group. This priority is assigned less to the relatively high proportion of Aboriginal to non-Aboriginal people in the Kimberley than to an acknowledgement by all health service providers that the Aboriginal people of the Kimberley, in common with Aboriginal people throughout Australia, have a health status far worse than that of the non-Aboriginal population of the region (Veroni, Rouse and Gracey 1992).

### **KAHPP Project Objectives and Research Components**

The **project objectives** were as follows:

1. **To develop instruments for and to collect baseline health data to assist in the planning and evaluation of Aboriginal health promotion activities.** This was achieved via development of a culturally appropriate survey instrument (Appendix A) and the conduct of cross sectional surveys of three remote Aboriginal communities in the Kimberley region. The questionnaire and field study methods were piloted in 1990 and the main study conducted in 1991 (Spark et al. 1992).
2. **To trial and evaluate a health promotion intervention in the Kimberley region based upon the Northern Territory Aboriginal health promotion approach.** The trialled intervention involved conducting workshops in communities with the assistance of Aboriginal facilitators. In these workshops, participants discussed and prioritised community health issues that they wished to address. Participants then created storyboards from which health promotion advertisements were produced for television (Spark and

Mills 1988; Spark, Donovan and Howat 1991). These advertisements were later screened on a paid schedule on the Golden West Network (GWN) across the Kimberley region. Pre-post surveys assessed relevant changes in the community, and a post-test survey assessed media reach and impact.

3. **To establish a mechanism whereby further health promotion programs with Aboriginal communities could be sustained.** This was achieved in June 1992, with the establishment by the Health Department of Western Australia of an Aboriginal Health Promotion Unit, based in Broome. The Kimberley Aboriginal Health Promotion Unit has an Aboriginal name: *Mardja Bulli Ubbadijinga* (meaning 'strong healthy mob' in a local Aboriginal language, Walmatjarri).

### **KAHPP Research Components**

An integral element of the Kimberley Aboriginal Health Promotion Project was research to inform and evaluate the project. Research methods varied according to the research questions as well as practical constraints such as budget, the availability of records and the remoteness of the Aboriginal communities. There were three main research components: Health Indicators, Media Evaluation and Intervention Impact. A fourth component examined the feasibility of using Aboriginal Health Workers in health promotion.

#### **Research Component 1: Health Indicators**

**Research Objective:** To describe and compare the health indicators of adult males and females in three different remote Aboriginal communities in the Kimberley region and to consider the implications of the results for Aboriginal health promotion.

**Rationale:** Aboriginal 'communities', particularly those in remote Australia, are not homogenous, although they are commonly regarded as being so by non-Aboriginal Australians (National Aboriginal Health Strategy Working Party 1989). Differences exist between and within Aboriginal communities. Within an Aboriginal community, a number of tribal groups frequently co-exist. Between communities, physical and

social environments can differ greatly. However, a distinguishing factor across remote Aboriginal communities is how often their development was shaped by the type and timing of white settlement they confronted (Hunter 1993). The two major interests that dominated early white settlement in northern Australia, particularly in the Kimberley, were the pastoral industry and missions. In the space of 100 years in the Kimberley, these two powerful interests, with the support of government policy, were responsible for the removal of most Kimberley Aborigines from their traditional lands.

The overall pattern of remote Aboriginal settlement in the Kimberley today therefore is somewhat mixed. Some contemporary Aboriginal communities are located on or near former or current missions and cattle stations. Other communities developed as 'town camps' because of the attraction the new towns held for some Aborigines, particularly in terms of access to consumer goods, or alternatively, as a result of Aboriginal people drifting to town camps following their exclusion from their traditional lands. Another group of 'town camp' communities resulted from whole tribal groups being passively, or sometimes forcibly, relocated to the outskirts of towns, to allow them to be better 'administered', with respect to missionary, government or other interests.

In this study, three different types of community were surveyed: (i) an ex-mission community (*Beagle Bay*), (ii) a community located next to a cattle station (*Bayulu*), and (iii) a community on the fringe of the town of Derby, a centre for government services in the region (*Mowanjum*). It is not proposed that these communities are 'pure' examples of the categories of *mission*, (cattle) *station* and *town camp* community, because, as stated above, the communities are not internally homogenous and each has been exposed to more than one of the above influences at some point in their history. However, they do possess sufficient characteristics to allow them to be placed within these categories for the purposes of comparison.

The *Health Indicator* research questions were:

- 1.1 Do environmental health factors differ by type of community?
- 1.2 Do perceptions of health and happiness differ by type of community, age or gender?

- 1.3 Do perceptions of the effect of risk factors for health differ by type of community, age or gender?
- 1.4 Do health behaviours differ by type of community, age or gender?
- 1.5 Does attitude to acting on health behaviours differ by type of community, age or gender?
- 1.6 Does perceived health efficacy differ by type of community, age or gender?
- 1.7 What are the current disease prevention strategies of individuals and communities?
- 1.8 What are the perceived health needs of communities?

**Research Method:** Cross-sectional survey of a representative purposive sample of males and females of all ages from three remote Aboriginal communities. The comparison of communities can be regarded as case study research, with one example of each type of community. The significance of statistical differences are informed by a detailed knowledge of each community.

## **Research Component 2: Media Evaluation**

**Research Objective:** Evaluate reach and impact of media component of KAHPP intervention.

**Rationale:** In the past 20 years, mass media strategies have become acknowledged throughout the western world as a key element of a population-level approach to health promotion (Egger, Donovan and Spark 1993). Television has become a popular medium for carrying health promotion messages in mainstream Australia due to its appeal as an ‘emotional’ medium and its ability to reach large audiences over a widely-scattered population. Despite high viewership levels among Aboriginal audiences and the recent introduction of satellite television to remote Aboriginal Australia, there have been few attempts to directly target Aboriginal people via television with culturally-appropriate health promotion advertisements (Spark and Mills 1988). The KAHPP intervention involved members of the community developing health promotion resources in community workshops. In this case, the resources included storyboards for television advertisements. Workshop participants identified the issues to be addressed, decided upon the messages to be communicated,



and created the storyboards for the advertisements. It was hypothesised that the televised health promotion advertisements would have some impact on the awareness of the health issues covered by the advertisements and motivation to act upon those health issues in all communities, whether or not those communities developed the advertisements. It was further hypothesised that, as a result of community participation, these effects would be enhanced within the community that produced a particular advertisement.

The *Media Evaluation* research questions were:

- 2.1 What proportion of the sample saw the advertisements? (*Reach*)
- 2.2 What messages were recalled by the sample? (*Recall*)
- 2.3 How 'strong' was the advertisement for the sample? (*Emotional Arousal*)
- 2.4 Did the sample see the advertisement as a good or bad thing? (*Acceptance*)
- 2.5 Did community participation in the development of an advertisement increase reach and impact of that advertisement relative to other communities? (*Involvement*)

**Research Method:** Post-test cross-sectional survey of communities involved in production of advertisements and the comparison community.

### **Research Component 3: Intervention Impact**

**Research Objective:** Evaluate impact of KAHPP intervention on community strength and on community motivation to act on health issues.

**Rationale:** In the limited time frame of this study, and given the limited nature of the intervention, changes in health indicators and health risk factor behaviours were not expected at the time of the post-test (approximately three months after the health promotion workshops). However it was hypothesised that: (i) participation in the community workshop and subsequent exposure to the television advertisements developed in the workshops would lead to increased motivation to act on health issues and an increased sense of community empowerment, and (ii) these changes would be greater within the communities that participated in the production of the advertisements relative to the comparison community.

The *Intervention Impact* research questions were:

- 3.1 Did the intervention increase community awareness of the health issues addressed by the workshop and the advertisements?
- 3.2 Did the intervention increase community motivation to act on the health issues addressed by the workshop and the advertisements?
- 3.3 Did the intervention increase community strength?
- 3.4 Did the intervention increase feelings of community empowerment in participating communities?

**Research method:** Quasi-experimental pretest-posttest survey with comparison group.

#### **Research Component 4: Use of Aboriginal Health Workers in Health Promotion**

A fourth objective was to examine the feasibility of using Aboriginal health workers as facilitators of Aboriginal health promotion programs. The employment of Indigenous health workers as part of a primary health care approach to health is now a policy of state health and community controlled health services for Aboriginal communities throughout Australia. In recent years Aboriginal health workers in the Kimberley and elsewhere have had access to certificate and diploma-level training courses. The introduction of a career structure has strengthened their position as an integral part of the health care team. In many communities the Aboriginal Health Worker is the main health care provider, supported by a visiting nurse and scheduled medical clinics. A key health promotion strategy is for primary care providers to utilise one-to-one opportunities to deliver 'patient education' (Egger, Spark and Lawson 1990). It was thought that Aboriginal Health Workers could undertake this within their clinical role and, as community residents, initiate and participate in community development programs.

Research questions were:

- 4.1 Can Aboriginal health workers be utilised as facilitators of health promotion activity in remote Aboriginal communities?
- 4.2 What barriers are there to Aboriginal health workers doing health promotion?

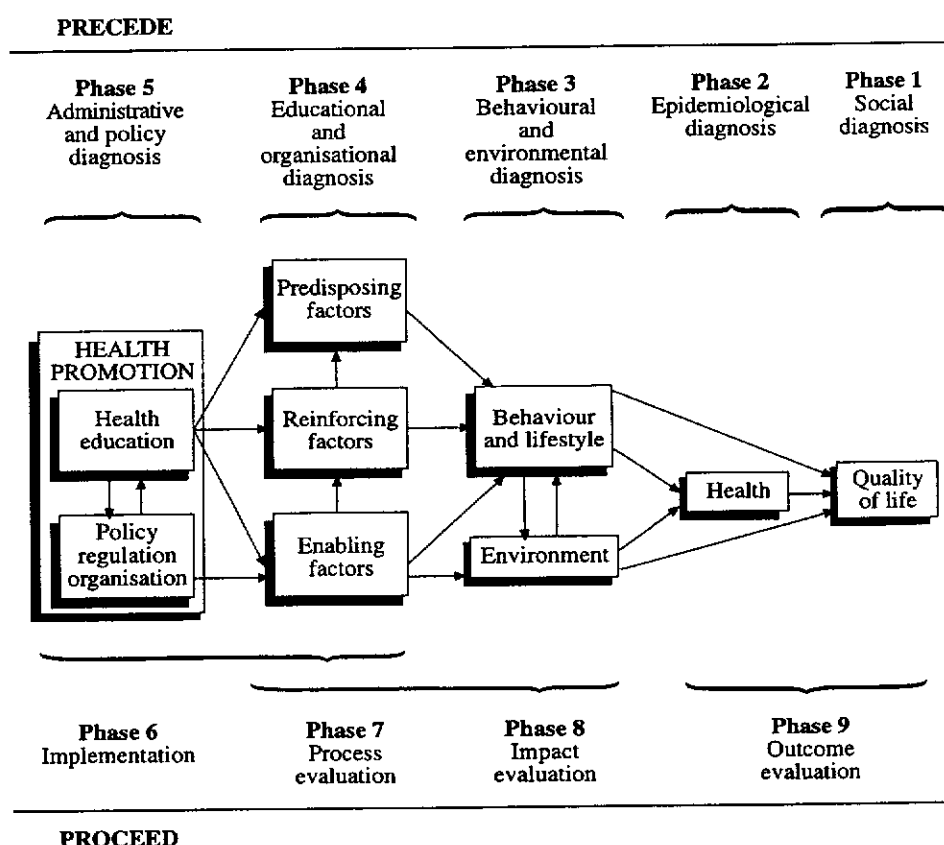
A health promotion training workshop was conducted with seven Aboriginal health workers drawn from a group of communities in the Derby-West Kimberley area, including those to be involved in the pilot and the main study. The workshop included a survey of the participants' duties as health workers and their attitudes to conducting health promotion activities.

## CHAPTER TWO LITERATURE REVIEW

### The PRECEDE-PROCEED Framework for Health Promotion

This chapter presents a review of the literature relevant to the topic, *Developing Health Promotion Methods in Remote Aboriginal Communities*, using the PRECEDE component of the PRECEDE-PROCEED planning, implementation and evaluation model for health promotion developed by Lawrence Green (Figure 3) (Green and Kreuter 1991). This model has been selected because of its widespread acceptance in the health promotion area, and specifically for its ability to provide a theoretical base for project planning and to gather and organise diverse information under a single framework.

Figure 3: The PRECEDE-PROCEED model for health promotion planning and evaluation



The model as originally developed by Green and colleagues consisted only of the PRECEDE component. PRECEDE is an acronym for Predisposing, Reinforcing and Enabling Constructs in Educational (and Environmental) Diagnosis and Evaluation.

This model was developed to assist planning in 'health education' and was published in a widely subscribed textbook in 1980. The definition of health education adopted in this book was *"...any combination of learning experiences designed to facilitate voluntary adaptations of behaviour conducive to health"* (Green et al. 1980, p.7).

PRECEDE was introduced to address what Green observed at the time as the tendency for health practitioners to predetermine which intervention strategy they were going to employ, with the choice often based on which techniques they were most comfortable with applying. The Precede framework was novel in that it focussed on outcomes rather than inputs, forcing the health practitioner to begin the planning process from the outcome end. Each of the five phases in Precede allows a different 'layer' of diagnosis: social, epidemiological, behavioural, educational and administrative. The range of information that can be collected within this framework provides for a comprehensive analysis of the health issue under investigation.

At around the time of the publication of PRECEDE in 1980, and increasingly during the decade following, there was an acknowledgment in the international public health community that health education, with its emphasis on behavioural or lifestyle-related choices and individually-oriented programs, was neglecting the importance of social factors in the aetiology of many diseases (McKeown 1976; Syme 1986). For example, Kickbusch argued that health education could only develop its full potential if it was supported by structural measures (economic, environmental, regulatory, etc.) (Kickbusch 1990). The legitimacy of this new philosophical movement was forged through the declaration of the Ottawa Charter for Health Promotion, at a World Health Organization-sponsored conference in 1986 in Ottawa, Canada. The Ottawa Charter described five principles for health promotion action as the basis for a 'new public health'. These principles were to: strengthen community action, develop personal skills, build healthy public policy, reorient health services and create supportive environments (World Health Organization 1986).

In response to these developments, in a 1991 revision of his text, Green replaced 'health education' with the more inclusive term 'health promotion', which he defined as:

*“The combination of educational and environmental supports for actions and conditions of living conducive to health.” (Green and Kreuter 1991, p.4)*

To reflect this broadened scope, Green amended the PRECEDE model to give greater emphasis to environmental factors and expanded it to include PROCEED - an acronym for Policy, Regulatory and Organisational Constructs in Educational and Environmental Development. Proceed includes the phases of resource mobilisation and evaluation following the diagnostic phases of Precede. PROCEED is essentially an elaboration and extension of the administrative diagnosis phase of PRECEDE. The addition of PROCEED to the original model gave greater emphasis to the contribution of structural factors and community organisation processes to program implementation, as well as articulating more fully the stages of evaluation.

The major focus of PRECEDE-PROCEED has been to address behavioural and environmental risk factors for chronic diseases (Mullen, Hersey and Iverson 1987). The model has been the chosen framework in the development of health programs and the evaluation of health promotion interventions in over 400 published applications of the model. The scope of these applications has included clinical field trials, the development of government health programs, evaluation of maternal and child health projects, a model for planning and evaluating national safety programs, as an organisational framework for school curriculum development and training programs for health professionals (Green and Kreuter 1991).

There are two principal reasons why PRECEDE-PROCEED has been selected as the framework within which to present the review of the literature relevant to the thesis topic. First, its diagnostic approach, featuring multiple ‘layers’ underlying a health problem, is most applicable to the area of Aboriginal health, which has a multi-factorial aetiology. Second, it differs from other models in that it is eclectic in nature and allows the incorporation of components of other models (e.g., Health Belief Model, Theory of Reasoned Action, etc. within PRECEDE Phase 4).

A variety of disciplines contribute to the eight phases of the model, including epidemiology, the social and behavioural sciences and health policy and administration. The PRECEDE-PROCEED model is therefore not a narrow

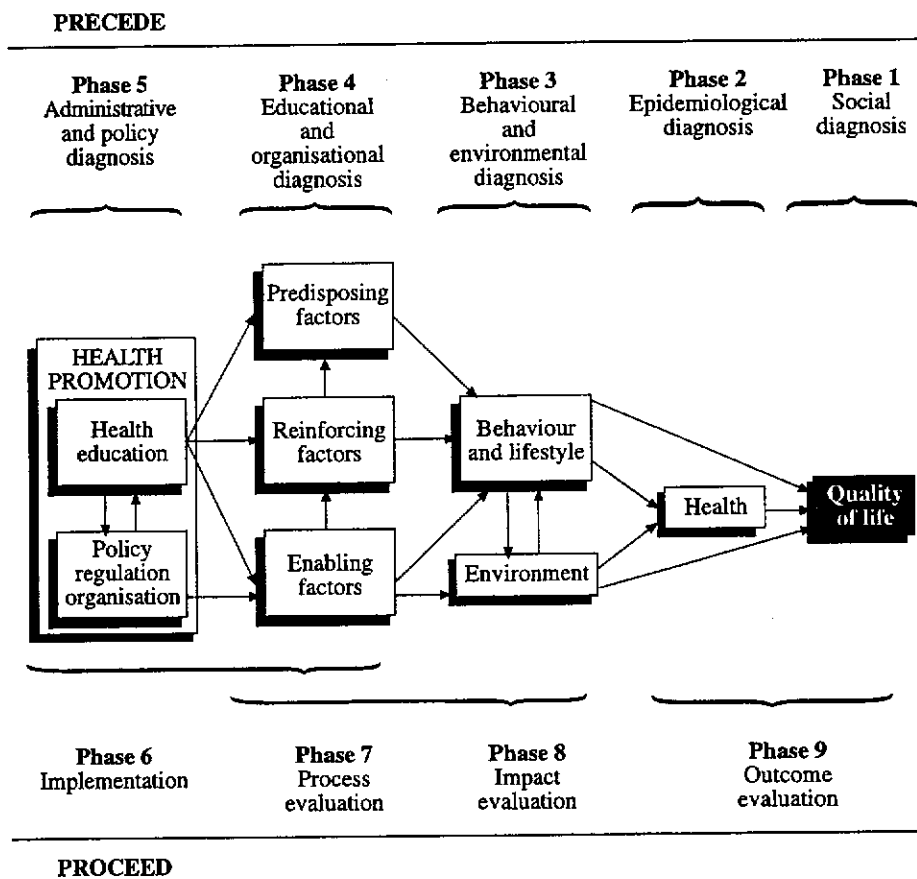
theoretical construct, the selection of which would limit discussion of broader issues, but has the ability to be inclusive of a range of applied research and theoretical information relevant to this topic.

The following review is organised according to the five PRECEDE phases of the PRECEDE-PROCEED model, beginning with Phase One, Social Diagnosis. The PROCEED phases (Six to Nine) of the model, which relate to implementation and process, impact and outcome evaluation are addressed in the Introduction, Method and Results sections of this thesis.

## PRECEDE Phase 1: Social Diagnosis

Phase 1 of the Precede-Proceed Model, Social Diagnosis, is highlighted in Figure 4. The Social Diagnosis phase is illustrative of the broader scope of the Precede-Proceed model compared with other health planning models. This phase represents a departure from conventional approaches to investigations in the health area, which generally begin with an examination of health status.

**Figure 4: PRECEDE Phase 1 - Social Diagnosis**



Instead the Social Diagnosis involves an assessment of indicators of the quality of life of the population group under investigation. By starting at this 'endpoint', the model acknowledges a social reality: for most people, health is an instrumental value rather than an ultimate value. In this sense, health is seen as a resource for everyday life, not the objective of living (World Health Organization 1986).



### ***Quality of Life: Contemporary conceptions***

Quality of life, due to its inherent subjectivity, is less easy to define than the more objective indicators of health status that are the standard instruments of epidemiologists and health planners. Rogerson notes the difficulties that arise in conceptualising quality of life, due to the complex, multi-dimensionality of the term. These difficulties include the fundamental issue in its measurement: whether quality of life should be measured as a whole, conceived holistically, or through a perspective which subdivides life quality into a set of components aggregated to represent the whole. A compounding factor is that, being a construct, quality of life is not directly observable (Rogerson 1995).

While there are a number of diverse definitions of quality of life, there appear to be two main perspectives. The first of these views quality of life more objectively. Researchers with this perspective, such as Hornquist, assert that human needs are the foundations for quality of life and that quality of life is the objectively-assessed degree of attainment of those needs, for example, physical, psychological, social, activity, marital and structural needs (Hornquist 1982).

In the second perspective, researchers such as Rosenberg argue that the translation of quality of life into components such as emotional status, social interaction, economic status and physical activity, while incorporating the multidisciplinary nature of human beings, does not capture their subjectivity (Rosenberg 1992). Researchers holding this perspective have developed indicators based on self-ratings of quality of life.

The World Health Organization Quality of Life Group (WHOQOL), an international group of collaborating investigators in various centres throughout the world, supports the subjective approach. This group defines quality of life as: “*...the individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives and in relation to his/her goals, expectations, standards and concerns.*” (The WHOQOL Group 1995, p.732)

The WHOQOL definition emphasises quality of life as an individual's judgement of personally important aspects of life. This sets it apart from concepts such as ‘standard

of living', which refers to a person's life objectively compared to a community's minimum set of material requirements (Stedman 1996).

The WHOQOL researchers have established an agreed set of dimensions or 'domains' for quality of life and have developed an instrument, the World Health Organization Quality of Life Assessment instrument, which includes them. These are:

- physical (individual's perception of their own physical state);
- psychological (individual's perception of their cognitive and affective state);
- social (individual's perception of the interpersonal relationships and social roles in their life); and
- spiritual (the person's perception of 'meaning in life', or the overarching personal beliefs that structure and qualify experience) (The WHOQOL Group 1995).

In terms of the scope of subjectively-assessed quality of life measures, Kuyken et al contend that the broad physical, psychological, social and spiritual domains of quality of life are universal values across cultures (Kuyken et al. 1994).

The argument in favour of quality of life as a subjective construct is strengthened by the work of Stedman, who reviewed a number of large sociological studies assessing satisfaction with life domains conducted in several countries, including Australia, in order to identify which of the many possible aspects of quality of life contribute disproportionately to judgements of well-being. Stedman observed that satisfaction with the life domains predicted approximately 50% of the variance in well-being measures, while demographic and objective measures explained less than 10% of the variance (Stedman 1996).

### ***Aboriginal Quality of Life***

There are two main factors to be considered in applying the WHOQOL quality of life definition (above) and its scope to Australian Aboriginal people. The first of these relates to Aboriginal society and culture being in a state of 'transition'. The second is due to Aboriginal people's position as an Indigenous minority within contemporary Australian society. Each of these will be considered in turn.

### **Aboriginal culture 'In transition'**

Until the relatively recent interruption by colonisation, Aboriginal society was an ancient one by world standards, with a length of tenure in Australia likely to be in the order of 50,000 years (Flood 1989). The proportion of Aboriginal history that has elapsed since European colonisation amounts to less than one half of one percent of that total history.

Therefore, despite the dramatic changes which colonisation has wrought in a short time, the 'traditional' or pre-colonisation lifestyle and culture of Aboriginal people is relatively 'accessible', in that elements of this former lifestyle are still within living memory of older Aboriginal people, particularly in latterly-settled remote areas like the Kimberley. Furthermore, as Aboriginality is not just skin-based, the less 'tangible' elements of Aboriginal culture, which include kinship obligations and relationships, attitudes, beliefs and practices, are still an everyday part of life for (urban as well as remote-dwelling) Aboriginal people (National Health and Medical Research Council 1996). Hence, just over 200 years after colonisation, contemporary Aboriginal people are still between two quite different worlds: one as a sub-group of mainstream Australian society, the other belonging to a traditional world of Aboriginal culture.

Given their transitional status, a meaningful assessment of Aboriginal quality of life should not only include comparisons of Aborigines' current experience and situation with that of contemporary non-Indigenous Australians, but also an examination of what quality of life was (within the limitations of retrospective assessment), prior to colonisation. This historical 'reference point' for Aboriginal quality of life also acknowledges that European colonisation was not a single event in history; its impact continues to be felt as part of everyday experience for contemporary Aboriginal people (National Health and Medical Research Council 1996).

### **Aboriginal life before colonisation**

Estimates of the Aboriginal population of Australia prior to white colonisation in 1788 range from the most conservative by Radcliffe-Brown of 250,000 (Radcliffe-Brown 1930) to that of White and Mulvaney (White and Mulvaney 1987), who consider a more reasonable estimate to be 750,000. Today, Aboriginal people represent just 1.6% of the Australian population (approximately 350,000).

Prior to European contact, Aborigines in the drier parts of the country lived a nomadic existence as hunters and food gatherers (Nathan and Japanangka 1983). Australia's geographic location as an island continent left Aborigines relatively undisturbed for their first 50,000 years, except for coastal areas in the north of the country, including the Kimberley, where contact with Macassan fisherman from Sulawesi occurred for at least several hundred years before Europeans arrived. However the objective of the Macassans was trade, not territory, so the influence upon Aboriginal life was peripheral.

Living in 'traditional', pre-colonisation Aboriginal society involved adherence to a complex set of laws and ceremonies which governed every aspect of life, from relationships with nature to relationships with other people and the spirit world (Reid 1982). A hunter-gatherer lifestyle in an often harsh and unforgiving environment required an intimate knowledge of the land for survival. However traditional Aboriginal society did not survive for such a long time as a 'static' society where small groups lived in rigid isolation. Rather its survival was linked to its capacity to foster cooperation among groups and to be adaptive to change.

Berndt has described two driving forces in traditional Aboriginal life that were all-pervasive: religion and economics. According to Berndt, the traditional Aboriginal web of life was close-knit, with religion as the primary integrating factor. As control over nature at a material level was minimal, people relied heavily on religion as a mechanism of intervention between themselves and the forces of nature (Berndt 1979).

Tonkinson has described Aboriginal religion as fundamentally a union of people, land and spirit (Tonkinson 1978). In contemporary Aboriginal English, this is often referred to as 'the Law'. Love, an early missionary to the Kimberley in the 1930's, gave his interpretation of how the Law influenced life among traditional Worora people, whose descendents now reside at Mowanjum community near Derby:

*"The Wandjina were the first men. They came from the wind, traveled the land by routes now shown by various landmarks, such as natural rocks, artificially-placed rocks, pools in the streams, and bottle trees, creating physical features of the land as they traveled and finally each Wandjina went to earth in a cave,*

*leaving his portrait behind him. There is an individual Wandjina for each local 'horde' division of the tribe. Each local Wandjina has his own proper name; and each local Wandjina has a man now living in the tribe who claims him as his mother's brother" (Love 1936, p.36)*

The almost constant search for food was a demanding influence on the lives of the people. It necessitated, in all cases, a division of labour between the sexes. Women were responsible for obtaining the bulk of the food supplies, mostly in the form of vegetable foods and small creatures. Men were mainly the hunters of larger game and as such their activities were more irregular and the results of their labours less predictable. Berndt also suggests that this may be an explanation for men's greater involvement in ritual affairs (Berndt 1979).

So how healthy was traditional Aboriginal life? Before white settlement, estimated life span was 40 years; approximating that of other similar Indigenous societies and indeed, approximating that in pre-industrial Europe at the time of white settlement in Australia. According to Abbie, in pre-contact Aboriginal society, the probable order of causes of death was injury (including warfare and murder), followed by disease, sorcery and old age (Abbie 1970).

Some writers, such as Cowlshaw, argue against the existence of high infant mortality in pre-colonial Australia (Cowlshaw 1982). Others do not agree and in fact assert the opposite view (Blainey 1975; Gray, Trompf and Houston 1991). However, circumstantial evidence of the 'acceptance' of a high infant mortality by desert-dwelling Aborigines is found in the ceremony of the 'naming' of a child, which, in the Kimberley was not performed until the infant was 1-2 years of age. Lowe's biography of the life of a traditional Kimberley Aborigine, Jimmy Pike, in the Great Sandy Desert, describes this practice:

*"When a child first came into the desert world it was not immediately given a name. There was always some danger a baby would die, and people were reluctant to endow it with the firm identity implied by a personal name until it had demonstrated its intention to thrive, usually when it had reached the pakitparta (toddler), stage and was learning to speak" (Lowe and Pike 1990, p.31).*

The prevalence of common illnesses is evidenced by the existence of an Aboriginal pharmacopoeia, where knowledge of certain plants with therapeutic properties was

utilised to treat a variety of illnesses and conditions (Byard 1988). Medications were applied either internally or externally, often by Aboriginal family members, for the alleviation of pain, the promotion of healing, or curing such ailments as were common to them (Aboriginal Communities of the Northern Territory of Australia 1988). As a last resort in any illness, people could call on a *traditional* healer, a role traditionally identified with men, known in the Kimberley as a *maparn* or *mabarn* (Toussaint 1989). The mabarn had special powers for good and evil and might bring about a cure by direct means or by ritual chants. A mabarn, like any doctor, sometimes knew that a patient was beyond his help. In such cases he would acknowledge to the patient and the patient's family, other powers stronger than his own (Lowe and Pike 1990).

Despite the intervention of occasional illness or injury, the general health of Aboriginal people prior to white settlement would appear to have been much better than that experienced by the majority of Aborigines today. An illustration of this can be found in the early photographs taken late in the nineteenth century by Baldwin Spencer, of Aborigines in central and north-west Australia (Spencer and Gillen 1968). For most of the Aboriginal people in Spencer's photographs, these occasions of contact, 100 years ago, were the first with white people. Spencer's observations, evidenced in his photographs, were of a lean, strong people (men, women and children) in fine, almost athletic, physical condition.

Such illustrations demonstrate, at least anecdotally, that Aboriginal people were in good physical health before white settlement, and that presumably this good physical health could be attributed to their lifestyle at that time. Cowlishaw supports such a proposition, asserting that before settlement, Aborigines rarely suffered from high blood pressure, and diabetes was unusual, as were cancer and arthritis (Cowlishaw 1978).

O'Dea attributes specific characteristics of the traditional Aboriginal hunter-gatherer lifestyle (high physical activity and a diet low in fat and high in fibre) which promote the maintenance of a very lean body weight and minimised insulin-resistance, as providing protection from the lifestyle-related diseases prevalent in contemporary westernised nations (O'Dea 1991). However Kamien suggests that this apparent good

health in Aborigines before contact with whites could also have arisen out of a process of natural selection which weeded out the weak and deformed:

*"There is little doubt that the nomadic life was physically difficult, especially in inland areas which were subject to extremes of climate. There would have been no place for those who could not keep up or play their part in the daily quest for sustenance. At the same time the nomadic life carried out in small groups of people would have contributed to their good health by discouraging the evolution of communicable disease" (Kamien 1980, p.254).*

Looking back from contemporary Western society it is difficult to judge with any certainty the quality of Aboriginal life prior to European contact. It is relatively tempting to exoticise the life of traditional Aborigine with images of the 'noble savage', which would deny the hardship of everyday life for Aboriginal people of the time, particularly among those in more marginal environments. Also simplistic would be a perception that traditional Aborigines somehow lived in perfect harmony with nature, obedient to its forces. We now know that Aborigines changed and modified the environment within their own parameters, to best suit their needs. A good example of this is Aboriginal management of land through application of selective burning to promote the growth of grasses and the game that would feed on them.

Nevertheless it could be claimed that traditional Aboriginal life struck a balance between man and environment. That Aboriginal society survived for so long in so difficult an environment would appear to justify such a claim.

Overall, measured against each of the WHOQOL dimensions discussed previously, Aboriginal quality of life prior to colonisation would appear to have met and possibly exceeded the requirements for physical, psychological, social and spiritual well-being.

### **Aboriginal life after colonisation**

#### **Pattern of settlement**

European settlement following 1788 gradually fanned outwards from the coastal south-east. The initial Aboriginal response to the first settlers was predominantly friendly. Aborigines' spiritual connection to their own land or 'country' made it inconceivable to them that people could venture so far from their homeland to permanently settle in another place, so they did not regard the European settlement as

a long-term one. The early days of settlement also demonstrated the adaptive capacity of Aborigines to the white settlers and their lifestyle. Reynolds cites early historical records of Aborigines, who through their traditional trade routes which criss-crossed the continent, incorporated European goods such as tools, artifacts and foodstuffs, into their culture before they had even sighted any Europeans (Reynolds 1982).

However, conflict was inevitable, as European concepts of land ownership included erecting fences on land over which Aborigines presumed they had free right of passage, and the introduction of sheep and cattle, which Aborigines presumed was theirs to take for food when hungry. Therefore, any 'honeymoon period' was short-lived and soon gave way to a period of conflict where an estimated 2,000-5,000 white settlers and 20,000 Aborigines were killed in frontier violence (Reynolds 1982).

Nevertheless frontier violence accounted for a lesser proportion of the overall loss of Aboriginal life in this period than the impact of infectious diseases. Like new implements and food items, the speed with which infection moved through a non-immune population meant that its impact was often felt in Aboriginal populations before the appearance of white people along the frontier of settlement. Previously unknown diseases such as smallpox, syphilis and influenza, combined with the government policy of containment of previously nomadic people, ensured that the net effect was devastation of Aboriginal society. By the 1930's, the Aboriginal population is estimated to have fallen to its nadir, at just 70,000 (Borrie, Smith and Di Julio 1975).

In summary, Franklin and White described the impact of the movement of white settlers into Aboriginal Australia as a 'three-pronged attack' on the health and welfare of Aborigines:

1. The introduction of new diseases, some immediately fatal, others fatal in the long term.
2. The taking of Aborigines' ancestral land, causing psychological illness and spiritual despair.
3. The confinement of Aborigines in small reserves and settlements, destroying their healthy lifestyle and substituting conditions and diet poorer than those of the poorest newcomers (Franklin and White 1991, p.5).



### **Settlement in the Kimberley**

While European settlement was progressing in the Australia's south, remote areas of the continent such as the Kimberley remained relatively untouched, except for the occasional intrusion of explorers. However by the middle of the nineteenth century, Europeans began to be lured north by the opportunity to exploit the Kimberley's resources. The new arrivals were a diverse group that included gold miners, pearlers, pastoralists and missionaries. The pastoralists were to have the greatest direct impact on Aboriginal land and their use of it. Pastoralism began in earnest with the great cattle drives from Queensland into the Ord River valley and from the south into the Fitzroy Valley in the 1860's. Missionaries of various denominations followed shortly afterwards to establish missions in various locations throughout the Kimberley.

As Hunter et al. note, "*....settlement required order and order necessitated pacification*" (Hunter, Hall and Spargo 1991, p.18). The conflict period that followed settlement in the south was replicated in the Kimberley and lasted until the 1920's. Conflict was predominantly sporadic and unorganised on the part of Aborigines, and unbalanced in favour of the Europeans. Despite superior bushcraft, Aborigines had neither horses nor firearms, against which spears were no match and they were soon overcome. However at least one warrior, Jandamarra (also known as Pigeon) was skilful enough to muster and train an organised resistance to the point where it required a significant investment of government resources for him to be hunted down and captured in 1897 (Pederson and Woorunmurra 1995).

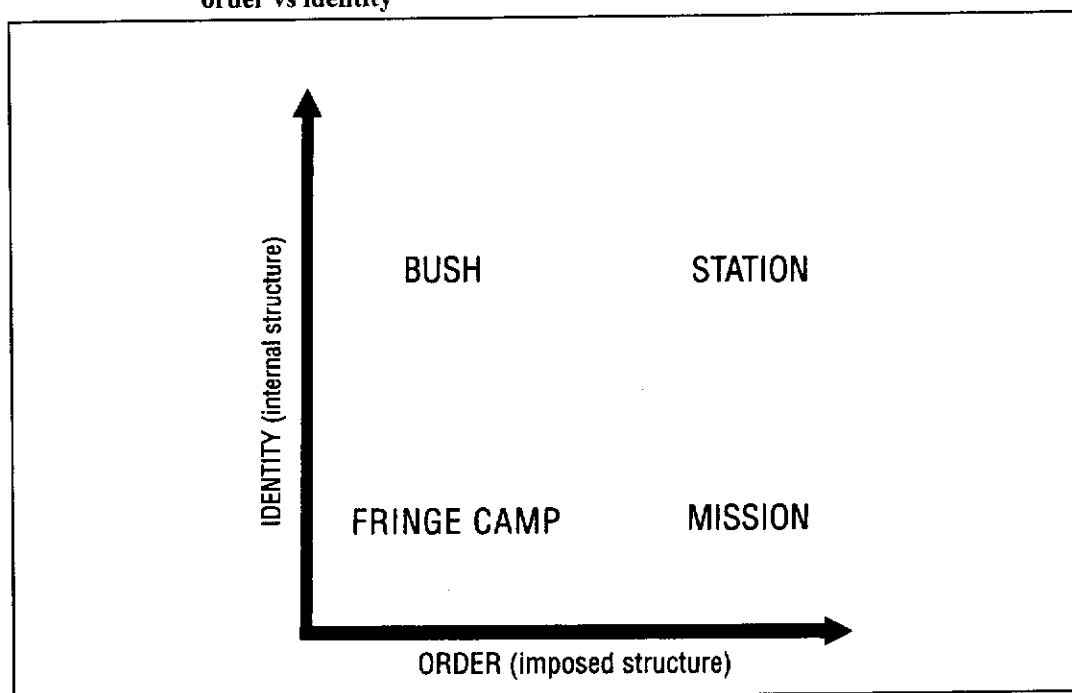
The period of pacification in the Kimberley was followed by a period of relative calm that lasted until the 1960's. The 'quiet' of the post-pacification period was achieved through the imposition of externally imposed structures upon Aboriginal people. In this period some Aborigines were able to retain relative safety in remote areas of the Kimberley while others, particularly those of mixed descent, gathered around the fringes of the emerging towns such as Derby and Broome. However the majority of Aborigines were located on missions and cattle stations where their lives were controlled and structured by Europeans.

As Hunter has observed, the experiences of Aborigines on stations and missions varied:

*“Missions provided a degree of safety, but made demands which were incompatible with traditional life, or attempted to suppress it. Stations demanded work, but showed less concern for ‘blackfellow business’. The common denominator was the attempt to instill an institutional identity and the development of dependence”* (Hunter, Hall and Spargo 1991, p.18)

Hunter differentiated the four Aboriginal environments of the post-pacification period (station, mission, bush and fringe camp), according to two constructs: order (imposed structure) and identity (internalised structure) (Hunter 1993, p.214). This is shown in Figure 5 below.

**Figure 5:** Socio-environmental characteristics of transition-phase communities: order vs identity



Source: Hunter 1993, p. 214

According to Hunter's typology, Aborigines who had reached maturity in the bush retained a strong traditional identity, avoiding the imposition of European external controls and structuring of their lives. Fringe-dwelling Aborigines also escaped the direct control of Europeans, although their life circumstances, which included ease of access to alcohol, made it difficult for them to maintain traditional links. Aborigines on stations maintained a 'transitional identity' by having meaningful work roles for

both men and women, and because they remained close to their traditional land, were therefore able to maintain traditional obligations (Law). They accommodated the station timetable by carrying out Law during the wet season, when station life came to a halt. Mission life, while providing security and sustenance, discouraged traditional Aboriginal practices and beliefs and introduced an authoritarian structure and control over the lives of Aboriginal people, particularly as children were often frequently segregated from their parents in single sex dormitories.

Hunter asserts that Aboriginal people's experiences in these transitional environments influenced how they behaved and coped during the period of the 1960's and 1970's which saw a withdrawal of external controls (Hunter 1993).

The period of 'self-determination' began in the Kimberley in the late 1960's with the national referendum (1967), that guaranteed full citizenship rights for Aborigines, including the right to drink alcohol, and the Cattle Station Award (1969) that guaranteed equal wages for Aboriginal workers. In this period another new 'industry' became established in the Kimberley - government administration, as the institutional frameworks which had ordered Aboriginal life in missions and stations were dismantled. Their replacement was the Aboriginal 'community'.

Aboriginal communities were established from existing fringe camps or reserves, places for whom their residents by now had long historical associations, ex-missions, or in the case of cattle stations, excisions from pastoral leases. Often perceived by urban, non-Aboriginal people as intact sanctuaries of Aboriginal culture and tradition, few Aboriginal communities (apart from some outstations) approach this conception. For example, Brady has observed the lack of homogeneity in a remote Aboriginal community in the Western Desert, despite the people having lived together for over thirty years:

*"Their social organisation enables, indeed encourages, independence of action, and the so-called 'community' is composed of small, labile, autonomous collections of people who rarely come together for a shared purpose"* (Brady 1990, p. 20).

The government's policy of self-determination for Aboriginal communities was intended to lead to self-management and included devolution of more responsibility

for decision-making to Aboriginal community councils. However many elected members, including community council chairpersons, were untrained for the complex roles of community government. Frequently, council chairpersons became reliant on non-Indigenous advisers, whose power and influence could be considerable and motives varied.

Overall, as well as the overt devastation of their lives and culture throughout the post-colonisation period, Kimberley Aboriginal people, along with Aboriginal people elsewhere in Australia, were increasingly powerless to act in the face of the pendulum swings of government policy on Aborigines. Each new government policy was driven by non-Aboriginal interests in the south, resulting in legislation that would have a profound effect on the lives of Aborigines.

Aboriginal responses to these policies in this period were not always characterised by passive acceptance. For example, Saggars and Gray have noted several instances elsewhere in Western Australia, quite early in the post-colonisation period, where Aborigines attempted to actively participate in the wider society by taking up government grants and subsidies to establish farms and mining ventures. In each case these Aborigines were to find that the rules were amended to deny their participation. For example, with respect to school education, without which access to the white man's economic system was (and is) impossible, Aboriginal children were excluded from attending government schools in Western Australia until the 1940's under 'health regulations' (Saggars and Gray 1991).

### **Contemporary Aboriginal Quality of Life**

The historical perspective would support the claim that prior to colonisation, quality of life for the Aboriginal inhabitants of Australia was better than it is for most Aboriginal people today. Colonisation and its consequences, including direct oppression, forced removal of whole tribes from their land, abduction of several generations of children from their natural parents and creation of an economic system which inhibits the participation of Aborigines, have pushed Aboriginal people to the fringes of contemporary Australian society. The close knit family and kinship networks which were the structural fabric of traditional Aboriginal society have been severely weakened. Laws that governed Aboriginal society for thousands of years have little

meaning in contemporary Australian society. Since colonisation, a plethora of government policies which have alternately prescribed isolation, concentration, separation, assimilation and integration, have seen rigid controls imposed on the lives of Aborigines, only to have many subsequently withdrawn. It is hardly surprising that this has left many Aboriginal people today confused and angry, in a situation of neglect and poverty, yet without the resources to change their situation.

***Aboriginal people: an Indigenous minority***

The second factor in applying the WHOQOL quality of life definition to Aboriginal people relates to their contemporary status as an Indigenous minority, existing within the dominant, mainstream culture of a colonising nation. Even if we accept Orley and Kuyken's view that the broader domains of quality of life are common across cultures (Orley and Kuyken 1994), where distinct cultural minority groups exist within societies (such as Aborigines within the broader Australian society), the subjectively-assessed perceptions on the quality of life within these domains may be sufficiently different to warrant independent examination.

Recent research among Aboriginal people in the Northern Territory would appear to confirm this view. In a study of quality of life domains among urban Aboriginal people in two communities in the Northern Territory, Senior found that the domains of 'family', 'knowing about culture and land' and 'having pride in yourself' were rated as more important than 'health' (Senior 1999). This finding differed from several earlier studies of quality of life domains conducted with people in the United Kingdom and Ireland where 'health' appeared within the top three priorities, along with 'family' and 'relationships'. Domains relating to pride and self-esteem were not observed in these studies, and are also not commonly found in generic quality of life instruments, such as the WHOQOL. This means that instruments such as this may fail to capture those areas of life that Aboriginal people consider most relevant to their lives' quality.

Apart from the inclusion of a global question on health in the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) in 1994 (Australian Bureau of Statistics 1994), there have been few systematic subjective assessments of quality of

life among Aboriginal people. The NATSIS survey asked the following question of a sample of 8,752 Aboriginal and Torres Strait Islander people, 15 years and over: *'In general, would you say that your health is excellent, very good, good, fair or poor?'* Approximately 18% of males and females in the NATSIS survey reported their health as fair or poor.

Overall, these results did not differ significantly from what was observed for all Australians in the 1995 National Health Survey (see Table 1 below). However this overall similarity obscures differences in self-assessed health status within particular age groups.

**Table 1: Self-Assessed Health Status (adults aged 15 years or more)**

	1994 NATSIS		1995 National Health Survey	
	Males %	Females %	Males %	Females %
Poor	2.8	2.8	4.0	3.9
Fair	14.5	14.4	12.3	12.8
Good	33.4	40.9	28.4	28.5
Very Good	28.9	27.8	35.4	35.6
Excellent	20.4	14.2	19.9	19.2

Source: Cunningham, Sibthorpe and Anderson 1997, p.8.

Cunningham et al. found that differences between Aboriginal people and the total Australian sample from the NHS did appear after accounting for the age structures of the two populations. The differences were most pronounced among people aged 35-64, with Aboriginal people in those age groups in the NATSIS about twice as likely to report fair or poor health as the total Australian sample in the NHS (Cunningham, Sibthorpe and Anderson 1997).

The same researchers also observed differences in self-assessed health status within the NATSIS with respect to several other variables. Aboriginal people living in rural and remote areas and those speaking a main language other than English were significantly less likely than Aboriginal people living in urban centres to report their health as fair or poor. These researchers suggest that both factors could be associated with a lack of social proximity to health infrastructure; that is, in Aboriginal populations, there may be a relationship between access to Western

medicine and knowledge of disease. For remote Aboriginal people, those who did not speak English as their main language may have been less likely to know that they had a disease because they had less access to relevant diagnostic services. Whereas for urban Aboriginal people:

*"...better access to services may increase people's expectations of good health; if reality fails to keep pace with such changes in expectation, self-assessed health status might worsen, even in the absence of changes in objective measures of health" (Cunningham, Sibthorpe and Anderson 1997, p.25).*

Sansoni and Senior have advanced another explanation for these findings from the NATSIS, which is that an individual's perception of their own health status may be influenced by the general health status of the community:

*"If the community as a whole, has a poor health status, then a given individual may see themselves as being healthier than their companions, and rate themselves accordingly, when to an outsider their objective health status would be low" (Sansoni and Senior 1998, p.8)*

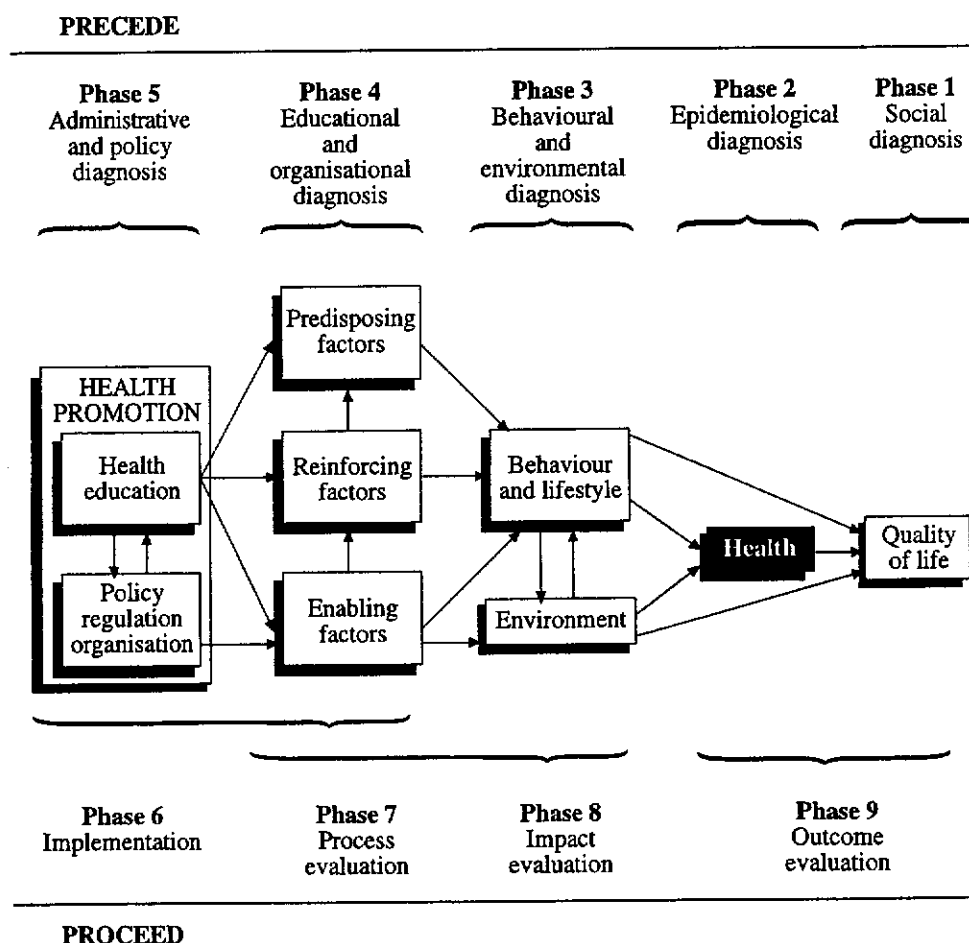
Based on the results of the general health question used in the NATSIS, and further concerns about cultural relevancy, Sansoni and Senior also concluded that multi-dimensional indices of quality of life, such as the current Short Form 36 (SF36), are unsuitable for Aboriginal populations, especially those in remote areas where English is not the first language. These researchers also noted that 'health' itself may have a different meaning and dimensions for remote Aboriginal people than for middle class westerners whose conceptions are the basis for the standardised scales (Sansoni and Senior 1998).

Overall then, further research would appear to be required to establish how Aboriginal people subjectively view quality of life. Nevertheless, both subjective assessments of WHOQOL's domains and a number of objective indicators reveal that Aboriginal people's quality of life has declined considerably since colonisation. Further evidence of this decline is provided within the Epidemiological and Behavioural and Environmental Diagnosis phases of PRECEDE that follow.

## PRECEDE Phase 2: Epidemiological Diagnosis

The Epidemiological Diagnosis phase of PRECEDE is concerned with pinpointing the important health problems of the target population. Using descriptive epidemiological data to investigate the relative importance of the health problems in terms of morbidity, disability or mortality, the epidemiological assessment identifies those health problems that deserve priority among the many health problems a program might address (Green and Kreuter 1991, p.90). The second phase of PRECEDE is highlighted below in Figure 6.

**Figure 6: PRECEDE Phase 2 - Epidemiological Diagnosis**





## ***Aboriginal Health Status***

### **Aboriginal population and its distribution**

A total of 352,970 people identified themselves as being of Aboriginal or Torres Strait Islander descent at the 1996 Census (Australian Bureau of Statistics 1997). This was an increase of approximately 100,000 from the 1991 Census. Fertility rates are higher among Aboriginal than non-Aboriginal people (in Western Australia the 0-4 age group comprises 16 percent of the Aboriginal population - double the rate for the total WA population (Kelly 1993)). However, this large increase in the Aboriginal population since the 1991 Census cannot be explained by fertility alone. It is more likely that this increase reflects an increased willingness of people of Aboriginal descent to identify as such.

The Aboriginal population is relatively young compared with the total Australian population. About 40 percent of Aborigines are less than 15 years of age compared with 23 percent of the total population. Only 4 percent of Aborigines are aged 60 years or over compared with almost 15 percent of the total population.

Aboriginal people in Australia are more likely to be living in rural and remote areas than are non-Aboriginal people. However just over a quarter of Australia's Aboriginal people live in capital cities and only one fifth live in remote areas such as the Kimberley. Of the 25 percent of Aborigines living in remote areas of Australia, about one in five live in small groups in their traditional homelands, and the rest in Aboriginal towns and settlements on Aboriginal lands and reserves (Smyth 1989). The percentage of Aboriginal people who continue a traditional lifestyle resembling that lived prior to colonisation is so small to be virtually insignificant.

### **Aboriginal vs non-Aboriginal Health Status**

Aboriginal Australians have the worst health outcomes of any other identifiable group in Australia (Australian Bureau of Statistics/Australian Institute of Health and Welfare 1997). Death rates in Australia have shown a downward trend from the beginning of this century and have almost halved since 1921, with most of the decline in the last three decades attributable to a reduction in deaths from cardiovascular diseases (Anderson, Bhatia and Cunningham 1996). By comparison, Mathews has observed

that recent Aboriginal mortality patterns in the Northern Territory resemble, in many respects, those for non-Aboriginal Australia in the 1920's, with high rates of infectious diseases and rising rates for cardiovascular diseases (Mathews 1997).

From 1988 to 1994, the death rate from all causes decreased by about 10% among Australians as a whole but remained steady among Aboriginal men and increased among Aboriginal women. As a result, the gap between Aboriginal and total Australian death rates widened, especially for women. Between 1992 and 1994 Aboriginal people experienced higher death rates than non-Aboriginal people at every age with the largest gap among adults aged 25-54 years, where they were about 6-8 times higher (Australian Institute of Health and Welfare 1997). During 1990-94, the mortality rate of Aboriginal men in Western Australia, including the Kimberley region, was about three times that of non-Aboriginal men (Office of Aboriginal Health and Health Information Centre 1996).

### **Life expectancy**

The expectation of life at birth is much lower for Aborigines than for other Australians. Life expectancy for Aboriginal males was estimated to be 16-18 years shorter than for non-Aboriginal males during 1990-92 (Australian Institute of Health and Welfare 1997). In Western Australia, life expectancy of Aboriginal men is 57 years compared to 75 years for non-Aboriginal men. Despite their respective life expectancies being higher than for males, a similar gap in life expectancy (14 years) is apparent between Aboriginal and non-Aboriginal females in Western Australia (Thomson and Briscoe 1991).

### **International Comparisons**

Aboriginal people are subjected to a 'double-strength disease cocktail' in which they suffer from 'Third World' health problems of infectious and parasitic diseases, rheumatic heart disease and genito-urinary problems, as well as the degenerative diseases of 'civilisation' such as coronary heart disease and diabetes (Mathers 1995). While Indigenous people in other countries experience similar high levels of disease relative to their non-Indigenous majority, Kunitz has observed that Aborigines have poorer health than either Maoris of New Zealand or Native

Americans. The health gains that the other two Indigenous groups have made in the past 20 years have not been seen in Aborigines (Kunitz 1994).

### **Mortality and Causes**

Aboriginal mothers give birth at a younger age and in most States and Territories their babies are about two to three times more likely to be of low birth weight, and four to five times more likely to die at birth, than are babies of non-Aborigines. The proportion of stillbirths and neonatal deaths was much higher in Aboriginal babies born in Western Australia than in Aboriginal babies born in other States and Territories (Lancaster, Huang and Pedisich 1994).

Despite significant declines over the past two to three decades, Aboriginal infant mortality remains significantly higher than that for non-Aboriginal infants (Australian Institute of Health and Welfare 1997). Nationally, during the period 1991 to 1996, the leading causes of death among both Aboriginal and other Australian infants were conditions originating in the perinatal period. However the rate was three times higher for Aboriginal boys and nearly four times higher for Aboriginal girls than for their other Australian counterparts (Moon, Rahman and Bhatia 1998).

The majority of excess deaths among Aboriginal people relative to other Australians are due to circulatory diseases (including heart disease), respiratory diseases (including pneumonia), injuries (including road accidents) and endocrine diseases (including diabetes) (Australian Institute of Health and Welfare 1998). During 1990-92, over 60% of Aboriginal deaths were caused by circulatory diseases, respiratory problems, neoplasms and endocrine and nutritional disorders. Hypertension, ischaemic heart disease and other circulatory diseases accounted for more than a quarter of Aboriginal deaths. Diabetes was seven times more often the primary cause of death in Aboriginal males and nearly ten times more often in Aboriginal females when compared with cause-sex-specific rates in non-Aborigines. Injury death rates were about four times the non-Aboriginal rates for both males and females. No difference was noted between Aboriginal and non-Aboriginal cancer mortality rates in males. However, the cancer death rate among Aboriginal females was 70% higher than expected when compared to non-Aboriginal females. While infectious and parasitic diseases were not the leading causes of Aboriginal death, these diseases

showed the largest differentials in Aboriginal/non-Aboriginal mortality. Aboriginal mortality for these diseases was about twelve times higher than in the total Australian population (Bhatia and Anderson 1995).

A list of the eight prominent categories of causes of Aboriginal deaths (combining males and females) is shown below in Table 2. The table also lists some of the main conditions contributing to these deaths.

**Table 2: Prominent Categories of Causes of Aboriginal Deaths and Main Contributors (Males and Females Combined)**

Category of Cause of Death	Main Contributors to Cause of Death
Circulatory System Diseases	Ischaemic heart disease/cerebrovascular disease
Injury and Poisoning	Transport Accidents/ Suicide/Homicide
Respiratory System Diseases	Pneumonia/Chronic obstructive pulmonary disease
Neoplasms	Lung cancer (♂)/Cervical cancer (♀)
Nutritional, Endocrine Disorders	Diabetes mellitus
Digestive System Diseases	Alcohol-related chronic liver disease/cirrhosis
Genito-urinary Diseases	Renal failure/Nephritis
Infections, Parasitic Diseases	Intestinal infections/Enteric diseases
Mental Disorders	Alcohol Dependence Syndrome

Source: Adapted from Bhatia and Anderson 1995, p. 17.

### **Hospitalisation**

For virtually every disease category, Aborigines experience higher levels of sickness than non-Aborigines. These higher levels of sickness are seen in malnutrition, many communicable diseases, chronic diseases such as diabetes, alcohol and other drug abuse, and injury (Thomson 1990). This level of sickness is also reflected in rates of hospitalisations for Aboriginal people that are 50% higher than the total Australian population. The real difference may be even greater given that the identification of Aboriginal people in hospital records is incomplete (Australian Institute of Health and Welfare 1998). The most common causes of hospitalisation for Aboriginal males are injuries (15%) and respiratory diseases (13%), while for Aboriginal females the leading causes of hospitalisations are pregnancy and childbirth (23%), injuries (12%) and respiratory diseases (12%) (Australian Institute of Health and Welfare 1998).

Overall, apart from some improvements in Aboriginal infant mortality, most Aboriginal health indicators have shown little or no change over the past 20 years.

## **Disability**

The National Aboriginal and Torres Strait Islander survey showed that 2.8% of people aged 25-44 and 1% of those aged 15-24 reported severe or profound handicap in 1994 (Australian Bureau of Statistics 1996). These results appear similar to the general population, which is difficult to reconcile with the higher rates of disabling conditions among Indigenous people, such as injury, respiratory and circulatory disease, all often associated with disability. A study in Taree, NSW, found rates of severe handicap about 2.4 times higher than the total population (Thomson and Snow 1994). Most frequent disabling conditions included slow learning/developmental delays, hearing loss, asthma and heart disease. Of the 124 people identified as being handicapped by their disability in this study, 70 percent reported a mobility handicap.

A recent report of a workshop on Indigenous disability noted the findings of the Taree study, and recommended that, particularly given the heterogeneous nature of the Indigenous population, there is a need to assess the levels of disability and handicap for Indigenous people living in other parts of Australia (Australian Bureau of Statistics/Australian Institute of Health/Department of Health and Family Services 1998).

## ***Western Australian and Kimberley Aboriginal health status***

In general terms, patterns of mortality and morbidity among Aboriginal people in the Kimberley and in Western Australia as a whole are similar to those for Aborigines in other parts of Australia. Kimberley Aborigines are most similar to those of Aboriginal people in other parts of remote northern Australia, and on some indicators until recently, even appeared to compare relatively favourably with them. For example, in terms of expectation of life at birth, comparisons in the 1980's showed that Kimberley Aboriginal males were living, on average, seven years longer than their counterparts in the Northern Territory (Thomson and Briscoe 1991). However this apparent advantage would appear to have eroded, with recent comparisons showing life expectancy at birth for Kimberley males of 57 years, approximately the same as that for Northern Territory males (Anderson, Bhatia and Cunningham 1996; Office of Aboriginal Health and Health Information Centre 1996).

One study of mortality in Western Australia with specific reference to the Aboriginal population considered all deaths registered in Western Australia from 1983 to 1989 by year of registration (Veroni, Rouse and Gracey 1992). This study found that rates of mortality for Aboriginal people in Western Australia were 2.6 times the non-Aboriginal rate for males and 3.0 times the non-Aboriginal rate for females. These figures also agree closely with those found in an earlier one-year analysis of mortality conducted in Western Australia by Hicks in 1983 (Hicks 1983). Unfortunately, this re-emphasises the lack of significant improvement in relative rates of Aboriginal mortality in Western Australia over a time period when some improvement might have been expected.

The five leading causes of death for Aboriginal males in Western Australia identified by Veroni et al. in their study were circulatory diseases, injury and poisoning, respiratory diseases, neoplasms and diseases of the digestive system. For Aboriginal females the five leading causes of death were circulatory diseases, neoplasms, endocrine, nutritional, metabolic and immunity diseases (predominantly diabetes), respiratory diseases and injury and poisoning. In terms of Person Years of Life Lost (PYLL) in the Aboriginal population below 70 years, the main contributors were injury and poisoning and circulatory diseases.

Leading causes of death for Kimberley Aboriginal males matched those for Aboriginal males state-wide. Females differed from the state-wide data in that injury and poisoning featured higher in priority as the third leading cause of death. A more recent report by the Office of Aboriginal Health in the Health Department of Western Australia in 1996 has confirmed the hierarchy of causes of Aboriginal death in the Kimberley observed by Veroni et al., with just a few variations. While the top four causes of death remained unchanged, this report noted an increase in deaths attributed to diabetes and injury and poisoning in both Aboriginal males and females over the four year period between the two studies (Office of Aboriginal Health and Health Information Centre 1996).

As well as comparing Kimberley health status indicators with state-wide data, the study by Veroni et al. examined differences in mortality between the eight Health

Services Management Regions in Western Australia. Here the authors acknowledged a limitation of the data in that low numbers of Aboriginal deaths and low population estimates in some of the regions resulted in the calculated rates having large standard errors. However, some differences between regions were evident. Overall, Aboriginal people in the Kimberley region were found to have lower mortality rates than those in southern and metropolitan regions. However, this finding was not uniform across all causes of death. For example, while the Kimberley had a low rate of mortality from neoplasms compared with southern and metropolitan regions, the rate for injury and poisoning among Aboriginal males in the Kimberley was, along with the Goldfields region, the highest in the state.

The same study also compared Aboriginal/non-Aboriginal mortality by Health Region. The contrast in mortality between Aboriginal and non-Aboriginal people in the Kimberley was demonstrated by this Region having one of the highest mortality rate ratios in the state.

A significant observation made in this study was that while death rates among Aborigines for circulatory diseases were 10 to 20 times the expected rates for other Australians, the relative Aboriginal hospitalisation rates for these diseases in Western Australia were only 1.1 to 1.4 times the overall non-Aboriginal rates in young and middle aged adults and only three to five times higher over 40 years of age. The authors concluded by agreeing with an assessment made by Thomson and Briscoe (1991), and observed that:

*“These differences in hospitalisation and death rates suggest under-utilisation of services or under-recognition of these diseases, or both, in Aboriginal people.”* (Veroni, Rouse and Gracey 1992, p. 61)

Nevertheless, due to the sheer magnitude of the illness burden among Aboriginal people in Western Australia, individual conditions do demonstrate large differences in rates of hospitalisation for Aborigines compared to non-Aborigines. For example, in 1993-94, compared to non-Aboriginal people, Aboriginal women were hospitalised for diabetes 16 times as often and Aboriginal men 10 times as often. For pneumonia over the same period, Aboriginal women were hospitalised 16 times as often and Aboriginal men 17 times as often. For alcohol-related liver diseases

Aboriginal women were hospitalised 11 times as often and Aboriginal men eight times as often (Office of Aboriginal Health and Health Information Centre 1996).

### **Communicable Diseases**

It was noted previously from national causes of death comparisons that rates of communicable diseases among Aboriginal people are much higher than these rates for non-Aboriginal people. In Western Australia in 1993-94, notification rates for communicable diseases were about six times higher among Aboriginal people than non-Aboriginal people for non-sexually transmitted diseases and about 71 times higher among Aboriginal people for sexually transmitted diseases.

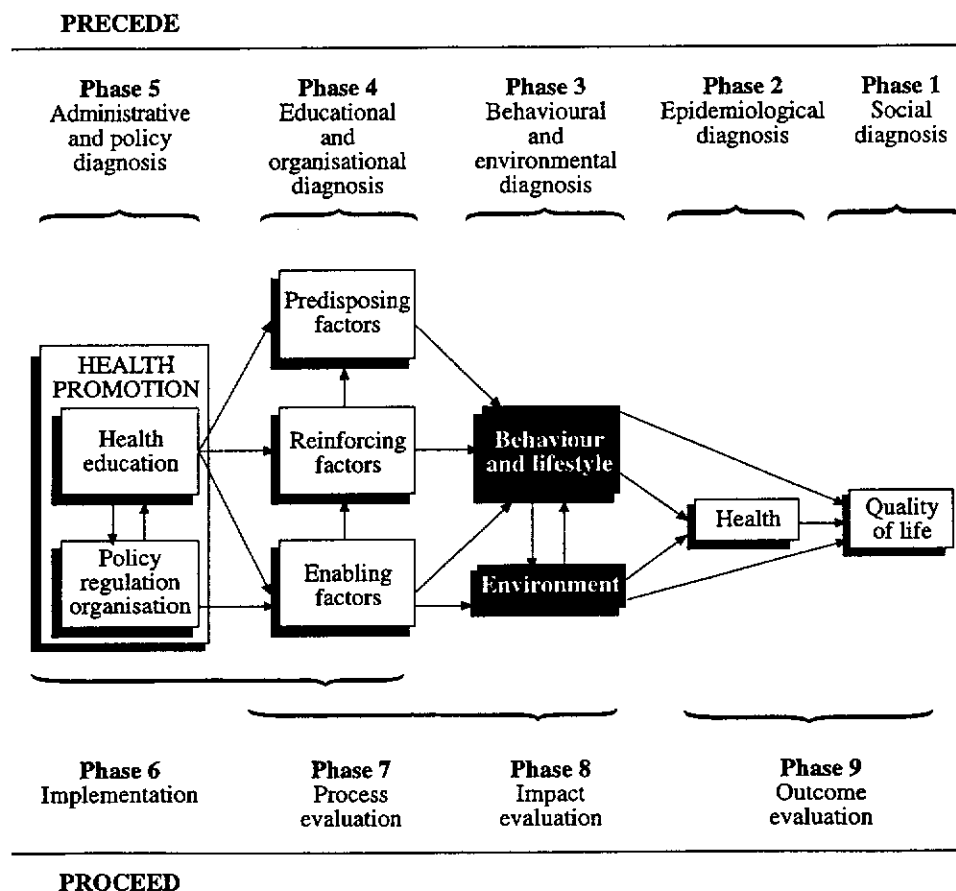
In the Kimberley in 1993-94, enteric diseases such as giardiasis, salmonellosis and shigellosis were the leading causes of notifications for non-sexually transmitted diseases among Aboriginal people, followed by hookworm and hepatitis B. Gonorrhoea was the leading cause of notifications for sexually transmitted diseases among Aboriginal people, followed by chlamydia and syphilis (Office of Aboriginal Health and Health Information Centre 1996).



### PRECEDE Phase 3: Behavioural and Environmental Diagnosis

The third phase of the PRECEDE planning process analyses personal and collective actions that are most pertinent to controlling the determinants of health or quality of life issues. The **behavioural diagnosis** is a systematic analysis of the behavioural links to the problems identified in the epidemiological or social diagnoses. The **environmental diagnosis** is a parallel analysis of factors in the social and physical environment that could be causally linked to the behaviours identified in the behavioural diagnosis, or directly to the outcomes of interest (health or quality of life) (Green and Kreuter 1991). Phase 3 of the PRECEDE-PROCEED model is shown below in Figure 7.

Figure 7: PRECEDE Phase 3 – Behavioural and Environmental Diagnosis



### ***Behavioural versus Environmental Influences on Health***

As noted in the introduction to this chapter, in recent years a debate has emerged in the health promotion field (and in the broader public health field) concerning whether health-related behaviour or environmental factors have more influence in determining health outcomes (Egger, Spark and Lawson 1990). Some of the main differences between these two perspectives and the impact for health promotion strategy selection are outlined below.

The individualist perspective places emphasis on the responsibility of the individual for his or her health status. In this conception, health-compromising behaviour by individuals is the main factor determining ill-health. This is based on epidemiological studies indicating that most premature death from the major non-communicable diseases (such as coronary heart disease, cancer and stroke) may be attributed to lifestyle or 'risk factors'. These risk factors include smoking, high-fat diets, excessive use of alcohol, hypertension, inactivity and stress (Berkman and Breslow 1983; Hetzel and McMichael 1987). This approach suggests that individuals adopt health-compromising behaviours because they have inadequate knowledge, a lack of skills or a negative attitude. In this perspective, health promotion strategies are aimed at changing individual behaviour without specific emphasis on structural factors that may be seen as underlying the causes of behaviour.

The environmental interpretation ascribes the cause of illness among disadvantaged groups to their comparative social and economic deprivation (Marmot 1994; Syme 1994). Strategies for dealing with ill-health are seen as addressing the causes of this deprivation; causes such as poverty, lack of education, housing, unemployment and social factors. Rather than implementing health promotion strategies that encourage individuals or groups of individuals to adopt healthful behaviours or lifestyles ('to make healthier choices') and so avoid risk factors at the level

of the individual, health environment-related strategies attempt to change 'risk conditions'. By increasing the access of individuals or groups to resources that can improve their health or reduce disease, the goal is to make the healthy choice 'the easy choice'. If this requires introducing health-related policies or regulations, as in the case of compulsory seat-belt legislation, then the healthy choice becomes 'the only choice' (Milio 1981).

The tendency to assign responsibility for illness to the individual is one of the main limitations of individual behaviour-change strategies. Placing the blame for poor health on the victim allows society to morally and economically castigate the individual while at the same time leaving the status quo unexamined (McLeroy, Bibeau and McConnell 1993). This is particularly relevant to Aboriginal people whose present circumstances are largely not of their own choice. Furthermore an inherent risk in this approach is that it presents an opportunity for non-Aboriginal Australians to absolve any responsibility for the current plight of Aboriginal people by explaining Aboriginal ill-health as the result of a lifetime of poor health habits.

Green's PRECEDE-PROCEED model provides for separate examination of the behavioural and environmental influences on health but highlights their inter-relationship (Figure 7). This approach has utility and is adopted in the following analysis. However it should be emphasised that, particularly for Aboriginal people, the health behaviours described should not be viewed in isolation from their social and physical environmental context as these are inextricably intertwined.

### ***Behavioural and Lifestyle Factors Underlying Aboriginal Health***

To assist this analysis, Table 3 (below) lists the main contributors to the principal categories of causes of death that were presented in Table 2, along with some of the behavioural and lifestyle factors associated with each. The table does not include

risk factors that are physiological (e.g., high blood pressure or raised blood cholesterol levels) or background risk factors (genetic predisposition, sex or age).

**Table 3: Behavioural Factors underlying Main Contributors to Causes of Aboriginal Death**

Main Contributors to Cause of Death	Predominant Behavioural Factors
Ischaemic heart disease/Cerebrovascular disease	Smoking, excess alcohol consumption, poor dietary behaviour, inadequate physical activity
Transport Accidents	Drink-driving, overloading vehicles
Suicide	Disinhibition, self-harming behaviour, lack of coping skills
Homicide	Intoxication, lack of coping skills, intentional violence
Pneumonia/Chronic Obstructive Pulmonary Disease	Smoking, intoxication, disregard for self-care
Lung cancer (♂)	Smoking
Cervical cancer (♀)	Early and unprotected sexual activity, excess alcohol consumption, smoking
Diabetes mellitus	Poor diet, obesity, inactivity
Alcohol-related chronic liver disease/cirrhosis	Excess alcohol consumption
Renal failure/Nephritis	Poor hygiene practices
Intestinal infections/Enteric diseases	Poor personal, family and food hygiene
Alcohol Dependence Syndrome	Excess alcohol consumption

As Table 3 shows, the predominant health-related behaviours underlying the main contributors to the causes of death for Aboriginal health include excess alcohol consumption, smoking, diet and nutrition, injury (accidents and violence), sexual activity and personal hygiene practices. Of these however, the most significant is excess alcohol consumption, which is directly associated with more than half of the nine main contributors to the causes of death and is indirectly associated with almost all of them.

### **Alcohol**

Prior to European colonisation, there are accounts of Aborigines in various parts of Australia making alcohol-type drinks from fermented plants and native honeys, and mood-modifying drugs such as pituri, a tobacco-like substance that was dried and chewed (Brady 1998). However alcohol was to have a much greater impact on

Aborigines than their traditional substances as they were not in control of its production or distribution and its effects were unfamiliar and more profound.

Alcohol was introduced to Aboriginal tribes in the south and east of Australia at the same time as their populations were being decimated by disease and dispossessed of their land, magnifying the devastation already taking place. Legislation prohibiting Aboriginal people from accessing alcohol was first passed in 1838. This did not prevent alcohol consumption but reinforced patterns of furtive and rapid drinking in town and fringe-camp settings. Hunter observes that the associations between drinking rights and citizenship were reinforced as the prohibition against drinking by Indigenous people was lifted around the same time that Aborigines were given the right to vote by Referendum in 1967 (Hunter, Brady and Hall 1999).

Approximately three out of four Australians drink alcohol at least once a week or drink occasionally. Of those who do drink, approximately one quarter drink alcohol at hazardous or harmful levels (Australian Institute of Health and Welfare 1998). National surveys of Australian Indigenous people show that when compared to the Australian population as a whole, a smaller proportion of Indigenous people drink alcohol. However of those who do drink alcohol, a higher proportion drink at hazardous or harmful levels (Commonwealth Department of Health and Family Services (DHFS) 1995).

A survey of alcohol use among remote Aboriginal people in the Northern Territory was conducted in 1986/87 (Fleming et al. 1991). This study found that alcohol was consumed by only 41% of those surveyed; fewer than among Aborigines in other parts of Australia and 34% less than the non-Aboriginal population of the Northern Territory. Most women (80%) did not drink while slightly less than two-thirds of men did consume alcohol. Almost one-third of abstainers were former drinkers. Substantially more men than women consumed alcohol in each age group. This study found that just over two-thirds of Aboriginal men and women who drank alcohol drank at harmful levels, according to National Health and Medical Research Council guidelines. This was five times and 11 times, respectively, the number of non-Aboriginal male and female Northern Territorians who drank at these levels. The study also found that more people who drank weekly lived in major

communities or town camps. In all community types, the more available alcohol was, the higher the percentage of drinkers and the more often they drank.

A study of alcohol consumption of Kimberley Aboriginal people was conducted in 1988/89 (Hunter, Hall and Spargo 1992). The findings of this study were broadly consistent with the earlier Northern Territory study. Both studies showed that remote Aboriginal communities contained a substantial number of non-drinkers, that the majority of drinkers drank at harmful levels, that young men contained the greatest proportion of heavy drinkers and that the frequency of drinking decreased with decreasing availability of alcohol.

A major difference between the findings of the Kimberley and the Northern Territory studies was in the proportion of drinkers in each type of residential site. In the Northern Territory, reduced access to alcohol was associated with a reduced frequency of drinking and with a smaller proportion of drinkers: three-quarters of town camp residents consumed alcohol whereas only one-third of those who lived in outstations and cattle stations did so. In the Kimberley study, there was no relationship between the proportion of drinkers and ease of access to alcohol; remoteness from alcohol outlets was only correlated with a lower frequency of drinking, not with consumption per drinking day (Hunter, Hall and Spargo 1991).

Brady has observed that low alcohol beer is used in some areas by people who are not heavy drinkers and cites survey data indicating that between 10 and 20 percent of Aboriginal drinkers could be classified as 'responsible drinkers' (Brady 1996). This phenomenon was also observed in both the Northern Territory and the Kimberley studies described above, although Hunter notes that in the Kimberley this occurred predominantly among town-dwelling Aborigines (Hunter, Hall and Spargo 1991).

Overall, both the Northern Territory and Kimberley studies succeeded in challenging the belief held by some non-Indigenous Australians that 'all Aborigines are drunks' by demonstrating the high proportion of Indigenous people who do not drink alcohol. However these studies also revealed that the majority of Aboriginal drinkers consume alcohol in large amounts at one time with frequent 'heavy daily use' or 'binge

drinking' consumption patterns. That the relatively high rate of abstinence reported in these studies is age-related, with young Aboriginal people drinking in higher proportions and at hazardous levels is of great concern for their future health and well-being.

The immediate health consequences of this excess are also significant, with alcohol implicated in at least ten percent of Indigenous deaths nation-wide and higher levels in regional areas. For example, a study by Weeramanthri et al. found that in Alice Springs town camps, 46 percent of deaths were alcohol-related, while in Katherine, between 30 and 44 percent of deaths were alcohol-related (Weeramanthri, D'Abbs and Mathews 1993). In Western Australia, Unwin et al. found that for alcohol-related deaths, 62% of Aboriginal males and 70% of Aboriginal females died before 55 years of ages, compared with 35% and 23%, respectively, in non-Aborigines (Unwin, Gracey and Thomson 1995).

Most Aboriginal people are aware of the magnitude of the problem that alcohol poses to their communities. The National Aboriginal and Torres Strait Islander Survey in 1994 found that 76 percent of Indigenous people believed that alcohol was a problem (Australian Bureau of Statistics 1996). In the same survey, alcohol was also identified as the main local health problem for West Kimberley Aboriginal people in both Broome and Derby ATSIC regional sub-samples (Australian Bureau of Statistics 1996; Australian Bureau of Statistics 1996).

### **Smoking**

Cigarette smoking is a leading cause of mortality and morbidity in Australia. It plays a major role in many serious and common diseases, including heart attack, stroke, lung cancer, a range of other cancers, and chronic lung disease (Australian Institute of Health and Welfare 1998). In non-Indigenous Australians, the overall prevalence of smoking has been declining in recent decades. In 1995, 27.1% of males and 23.2% of females aged 16 years and over were smokers (Hill, White and Scollo 1998).

By contrast, a national survey in 1994 found that 56% of Indigenous males and 48% of Indigenous females aged 15 years and over were current smokers, almost

double the non-Indigenous rate (Cunningham 1997). The same survey found that Indigenous youth smoke less than non-Indigenous youth up until age 15, after which they exceed the non-Indigenous rate to the point where 66% of 35-44 year old Indigenous males and 60% of females in the same age group are smokers. Indigenous males in rural areas were slightly more likely to report smoking than those in capital cities and other urban areas, with the reverse of this trend observed among Indigenous females.

The higher rates of smoking among Indigenous people carry a much greater likelihood of smoking-related disease and death. In Western Australia in 1990-91, the rates of hospitalisation and death from tobacco-related conditions were estimated to be 2-5 times higher for Aboriginal people than for non-Aboriginal people (Unwin, Gracey and Thomson 1995). For example, a study of respiratory tract diseases in Aborigines and non-Aborigines in Western Australia, revealed that, among Aboriginal patients forty years of age or greater, tobacco smoking is an important contributing factor to high levels of chronic airways obstruction and respiratory tract carcinoma (Williams, Gracey and Smith 1997).

The effects of the high smoking rates among Indigenous people flow on to affect others besides the smoker. For example, low birth weight, associated with maternal smoking, is about twice as common among Indigenous babies as non-Indigenous babies (Plunkett, Lancaster and Huang 1996).

Cunningham has observed that, similar to those factors associated with smoking among non-Indigenous Australians, the most important factors found to be associated with smoking among Indigenous people were alcohol use, lack of education, unemployment, low home ownership and younger age (Cunningham 1997).

Any decline in the prevalence of smoking among Aboriginal people might be expected to be seen first in those Aboriginal people working in primary health care settings: the Aboriginal health workers. However, according to a study by Andrews et al., any decline is not yet evident, with the majority of Aboriginal health workers surveyed found to be smokers, at approximately the rate found in the wider Aboriginal



community (Andrews, Oates and Naden 1997). As with General Practitioners in the mainstream community, Aboriginal health workers are well placed, because of their position, to be effective health advocates and influential role models. As this group becomes the subject of interventions to assist them to quit smoking, they are likely to be an indicator of any change in smoking rates in the broader Indigenous population.

### **Diet and Nutrition**

A diet high in fat, sugar or salt and/or low in fibre has been attributed to increased rates of obesity, heart disease, diabetes and some cancers. In particular, low intakes of fruit and vegetables are linked with higher risks of some cancers and heart disease (Mackerras 1995).

Before European colonisation of Australia, Aborigines lived as nomadic hunter-gatherers. Traditional Aboriginal diets were derived from a wide variety of animal and vegetable sources. The exact composition of these diets depended on geographic location, climate and season as well as on cultural factors, such as taboos on certain foods at certain times of the year for particular members of a community. In the Kimberley, mammals, birds, reptiles, fish and other seafood (for coastal-dwellers) were consumed throughout the year, while roots, seeds, berries and other fruit and vegetable foods were eaten as they ripened on a seasonal basis (O'Dea et al. 1987).

Even though the traditional Aboriginal diet contained a high proportion of animal foods, it was low in fat content; wild animals being lower in fat than domestic animals, with a high proportion of polyunsaturated fat. The traditional vegetable foods were also high in fibre and relatively high in protein. This diet, together with the energy expended in gathering the food meant that people restricted their food intake and, in fact, food shortages were not infrequent (Office of Aboriginal Health 1997). Data collected from Aborigines living traditional lifestyles until 20-30 years ago indicated that they were extremely lean, with a low body mass index and low blood pressure, both of which did not increase with age (White 1985).

The variable nature of the traditional food supply for Aborigines is postulated to have produced a biological response, the 'thrifty genotype', where rapid insulin response to plasma glucose prevents energy loss by converting excess glucose to stored fat, which

can be utilised in times of food shortage (Neel 1962). This mechanism that provided exceptional efficiency in the intake and/or utilisation of food would have contributed to improved survival in the 'feast-or-famine', hunter-gatherer lifestyle. However, in modern society where there is a continuous and abundant food supply, the rapid insulin response becomes maladaptive (Guest and O'Dea 1992).

In the hunter-gatherer lifestyle, the energy-dense foods such as fat and honey would have been important for survival. However they were also scarce and therefore highly prized. Just as colonisation changed the physical and social circumstances of Aboriginal people dramatically, so it also altered their diet and food supply. Even in remote areas such as the Kimberley, contemporary Aboriginal diets are based on refined sugar, flour, meat (often of poor quality and subjected to prolonged cooking) and other processed foods selected for their 'keeping' qualities rather than for their nutritional qualities (O'Dea et al. 1987). This diet, mostly derived from store-purchased food is high in fat and low in fibre and nutrients. Unlike the hunter-gatherer diet, the contemporary diet requires virtually no energy expenditure in its procurement, and along with a welfare economy, and limited opportunities for activity, compounds the effect of a poor diet with sedentary behaviour.

This changed lifestyle has caused Australian Aborigines to experience high levels of obesity, non-insulin-dependent diabetes mellitus (NIDDM) and cardiovascular and renal disease. Analysis of national data for Australian Indigenous people found that based on Body Mass Index (BMI), about 25% of Indigenous males and 28% of Indigenous females aged 18 or more could be classified as obese. This compares unfavourably with 19% of all-Australian males and females aged 18 or more falling into this category (Cunningham and Mackerras 1998).

The effects of this change in lifestyle appear greatest where Westernisation has been greatest. For example, Rowley et al. have observed that the prevalence of overweight people and obesity ranges from 0% in communities with a traditionally-orientated lifestyle to well over 50% in the worst affected communities (Rowley et al. 1997). For diabetes, available data suggest that its overall prevalence among Indigenous adults is between 10% and 30%, at least 2-4 times that of non-Indigenous Australians (Colagiuri, Colagiuri and Ward 1998).

The increase in obesity and the diet-related 'diseases of affluence' among all Australians has been a cause for concern in recent years (National Health and Medical Research Council Working Party on the Prevention of Overweight and Obesity 1997). This has led to a range of initiatives, including a national policy on food and nutrition (Commonwealth Department of Health and Community Services 1992). The rate of increase of these diseases among Aborigines is of even greater concern. In this context, the 'thrifty genotype' hypothesis may still have scientific validity, but is also limiting if it restricts understanding of the high rates of diet-related diseases among Aborigines to genetic factors alone. As McDermott argues, such a perspective can perpetuate simplistic and inappropriate attributions to race which are really due to factors such as social history, early life experience of malnutrition, poverty and illness, followed by later life experiences of poverty, welfarism, physical inactivity and obesity. As such it may also obscure the need for important initiatives in primary prevention of these diseases (McDermott 1998).

### **Injury (Accidents and Violence)**

Injury mortality rates are higher for the Aboriginal population than for other Australians at every age group, with the Aboriginal rate nearly three times higher overall. Injury deaths from transport-related causes in middle age, drowning in adulthood, poisoning with non-pharmaceutical substances (particularly petroleum products and solvents) in early adulthood, effects of fire in later adulthood, suicide in early adulthood and interpersonal violence throughout adulthood are particularly prominent compared with the mortality experience of non-Aborigines (Harrison and Moller 1994).

Several factors contribute to the high rate of injury mortality among Aboriginal people. One is that a larger proportion of Indigenous people are young and young people are at higher risk of injury because of risk-taking behaviours, such as drinking and driving, and driving without seat belts. Also, alcohol is a major contributing factor to injury, especially injury related to motor vehicle crashes. For example, 83% of deaths involving motor vehicle crashes among Aborigines in Western Australia were alcohol-related (Williams and Maisey 1991). Nearly half of all motor vehicle

crashes involving Aborigines in Western Australia were also defined as 'non-collisions' (Cercarelli 1994).

Along with alcohol, the impact of Aborigines living in predominantly rural areas, travelling on poorly maintained and unsealed roads at high speed, all contribute to the over-representation of the Indigenous population in motor vehicle-related injuries (Stevenson et al. 1998). Isolated communities with few vehicles available to transport residents also leads to overloading of vehicles, often open trucks and utilities. For example, in the Kimberley, Garrow has observed that Aboriginal passengers travelling in the open-load-space of utility trucks comprised 18 percent of road fatalities in that region (Garrow 1997).

Suicide occurred at approximately the same rate among Aboriginal as non-Aboriginal populations in Australia from 1990-1992. However the distribution by age differed markedly; Aboriginal rates being relatively high in young adulthood and considerably lower in older adulthood than among non-Aborigines (Harrison and Moller 1994). Suicide is regarded as having been uncommon in traditional Aboriginal culture. In past times, mystical and magical explanations would most likely have been presented in the event of a suicide (Eastwell 1988).

While suicide in traditionally-orientated Aboriginal communities was almost unknown up until the late 1980's, suicide rates among young Aboriginal people, particularly young males, has increased up to 30-fold since then to make this a serious problem in remote regions of Australia, such as the Northern Territory and the Kimberley. For two-thirds of the Aboriginal suicides from 1990-1992 the method used was hanging, many of these suicides occurring in custody. Aborigines comprise less than 2% of the population, yet they account for 30% of those in custody and 15% of the prison population. In 1995, almost one quarter of the 86 deaths in custody involved Aboriginal people (Cantor et al. 1998). As well as high mortality from completed suicides, there is also high morbidity among young Aboriginal males from other self-harming behaviours, including non-ritual self-mutilation, frequently involving alcohol (Hunter 1990a).

Recorded cases of death resulting from interpersonal violence were much higher proportionally in the Aboriginal population than the non-Aboriginal population in Australia from 1990-1992. The Aboriginal to non-Aboriginal rate ratio was around 10 from ages 15-74 years. Among Aboriginal deaths from interpersonal violence, stabbing and unarmed fights were relatively common and shooting was uncommon, compared to non-Aboriginal deaths from this cause. Alcohol was also implicated in many of these deaths (Harrison and Moller 1994).

### **Sexual Behaviour**

Gonorrhoea and syphilis were mainly introduced to Aborigines by European colonists although other sexually transmitted diseases (STD) may have been introduced by Indonesians, Melanesians, Chinese and Japanese (Abbie 1970). For example, Bowden has suggested that Macassan traders may have introduced Donovanosis to Aborigines in parts of the Northern Territory in the seventeenth and eighteenth centuries (Bowden and Savage 1998).

Today, STDs are highly prevalent in many Aboriginal communities, leading to complications such as ectopic pregnancy and infertility (from gonorrhoea and chlamydial infection) and neurological complications (from syphilis). Among urban and remote Aboriginal communities the relative risk of contacting an STD is many times that for the non-Aboriginal population, and in some communities, several bacterial STDs are endemic (Bowden, Bastian and Johnston 1997). In Western Australia, for example, overall notification rates for STDs in 1993/94 were approximately 70 times higher among Aboriginal people than non-Aboriginal people (Office of Aboriginal Health and Health Information Centre 1996). Mathews notes that recent analyses in the Northern Territory suggest the high rates of continuing STD infection are mostly due to low rates of diagnosis and cure, and not to very high rates of new infection as a result of high rates of change of sexual partners (Mathews 1997).

Skov et al. have observed that barriers to effective STD control programs in remote Aboriginal communities have included the under-resourcing of health services, the difficulty of maintaining confidentiality in small communities, the stigma attached to STDs, the unpleasant nature of urethral and endocervical swabs and, in particular, the frequent lack of male health care workers (Skov et al. 1997). On a

positive note, new approaches to case detection and treatment, including the application of urine PCR technology for chlamydia and gonorrhoea testing, have seen STD morbidity rates begin to fall in some Northern Territory communities (Mathews 1997).

From information currently available from routine surveillance it would appear that the rates of HIV infection among Aboriginal people are similar to those in the non-Indigenous population (Commonwealth Department of Human Services and Health 1997). However it also appears that the rate of HIV diagnosis among Aboriginal people is increasing and this, coupled with the already high STD rate among Aborigines, emphasises the need for maintaining prevention and control initiatives in this area.

### **Hygiene**

European colonists to Australia frequently lamented the hardships of remote Australia and the toll that the combination of heat, dust and flies and the lack of hygienic amenities took on them and their families. For Aborigines such amenities were unnecessary in a nomadic hunter-gatherer lifestyle where camps changed location regularly, eliminating the need for the level of hygiene required in a static family household. Also, to some degree, notions of hygiene are culturally-determined. As Willis observed in the Uwankara Palanyku Kanyintjaku (UPK) report in Central Australia:

*“The western notion of hygiene depends on particular and culture-specific definition of what constitutes ‘dirt’. The Anangu division of the continuum from clean to dirty is divided in a way that is ideal for desert life, but maladapted for transplanted suburban living.”* (Nganampa Health Council 1987, p.86)

As the UPK report also indicated, a satisfactory health outcome relies on a related chain of events - washing people, washing clothes and cleaning immediate surroundings - all being in place at the one time. This chain of events is difficult to realise as it relies on other event chains such as effective waste disposal, good nutrition, relief from substance abuse, that are also absent or ineffective in many remote Aboriginal communities. This problem is magnified by the high, and fluctuating population that is typical of Aboriginal households in remote communities.

The burden of illness of unhygienic conditions in these communities is manifested in terms of high rates of skin infections and diarrhoeal diseases, particularly among children (Miller and Torzillo 1996). For example, in Western Australia, relative rates of hospitalisation among Aboriginal children up to the age of five, compared with non-Aboriginal children, for all infectious and parasitic diseases are about 7.7, for gastroenteritis about 7, and for diseases affecting the skin and subcutaneous tissues (mainly infections), about 18 times the non-Aboriginal rates (Gracey et al. 1992).

The prevalence of these diseases in remote Aboriginal communities and media images of overcrowded houses where dogs and children share the same cramped and unhygienic environments have served to foster the impression among many non-Indigenous Australians that Aboriginal people have lower standards of hygiene than they do. In reality, where Aboriginal people have access to hygienic conditions and facilities appropriate to their needs, culture and environment, studies show they are likely to make full use of them. For example, an evaluation of washing machine use by Aboriginal people in Central Australian communities found that the reason for low appliance lifetime was high usage of domestic models and not by misuse by householders. This evaluation concluded that if washing machines are provided to remote Aboriginal people and are in working order, they will be used to wash clothes (Lloyd 1998).

From studies such as UPK, an awareness of the need for the health-related 'hardware' of the living environment that is provided to remote Aboriginal communities to be appropriate to the needs, environmental conditions and culture of these communities is beginning to be acknowledged, albeit slowly (Pholeros, Rainow and Torzillo 1993). Such policy-level initiatives, together with other social and environmental changes, may assist in improving the unhygienic living conditions that most remote Aboriginal people still live with today.

### *Environmental Factors Underlying Aboriginal Health*

To assist this analysis, Table 4 (below) lists the main contributors to the principal categories of causes of death that were presented in Table 2, along with some of the social and physical environmental factors associated with each.

<b>Table 4: Environmental Factors underlying Main Contributors to Causes of Aboriginal Death</b>	
<b>Main Contributors to Cause of Death</b>	<b>Social and Physical Environmental Factors</b>
Ischaemic heart disease/Cerebrovascular disease	Social dislocation, loss of traditional way of life, impaired foetal and infant growth
Transport Accidents	Poor roads, unsuitable motor vehicle design
Suicide	Unemployment, powerlessness, absence of positive role models
Homicide	Binge-drinking environment, breakdown of traditional law and sanctions
Pneumonia/Chronic Obstructive Pulmonary Disease	Poor environmental conditions, bacterial 'traps'
Lung cancer (♂)	Socially patterned smoking behaviour
Cervical cancer (♀)	Social norms for early sexual activity, breakdown of traditional law and sanctions
Diabetes mellitus	Poor food supply, lack of income, lack of sporting and recreation facilities
Alcohol-related chronic liver disease/cirrhosis	Binge-drinking environment, lack of alternatives to a drinking lifestyle
Renal failure/Nephritis	Overcrowded houses, unhygienic conditions
Intestinal infections/Enteric diseases	Poor environmental infrastructure and conditions
Alcohol Dependence Syndrome	Binge-drinking environment, lack of alternatives to a drinking lifestyle

### **Physical Environment**

Whereas the strength of non-Aboriginal people's relationship with the physical environment is mainly represented through their ownership of land, for Aboriginal people the land represents a special social, physical, and spiritual interconnection. Aboriginal people often say that the people don't own the land, the land owns the people (Mathews 1997). However the special relationship that Aboriginal people had built up with the land - a balance struck between people and their environment - was radically altered with colonisation. For Aborigines, the change from living as



small nomadic bands roaming vast areas to living in static communities, has had profound effects on their health and well-being.

Despite their initial awe at the first white settlers seemingly abundant food supply, the benefits of store food over traditional hunting and gathering were short lived. Static settlements meant surrounding 'bush tucker' was eventually hunted out, and, along with the introduction of domestic and feral animals by settlers, this forced Aborigines to go further afield to access many traditional food sources. They gradually became dependent on mission or government hand-outs of flour, sugar, tea and tobacco. This new food supply locked remote Aboriginal people out of a food system that they controlled and into a cycle of dependency on the white economy.

In remote areas such as the Kimberley, food supplies, as well as all other supplies, must be hauled long distances over poor roads that frequently became impassable after wet season rain. Not only are many of the store-purchased foods low in nutrient value, as discussed previously, they are frequently poor in quality and high in cost. For example, Gracey et al. devised a local 'market basket' for Kimberley Aboriginal communities based on popular food items from the relatively restricted range of goods available to Kimberley Aboriginal communities through their stores. This was then compared to similar items available in Perth supermarkets. These researchers found that the 'market basket' cost up to 166% more in the Kimberley stores than in the Perth supermarket (Sullivan, Gracey and Hevron 1987).

In regard to the built environment, where housing was provided to Aborigines in settlements, it was inadequate and inappropriate. This situation, despite attempts at improvements over many years, largely continues today. Community planning in rural and remote Aboriginal communities has tended to be developed from mainstream society and arranged in pragmatic settlement layouts (Sinatra and Murphy 1997). Houses have been modelled on a 2-3 bedroom block or brick house for a non-Indigenous nuclear family in a suburb of an Australian capital city. These 'suburban' house designs have been transplanted to remote locations where dust, insects and heat have rendered them ineffective in providing basic shelter for their Aboriginal occupants and inappropriate to their needs.

A study by Pholeros et al. in a remote community in central Australia found that the number of people per house fluctuated according to family and cultural demands, and that houses in this community could be required to accommodate up to 30 people at a time (Pholeros, Rainow and Torzillo 1993). The same study also observed that overcrowding put pressure on the existing water supply, washing and waste disposal infrastructure, frequently causing them to fail. This 'health hardware', was generally installed without a regular maintenance program, with this and the isolation of these communities leading to long delays between repairs, exacerbating the health risks. For example, the UPK review in 1987 found that in these remote communities, only 60% of cold water and 45% of hot water outlets were functioning, and just 43% of waste water systems were functioning adequately (Nganampa Health Council 1987).

These poor environmental conditions have been reported in Aboriginal communities elsewhere in remote Australia. In a survey of 155 rural and remote Aboriginal communities in Western Australia in 1994-95, Gracey et al. found that one-third of the communities had water supply or sanitation problems and 70 percent had housing problems, with overcrowding and substandard housing being commonplace. Thirty-six percent had difficulties with waste water disposal, 37 percent had no rubbish disposal, pests were a problem in 44 percent of communities, and hygiene and maintenance of communal toilets was deficient in 25 percent (Gracey, Williams and Houston 1997).

Particularly in these environments, infected secretions from eyes, nose, ears and cough have a major role in transmitting infectious diseases. Children are particularly at risk as demonstrated by high attack rates in children of diarrhoeal disease and acute respiratory infections. For example, Munoz et al. demonstrated that hospital admission rates for children in the Northern Territory are higher for Aboriginal communities where living conditions were poorer and there was less community development (Munoz et al. 1992).

Mathews has suggested that the environmental conditions in remote Aboriginal communities establish 'traps' for disease-causing strains of bacteria (Mathews

1997). These bacteria cause otitis media (Boswell 1997), trachoma (Thomson and Paterson 1998), acute rheumatic fever (Carapetis, Wolff and Currie 1996), skin infections such as impetigo and scabies (Carapetis et al. 1997), and pneumonia, bronchitis and lung damage in Aboriginal infants, children and adults (Torzillo et al. 1995). Mathews notes that endemicity of these bacteria is maintained, even in a relatively small population, because all infants are infected soon after birth. Also, multiple carriage and long carriage times ensure that each strain persists long enough to be passed on to another newborn susceptible before the last carrier has cleared its infection. In this way a strain will rarely fade out or disappear from the community, which thus 'traps' the bacterial strain and provides it with a permanent 'home' (Mathews 1997).

Whilst living conditions are clearly the key issue in determining prevalence rates of these diseases, it is likely that widespread availability of antibiotics in some communities has contributed to the reduction in severity which has occurred in some of these infectious diseases (Miller and Torzillo 1996). Nevertheless, the emergence of antibiotic-resistant bacteria has led to recent concerns about reliance on antibiotics without addressing the poor state of physical environmental conditions in remote Aboriginal communities (Leach et al. 1995).

### **Social Environment**

In remote Aboriginal communities, the health consequences of poor physical environments do not operate in isolation. In these communities, social environmental factors interact with those of the physical environment to produce a 'cocktail of illness'. Some of the major social environmental factors at work in remote Aboriginal communities are discussed below.

If one of the social environmental factors affecting Aboriginal people predominates, it is poverty. People with the most limited economic resources experience poorer health as measured by standardised death rates and measures of illness. Furthermore, compared to people of high socioeconomic status, people of low socioeconomic status are more likely to suffer a disability, to have serious chronic illnesses, to suffer recent

illnesses and to report being in fair/poor health as opposed to good/excellent health (National Health Strategy 1992).

Aboriginal people are at much greater disadvantage than non-Aboriginal people according to a range of social indicators, including economic status, employment and education. Aboriginal socioeconomic status is considerably lower than that of non-Aborigines. Low income brackets are over-represented in state profiles of individual Aboriginal incomes and a much higher proportion of Aborigines derive their income from Social Security benefits than non-Aborigines. In all states, the unemployment rate for Aborigines in the labour force exceeded 40% compared with that for non-Aboriginal males in the labour force which was less than 10% (Thomson and Briscoe 1991). The actual unemployment rate may be much lower than this as many Aborigines classified as 'employed', particularly in remote communities, in fact undertake work in return for welfare payments under the Community Development Employment Program (CDEP). Under CDEP, welfare payments are made to communities for distribution to participants in projects such as building maintenance, rubbish collection, or construction of community facilities. While CDEP work has an obvious benefit to communities and to many individuals, it is often viewed by Aboriginal people as another variation of 'sit-down money', not meaningful employment.

Despite international comparisons that show that education, particularly female education, is an important determinant of health improvement in developing countries (Caldwell and Caldwell 1995), in Australia a far higher proportion of Aborigines than non-Aborigines report having never attended school. This difference is magnified in remote Aboriginal communities. In the Northern Territory, for example, attendance rates for Aboriginal children at rural and remote schools are low and retention rates beyond Years 8 and 9 are very low; perhaps reflecting a perceived lack of relevance for Aboriginal children or a failure to enforce compulsory education (Mathews 1997). This situation ensures that Aborigines are locked into a poverty trap as their limited technical skills and qualifications excludes them from opportunities to secure any but unskilled and lowly-paid jobs in the mainstream job market.

Recent research indicates that the effect of poverty on health is not so much due to absolute poverty as to relative deprivation. For example, Wilkinson observes that socioeconomic differences in health status result primarily from differences in people's position in the socioeconomic hierarchy relative to others. Health inequality, rather than just distinguishing between the poor and the rest of the population, runs across society, making even the higher echelons less healthy than those above them (Wilkinson 1997). Syme's explanation for this gradient effect of socioeconomic status on health is that as one moves down the social class hierarchy, one has increasingly less control of one's destiny, with less opportunities to influence the events that affect one's life (Syme 1994).

There could be few groups with less control of their destiny than Aborigines, particularly those in remote areas such as the Kimberley. They are not only economically poor, they are powerless to change their situation as they do not control the resources they would require to do so. The result is that life in the majority of remote Aboriginal communities is far from the romanticised non-Aboriginal conception of life in such communities – of a tranquil existence where a predominantly traditional lifestyle is practised.

Aboriginal society, once highly ordered according to traditional law, assigned clear roles and responsibilities to all of its members. The fabric of these ordered societies has been torn apart, first by the separation of people from their land or 'country', then by the separation of people from each other. For example, in 1995/96 the national inquiry into the separation of Aboriginal and Torres Strait Islander children from their families found that between one in three and one in ten Indigenous children were forcibly removed from their families and communities between 1910 and 1970 (Human Rights and Equal Opportunity Commission 1997).

Even the word 'community', in that this implies some sense of bond and commonality, is a misnomer, as many remote Aboriginal 'communities', whether ex-missions, town camps or station communities, have evolved from artificial 'collection points' for Aborigines from often disparate locations. These communities frequently contain mixes of different tribal groups whose relationships prior to colonisation may have been characterised by conflict or mistrust. Fuelled

by alcohol and frustration, such simmering tensions frequently boil over into full-blown disputes and open violence in these communities.

The result is a very marginalised and often desperate existence. In families, the small income that is available for food is frequently spent on alcohol and/or gambled (Hunter and Spargo 1988), and males in particular often experience great resentment and anger at the loss of their traditional identity in their own society. For example, Hunter observed that youths had painted the word "WARRIORS" on community walls in a predominantly Aboriginal Kimberley town following violent confrontations between police and Aborigines in the town. Hunter noted that, for these Aborigines, even being identified as violent, as 'bad blackfellows', was a greater source of esteem than the void that had preceded it (Hunter 1993). Hunter observes that these are messages from a group whose traditional coping mechanisms, social controls and structures have been undermined, and not replaced by realisable alternatives in the wider society (Hunter 1990b).

Therefore, far from being ordered, life is highly disordered in remote Aboriginal communities. A visible symptom of this disorder is violence, facilitated by alcohol, boredom and frustration. Though occasionally flowing outwards as described above, this violence is predominantly felt within the community itself and often directed by individuals at themselves and their families, as evidenced by the high rates of injury from violence in these communities, noted previously.

As a consequence of this dysfunctional social environment, many people suffer high levels of personal stress and anxiety. The health effects of this stress are only recently becoming better understood. For example, it is known that stress-induced engagement of central nervous system and autonomic-neuroendocrine system axes is implicated in the development of most risk factors for stroke, cardiovascular disease, Type 2 diabetes mellitus and some cancers, amongst other diseases (Goldstein 1995; Kelly, Hertzman and Daniel 1997). Recent research by Daniel et al. indicates that the social changes and living conditions associated with Westernisation may be inherently stressful at the biological level for Indigenous populations in Australia (Daniel et al. 1999).

Coping in this environment is made even more difficult with the configuration of the welfare system that perpetuates its own inequities and inter-community tensions. For example, as Hunter observes, for some Aboriginal men, the relative security of regular and non-contingent income requires controlling the assets of a woman. As it exists, the system frequently not only entrenches dependency but creates an asymmetry of resources that predisposes to conflict (Hunter 1993). Hunter notes that these circumstances serve to undermine male avenues to self-esteem, and encourage hostile dependent relationships (indeed, double dependence, on the welfare bureaucracy and frequently on Aboriginal women). Furthermore, the fortnightly payment structure of welfare benefits forces many families to experience at least some of this period with little or no income for food.

The effect of the high food costs, discussed previously, is multiplied by the high percentage of median income (up to 30%) required to purchase a standard 'food basket' in remote communities (Leonard et al. 1997), making it even harder to provide food for families. Those most at risk in this dysfunctional social environment are also those most vulnerable – infants and children. For example, Mathews reported that in the Northern Territory that the nutritional status of Aboriginal children under two years of age may be deteriorating rather than improving (Mathews 1993). A recent study also showed an estimated 20% of Aboriginal children in the Top End of the Northern Territory are malnourished (Ruben and Walker 1995). According to Barker, this early malnutrition can not only stunt physical and intellectual growth and lead to increased susceptibility to infectious disease, but can also increase the risk of diabetes, heart disease and high blood pressure in later life (Barker 1996).

Where children are exposed to a binge-drinking environment, where heavy drinking and violence are normative, parental supervision and/or controls by elders are likely to be non-existent. In these environments, children and young people are also vulnerable to inhalant abuse, sexual exploitation and sexually transmitted diseases. It is in these circumstances that the scale of the breakdown of Aboriginal society, including Aboriginal law, is most evident. As Jock Shandley, a former Aboriginal stockman of Fitzroy Crossing observes below, alcohol is primarily responsible for eroding what was once a highly ordered society:

*“When they drink that heavily, they don’t call that one ‘sister’ or this one ‘cousin’, they forget about their skin line (skin is the term for a social classification that traditionally determined suitability for marriage). Skin relations are finished with that mob. Anyone with a dress is thought of like a wife. Whiskey takes over all the skin relations. They might grab the first girl they see. They wouldn’t have done that in the old days, no way in the world! The old fellas kept an eye on you. If you did that sort of thing, you’d be finished that night. You’d be dead. That’s in the old fellas’ time. They’d be watching these young people properly, and they’d keep such things straight and proper according to the old law” (Marshall 1988, p.77).*

### **Comment on Behavioural and Environmental Diagnosis**

A contemporary assessment of progress in improving behaviours and environments in remote Aboriginal communities is possible due to a comparative health survey of adults in an isolated Northern Territory community (Hoy et al. 1997). The same community, where standardised mortality rates are the second highest in Australia, had undergone a similar health screen in 1957, enabling comparisons over a 20 year period to be made.

The researchers observed that infectious morbidities were more pronounced and the lifestyle morbidities almost entirely new since the 1957 health screen. They noted that most morbidities were strongly associated with identifiable risk factors, such as overweight, smoking, excessive drinking, skin sores and scabies, all of which are amenable to modification. Problems with food supply and pricing, poor food choices and diversion of money to alcohol, cigarettes and gambling all contributed to poor nutrition. The researchers concluded that the contemporary profile highlighted the failure of current systems to deal with health needs in such communities.

The above study by Hoy et al. may be typical of many remote Aboriginal communities today. Despite greater understanding in both the Aboriginal and non-Aboriginal communities of the problems of Aboriginal health and the increase in health-related interventions, policies and research initiatives, most Aboriginal health indicators do not appear to be showing signs of improvement and may even be getting worse. It may be that it is too early to detect changes from these interventions. However it could also be that this situation reflects the failure of attempting to provide

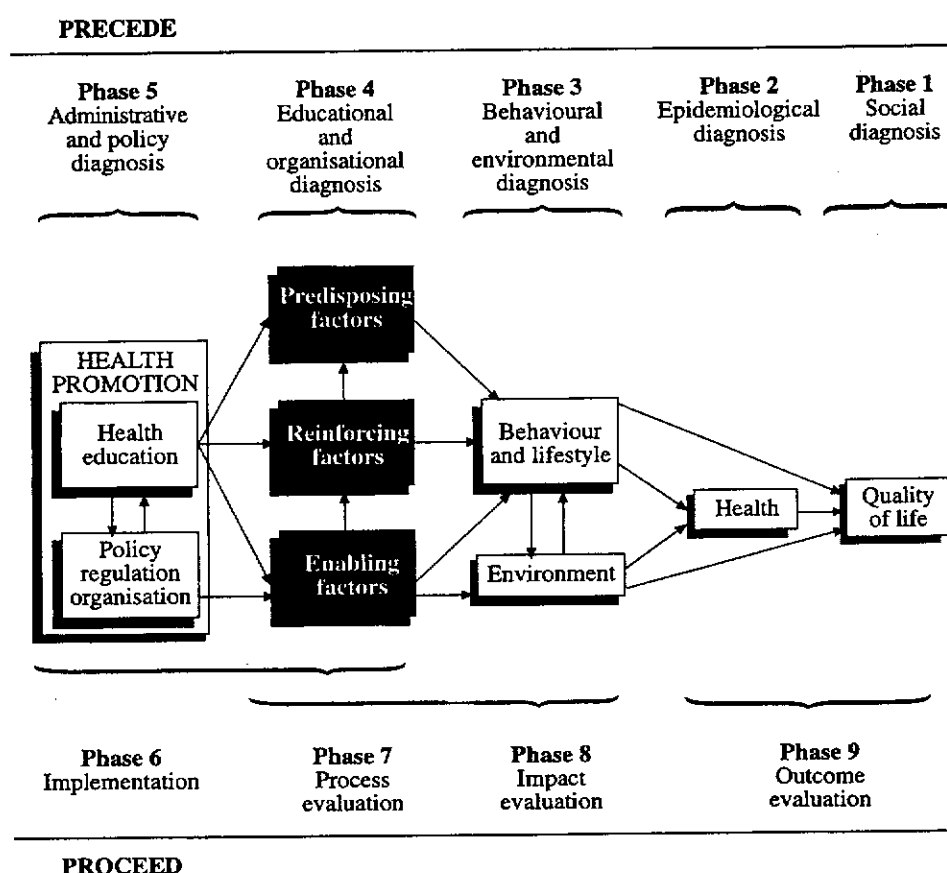


biomedical solutions only to a complex problem that has a strong social, historical and cultural aetiology.

## PRECEDE Phase 4: Educational and Organisational Diagnosis

Phase 4 of the Precede-Proceed Model, the Educational and Organisational Diagnosis, identifies factors that must be addressed or acknowledged to initiate and sustain the process of behavioural and environmental change. This phase is shown below in Figure 7.

Figure 7: PRECEDE Phase 4 – Educational and Organisational Diagnosis



Green identifies three categories of factors affecting individual or collective behaviour, including organisational actions in relation to the environment, each of which has a different type of influence on behaviour (Green and Kreuter 1991):

- **Predisposing factors** are those antecedents to behaviour that provide the rationale or motivation for the behaviour. Predisposing factors include beliefs, knowledge, values and attitudes.
- **Reinforcing factors** are factors subsequent to a behaviour and contribute to its persistence or repetition. Reinforcing factors include family, peers, teachers, employers, health providers, community leaders and decision-makers.

- **Enabling factors** are the antecedents to behaviour that enable a motivation to be realised. Enabling factors include availability of health resources, accessibility of health resources, community/government laws, priority and commitment to health and health-related skills.

### ***Predisposing Factors***

For Aboriginal people, particularly (but not exclusively) those that live in remote areas of Australia, the predisposing factors that underlie health behaviours and environments are fundamentally influenced by Aboriginal culture. Culture is defined by Orlandi as: “..shared values, norms, traditions, customs, art, history, folklore and institutions of a group of people” (Orlandi 1992, p.3).

In the context of health promotion, culture is revealed through the unique shared values, beliefs and practices that are directly or indirectly associated with a health-related behaviour or that influence adoption of a health education message (Pasick, D'Onofrio and Otero-Sabogal 1996). One of the most fundamental differences between Aboriginal and non-Aboriginal culture is that non-Aboriginal Australia, like other Western societies is individually-oriented, where individual pursuits and needs take precedence over community. However Aboriginal society, like many other Indigenous societies, is collectivist in nature. In a collectivist culture, patterns of health behaviour may be modelled entirely within the extended family, with this the most credible source of health information.

Bunton et al. argue that models of behavioural change currently informing health promotion rely on underdeveloped conceptions of social structure and cultural process, due to a bias towards individually-based behavioural change (Bunton, Murphy and Bennett 1991). These authors claim that a particular culture or sub-culture can act both as a resource and a buffer to outside cultural impositions by selecting, rejecting and actively adapting any incoming information or forms of persuasion.

This may provide some explanation as to why some health promotion programs influenced by mainstream health behavioural models, such as the Health Belief

Model (Rosenstock 1974) or Protection Motivation Theory (Rogers 1975), are less effective in gaining or sustaining desired health behavioural changes among Aboriginal populations. For example, the Health Belief Model involves mediating individual perceptions of vulnerability to a specified illness or condition, the perceived severity and consequence of the condition, and the cost-benefit consequences of reducing susceptibility. However in a collectivist culture such as Aboriginal society, the 'common good' of community or family well-being may outweigh appeals to individuals to 'take care of themselves'.

Cultural understanding of Aboriginal health beliefs begins with the way Aboriginal people see themselves, which is different to the European-derived notions of identity that predominate in non-Aboriginal society. Among non-Aboriginal Australians, relationships within society and nature are assumed to be little more than mechanical interactions of otherwise separate things or beings, each with discrete individual identity and interests. However for Aborigines, identity is very much an inalienable feature of an interdependent world. Personal identity is holistically defined in terms of kinship, ritual, and spiritual relationships and responsibilities, all of which are inseparable from each other and from the land itself (Morgan and Slade 1997). Personal identity is not understood as the identity of one individual but rather as an extended, plural identity, and individuals remain strongly committed to this plurality of self. However, this is not a denial of individuality as every individual is given the security of place and the freedom of expression within their social context.

This 'plural' identity extends to the way Aboriginal people define health. Unlike contemporary Western society, in traditional Aboriginal society no dichotomy appears to have existed between a 'healthy' and an 'unhealthy' lifestyle (Spark and Mills 1988). Furthermore, in most Aboriginal tribal languages, no word existed which equates to a definition of 'health' as being an absence of illness nor one which matched current conceptions of health as "*...a dynamic state of social, physical and emotional well-being*" (Houston 1994). There was therefore no need to conceptualise health (as distinct from illness) as an element independent from other elements that formed traditional Aboriginal life. Life in itself provided health. Djerrkura has claimed that this conception is still felt by Aboriginal people:

*“To Aboriginal people health is life. This means promoting health to strengthen the life of Aboriginal people as a way of ensuring their survival and growth” (Djerrkura 1985).*

An appreciation of this ‘plural’ identity and holistic view of health is useful in understanding Aboriginal people’s acceptance or otherwise of contemporary health promotion messages. For example, despite warnings of the risks involved, Aboriginal people in remote communities frequently travel in overloaded motor vehicles and utilities. For them the ability to maximise participation by members of an extended family or clan group in a journey (often associated with traditional ‘business’), may outweigh the high risk of injury in the event of a motor vehicle roll-over (Garrow 1997). With respect to the issue of nutrition, if to Aboriginal people all food is viewed as being inherently ‘good’ in terms of sustaining life, it may be difficult to introduce concepts of food being ‘good for health’ or ‘bad for health’.

A related issue is that of knowledge, also strongly underpinned by culture and which also influences Aboriginal health behaviour. Aboriginal people display a preference for concrete knowledge that is related to the immediate context of their lives rather than abstract concepts such as those used in the science that shapes health services and health information for non-Aborigines (Morgan and Slade 1997).

Aboriginal people express a clear preference for associating all events with the concrete, tangible happenings of their interdependent physical, social and spiritual environment. For example, in investigating contemporary Aboriginal explanations for diabetes in the Northern Territory, London and Guthridge observed that these Aboriginal people offered explanations for diabetes that fell into four broad themes: worry, food, family and infection (London and Guthridge 1998). Within each of these, emphasis was placed on the impact of the disease on the family and immediate social environment rather than on biomedical explanations. Participants in this survey often did not distinguish between the cause, treatment and prevention of diabetes, or saw them as part of a continuum in which the best treatment could also prevent or cure diabetes. Those surveyed were often less concerned about the possible complications of diabetes, such as losing an eye or having a leg amputated, than they were about being separated from their families in hospital.

It is important for health promotion and other health professionals working with Aboriginal people to have an understanding of how Aboriginal beliefs, values, knowledge and attitudes differ from those of non-Aborigines, as these predisposing factors can determine the effectiveness of health promotion programs and also affect outcomes in clinical care. If these are acknowledged, programs can be tailored accordingly. For example, in a recent evaluation of a breastfeeding project with Native American mothers, success was attributed to the culturally-appropriate approach adopted in this health promotion program (Wright et al. 1997). Rather than attempting to replace existing perceptions of infant feeding with the latest medical knowledge, traditional Navajo beliefs about the benefits of breastfeeding were reinforced in this program.

### ***Reinforcing Factors***

For at least 50,000 years Aboriginal society functioned under strict codes which governed behaviour and which ordered life. Tribal elders were the custodians of the 'Law' and their authority, if questioned or flouted, could lead to punishment being exacted upon the erring party. The separate roles of men and women were designated, each with their own defined tasks and rituals.

While men were clearly the dominant authority figures, women had important roles that were integral to the effective functioning of Aboriginal society, including their own 'women's business' from which men were excluded. The 'Law', which brought together land, body and the spiritual world, the immediate family and extended clan relationships, formed the core element of Aboriginal life, forging and reinforcing individual identity and behaviour, including that related to health (Reid 1982).

As noted previously, Aboriginal society is in a state of transition between the traditional past and contemporary Australia. Particularly in remote Australia, traditional elements remain. Nevertheless, the pressure to conform to non-Aboriginal society continues to gradually erode what is left. For example, many older people in remote communities still have experience of the hunter-gatherer lifestyle. However, younger people have less contact with this hunter-gatherer past.

The positive reinforcements for a healthy lifestyle that existed in traditional society have been replaced by what are more frequently negative reinforcements. Functional family life has fallen victim to the influence of alcohol and boredom, with traditional gender roles as family providers usurped by a welfare system that in its attempt to protect women and children from neglect, inadvertently undermines male power and therefore male esteem. A dysfunctional family environment also means that essential life skills such as how to cook, budget and manage a household that are commonly learnt within most non-Aboriginal families have not been learnt by the parental generation of Aboriginal adults. Therefore these life skills cannot be transmitted from the Aboriginal family to the next generation of children (Mathews 1997).

Conversely, the view of the non-Aboriginal world from the margins of the remote Aboriginal community is often a distorted one. Aboriginal people often see Western culture through television or violent videos rather than through education, and the values they see expressed are not those that would be considered desirable by either Aboriginal or non-Aboriginal elders. These ambiguities in expectations place Aboriginal children and adolescents in a no-man's land between the two cultures; they see evidence of the material superiority of Western culture, but with little experience of any of the positive aspects of its history and values. They also inevitably discover that while television provides a window on the non-Aboriginal world where life appears easy and material wealth and pleasures abundant, being both black and poor ensures that this window remains closed to them.

It is perhaps not surprising then, given the seeming hopelessness of participating equally in non-Aboriginal society, Aboriginal children and adolescents have shunned the non-Aboriginal education system, reflected in alarming rates of school absenteeism by Aboriginal children. Many of their parents are also unlikely to foster strong enthusiasm for contemporary school education. In contrast to Western society, where knowledge and literacy are more often viewed as public goods that serve a free and open society, in traditional Aboriginal society knowledge was guarded with great respect and only passed on by and to those with appropriate authority and seniority to be worthy of its possession.

Mathews asserts that an inevitable consequence of school education in the last generation, with its emphasis on critical thought and inquiry, has been to weaken the respect for and authority of parents and to weaken respect for religion and other social controls (Mathews 1997). This helps to explain why some Aboriginal elders have been suspicious of a Western education system that has ignored traditional Aboriginal knowledge and values. At a more practical level, in many remote communities education has failed to produce jobs for young people, and, where it has, this has often required young people leaving those communities for larger towns and centres, unlikely to return. While providing opportunities for a few, this serves to weaken further the social fabric of these communities.

For those Aborigines who do attempt to engage the non-Aboriginal society through choice or necessity, a further hurdle to negotiate is that of non-Aboriginal attitudes to Aborigines. Paralleling the pendulum swings of government policies, Aborigines have been the victims of what are often contradictory attitude swings within the non-Indigenous population. For example, during a short-lived gap between the massacres and the introduction of legislation to 'protect' Aborigines, in 1868 an Aboriginal cricket team was organised and toured England. As Tatz has observed:

*"When Aborigines conformed to ethnocentric values – such as looking like English gentlemen, there was acceptance"* (Tatz 1995, p.46).

It is ironic that today, despite the fact that non-Indigenous Australia has pursued for most of the last 210 years, by direct and indirect means, the removal of Aboriginal land, language and culture, the Aboriginal people who are now afforded greatest popular respect are those who are most 'traditional', and least 'white'; the 'real blackfellow'. Most criticism is levelled at the 'white' Aborigines from the urban south who are likely to be critical of mainstream institutions and policies that discriminate against Aborigines. Whether their impressions are favourable or not, as Aborigines constitute such a small minority of the contemporary population, most non-Aboriginal Australians, unless they are from rural or remote Australia, are unlikely to encounter Aboriginal people in the course of their everyday lives. This lack of contact leads to ignorance that is the breeding ground for the development of racist attitudes towards Aborigines. These attitudes and racial stereotypes are reinforced by the media (Donovan and Leivers 1993).



As in other countries where skin colour and cultural differences expose a minority group to prejudicial attitudes and behaviours of the majority, Aborigines and Torres Strait Islanders experience similar treatment from a mainly white, mainstream Australian population. While legislation introduced over the past three decades has achieved equal rights for Aboriginal people, legislation per se cannot remove racist attitudes. Besides the personal distress which racism causes to Aboriginal people, it also serves to reinforce the disadvantage and marginalised status of Aboriginal people within Australian society.

The subjective experience of racism, in this case in Australian Rules Football, was recently expressed by Che Cockatoo-Collins, a professional Aboriginal footballer:

*"The Footscray General Manager, whoever he is, has probably never been taken away from his parents when he was a young kid. And doesn't know what its like to be called names and face racial abuse every day. Not straight at your face, but if you want to go and get a loaf of bread and somebody looks at you down the hall, just little things like that"* (Linnell 1997).

### ***Enabling factors***

Prior to colonisation, Aboriginal tribal groups throughout Australia were responsible for their own health care. They had traditional healers who were in control of and responsible for the spiritual and physical health of their people and traditional bush medicines used for healing and other purposes (Aboriginal Communities of the Northern Territory of Australia 1988). After colonisation, Aboriginal traditional healing and the use of bush medicine were discouraged and often forcefully banned by some church and medical groups. Consequently the Aboriginal 'doctor' was undermined by the curative system which also served to undermine the allied role of this esteemed figure in maintaining social cohesion (Hunter 1993).

Many of those responsible for the delivery of medical care to Aboriginal people in the early days were hostile towards them and provided a service that was not only alien but sub-standard compared to the level of care provided to non-Aborigines (Collins 1995). In fact, in the early part of the twentieth century, eradication of disease amongst Aboriginal people was not so much a concern for the Aborigines but for the protection of the non-Aboriginal population. For example, the

establishment of 'lock hospitals' in the Kimberley during this period for Aboriginal people suffering from leprosy and sexually transmitted diseases was more for containment and control than cure as effective treatments were not yet available for either of these diseases.

In the years after the Second World War, when hospitals began to admit Aboriginal patients, they were segregated from non-Aboriginal people. However, many Aboriginal people were unhappy because the services were often culturally inappropriate and failed to meet their needs. Therefore many put up with their illnesses rather than use these services. Out of this dissatisfaction was born a movement for culturally-appropriate medical services to cater for Aboriginal people – 'community-controlled' health services that included Aboriginal people in the provision of those services. First in Redfern in 1971 and then in later in Central Australia, the Kimberley and elsewhere, Aboriginal Medical Services were established to fill this need, eventually with financial assistance provided by the Federal Government. These Aboriginal Medical Services provided mostly 'on the job' training to Aboriginal people to perform a range of clinical and subclinical duties, thus establishing the role of the Aboriginal Health Worker.

This initiative had the effect of stimulating action on the part of state governments who had been slow to respond to the demand for more culturally-appropriate services by Aboriginal people. In 1975 the Northern Territory Department of Health established a Territory-wide Aboriginal Health Worker Training Program and in 1985 an Act of Parliament was passed for Aboriginal Health Workers to be registered as health professionals, legally protecting them as Health Practitioners (Collins 1995). Other states followed suit and since then Aboriginal Health Workers have participated, along with doctors and nurses in the delivery of health care to Aboriginal people in health centres in remote communities and in community-controlled health services.

Despite the recent movement for greater community control of health services and participation in those services by Aboriginal people, as has been discussed previously, Aboriginal health status has not improved and in some areas has deteriorated. In acknowledgment of this, the Federal Government commissioned

the National Aboriginal Health Strategy Working Party to prepare a report (NAHS Report) to assess a range of Aboriginal health areas and to make recommendations for action (National Aboriginal Health Strategy Working Party 1989). The Federal Government allocated \$232 million to address the report's recommendations in special funding over the next five years. This was less than one fifth of what was requested in the NAHS report.

Not surprisingly, the 1994 evaluation of the NAHS (National Aboriginal Health Strategy Working Party 1994) argued that the strategy had not worked as these 'special' funds were inadequate for implementation and because no one in the bureaucratic maze could ensure the shortfall in services was met from 'mainstream' health expenditure of about \$2,000 per year per person (Mathews 1997).

Given that the mortality rate of Indigenous Australians is three times higher than that for non-Indigenous Australians, it would appear that per capita annual expenditure on health care for Indigenous people needs to increase significantly to attempt to compensate for this situation. However, in 1995-96, per person, spending for and by Aboriginal and Torres Strait Islander people on health services was found to be \$2,320, only about 8 percent higher than that for and by other Australians (Deeble et al. 1998).

In a study in Queensland that compared Aboriginal and Torres Strait Islander communities with similarly remote non-Indigenous communities, Hart et al. found that there was greater hospital activity per person in remote Aboriginal and Torres Strait Islander communities (Hart, Ring and Runciman 1993). Paradoxically this study revealed that while there was greater hospital activity in discrete Indigenous communities, there was lower expenditure on hospital services, with fewer medical and nursing staff per person than in non-Indigenous communities.

Despite remote area clinics provided by Royal Flying Doctor Service and other aeromedical services, and increased numbers of Primary Health Care Centres established within communities, remote Aboriginal people do not have access to the quality and range of health services provided to other Australians. This means that these Aboriginal people often need to travel long distances away from their families

and communities to access care, particularly where secondary and tertiary care is required. If treatment requires extended time, as for example renal dialysis, this may require relocation of entire families for some duration. This exposes remote Aboriginal people to negative influences of town life, particularly in regard to increased access to alcohol.

Such experiences with town life and within larger Aboriginal 'communities' which have a history as artificial 'collection points' for multiple tribal groups, has resulted in many small family groups to begin moving back to their traditional homelands, away from larger population centres. Goff argues that the 'outstation' or 'homelands' movement is a vehicle for Aboriginal empowerment, representing an attempt by Aboriginal people to recapture control over life, land and society (Goff 1992).

There are several objectives to the homelands movement, according to Aboriginal people. By returning to their homelands, Aboriginal people are seeking a safer, healthier and culturally more satisfying lifestyle, free of the social stresses, alcohol abuse, petrol sniffing and domestic violence of some of the larger communities and towns. Among other benefits, returning to their traditional country also gives Aboriginal people the opportunity for teaching young people about their cultural heritage and looking after the land and its sites of significance (House of Representatives Standing Committee on Aboriginal Affairs 1987).

Supporting the homelands movement has considerable resource implications for service providers, as many outstations are quite remote from existing service centres. Besides the legal impediments, including Aboriginal people gaining land rights over or at least access to their traditional lands, there has been debate for some time over whether outstation life is indeed healthier for Aboriginal people. However, following a recent study in Central Australia, McDermott et al. concluded that Aboriginal people who live on homelands communities appear to have more favourable health outcomes with respect to mortality, hospitalisation, hypertension, diabetes and injury, than those living in more centralised settlements (McDermott et al. 1998). This study also found that effects were most marked among younger adults.

The results of the study by McDermott et al. may give further justification to some Aboriginal groups and government policymakers to encourage more remote Aboriginal people to move back to their homelands. While no panacea for good health, and notwithstanding the difficulties in providing infrastructure and access to health care in these locations, the homelands movement probably provides the best opportunity for appreciating and reclaiming the factors that once predisposed, reinforced and enabled good health for remote Aboriginal people.

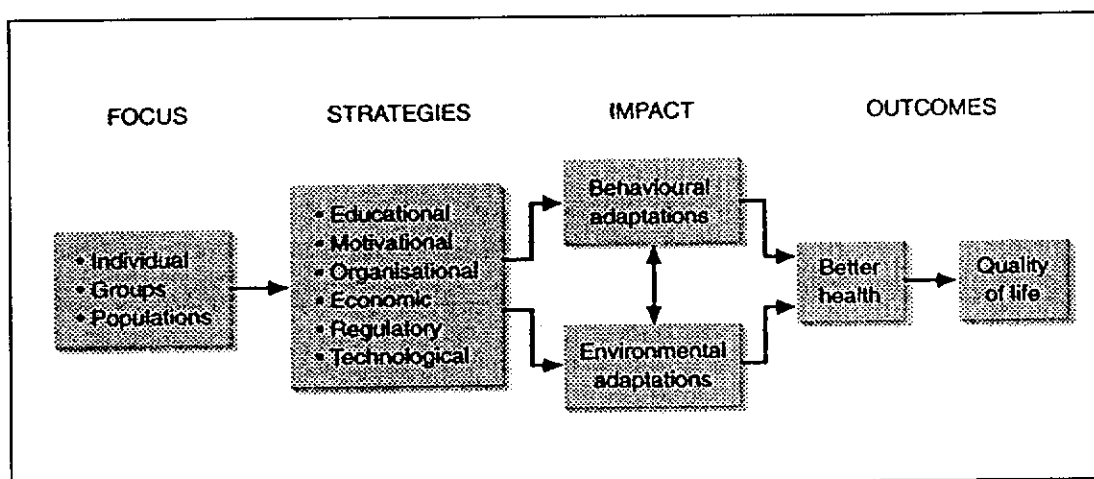


## Health Promotion

Health promotion has been defined by Green as *"...the combination of educational and environmental supports for actions and conditions of living conducive to health"* (Green and Kreuter 1991, p.4). A discussion of the evolution of health promotion in recent decades to arrive at this more inclusive definition was presented at the beginning of this chapter.

Egger et al. have developed a framework for health promotion that aims to assist practitioners in understanding and selecting key strategies, either individually or in combination, for implementation in health promotion programs (Egger, Spark and Lawson 1990; Egger et al. 1999). This framework is shown below in Figure 9.

Figure 9: A Framework for Health Promotion



Source: Egger, Spark, Lawson & Donovan, 1999, p.7.

According to this framework, health promotion can focus on individuals, groups or whole populations, and encompasses educational and motivational components, including individual and group change, and social influence techniques. These, together with organisational, economic, regulatory and technological interventions, make up a range of strategies for better health and improved quality of life. The first two of these strategies address intrapersonal and interpersonal factors underlying risk factors for health, while the last four embrace broader policy-level approaches aimed at the socio-political or physical environment and addressing the 'risk conditions' for health.

In practice, educational strategies are generally focussed on individuals and groups of individuals, such as patient education, school or worksite programs. Population-level strategies include motivational and public education campaigns (predominantly employing mass media), community organisation and development projects, and in the case of organisational, regulatory, economic and technological strategies, require the adoption of health-protecting policies or technological solutions for health problems. In the case of the last three strategies in particular, the emphasis is not so much on encouraging people to make 'healthy choices' as to 'make the healthy choice the easy choice', or, as with healthy public policy or legislation, the healthy choice is 'the only choice' (Milio 1981). Research in this field indicates that health promotion interventions are more likely to be effective where combinations of strategies are employed (Steckler et al. 1995).

### ***Health Promotion and the Media***

Some health promotion strategies are generated from within the community (i.e. community development). Community organisation (as distinct from community development) involves mobilisation of the community in line with the needs deemed appropriate by health authorities. Mass media strategies are also more intrusive, with programs being 'imposed' on the community as a whole, rather than being generated by individual demand within a community. However, the requirements of a successful media message are the same: it must have individual appeal that encourages the individual to act.

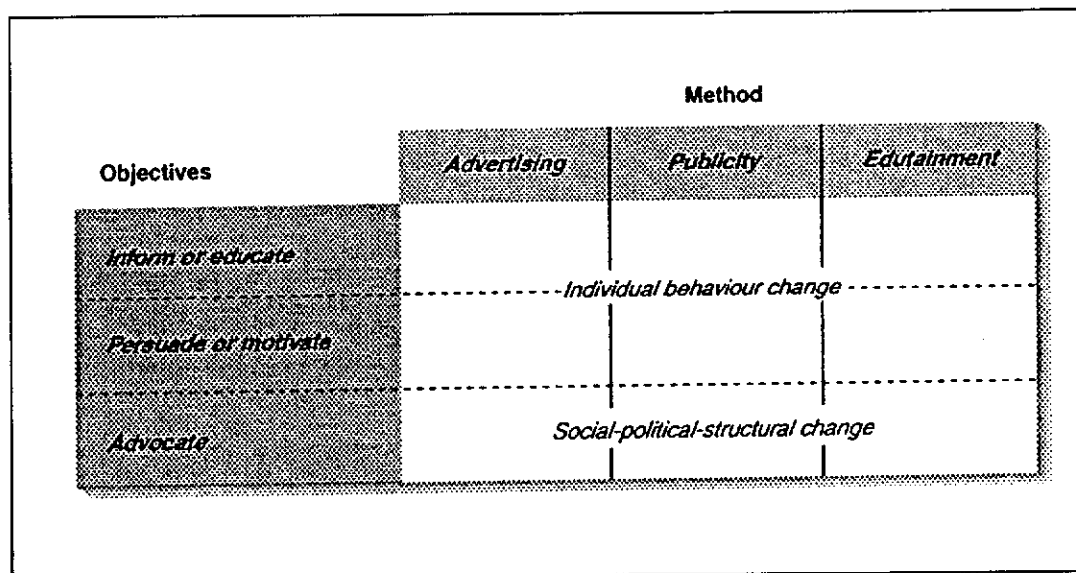
The influence of the media in health promotion has been the subject of considerable debate in the past. Although they have been used for some time in a range of health and public service programs, the media have only been looked at seriously since the early 1970's and the advent of a series of large-scale community media projects around the world such as The North Karelia study (Puska et al. 1979), the Stanford Heart Disease Prevention Program (Maccoby et al. 1977), and the North Coast Healthy Lifestyle Program (Egger et al. 1983). These programs were all aimed at reducing heart disease and related ailments in countries as diverse as Finland, the US and Australia respectively.



It is now generally accepted that well-designed and well-implemented mass media campaigns based on sound communication principles and developed with close co-operation between health and media professionals, have had substantial impact, both in the health area and in other social areas (Egger et al. 1983; Pierce, Macaskill and Hill 1990; Donovan and Leivers 1993; Elder et al. 1996; Reid 1996).

The components of the media can be classified as either *mass reach*, meaning those with a more impersonal general distribution (e.g. TV, radio, press, magazines), or *limited reach*, meaning those with a more personal distribution and limited communications intent (e.g. posters, pamphlets, T-shirts, bumper stickers, etc.) Media may or may not be used as part of other community focus strategies such as social marketing, community organisation and community development. The three major methods of using the media are advertising, publicity and 'edutainment' (Figure10) (Egger, Donovan and Spark 1993).

Figure 10: A Framework for Media Use



Source: Egger, Spark & Donovan, 1993, p.50

**Advertising** refers to the paid placement of messages in various media vehicles by an identified source. This includes the voluntary placement by the media of social change messages that are clearly in the form of paid advertisements (called community or public service announcements: CSAs or PSAs).

**Publicity** refers to the unpaid placement of messages in the media, usually in news or current affairs programs, but also in feature articles or documentaries. Publicity involves attracting the media to run a particular story or cover a particular event in a way that creates, maintains or increases the target audience's awareness of, or favourable attitudes towards the organisation's products or message, or towards the organisation itself. Many campaigns now involve press conferences with celebrities and staged events, supported by activities such as providing the media with press releases, videotapes, feature articles and photographs, and by making experts available for interview on radio and television.

A third, and increasing use of the media for health promotion is **Edutainment**: the deliberate inclusion of socially desirable messages in entertainment vehicles such as television soap operas, to achieve social change objectives. For example, the Harvard alcohol project in the USA approached television writers to introduce into top rated TV programs, actions and themes that would reinforce and encourage a social norm that drivers don't drink (DeJong and Winsten 1990).

### ***Indigenous Health Promotion***

Kunitz has observed that the Indigenous people in countries colonised by Britain such as Australia, Canada, the United States and New Zealand, once conquered, quickly became 'forgotten people' (Kunitz 1994). Their land stolen and forced to the margins of the dominant society, in each of these countries, the health of Indigenous people and their basic needs was overlooked for generations. Early health care services focussed on providing services for acute conditions as long-term deprivation had caused the health of these populations to become desperately poor. The introduction of health promotion programs among these Indigenous peoples has been a relatively recent occurrence.

Some researchers have reported a lack of cultural appropriateness of early health promotion programs. In a review of Native Canadian and Native American health, Young observed, that until recently, typical approaches to health education, disease prevention and health promotion among Native communities have ranged from a

modification of existing programs to suit local needs, to an imposition of predominantly Eurocentric values and standards (Young 1994).

Young also noted that culturally affected areas such as alcohol abuse, Native American communities themselves have achieved some success at control through the development of culturally-constituted prevention and treatment programs, while acknowledging that successful strategies need to be adapted to other pressing needs, such as diabetes control.

It has become accepted that health promotion intervention strategies among Indigenous populations need to be culturally relevant and sensitive to the intended population because of the important role that culture plays in shaping health-related attitudes and behaviours. LeMaster and Connell recently conducted a review of Native American health promotion interventions that promote cultural relevance and sensitivity (LeMaster and Connell 1994). These interventions included the use of tribal elders to teach Native American traditions of running and exercise as a means to achieve physical fitness, and to promote traditional family teachings and practices in child care; and the emphasis on a more traditional diet, higher in complex carbohydrates and fibre and lower in sugar, and making traditional foods healthier through different preparation techniques.

Health promotion approaches with minority groups, including Indigenous populations have also begun to acknowledge the inappropriateness of imposing health education programs on these groups without addressing the social environment in which they live. Such programs can reinforce feelings of inadequacy among those who do not possess the resources to change their social and economic circumstances (Travers 1997). Powerlessness, or lack of control over destiny, has therefore emerged as a broad-based risk factor for disease (Syme 1998).

Empowerment, though more difficult to evaluate, can also be demonstrated as an important promoter of health (Wallerstein 1992). Wallerstein and Bernstein describe empowerment education, as developed by Paulo Friere's writings, as involving people in group efforts to identify their problems, to critically assess

social and historical roots of problems, to envision a healthier society, and to develop strategies to overcome obstacles in achieving their goals (Wallerstein and Bernstein 1988). Through community participation, people develop new beliefs in their ability to influence their personal and social spheres.

### ***Aboriginal Health Promotion***

In Australia, Aboriginal health education and health promotion had been operating informally within Aboriginal culture since its beginnings and formally for as long as individual non-Aboriginal doctors and nurses, Aboriginal 'camp nurses' and health workers translated health-related information into local community and tribal languages. Organisationally, health education programs have been delivered by health workers in a variety of settings including community health services, schools and Aboriginal Medical Services (AMS).

The introduction of bicultural approaches to health care provision in the Northern Territory sought to combine the techniques of modern medicine with those of traditional healing (Devanesen 1985). This development provided impetus for the establishment of an Aboriginal Health Promotion Program within the Northern Territory Department of Health in 1987. This program adopted a bicultural approach to Aboriginal health promotion, which involved the application of modern health promotion strategies within the context of Aboriginal culture, to address the specific health needs and concerns of Aboriginal communities (Spark and Mills 1988). In the same year, an Aboriginal Health Promotion Unit was also established within the New South Wales Health Department.

Since then, Aboriginal health promotion units and programs have been established throughout Australia in State Health Departments and community-controlled health services. The provision of sub-tertiary and tertiary health promotion training courses has also assisted the development of a trained Indigenous health promotion workforce.

Media strategies in health promotion have been facilitated by the growth in Indigenous media organisations and activities throughout Australia. One of the initiators of this movement was the Central Australian Aboriginal Media Association

(CAAMA). CAAMA began radio-based health promotion campaigns in the early 1980's (Frape 1984), and continued this tradition by producing Aboriginal health promotion advertisements for Imparja Television, a satellite television broadcaster based in Alice Springs, with a 'footprint' extending into five states, including the Northern Territory, and an estimated Aboriginal viewing population of 35,000 (Imparja Television 1988). For those communities unable to access Imparja, as well as those that can, the Broadcasting in Remote Areas Communication Scheme (BRACS) has enabled Aboriginal communities to make locally available health-related and other general publicity by 'interrupting' ABC radio and television signals. Mainstream and Aboriginal audiences have also been exposed to 'edutainment' programs, for example, ABC television's 'GP' series, that included one episode that focussed specifically on Aboriginal health and social issues.

A recent special issue of the Health Promotion Journal of Australia demonstrated the growth in Aboriginal health promotion activity that has occurred in a relatively short time. Articles were sought from Indigenous practitioners as authors as well as collaborative work with non-Indigenous authors. Among these reports of community-level educational interventions aimed at smoking cessation and improved nutrition (Johnston et al. 1998; Woods et al. 1998b); evaluation of an Aboriginal health promotion program using peer support to increase self-esteem and reduce drug use (Gray, Sputore and Walker 1998); strategies for Indigenous adult immunisation against respiratory disease (Young 1998); mass media advertising and community-based programs targeting Indigenous audiences for smoking cessation (Walley and Sullivan 1998); and a food and nutrition policy initiative (Woods et al. 1998a).

As a sub-discipline of health promotion, Aboriginal health promotion is as yet in its infancy. Its recent development to where Aboriginal health promotion is predominantly undertaken by Aboriginal people for Aboriginal people is a step forward. Culturally-appropriate health promotion is now recognised as a legitimate and important component of modern health services for Aboriginal people. However its future effectiveness is likely to be determined by its ability to respond, not only to the changing priorities of health bureaucracies, but also the health issues and problems revealed by diagnostic frameworks such as the PRECEDE-PROCEED model and the health needs as expressed by Aboriginal people and their communities.

## **CHAPTER THREE                      METHOD**

### **Overview: Development and Implementation of KAHPP**

In early 1989, preliminary discussions concerning the feasibility of an Aboriginal health promotion project were held between the author and the Regional Director of Kimberley Health Region of the Health Department of Western Australia (HDWA), and the Acting Director of the Kimberley Aboriginal Medical Services Council (KAMSC) in Broome. The basis for these discussions was the author's experience with a health promotion intervention model developed in the Northern Territory.

In August 1989, a grant submission was made by the School of Public Health at Curtin University to the Research and Development Grants Committee (RADGAC) of the Commonwealth Department of Human Services and Health for funds to enable a research and development project. The grant was lodged subject to obtaining Ethics Committee approvals and endorsements by the Kimberley Health Region of the HDWA, KAMSC and the participating communities.

A visit was made to the Kimberley in October 1989 to outline the proposed project to the Kimberley Aboriginal Medical Services Council, and the Regional Director of the Kimberley Health Region of the Health Department of Western Australia.

KAMSC was offered involvement in the project first. However, at the time, their Medical Director was on overseas study leave and their Director was on study leave in Perth. In the absence of senior management, relieving staff were reluctant to commit the organisation to involvement in KAHPP so the project was commenced in communities where health services were delivered by the HDWA. The project was re-offered to and accepted by KAMSC in 1990.

In October 1989, a preliminary visit was made to the communities of Looma, Noonkenbah, Wangkatjungka, Bayulu, Junjawa and Mowanjum in the West Kimberley. At Mowanjum and Noonkenbah it was only possible to meet with the Chairperson, but at Looma, Junjawa and Wangkatjungka, meetings were held with Aboriginal councils and the process of Aboriginal health promotion and the aims of

the KAHPP were explained and discussed. All community chairpersons and councils expressed verbal endorsement of the project's aims, and written permission for involvement in the project was received in the next month from the chairpersons of Looma, Wangkatjungka and Mowanjum as well as from the Health Department of Western Australia. In November of 1989, Curtin University Ethics Committee approval was granted. In December of that year the School of Public Health was notified that the grant application to RADGAC had been successful and in early 1990 the project commenced.

Because of the innovative nature of the project and the need to design a comprehensive survey instrument, a full year was scheduled to pilot the survey instrument with the first three communities that responded. Following on the pilot's success in gaining community support, further communities, including KAMSC communities, were invited to participate in the main study in 1991. A full description of how communities were sampled and a timetable of the intervention is presented in the Method section.

Over the two years of the project, five health promotion workshops were conducted, using local Aboriginal facilitators and Aboriginal facilitators from the Northern Territory program. While storyboards for television advertisements comprised the principal resource outcome, other supporting health promotion print resources in the form of stickers and posters and t-shirts were developed (Appendix B).

In September 1991, towards the end of the field work of the project, a proposal was prepared by the author and submitted to the HDWA to establish an Aboriginal Health Promotion Unit in the Kimberley. The proposal was based on the KAHPP methods and outcomes and upon the support that KAHPP had generated in the region. The HDWA approved this proposal and the new unit, based in Broome, was officially opened by the Premier of Western Australia in June 1992.

In October 1992, following a commitment given to the project communities and in line with desired practice in Aboriginal health research (Kimberley Aboriginal Health Workers 1992), visits were made to the project communities and a series of meetings held to report back and discuss results of the health surveys in each of the

communities. The formal presentation of these findings was conducted with health services staff in Derby on 9 October 1992.

### **Overall Design**

A quasi-experimental field study was conducted. Three communities were selected for the main study: two were assigned to the intervention condition and one to the non-intervention condition. The intervention communities received a community-based health promotion workshop. As an outcome of the workshop, each of these communities generated storyboards from which health promotion advertisements were made and exposed via a paid schedule on satellite television. The advertisements appeared on television within three months of the health promotion workshops. The third community acted as a comparison community and received no health promotion intervention prior to the post-test, but was incidentally exposed to the health promotion advertisements generated by the other two communities.

Prior to conducting the main study, preliminary exploratory qualitative research was undertaken, and the workshop processes and survey instruments were piloted. Data gathering for the main study occurred in two main stages:

- (i) A cross-sectional survey *prior* to any intervention, using the same instrument across all three communities. This instrument (Appendix A) focussed primarily on health perceptions and behaviours. This is termed the Pre-test Survey.
- (ii) A cross-sectional survey *after* the intervention across all three communities. This instrument was the same as the Pre-test Instrument but contained additional items measuring media exposure and impact (Appendix A). This is termed the Post-test Survey.

These surveys provided data for the three research objectives:



**Research Objective 1:** *Describe and compare the health indicators of adult males and females in three different remote Aboriginal communities in the Kimberley region and consider the implications of the results for Aboriginal health promotion.*

**Research Objective 2:** *Evaluate reach and impact of media component of the intervention.*

**Research Objective 3:** *Evaluate impact of the intervention on community strength and community motivation to act on health issues.*

**A fourth Research Objective** was to: *Observe the feasibility of using Aboriginal health workers as facilitators of Aboriginal health promotion programs.* This was carried out via a self-completion questionnaire administered to seven Aboriginal health workers attending a health promotion training workshop conducted prior to the intervention (Appendix C). In addition, observation was made of Aboriginal health workers' community activities and responsibilities with respect to opportunities for inclusion of health promotion activities.

### **Selection of Communities**

Nine remote Aboriginal communities (200-300 in population) in the Broome-West Kimberley region of Western Australia were invited, through their chairperson, to participate in the trial of a community-based health promotion intervention. The intervention was endorsed by the heads of the respective medical service organisations: the Kimberley Health Region of the Health Department of Western Australia and the Kimberley Aboriginal Medical Service Council. These nine communities represented the major communities in the West Kimberley region in terms of population, subject to the limitation of KAMSC communities not being available in the first year of the study.

Five of these communities expressed a willingness to be involved in the program. Meetings were then held in each of these communities with community chairpersons and community councils, where the purpose of the project was explained by the author. The communities confirmed participation through a letter

of consent from their council chairperson to the project coordinator. The first three communities to respond became part of the pilot study of 1990. Two of these communities, Wangkatjungka and Looma, received a health promotion workshop. The third, Mowanjum, acted as a comparison community for the pilot study and, for ethical reasons, became the first community in the main study in 1991. Bayulu, the fourth community to respond, became the second community in the main study and Beagle Bay, the fifth community to respond, became the comparison community for the main study (Table 5).

**Table 5: Timetable of Pilot and Main studies**

Study	Community and study design status
1990 Pilot study	Wangkatjungka and Looma = pilot intervention communities Mowanjum = pilot comparison community
1991 Main study	Mowanjum and Bayulu = main intervention communities Beagle Bay = main comparison community

### **Ethical Issues**

The success of this project relied heavily on the support and co-operation of the Aboriginal communities in the study area. Therefore, as noted in the Introduction, while a survey instrument was developed and piloted in line with standard research practice, a combination of ethical issues and consideration for the long-term viability of the project dictated that the full intervention (health promotion workshop plus resource development) not be withheld from the pilot communities.

Additionally, the community health promotion workshops and the media resources developed from them were intended to provide a tangible 'impact' in the pilot communities which would assist in obtaining support for the main study.

In recent years, Aboriginal communities have become sensitised to researchers who collect information for their own purposes and provide no seeming tangible benefit to the participants and the communities studied (National Aboriginal Health Strategy Working Party 1989). While the pilot and study communities were

geographically separate by several hundred kilometres, news of an inappropriate or exploitative approach in the pilot communities would have diffused through the local Aboriginal informal communication networks to other communities in the region. Later attempts to seek participation from the communities proposed for the main study may then have met with refusal.

The decision to conduct health promotion workshops and media resource production in the pilot communities in 1990 added significantly to the duration of KAHPP and the resources needed to implement it. However the successful pilot enabled a solid base of support for the project to be built prior to the main study of 1991. The time taken to consolidate the project and its methods in the region also facilitated the later development of an Aboriginal Health Promotion Unit, which was established in 1992.

The schedule of intervention and evaluation activities for the pilot and main studies is presented below:

### Study Timetable

Prior to the main study, exploratory qualitative research and a pilot study of the methodology was undertaken. The preliminary qualitative research was undertaken to develop items for the questionnaire. The pilot study piloted the questionnaire, the survey methodology and health promotion workshops. The television advertisements developed in the pilot workshops were screened for a three-month period following the workshops. The timetable for this is shown in Table 6.

**Table 6: Pilot Study Timetable**

Community	Pilot Study – 1990								
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Wangkatjunga	Qualitative		Pilot		Pilot		Advertisements		
Looma	Interviews		Instrument		Workshops		Screened on		
Mowanjum							Television		

The timetable for the main study is shown below in Table 7.

**Table 7: Main Study Timetable, 1991**

Community	Main Study – 1991											
	Jan	Feb	Mar	Apl	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mowanjum		Pre-test		Workshop				Advertisements			Post-test	
Bayulu		Pre-test		Workshop				Screened on			Post-test	
Beagle Bay						Pre-test		Television			Post-test + Workshop	

Pre-test surveys were conducted in the main study communities in late February/early March 1991. The workshops were held in late April/early May 1991. The television advertisements were filmed in June 1991. The Pre-test Survey for the comparison community took place in late May/early June of that year. The two television advertisements were screened fifty times each via a paid schedule on remote television in the Kimberley region for an eight week period from mid-August to mid-October, 1991. Post-test Surveys were conducted in all communities from mid-October until early November 1991.

As mentioned above, part of the agreement with all of the communities that participated in the project was that each would receive a community health promotion workshop. The comparison community, Beagle Bay, received a community workshop at the end of November/beginning of December 1991.

### **Pilot Study**

#### ***Exploratory Qualitative Research***

In order to establish the broad themes underlying health in the study communities from the perspective of residents, a series of individual interviews was conducted by the author with 3-5 people from two of the three pilot communities. The individuals interviewed were chosen as key informants whose position or length of time in the community provided them with an opportunity to comment with some authority on life in their community. These semi-structured interviews lasted 30-50 minutes and generally probed several of the following issues:

- perceptions of community strength and cohesion
- major health issues of the community
- factors underlying community health problems
- social and behavioural risk factors for health
- practice of Aboriginal culture
- motivation to improve health
- influences on health behaviours

Where appropriate, a number of these interviews, or parts thereof, were tape recorded. Transcripts of these may be found at Appendix D.

### ***Questionnaire Development***

It was part of the philosophical construct of the intervention that individual communities would list and prioritise their own health needs and concerns for health promotion program development rather than have these priorities assigned by the project team. This created particular problems in the evaluation of all of the possible impacts of the intervention using a pretest-posttest design. Foremost of these was anticipating the communities' health priorities so that these could be measured in the pre-test prior to actually conducting the workshops.

For this reason, an 'umbrella' instrument was designed which dealt with a wide range of known behavioural and environmental health risk factors for remote Aboriginal people (Reid and Trompf 1992). It was anticipated that the instrument would include items directly related to the issues prioritised by the community and addressed by the intervention.

The content areas and specific items addressed in the questionnaire are shown in Table 8 below.

**Table 8: Content Areas and Specific Items from the KAHPP Questionnaire**

Content Area	Specific Items
Demographic composition of the sample	Age, gender, years lived in the community, birthplace
Prevalence of environmental health risks in the communities	Dog ownership, rubbish in the community, number of people living in houses, prevalence of houses with toilets, leaking taps, washing machines, refrigerators.
Health and happiness	Perceptions of the health and happiness of men, women and young people in the community and of self.
Health risk factors	Perceived strength of effect of grog on blood pressure, fatty food on heart problems and sugar on diabetes.
Health related behaviours	Prevalence of smoking, drinking alcohol, showering, eating bush-tucker, going hungry for a day.
Motivation to change health-related behaviours	Motivation to quit smoking, drink less grog, keep dog healthy, drink low sugar drink, eat more vegetables, eat more baked beans, eat less sugar and eat bush-tucker, eat more healthy food.
Health efficacy	Perception of how much a community can do to prevent sickness.
Disease prevention	Current disease prevention strategies of individuals and communities, perceived needs of community to help disease prevention.
Media impact*	Recognition of the Caring & Sharing logo and the two television advertisements, messages recalled, perceived strength of advertisements, reactions to the advertisements, perceptions of advertisements as good or bad for Aboriginal people.
Awareness of health issues addressed by the workshop <sup>#</sup>	Awareness of trouble caused by men and women drinking.
Community strength <sup>#</sup>	Prevalence of community meetings, perceived strength of the community, perceptions of community and personal ability to prevent sickness.

<sup>#</sup> Added after the pilot

• Post-test only

### ***Item Development and Formatting***

Few precedents exist for surveying the health perceptions and behaviours of remote Aboriginal communities and few surveys have been designed especially for Aboriginal respondents. There have been a number of surveys of remote Aboriginal people that have measured clinical symptoms (Phillips, Patel and Weeramanthri 1995; Braun et al. 1996; Gault et al. 1997). Several have measured alcohol and drug consumption (Watson, Fleming and Alexander 1988; Hunter, Hall and Spargo 1991). However, at the time of this study, none were found that dealt with Aborigines' perceptions of their own and others' health and their attitudes to health behaviours. Furthermore, most instruments have used standard European formats, although some have been translated into the local Aboriginal language (Kamien 1980) and some have used graphics to assist in comprehension (Kamien 1980; Hunter, Hall and Spargo 1991).

Initial items for the instrument were selected on the basis of:

- i) the exploratory research individual interviews with health workers and community members;
- ii) a review of the literature on Aboriginal health problems and their predisposing, reinforcing and enabling factors (Reid and Trompf 1992); and
- iii) previous experience in implementing health promotion projects with Aboriginal communities in the Northern Territory (Spark and Mills 1988).

A number of items in the instrument were designed to take advantage of the fact that Aborigines living in remote communities tend to have good knowledge of each others' affairs. These items asked about the health and happiness of other groups in the community: men, women and young people. This technique is similar to the group consensus method. The group consensus method is a form of group discussion in which a questionnaire is completed by the group by reaching consensus agreement on questionnaire items. This technique has been validated against prevalence surveys (Popham 1976; Smart and Liban 1982) but is only

appropriate when the population of interest is close knit and homogenous and where community members know what the others think and do.

Most questions were closed-ended with a multiple-choice format. Open-ended questions were used to probe further on specific topics, such as reasons for rating others or themselves as healthy/sick and happy/sad; reasons for going hungry for a day; describing disease prevention strategies currently practiced; and, at post-test, reactions to the health promotion advertisements.

The instrument included questions asked in standard interviewing formats but incorporated a variety of techniques to ensure ease of use by the interviewer and greater understanding on the behalf of the respondent.

#### (i) Standard Questions

These generally related to simple, factual information, such as:

Item 5. *"Do you have a job right now?"*, and

Item 7. *"Do you smoke?"*

#### (ii) Use of Graphics to Clarify Standard Questions

Some questions, such as those concerning environmental hygiene in and around the home, were supplemented with graphics for additional clarification. For example:

Item 28. *"Are there any leaking taps or drains outside your house?"* (Figure 10); and

Item 30. *"Is there a refrigerator in your house that works?"* (Figure 11).

**Figure 10: Item 28**


<p><b>28.</b> Are there any leaking taps or drains outside your house? (circle one)</p>			
<p>Yes (1)</p>		<p>No (2)</p>	<p>Don't Know (3)</p>
<p></p>			



**Figure 11: Item 30**

**30.** Is there a refrigerator in your house that works? (circle one)

Yes (1)                      No (2)                      Don't Know (3)



**(iii) Use of Graphics to Enhance Understanding of Concepts of Scale, Numeracy and Intensity**

To measure scale, a picture of a sandhill was drawn with people in various stages of health standing on each side and at the top of the hill. Only the endpoints and midpoint of the scale were labelled. Instructions to respondents explained that the unlabelled midpoints on either side of the hill reflected an intermediate degree of good health or sickness (Figure 12).

Figure 12: Item 9

**9. (b) Where are most of the WOMEN in your community on this hill? (Tick one circle )**

Healthy and strong in body      Just okay - not good but not sick      Weak and sick in body

Fair bit healthy      A bit sick

(5)      (4)      (3)      (2)      (1)

To measure numeracy and intensity, circles were used, decreasing in size from about one 12 mm in diameter to a small dot representing, for example, 'lots' to 'never' (Figure 13).

Figure 13: Item 19

**19. How many times does your community get together to talk about community business? (Tick one circle or dot )**

Lots      A fair bit      Sometimes      A little bit      Never






(5)      (4)      (3)      (2)      (1)

(iv) **Use of Culturally Appropriate Terms**

Questions utilised English words from the local Aboriginal vernacular to enhance meaning. For example, Item 36: "*How **strong** is the feeling that you should drink less grog?*" (Figure 14).

Figure 14: Item 36

**36.** How strong is the feeling that you should drink less grog? (Tick one circle or dot)

Very strong	Fairly strong	Some	A little bit	Not at all
				
(5)	(4)	(3)	(2)	(1)

The relationship between most of the items and the concepts they are intended to measure is straightforward as most questions relate to perceptions and behaviours. However, the complex nature of the concept 'community empowerment' made it difficult to operationalise and measure. Wallerstein ascribes the problems of obtaining a construct for measuring community empowerment to its dual individual and community dimensions (Wallerstein 1992). Furthermore, sophisticated measures of community empowerment were judged to be inappropriate because community ambience is highly variable in remote Aboriginal communities, with seasonal fluctuations in population and frequent, annual changes in community leadership. For the current study, community empowerment in relation to health was operationalised simply as respondents' perceptions of how much the community and they as individuals could do to prevent sickness.

To encourage community support for the survey and to emphasise from the communities' perspective that the survey would be a basis for further health promotion planning and development, the instrument was labelled and referred to as a 'Needs Assessment'. The instrument is presented in Appendix A.

### *Administration of Questionnaire*

English was a second or third language for most of the study population. Furthermore, there was concern that Aboriginal people may be reluctant to discuss personal issues with non-Aboriginal people (Crawford 1989). To reduce language and cultural barriers to participation in the survey, it was decided to employ Aboriginal interviewers.

The use of Aboriginal interviewers was supported by American research and Australian precedent. Aquilino and Lo Scuito's study of race-of-interviewer effects in surveys of drug use among black Americans, suggested that lack of racial matching can increase the likelihood of 'socially-desirable' responses to interviewer questions (Aquilino and Lo Scuito 1990). Local Aboriginal interviewers were employed and recommended by Gray in surveying Aboriginal women on attitudes to the provision of family planning services in Aboriginal communities (Gray 1987).

Aboriginal interviewers were recruited for the pilot study via recommendations from local health workers and other community workers. Interviewers generally had some kind of community, welfare or health-related work experience. They were trained on-site in three stages. Firstly, they were briefed on the questionnaire and its purpose. Next they acted as a respondent for an experienced interviewer. They then interviewed a respondent in the presence of the author, who gave feedback on their performance and suggestions for improving their technique.

The policy of using only Aboriginal interviewers was modified for the main study as the majority dropped out after completing only two or three interviews. The reasons for the high 'dropout' rate may have related to the following factors:

- (i) Aboriginal interviewers indicated shyness and embarrassment at approaching people from their own community and asking them personal questions about their opinions and health habits.

- (ii) Each interview took about one hour to complete. This length of interview may have been excessive, particularly considering they were frequently conducted in the heat of the outdoors and at public access points.
- (iii) The payment of \$10.00 per completed interview may not have been sufficient, considering the time required to recruit a subject and conduct the interview.

### ***Piloting the Questionnaire***

Cultural and linguistic factors in remote Aboriginal communities necessitated careful planning and testing of the research methods and instruments. The instruments and survey methodology were pilot tested in the three above-mentioned remote Aboriginal communities in the Kimberley region. A total of 61 interviews (43 females and 18 males) was obtained by five interviewers.

Interviewers reported that the graphics used in the questionnaires assisted those with little English and that the ratings scales were clearly understood. This was confirmed by the distribution of responses that showed a spread over all five points of the scale, rather than clustering at end points or in the middle of the scale. Furthermore, the rating scale responses were consistent with the open-ended responses. All interviewers reported that, to the best of their knowledge, respondents answered all questions honestly and fully.

The pilot study suggested that the main study should continue with the overall questionnaire structure but with a reduced number of open-ended questions to shorten the duration of the interview from 60 to 45 minutes. A question to assess community strength and participation was added and several minor formatting changes were made to simplify administration.

The pilot study results are present in Appendix E (Spark et al. 1992).

## **Main Study**

The communities involved in the main study of 1991 are described below. The sampling and interviewing procedures for the pre-test and post-test surveys are then described.

### ***Main Study Communities***

The first community to be included in the main study was Mowanjum. The second study community was Bayulu. The comparison community was Beagle Bay.

#### **(i) Mowanjum**

Mowanjum is situated 16 kilometres south of Derby (pop. 5,000), the nearest major town. In 1991 the population of Mowanjum was approximately 200.

The people of Mowanjum are predominantly full-descent Aborigines, originally from the rugged hill country of the Prince Regent River, several hundred kilometres to the north of their current location. For this reason they refer to themselves as 'river' people.

In 1912, a Presbyterian mission was established on the coast at Port George IV, and in 1916 moved several kilometres inland to Kunmunya. This was the tribal land of the Worora people, many of whom gradually drifted in to the mission. In 1951 the mission was moved to Wotjulum on the coast near Cockatoo Island, nearly 100 kilometres to the south. Here the Worora joined their neighbouring tribes, the Ngarinyin and Wanumbal, who up until then had been living at what was a government-run mission at Wotjulum. The government was keen to hand over management of this facility to the church and so the three tribal groups were co-located.

After five years at Wotjalum the combined mission was moved again, this time with the majority of the three tribal groups, another 100 kilometres further south to

its present site. The new mission was named Mowanjum, a Worora word which translates to mean 'settled at last' or 'on firm ground' (McKenzie 1969).

While beginning as a mission, Mowanjum today is more typical of a 'fringe community' or 'town camp' because of its close proximity to the town of Derby (Hunter 1993). Traditional Aboriginal ceremonies and Law are not conducted at Mowanjum itself, however Mowanjum elders continue these traditions at sites away from the community. Tribal languages are spoken at Mowanjum, particularly by older people. In the former homeland areas, four satellite communities, or outstations, have been established by groups from Mowanjum in recent years. These outstations include Pantijan, Larinjuwar (Cone Bay), Marumbabiddi (Prap Prap) and Kandiuall (Mitchell Plateau). Many Mowanjum people are in the process of either moving back to these outstations permanently or visiting them on a regular basis, at long weekends and holidays. Populations of the outstations therefore fluctuate and range from 50-100.

The people of Mowanjum have access to the facilities of Derby, including a shopping centre, schools and a regional hospital. They have their own community store and a community council office. In 1991 the community chairperson was a Worora man who had recently been elected to this position. While the situation of three tribal groups co-existing is often problematic for gaining community consensus on all matters, time has seen considerable inter-tribal blending and there was no observable dissatisfaction with the chairperson or the community council during the time of the project which could have been attributed to tribal jealousies.

The Health Centre at Mowanjum has a full-time Health Worker and a visiting nurse from Community Health of HDWA in Derby. For a period of over ten years, Mowanjum has been a site for an intensive diabetes research project. A university-based researcher has worked with the community, providing diabetes screening, feedback and education at regular intervals. The project has recently employed a part-time project officer to provide continuity to the research and education activities.

Mowanjum participates in the Community Development Employment Program (CDEP). CDEP is paid by the government and provides payment similar to unemployment benefits to members of the community between the ages of 15 and 65 who are not at school, not receiving a pension or are not independently employed. Under the scheme, people work a minimum of four hours per day. Projects are mainly aimed at the upkeep and maintenance of the community and include activities such as rubbish collection, house repairs and the upkeep of community vehicles.

Housing at Mowanjum, as at many other remote Aboriginal communities, is sub-standard by West Australian government housing authority standards. Houses consisted of a kitchen, toilet, shower, two or three small bedrooms, dining and lounge area and an enclosed verandah. The houses are very hot in summer and do not have fans. In 1991 there were approximately 30 homes in the community.

## **(ii) Bayulu**

Bayulu is located in the Fitzroy Valley, approximately 15 kilometres from the town of Fitzroy Crossing (pop. 1000), on a land excision from a pastoral lease, Go Go Station. The establishment of the pastoral industry in the Fitzroy Valley in the 1880's meant that the local 'river' people such as the Gooniyandi were quickly caught up in this industry. During the first half of the twentieth century, groups of Walmatjari and Wangkatjunga people from the desert areas to the south gradually drifted north and on to Gooniyandi land. This was a movement which had begun before white settlement and which accelerated with the growth of the pastoral industry and the employment and access to resources it provided to Aboriginal people. Rights for the Walmatjari and Wangkatjunga people to settle on this land, from a traditional stand-point, were negotiated by the relevant groups (Kolig 1981).

The present Bayulu community is a mixture of two main language groups, Gooniyandi and Walmatjari, although Bayulu itself is situated on Gooniyandi land, beginning as an Aboriginal camp near to the Go Go homestead. The community was resettled to its current location in 1975.



The dynamics of inter-tribal co-existence are evident in Bayulu. In researching Aboriginal communities of the Fitzroy Valley, Arthur observed that in the 1970's, when resources, including land, were being allocated through Aboriginal resource agencies and government departments, groups such as the Gooniyandi were overlooked in favour of the Walmatjari and Wangkatjunga. His explanation is that the Gooniyandi (and other Fitzroy Valley 'river' people, such as the Bunaba) retained less of their traditional Aboriginal 'law' due to early contact with non-Aborigines, and were consequently considered by officials in the white bureaucracy to be less 'Aboriginal'. Therefore more assistance was given to the latterly arrived 'desert' people, the Walmatjari and Wangkatjunga. According to Arthur, the result in the Fitzroy Valley has been that the Gooniyandi and Bunaba have been 'by-passed' in terms of their economic and social development (Arthur 1990, p.45). This situation is evident in Bayulu community itself, where, although the past twenty years has seen considerable blending of the two main groups, Walmatjari interests predominate. Significantly, at the time of the study in 1991, most people at Bayulu referred to themselves as 'desert' people.

In 1991 the population of Bayulu was approximately 270, with outstations managed through the Bayulu Community Corporation. The major outstations in 1990-91 were Gillaroong, Luma Gorge (Mt Pierre Station), Bidijul, Karnparmi (Three Mile) and Eight Mile Bore.

Bayulu community in 1991 was visibly clean and well-organised, very much due to the strong leadership provided by the chairperson and the influence in community business of his family. Overall, the community appeared to have been able to separate community development at Bayulu and Aboriginal tradition maintenance, yet manage each of these effectively. Cultural traditions were visibly strong and survived in spoken language and traditional art, the latter encouraged through an active adult education group and the opening of an outlet for community artworks in Fitzroy Crossing. However, Aboriginal ceremonies ('Law') were conducted at outstations away from Bayulu itself.

Employment was created through the CDEP program and some Bayulu people had jobs in Fitzroy Crossing and the nearby Cadjebut mine. School-aged children

attended Go Go primary school and high school in Fitzroy Crossing. The community store was well managed and made an effort to supply fresh fruit and vegetables when available, and had a system of credit (known as 'book down') where debts remaining outstanding could, if necessary, be withheld by the corporation from an individual's CDEP payments.

Health services were provided by the HDWA at a community health centre in Bayulu in the form of a full-time health worker and visiting medical and nursing services from Fitzroy Crossing. A maternal and child health research project, coordinated by a Perth-based, university researcher and a local project officer, had been operating for several years in Bayulu (Gracey and Sullivan 1990).

In 1991 there were 43 houses at Bayulu, plus a community hall, the health centre, store, council office, adult education centre, mechanical workshop and recreation centre. Housing was basic, with two or three bedrooms, mostly built from concrete block at ground level on a concrete base, with a flat roof. The result was that these houses were difficult to keep free from rain and mud in the wet season, dust and dirt in the dry season, and community dogs at any time. Residents tended to live mostly outdoors, camping on verandahs and cooking on ground fires or outside stoves.

While many Bayulu people had either moved to or were spending considerable time at the nearby outstations, they viewed Bayulu as the 'main community' and returned regularly to visit relatives and to attend to family and clan obligations and other business.

### **(iii) Beagle Bay**

Beagle Bay is located on the Dampier Peninsula, not far from the coast and approximately 150 kilometres from the nearest major town, Broome (pop. 8,000). The access road is dirt and impassable in the Wet Season. At the time of the study the community had a population of approximately 250.

The Beagle Bay community is situated on Aboriginal Reserve land, which used to be a Roman Catholic Mission founded by Trappist Monks in 1890. The mission retains a section of the old mission area and a small religious staff, but the present community is independent of the mission, although its influence is still strong, particularly among the older people (Nailon and Huegel 1990).

Beagle Bay is situated on Nyulnyul land. The original mission drew Aborigines from tribes throughout the Dampier Peninsula including Nyulnyul, Bardi, Nyikina, Djabberdjabber and Yawuru. However, Beagle Bay was also a place where partial descent Aborigines were sent from Broome, Derby and other places in the Kimberley and Pilbara regions, and from as far away as Darwin. Dormitories were built to house the large number of Aboriginal children without parents or other relatives in the community who could care for them. The church took over this role and while education, work, sustenance and spiritual enlightenment were provided, life in the dormitories was strict and regimented. English was taught and tribal languages or traditional practices were either not encouraged or actively discouraged. As a result, apart from a few old people who could still speak their tribal languages, aspects of traditional culture such as spoken language and ceremonies were reported as not being practised in Beagle Bay at the time of the study.

In 1991 there were 17 outstations in the area surrounding Beagle Bay which Beagle Bay people or other people with traditional links to this country had established. Indications at the time were that this figure was likely to increase. The history of Beagle Bay, particularly with regard to the number of tribal groups and individuals of mixed descent sent to the Beagle Bay mission, provides a possible explanation for the proliferation of outstations and also for their relatively small numbers. Functionally they operate more as weekenders or holiday homes rather than as permanent settlements for tribal groups, as occurs elsewhere.

The Beagle Bay community council consisted of a chairperson and five members administering most of the community affairs, including the CDEP program. In 1991 a new chairperson was recently elected. However this position was to change once again in the same year, resulting in a sense of instability in the community.

Beagle Bay had its own school to Year Nine. A large community store was open during the week. Health services were provided by KAMSC. The health centre was spacious, with several beds for hospitalising patients for short periods. Staffing consisted of two health workers and weekly nursing and medical visits from the KAMSC base in Broome.

Employment within the community was mainly provided by CDEP. Due to the limited range of options available in the community, many young people were forced to leave for larger towns such as Broome for advanced schooling and to find employment.

The housing type in Beagle Bay in 1991 was predominantly concrete block with some fibro, situated at ground level, with two or three bedrooms. The houses and yards were relatively neat and well-maintained, with many having wire fences. At the time of the study, two new mud brick houses had been constructed recently by the council. These houses were very functional for the hot climate and featured high ceilings and extensive use of louvres. Including these there was a total of thirty-six houses in the community in 1991.

It was apparent in 1991 that the physical environment had been made a priority at Beagle Bay. The community was one of the first to have a trained Environmental Health Worker, an initiative of the HDWA. His work included some basic infrastructure maintenance and supporting a community dog health program, directed at controlling disease in the large number of dogs in the community, and hence limiting the spread of infection to humans, particularly young children (Williamson et al. 1994).

Also, for a period of one year prior to KAHPP, a university-based group of landscape architects had been conducting a project within Beagle Bay that applied landscape adaptations to minimise some of the major environmental problems, such as dust and lack of shade trees (Sinatra and Murphy 1992).

## **The Community Health Promotion Workshops**

Health Promotion workshops were held in the Mowanjum and Bayulu communities in April and May of 1991, after the pre-test surveys. The workshop for Beagle Bay, the control community, was held after the post-test survey in December of the same year. The format and procedure in each community followed the process that had been developed by the Northern Territory Aboriginal Health Promotion Program (Spark and Mills 1988) and replicated in the KAHPP pilot communities (Spark, Donovan and Howat 1991).

### ***Aims***

The purpose of the KAHPP workshops was to provide a forum where the community's health issues could be raised, discussed and then arranged in some kind of priority.

### ***Facilitators***

In the pilot workshops the primary facilitator was an Aboriginal health promotion officer from Darwin, with the author and a graphic artist as secondary facilitators. In the case of the main study workshops, the primary facilitator was an Aboriginal health and community development worker from the Kimberley, with the author and a graphic artist in secondary roles.

### ***Procedure***

The workshop was advertised on a flyer posted at locations in the community and publicised on community radio where this was available. The workshop facilitators arrived in the community several days ahead of the date for the workshop. This provided the facilitators with an opportunity to become known in the community and to speak formally and informally to some of the groups within the community. This was done to build trust between the facilitators and the community members and served to increase understanding of and participation in the workshop by the community.

Local health or community services staff were invited to visit the workshop but not encouraged to stay for the entire time so that the ideas expressed could reflect as much as possible those of community members. Aboriginal Health Workers were invited but their participation was often limited by the demands of their clinical duties. In some workshop communities, nursing staff supported Aboriginal Health Workers to attend by 'covering' their clinic hours on some if not all of the workshop days.

The 'workshops', which lasted four to five days, were not always conducted as a formal meeting in the sense of people meeting at an appointed time in a designated place and providing opinions when asked by facilitators. The workshops generally proceeded as follows. On the first day of the workshop, as many people who were willing and available to attend, came together in a community hall or similar venue. The Aboriginal health promotion facilitator presented to the group the concepts of prevention underlying the workshop, generally illustrating these concepts with reference to the Northern Territory Aboriginal Health Promotion Manual (Northern Territory Department of Health and Community Services 1989), copies of which were made available for participants to peruse. Stories from this manual, including the 'River of Health', and concepts of prevention, intervention and treatment of disease were outlined. Active participation was encouraged, often causing older participants to reflect on traditional concepts of prevention and ways of life in recollections of 'healthier days' such as in station and mission times or prior to colonisation. Lunch was provided to participants on all days of the workshops.

On the second day the community meeting was asked to discuss the kind of health 'worries' and problems that they felt were present in the community, and particularly to reflect on the factors that might be contributing to them. While this was occurring the graphic artist began listening to discussions and recording images and themes in a pictorial form - both as a record of what was said and also to begin the process of documenting the community's issues. As information was gathered and recorded, the graphic images were repeatedly fed back to those present to confirm or otherwise their accuracy and appropriateness.

On the third day the workshop participants were asked to discuss and prioritise the kind of things that might be done to prevent these health problems in their communities. These were the beginnings of the community's own health 'stories' that Friere refers to as 'codifications' or 'codes' (Friere 1973).

It was acknowledged that the workshop would not necessarily involve and be attended by all groups in the community. For this reason the workshop facilitators, particularly once themes had begun to emerge after the third day, took draft ideas and images to other groups within the community that might not be fully represented at the workshop, such as young people, men or women's groups, or elders. This served as a 'reference check' or validation that the material that was being provided through the workshop proper was accurately representing as many community members as possible.

Hence, an iterative process was used to arrive at two or more main health needs or issues for each community on which to base health promotion messages. The more significant of these issues (as negotiated between the facilitators and the community members) were developed into the storyboards for the television advertisement. Some other health stories or issues arising became the subject of printed materials, produced as posters or leaflets, such as those on head lice from Beagle Bay and diabetes from Mowanjum (Appendix B).

At the end of the workshop, the Aboriginal facilitator negotiated a time in the weeks following to return to the community to film the television advertisement, while the graphic artist undertook to return final 'camera ready' drafts of printed material to relevant groups and individuals for final checking.

The filming of the television advertisements was as important as the process preceding it, with involvement of the communities in the filming maximised. Selection of locations, individuals to participate, and ways in which the advertisements were to be filmed were also negotiated with community groups. Those community members who appeared in advertisements were paid standard appearance fees.

After filming and post-production, the 'draft' television advertisements were returned on video to the community for validation and their approval for these to appear on television.

## **Pre and Post-Test Surveys**

### ***Sampling Within Communities***

Simple random sampling of households or enumerated individuals was not considered feasible for the following reasons:

1. Residents tend not to be in their own houses but more likely in houses of members of their extended family in the community.
2. Community members were often absent from the community. The movement of community members to outstations and other absences meant that up to one third of each of the three communities' populations could be away from the community at any one time. For example, interviewers at Beagle Bay during the pre-test estimated that they interviewed all but 10-20 adults who were present in the community during the week of the survey. This indicated that the adult population at that time was approximately 80 rather than 130-140 according to official figures.

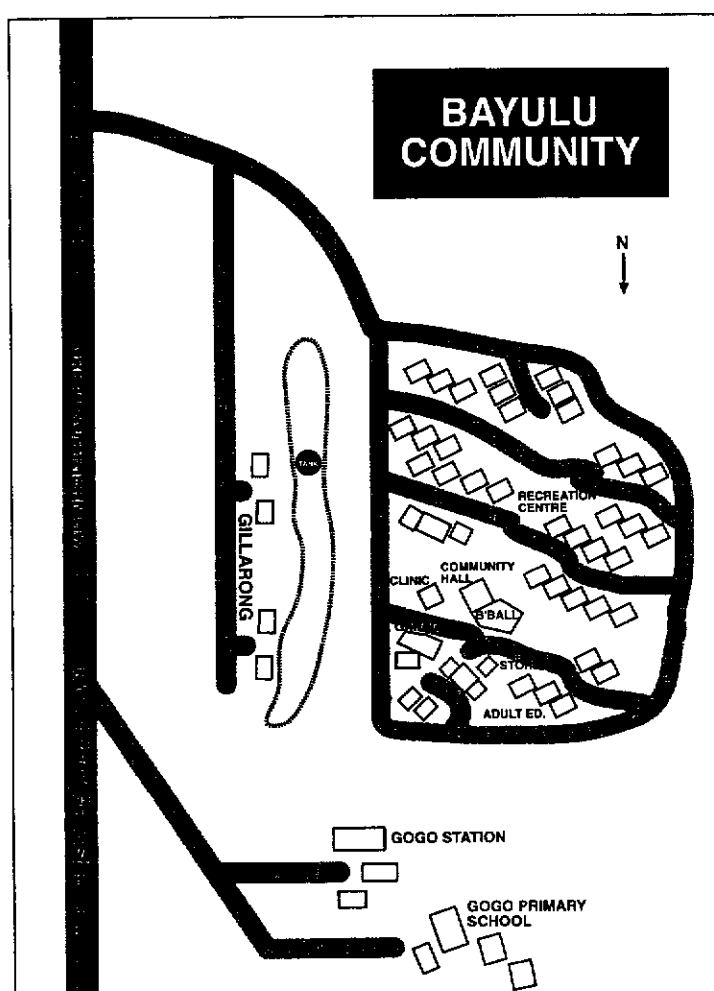
Therefore, a form of purposive sampling was used (Spooner and Flaherty 1992). Purposive sampling involves recruiting respondents from places that they frequent in higher concentrations than exist in the general population and is more efficient than random sampling when studying a small segment of the population. Purposive sampling methods that do not rely on convenience samples, such as the street intercept technique, have been affirmed in recent American research to be a feasible alternative to traditional population survey methods in accessing hard-to-reach segments of the population (Miller et al. 1997).

To achieve a representative sample of each community, a map of the community showing streets and houses was constructed (for example, a map of Bayulu



Community is shown at Figure 15). This was relatively simple to construct as these communities had only three or four streets and 20-30 houses. Local people marked family names against each house on this map and a list of families was constructed. Outstation residents generally had family members living on the community. If not, these were added. Interviewers then ticked against the family list as interviews were completed at the end of each day. In this way, they could identify which families were being over-sampled and which needed to be included. Notwithstanding this technique, due to the low numbers of people in the community at any one time, the objective was to interview as many adults in the community as possible during the time available.

**Figure 15:** Map of Bayulu Community showing streets and houses



To facilitate inclusion of outstation residents, community access points were used. These access points were places where outstation residents would visit when in the main community, such as the health clinic, the council office and the store. Visits to

each outstation for sampling had been ruled out because of their remote and inaccessible locations and the consideration that most outstation people visited the main communities weekly or fortnightly.

Other restrictions placed on interviewers in terms of their selection of respondents were that they were to interview persons over 18 years of age and to obtain a range of age groups.

Interviewers reported that respondents freely gave their time and were not 'looking at their watches' or becoming generally impatient. Refusals to participate and premature termination of the interview were rare with only one or two such actions in both pre-test and post-test surveys across all study communities.

### ***Main Study Interviewers***

For the main study, non-Aboriginal interviewers were recruited to supplement the four member Aboriginal interview team. There were three non-Aboriginal interviewers, two males and one female. The interviewers were selected on the basis that they possessed a substantial history of living and working in Aboriginal communities and that they were known to each of the communities. The non-Aboriginal interviewers usually worked in casual employment or on short-term contract work, often with Aboriginal resource agencies or other organisations. Their availability to conduct this survey was opportunistic.

Non-Aboriginal people completed about half of the interviews at both pre-test and post-test, across all three communities in the main study. Their training program was identical to that described above for Aboriginal interviewers. While they also experienced the problem of interview length, they reported few difficulties in approaching and recruiting potential respondents. Importantly, no significant differences were noted between the Aboriginal and non-Aboriginal interviewers in terms of responses to the questionnaires.

### ***Questionnaire Administration***

The questionnaires were administered via face-to-face interviews lasting approximately 45 minutes each. Face-to-face administration of the survey was favoured over other options such as self-completion and telephone administration. The low level of English literacy in the study population ruled out self-completion and the low telephone ownership of less than 10% did not make telephone surveying a viable option.

Interviewers approached potential respondents at public locations where people tended to congregate such as the community store, the community health centre and shade trees.

To reinforce instructions provided at interviewer training, written instructions were provided at the beginning of each survey booklet.

On approach, interviewers asked potential respondents the following question:

*"I would like to ask you some questions to find out about health needs in this community. This will take approximately a half to three-quarters of an hour. Is that okay with you?"*

Interviewers were instructed to assure respondents that all information gathered in the interview would remain confidential and that individuals would not be identified in the overall results of the survey. If the potential respondent was comfortable at this point, they were read and requested to sign the Personal Consent Form at the front of the survey booklet. This form guaranteed respondents that they did not have to answer questions they did not want to and that they could terminate the interview at any time. To prepare respondents for the format of the questionnaire, before commencing the interview proper, interviewers took each respondent through a hypothetical example of a question that used graphics. For ease of administration, questions were printed in large font on a page presented in landscape format with only two or three questions to a page.

Interviewers were asked to ensure that, prior to interview, respondents were seated as comfortably as possible, with a minimum of distractions. The offer of a 'cool drink' (soft drink) was made to further increase the comfort of respondents. The offer of a small reward to enhance compliance is a universal cultural phenomenon described by Cialdini as 'reciprocity' (Cialdini 1991). The technique was also demonstrated effectively in Australia by Spooner who gained greater rapport in face-to-face interviews with illicit drug users through the offer of a refreshment such as a cup of coffee than through monetary payments (Spooner and Flaherty 1993).

### ***Data analysis and reporting***

The data were analysed using SAS (version 6.01). All data were categorical and described as percentages. Comparisons by gender, age and community were tested via Chi-square statistics or multiple logistic regression. Details of specific analyses are provided within the Results section.

### ***Limitations of the study***

The internal validity of the pre-test and post-test design with non-equivalent comparison groups was vulnerable to the effects of:

- (i) Selection-maturation: the pre-intervention rate of change in study variables may have differed between communities. For example, community strength may have been growing or declining at different rates in the different communities, independent of the intervention.
- (ii) History: events that may have affected the study variables could not assume to have been the same for the three communities. For example, a change in the community leadership in any of the communities could influence community strength, over-riding or enhancing any effect of the intervention. Efforts were made to monitor the individual community factors that may have interacted with the intervention.

- (iii) Interviewers: Interviewers differed somewhat between the communities and between pre-test and post-test. Measurements between communities and/or between pre-test and post-test could have differed as a result of different styles of survey administration. Training of interviewers should have minimised such an effect.

To some extent, the description and comparison of only three communities may be seen as a case study analysis. However, although the small number of communities in the study limits the external validity of the findings, experience suggests that the study findings are likely to be relevant to other remote Aboriginal communities, at least as a basis for comparison.

## **CHAPTER FOUR                      RESULTS**

The results are presented in the following sequence:

Firstly, the pre- and post-test sample demographics are presented for each community. Significant differences between the various samples are noted.

The results are then presented and discussed for each of the major research objectives in turn:

1.     The health indicators of adult males and females in three different remote Aboriginal communities in the Kimberley region are described and compared. The implications of the results for Aboriginal health promotion are noted.
2.     The reach and impact of the media component of the intervention are presented.
3.     The impact of the intervention on community strength and community motivation to act on health issues is discussed.

The potential for using Aboriginal Health Workers in health promotion is then discussed.

### **Study samples**

A total of 361 interviews was obtained: 200 in the pre-test and 161 in the post-test. The sample size for each community at pre-test and post-test is presented in Table 9.

**Table 9: Number of interviews from each community at pre-test and post-test**

Community	Pre-test	Post-test
Mowanjum	73	57
Bayulu	62	50
Beagle Bay	65	54
TOTAL	200	161

These numbers represent approximately two-thirds of adults living in those communities, not including adults living in outstations. Between one in four and one in three respondents were interviewed at pre-test and post-test. Although names were not retained on the questionnaires, the interviewers reported a small number of persons were interviewed at both pre-test and post-test. Hence, the pre-post samples may not be completely independent.

Only the pre-test sample were used for Research Objective 1: Health Indicators. Demographics for all communities for the pre-test samples are shown in Table 10. The demographics for all communities for the post-test sample are shown in Appendix F.

Within the total pre-test sample, 50% were male, 57% were employed, 54% smoked cigarettes and 47% drank alcohol. All age groups, 18 years and over, were represented in the pre-test sample (Table 10).

### **Demographic characteristics of the three communities at pre-test**

There was no significant difference between the three community samples at pre-test by gender ( $\chi^2=1.4$ , DF=2, P=0.5) or age distribution ( $\chi^2=3.4$ , DF=6, P=0.8). However employment status was significantly lower in Beagle Bay ( $\chi^2=5.8$ , DF=2, P=0.05) (Table 10).

Mowanjum contained significantly more respondents who stated that they had been born in the community in which they were interviewed (45%) than did Bayulu (21%) and Beagle Bay (26%); ( $\chi^2=10.4$ , DF=2, P=0.006) (Table 11). Correspondingly, Mowanjum contained significantly less short-term residents (less

than 10 years) relative to the other two communities ( $MH\chi^2=4.6$ ,  $DF=1$ ,  $P=0.03$ ) (Table 11).

**Table 10: Sex, Age and Employment Status at Pre-test**

Community	% Mowanjum (n=73)	% Bayulu (n=62)	% Beagle Bay (n=65)	Total (N=200)
<b>Sex</b>				
Male	48	58	54	53
Female	52	42	46	47
TOTAL	100	100	100	100
<b>Age</b>				
18-25 years	26	21	26	25
26-35 years	26	37	28	30
36-45 years	21	16	14	17
46 years plus	27	24	31	27
No answer	0	2	1	1
TOTAL	100	100	100	100
<b>Employment</b>				
Employed	64	60	45	56
Not Employed	36	40	55	44
TOTAL	100	100	100	100

Most of those respondents who were not born in the community in which they were interviewed, were born in the Kimberley. The other places of birth differed by community such that respondents from Bayulu were more likely to have been born at a station (32%), and respondents from Beagle Bay were more likely to have been born in Derby or Broome (48%). (Table 11).



**Table 11: Birth place and number of years lived in each community at pre-test**

Community	% Mowanjum (n=73)	% Bayulu (n=62)	% Beagle Bay (n=65)	Total (N=200)
<b>Place of Birth</b>				
The community	45	21	26	32
Derby or Broome	11	19	49	25
Station	6	32	2	13
Out bush or in the desert	4	13	0	6
Mission	6	0	0	2
Elsewhere in the Kimberley region	26	8	20	19
Out of the Kimberley region	2	7	3	3
TOTAL	100	100	100	100
<b>Number of years lived in community</b>				
1-10	10	40	32	26
11-20	26	31	20	26
21-30	30	19	21	24
31 plus	26	7	25	20
No answer	8	3	2	4
TOTAL	100	100	100	100

## Comments

### *Birthplace*

Community differences in terms of birthplace may be attributed in part to how this question was interpreted at face value by respondents, particularly those from Bayulu.

This item was in two parts. Part A asked the question, "Were you born in this place?" If the answer was No, then Part B was invoked and the respondent was asked, "If you were not born here, where were you born?" to which an open-ended response was recorded by the interviewer. As Table 10 shows, the range of birthplaces included mission, station and bush/desert, along with nearby community and town locations.

Contrary to what might have been expected in Bayulu, with a 'stable' history relative to the other two study communities, few respondents from this community

replied affirmatively to this question, either at pre-test or post-test. However, after answering "No" to the first question, a large percentage (32%) of Bayulu respondents in the pre-test sample then stated for Part B that they were born at a station (50% of the post-test sample).

The reason for this may be straightforward, if not immediately obvious. Bayulu is only a few kilometres from Go Go cattle station. Gooniyandi people from the area surrounding Go Go station began to be involved in station work shortly after the cattle station was established, early in the twentieth century. As was the usual pattern in outback Australia, Aboriginal workers and their families who worked on cattle stations, set up camp at a site near to the station homestead. As well as the local Gooniyandi people, Walmatjari and Wangkatjunga people who had been moving up to the country around Bayulu for some time prior to white settlement from the desert areas to the south also joined the camp at Go Go station. In the mid-1970's, with Commonwealth funds enabling Aboriginal communities like Bayulu to set up housing infrastructure, the former 'camp' was moved several kilometres away from the cattle station to the site of the present Bayulu community.

The importance of this time sequence for this the survey item is that if Bayulu respondents took the question, "Were you born in this place?" literally, at the time of the main study in 1991 no adult respondent (18 years or older) could have accurately answered "Yes". The correct birthplace would have been the cattle station camp several kilometres away.

This interpretation of the low result on this item is given further credibility by comparing the three communities according to years lived in each community (Table 11). Fifty-six percent and 46 % of Mowanjum and Beagle Bay respondents respectively responded as reported having lived more than 20 years in the community. However 26% of Bayulu respondents stated that they had lived more than twenty years in their community, suggesting that some respondents assumed the former 'camp' on Go Go station would also count as 'this place'. Others may simply have over-estimated the time period that the present community had been in existence.

Therefore, if a large proportion of the 32% of Bayulu respondents who stated that they were born at a station were added to the 21% who answered that they were born in the community, the total number of respondents born in their community in Bayulu would approach the number who did so in Mowanjum (45%). This would reduce the difference between Bayulu and Mowanjum on this item and sharpen the contrast between both communities and Beagle Bay, where only 26% of respondents replied that they were born in their community.

In Beagle Bay nearly one half of respondents replied that they were born in Broome or Derby. This reflects the closer connection between Beagle Bay residents and the major towns of the region relative to the other two communities. However the difference may be related also to the history of Beagle Bay as a mission focal point for receiving Aborigines from a range of locations inside and outside of the Kimberley.

### *Employment*

The National Aboriginal and Torres Strait Islander Survey conducted by the Australian Bureau of Statistics found an overall employment rate of 63% among ATSI West Australians aged 15 years and over (Australian Bureau of Statistics 1996). This figure is similar to the overall rate of 56% of the KAHPP sample at pre-test, with the lower rate in the Kimberley probably due to the greater lack of employment opportunities in remote areas.

A relatively higher number of respondents in the pre-test sample were employed at Mowanjum (64%) and Bayulu (60%) compared with Beagle Bay (46%). The lower employment rate for Beagle Bay could have been due to seasonal fluctuations, where much work often ceases for up to three months during the wet season and resumes shortly after. The pre-test in Mowanjum and Bayulu was conducted in late February/early March 1991, immediately following the wet season - a time when better weather allows a range of work to resume. However for Beagle Bay, the pre-test had to be postponed until July due to the late withdrawal from the study of several interviewers.

Kolig observed that seasonal fluctuations have always been a factor in employment in the Kimberley for both Aboriginal and non-Aboriginal people (Kolig 1981). At the time of the post-test, which was conducted in all three communities in late November/early December 1991, most seasonal work was winding down with the approach of the next wet season. In the post-test sample, employment did not significantly differ and was approximately 40% in all three communities.

**Research Objective 1**      **Describe and compare the health indicators of adult males and females in three different remote Aboriginal communities in the Kimberley region and consider the implications of the results for Aboriginal health promotion: results of the cross-sectional survey of three communities**

**Research Question 1.1:**      **Do environmental health factors differ with the type of community?**

**Household Size:**      *How many people are living in your house at the moment?*

Over half of the respondents had six or more persons living in their house. There was no significant difference between the three communities in the number of persons per household ( $\chi^2=7.5$ , DF=6, P=0.3). Few respondents had only one or two persons in their household. (Table 12).

**Table 12: Number of people living in respondents' homes**

	%	%	%	Total
Number of people in house	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	(N=200)
1-2	12	11	11	11
3-5	34	37	25	32
6-8	29	42	40	37
9 or more	22	10	24	19
No answer	3	0	0	1
Total	100	100	100	100

**Dog Prevalence:*****How many dogs do you have?***

Just over half of the total sample had at least one dog (56%), nearly one third (29%) had two or more dogs (Table 13). The number of dogs owned differed significantly by community with dog ownership highest in Mowanjum and lowest in Beagle Bay ( $\chi^2=15.4$ , DF=6, P=0.02).

**Table 13: Number of dogs owned, by community**

	%	%	%	Total
Number of dogs	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	(N=200)
0	37	44	51	44
1	33	19	28	27
2	4	16	14	11
3 or more	26	21	7	18
Total	100	100	100	100

**Hygiene/Sanitation:*****Do you have a toilet in your house? and Does your toilet flush OK or is it blocked?***

Nearly all respondents in all communities (99%) had a toilet in their house, and nearly all toilets were in working order (97%) (Table 14).

***Are there any leaking taps or drains outside your house?***

Around one quarter (27%) of respondents had a leaking tap or drain outside their house. This did not significantly differ by community ( $\chi^2=5.1$ ,  $DF=2$ ,  $P=0.08$ ).

**Table 14: Hygiene/Sanitation Factors, by community**

	%	%	%	Total
Hygiene/Sanitation Factors	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	(N=200)
<b>Have Toilet</b>				
Yes	99	97	99	98
No	1	3	1	2
Total	100	100	100	100
<b>Toilet Works</b>				
Yes	96	95	98	96
No, toilet blocked	4	3	2	3
Don't know	0	2	0	1
Total	100	100	100	100
<b>Leaking Taps</b>				
Yes	22	37	22	27
No	78	63	79	73
Total	100	100	101	100

**Household White Goods:**

***Is there a washing machine/refrigerator in your house that works?***

A substantial minority of the total sample did not have a washing machine that worked in the house (39%). This differed significantly by community ( $\chi^2=24.8$ ,  $DF=2$ ,  $P<0.001$ ). Respondents from Beagle Bay were more likely to have a working washing machine (86%) than respondents from Mowanjum (51%) and Bayulu (48%) (Table 15).

A substantial minority of the total sample did not have a refrigerator in the house that worked (30%). As was the case with washing machines, respondents in Beagle Bay were significantly more likely to have a refrigerator (100%) than respondents from Mowanjum (55%) and Bayulu (56%) ( $\chi^2=41.3$ ,  $DF=2$ ,  $P<0.001$ ) (Table 15).

**Table 15: White Goods Ownership, by community**

	%	%	%	Total
White Goods	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	(N=200)
<b>Have Working Washing Machine</b>				
Yes	51	48	86	61
No	49	52	14	39
Total	100	100	100	100
<b>Have Working Refrigerator</b>				
Yes	55	56	100	70
No	45	44	0	30
Total	100	100	100	100

**External Waste:*****How much rubbish is lying around your community?***

Most of the sample reported that there was a 'little bit' (40%) or 'some' (19%) rubbish lying around their community. Few reported 'lots of rubbish' (9%) (Table 16). The reported amount of rubbish differed significantly by community ( $\chi^2=33.3$ ,  $DF=8$ ,  $P<0.001$ ). Bayulu respondents were less likely to report any rubbish but more likely to report a fair bit or lots of rubbish than the other communities (Table 16).

**Table 16: Reported amount of rubbish lying around each community, by community**

Amount of rubbish	%	%	%	%
	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	Total (N=200)
None	12	29	8	16
Little bit	46	19	52	40
Some	22	13	20	18
Fair bit	16	27	8	17
Lots	3	11	12	9
Total	100	100	100	100

## Comment on Environmental Health Factors

Differences between communities in environmental health factors were consistent with external indicators and other influences that might have affected these factors in each of the communities. These differences are summarised in Table 17.

**Table 17: Summary of community differences in environmental health factors**

Ratings	Community differences*
Household Size	None
Dog Prevalence	Mowanjum > Bayulu > Beagle Bay
Hygiene/Sanitation	None
Household White Goods	Beagle Bay > (Mowanjum = Bayulu)
External Waste	Bayulu > (Mowanjum = Beagle Bay)

\* Community differences are summarised by presenting the order of ratings of environmental health factors. For example, *Bayulu > (Mowanjum = Beagle Bay)* denotes that the ratings for environmental health factors made by respondents from Mowanjum and Beagle Bay were similar and that both were lower than those of respondents from Bayulu.

No differences were found between communities in terms of household size or hygiene/sanitation factors. However of the total sample, over half of the households had in excess of five people living in their house. These households would be defined as 'overcrowded' according to the standards of the Health Infrastructure Priority Projects (HIPP) Program of the Aboriginal and Torres Strait Islander Commission (Aboriginal and Torres Strait Islander Commission 1995). One in five had nine or more people and would have been defined as 'severely overcrowded' according to the same standards.

Just over half of the total sample owned a dog and one third had two or more dogs. Despite the popular perception that Aboriginal people own a lot of dogs, this figure is slightly more than the level of dog ownership among the general population. A recent survey found that 46% of Australian households own one dog and 20% own two or more dogs (McHarg et al. 1995).



The lower dog prevalence at Beagle Bay relative to Mowanjum and Bayulu may have been due to two factors. Firstly, at the time of the study, Beagle Bay had a resident Environmental Health Worker while the other two communities did not. Secondly the Environmental Health Worker was actively involved with researchers from Murdoch University Veterinary School in a research project, the Kimberley Dog Program, for which Beagle Bay was one of the intervention communities in 1990/91. The project aimed at decreasing the number of zoonotic diseases in dogs in Aboriginal communities through administering drugs to control parasites and fertility in dog populations (Wilks, Williamson and Robertson 1993).

The 100% refrigerator ownership in Beagle Bay was what one might expect in non-Aboriginal Australia while the approximately 50% in the other two communities is consistent with data reported by Sullivan and Gracey from other Kimberley communities (Gracey and Sullivan 1990). The difference may have been due to a greater level of contact by Beagle Bay residents with nearby major towns, leading to a higher identification with urban lifestyles and a more ready acceptance of consumer goods.

Respondents' perceptions of external waste in terms of the amount of rubbish around their communities were not consistent with project personnel and interviewer observations. Beagle Bay was demonstrably the 'neatest' and 'tidiest' of the three communities, yet Mowanjum's ratings were similar to those of respondents from Beagle Bay.

One indicator of this 'neatness' was that Beagle Bay was the only community to have well-maintained fences between houses. In 1990/91 Beagle Bay was participating in a Landscape Improvement Project as a Community Development Employment Project with landscape architects from the Royal Melbourne Institute of Technology (Sinatra and Murphy 1992). Participation in this project may have raised the standards of Beagle Bay residents with regard to their physical environment. Therefore the expectations of Beagle Bay respondents in terms of community waste could have been higher. Hence, while visibly cleaner, Beagle Bay's ratings on perceived waste were similar to those of Mowanjum.

Despite the best efforts of an enthusiastic CDEP program, Bayulu reported significantly higher waste than the other two communities. The lack of sealed roads and associated dust problems, as in many other remote Aboriginal communities, was visibly obvious in Bayulu. This was one of the environmental issues that the landscape improvement plan in Beagle Bay had been successful in addressing.

As noted by Reid and Trompf, overcrowding, combined with other poor environmental conditions, such as dust and the high dog population, predisposes these and other remote Aboriginal people in similar conditions to a range of communicable diseases (Reid and Trompf 1992). Torzillo et al. have observed that a major issue is not just the lack of health hardware, including adequate housing, clean water, drainage and waste disposal in Aboriginal communities, but the poor or non-existent maintenance of what health hardware does exist (Torzillo, Rainow and Pholeros 1993). This lack of maintenance serves to compound the contribution of poor environmental conditions to ill-health. The potential for this to occur is evidenced in this study by the one in four respondents who reported leaking taps or drains around their houses.

### **Research Question 1.2: Perceptions of health and happiness**

Respondents were asked to rate most men in the community, most women in the community, most young people in the community and themselves on health and happiness.

All of the items assessing perceptions of health and happiness used a five point rating scale. Health categories were: 1) *Weak & sick in body*, 2) *A bit sick*, 3) *Just okay - not good but not sick*, 4) *Fair bit healthy*, 5) *Healthy and strong in body*

Happiness categories were: 1) *Sad in mind*, 2) *A bit sad*, 3) *Just okay - not happy but not sad*, 4) *A fair bit happy*, 5) *Happy in mind*

The results appear in Tables 18 and 19 respectively, for health and happiness. For all ratings, very few respondents ( $N < 5$ ) chose either of the first two categories for either health or happiness. Hence, the first two or the first three categories were combined for Chi-square tests. The results of the univariate Chi-square analyses (presented below) were confirmed by multiple logistic regression. All results were equivalent, except the test of age on the perception of the happiness of women in the community. This discrepancy is discussed below.

### **Perceived health - Men**

Overall, most respondents felt that most men in their community were at least fairly healthy (Table 18). However, these perceptions differed significantly by community ( $\chi^2=34.8$ ,  $DF=6$ ,  $P<0.001$ ), with Mowanjum respondents rating their men less healthy than respondents from the other two communities (Table 18). The ratings of health of men in the community did not significantly differ with gender ( $MH\chi^2=0.3$ ,  $DF=1$ ,  $P=0.6$ ) or age ( $\chi^2=6.6$ ,  $DF=9$ ,  $P=0.7$ ).

The main reasons for rating men's health positively were that the men were busy working (42%), hunting and fishing (31%), physically active (28%), looking after themselves (26%) and eating good food or bush tucker (18%). The main reasons for rating men's health negatively were that the men had grog problems (31%) and did not eat good food (11%).

**Table 18: Perceived health of men, women, young people and self, by community**

Perceived health by community	% Mowanjum (n=73)	% Bayulu (n=62)	% Beagle Bay (n=65)	% Total (N=200)
Perceived health of men				
Weak & sick	1	2	1	1
Bit sick	18	8	3	10
Okay	48	34	28	37
Fair bit healthy	22	22	54	33
Healthy & strong	11	34	14	19
TOTAL	100	100	100	100
Perceived health of women				
Weak & sick	1	2	2	2
Bit sick	7	5	6	6
Okay	43	17	28	30
Fair bit healthy	38	34	38	37
Healthy & strong	11	42	26	25
TOTAL	100	101	100	100
Perceived health of young people				
Weak & sick	0	0	2	1
Bit sick	0	5	2	2
Okay	15	19	12	16
Fair bit healthy	29	23	27	26
Healthy & strong	56	53	57	55
TOTAL	100	100	100	100
Perceived personal health				
Weak	0	0	2	0
Bit sick	1	0	10	4
Okay	29	21	36	29
Fair bit healthy	42	27	25	32
Healthy & strong	28	52	27	35
TOTAL	100	100	100	100

### Perceived Health - Women

Overall, most respondents felt that most women in their community were at least fairly healthy (Table 18). This differed significantly by community ( $\chi^2=20.0$ ,  $DF=6$ ,  $P=0.003$ ). Respondents from Bayulu were more likely to rate women as healthy than respondents from Beagle Bay who in turn were more likely to rate women as healthy than respondents from Mowanjum (Table 18). Perceptions of

health of women in the community did not significantly differ with gender ( $MH\chi^2=0.3$ ,  $DF=1$ ,  $P=0.6$ ) or age ( $\chi^2=7.2$ ,  $DF=6$ ,  $P=0.3$ ).

The main reasons for rating women's health positively were that the women were looking after themselves (42%), busy working (37%), hunting and fishing (34%), physically active (32%) and ate good food and bush tucker (13%). The main reason given for rating women's health negatively was grog problems (17%).

### **Perceived Health - Young People**

Young people were rated far healthier than were men or women. More than half (56%) of the respondents rated young people as *healthy and strong in body* and a quarter (27%) rated them as *a fair bit healthy* (Table 18). The perception of the health of young people in the community did not differ significantly by community ( $\chi^2=2.5$ ,  $DF=4$ ,  $P=0.6$ ), gender ( $MH\chi^2=2.0$ ,  $DF=1$ ,  $P=0.2$ ), or age ( $\chi^2=7.2$ ,  $DF=6$ ,  $P=0.3$ ).

The main reasons given for rating the health of young people positively were that they were happy playing sport (57%), had enough good food (54%), no grog problems (19%) and that they got good exercise (18%). The main reasons for rating the health of young people negatively were grog problems (9%) and that they do not eat good food (6%).

### Perceived Health - Self

When asked about their own health, most respondents rated themselves as healthy, with just over two-thirds (67%) rating themselves as *a fair bit healthy* or *healthy and strong*, and very few rating themselves as *weak* or *a bit sick* (4%) (Table 19). Personal ratings of health did differ significantly between communities ( $\chi^2=17.4$ ,  $DF=4$ ,  $P=0.002$ ). Residents from Beagle Bay tended to rate themselves least healthy while residents from Bayulu tended to rate themselves most healthy (Table 18). While the mean rating of women's health was slightly higher than men's health in all three communities, personal ratings of health did not significantly differ with gender ( $MH\chi^2=2.0$ ,  $DF=1$ ,  $P=0.2$ ) or with age ( $\chi^2=4.2$ ,  $DF=6$ ,  $P=0.6$ ).

### Perceived happiness - Men

Overall, men were generally regarded as 'happy', although this perception differed significantly by community ( $\chi^2=28.5$ ,  $DF=6$ ,  $P<0.001$ ). Respondents from Mowanjum tended to rate their men as less happy than respondents from the other two communities (Table 19). The perception of happiness of men in the community did not significantly differ with gender ( $MH\chi^2=1.0$ ,  $DF=1$ ,  $P=0.3$ ) or age ( $\chi^2=16.0$ ,  $DF=9$ ,  $P=0.07$ ).

**Table 19: Perceived happiness of men, women, young people and self, by community**

	%	%	%	%
Perceived happiness By community	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	Total (N=200)
Perceived happiness of men				
Sad	1	3	1	2
Bit sad	18	8	5	11
Okay	33	18	17	23
Fair bit happy	38	26	35	34
Happy	10	45	42	31
TOTAL	100	100	100	100
Perceived happiness of women				
Sad	1	0	2	1
Bit sad	5	8	2	6
Okay	40	16	14	24
Fair bit happy	40	30	45	38
Happy	14	46	37	31
TOTAL	100	100	100	100
Perceived happiness of young people				
Sad	1	0	1	1
Bit sad	0	3	0	1
Okay	10	13	3	9
Fair bit happy	25	29	22	25
Happy	64	55	74	64
TOTAL	100	100	100	100
Perceived personal happiness				
Sad	0	0	2	0
Bit sad	1	0	3	2
Okay	28	11	5	16
Fair bit happy	25	27	45	32
Happy	46	61	45	50
TOTAL	100	100	100	100

The main reasons given for rating men as happy were that they were busy working (41%), that one could see it on their faces (21%), that they laugh and have fun (19%), that they get good exercise such as sport and fishing (15%) and that they have no grog problems (12%). The main reasons given for rating men as sad were grog problems (19%) and family troubles (15%).

## Perceived Happiness – Women

As for the men, women overall were generally regarded as happy. However, as for the men, respondents from Mowanjum tended to rate their women significantly less happy than respondents from the other two communities ( $\chi^2=24.9$ ,  $DF=4$ ,  $P<0.001$ ) (Table 19).

The main reasons given for rating women as happy were that they were busy working (35%), that “...you one could see it on their faces” (21%), that they had no grog problems (16%), that they had good exercise such as sport and fishing (14%) and that they laugh and are happy (14%). The main reasons given for rating women as sad were family troubles (15%) and grog problems (12%).

While the perception of the happiness of women in the community did not differ significantly with gender ( $MH\chi^2=1.2$ ,  $DF=1$ ,  $P=0.3$ ) it did differ significantly with age ( $\chi^2=16.4$ ,  $DF=6$ ,  $P=0.01$ ) (Table 20). The effect of age was not clear-cut. It appears that younger women were less likely to rate women as *happy* and more likely to rate women as *fair bit happy* than older women (Table 20).

**Table 20: Perceived happiness of women, by age group (missing=4)**

Perceived happiness of women	% 18-25 (n=49)	% 26-35 (n=60)	% 36-45 (n=33)	% 46+ (n=54)	% Total (N=196)
Sad	0	3	0	0	1
Bit sad	4	8	3	4	6
Just okay	20	27	36	17	24
Fair bit happy	55	33	18	41	38
Happy	20	28	42	39	31
TOTAL	99*	99*	99*	101*	100

\* Totals not equal to 100 due to rounding.



### **Perceived Happiness - Young People**

As was the case with the ratings of health, young people were rated as happier than men and women. The vast majority of respondents rated young people as either *happy in mind* (65%) or *a fair bit happy* (25%) (Table 19). The perception of the happiness of young people in the community did not differ significantly by community ( $\chi^2=6.5$ , DF=4,  $P=0.2$ ), gender ( $MH\chi^2=2.3$ , DF=1,  $P=0.1$ ), or age ( $\chi^2=16.0$ , DF=9,  $P=0.07$ ). The main reasons given for rating young people as happy were that they were playing (61%), had nothing to worry about (55%) were busy working (17%), they got exercise such as fishing and swimming (12%) and they had friends (11%) and family (8%).

### **Perceived Happiness - Self**

Most respondents rated themselves as happy (Table 19). Personal ratings of happiness did significantly differ between the communities ( $\chi^2=17.2$ , DF=4,  $P<0.002$ ). Relative to respondents from Beagle Bay, respondents from Mowanjum were less likely to rate themselves as happy while respondents from Bayulu were more likely to rate themselves as happy (Table 19). These results are consistent with the low ratings of perceptions of happiness of men and women by Mowanjum respondents. Personal ratings of happiness did not differ significantly with gender ( $MH\chi^2=2.2$ , DF=1,  $P=0.1$ ) nor age ( $\chi^2=7.5$ , DF=6,  $P=0.3$ ).

### **Comment on perceptions of health and happiness**

Overall, few respondents rated the men, women or young people in their community as unhealthy or sad and few rated themselves as unhealthy or sad. Respondents rated young people as having high levels of health and happiness. The most frequent reason given for young people's health and happiness was playing sport. Women were rated next in terms of levels of health and happiness, ahead of men who were rated lowest of all.

Being busy at work and active in leisure were the principal reasons for men and women being healthy. Problems with alcohol was the most frequent reason given for poor health in both men and women, and along with family problems was also the most frequent reason given for sadness among men and women. Overall, gender and age did not affect these ratings.

With regard to community differences, higher ratings for health and happiness tended to come from Bayulu respondents, closely followed by Beagle Bay (Table 21). Conversely, respondents from Mowanjum tended to rate their community as less healthy and less happy than the respondents from the other communities. The reasons why Bayulu respondents should consistently have rated their community's health and happiness higher than the other two communities and Mowanjum respondents lower than the other two communities is unclear. It may be that historical factors have played some part in influencing community and personal perceptions of health in these communities (Hunter 1993).

**Table 21: Summary of community differences in perceptions of health and happiness**

Ratings	Community differences**
Men's health	(Bayulu = Beagle Bay) > Mowanjum
Women's health	Bayulu > Beagle Bay > Mowanjum
Health of young people	None
Personal health	Bayulu > Mowanjum > Beagle Bay
Men's happiness	(Bayulu = Beagle Bay) > Mowanjum
Women's happiness	(Bayulu = Beagle Bay) > Mowanjum
Happiness of young people	None
Personal happiness	Bayulu > Beagle Bay > Mowanjum

\* Scores could range from 1 (sick/sad) to 5 (healthy/happy)

\*\* Community differences are summarised by presenting the hierarchy of ratings of health and happiness. For example, (Bayulu = Beagle Bay) > Mowanjum denotes that the ratings for happiness made by respondents from Bayulu and Beagle Bay were similar and that both were higher than those made by respondents from Mowanjum.

The self-perceived health ratings of the total KAHPP sample can be compared with the ratings of the general Western Australian population, as obtained by the National Health Survey (Australian Bureau of Statistics 1996). The National Health Survey required respondents to rate their health according to four categories: 'excellent', 'good', 'fair' and 'poor'. For the purposes of comparison these have been matched with the KAHPP categories of 'healthy and strong in body', 'fair bit healthy', 'just okay - not good but not sick' and the combined categories of 'a bit sick' and 'weak and sick in body', respectively.

The National Health Survey responses for self-perceived general health are further broken down by socio-economic level, as defined by educational qualifications. The self-perceived health ratings in the KAHPP sample are compared with the highest category of the National Health Survey (bachelor or higher degree) and the lowest category (no post-school qualifications) in Table 22.

**Table 22: Self-Perceived Health of KAHPP respondents  
compared with National Health Survey (WA Sample)**

Perceived Health	% Degree	% No Quals	% KAHPP
Excellent	49	26	35
Good	44	54	32
Fair	6	16	29
Poor	1	4	4
TOTAL	100	100	100

One half of the degree-qualified West Australians in the National Health Survey perceived their health as excellent (49%). This was almost twice the number of those with no post-school qualifications who held the same perception (26%). At the other end of the scale, nearly one in five of the West Australians with no post-school qualifications perceived their health as fair or poor (20%). This was almost three times the number of those who were degree qualified who held this perception of their health (7%).

More of the total KAHPP sample perceived their health to be excellent than did West Australians with no post school qualifications (35%). However it was at the other end of the scale that the KAHPP respondents were most different to the general West Australian population in self-perceived health. One in three of KAHPP respondents perceived their health as fair or poor. This was nearly five times higher than the degree-qualified West Australians and one and a half times more than the West Australians with no post-school qualifications.

This comparison of the KAHPP ratings with those of the National Health Survey suggests that not only do Aboriginal people experience poorer health than non-Aboriginal people, as evidenced by epidemiological data, they also perceive their health to be poorer.

### **Research Question 1.3:      Perceptions of the effect of chronic disease risk factors on health**

Major causes of excess mortality and morbidity among Aboriginal people in the Kimberley include heart disease, stroke and diabetes (Office of Aboriginal Health and Health Information Centre 1996). Some of the main risk factors for these chronic diseases in Aboriginal people include hypertension and obesity (McGrath et al. 1991). Behaviours that contribute to the development of risk factors include excess alcohol consumption, and adopting and maintaining diets high in fat and low in fibre.

Respondents were asked how much several of these major risk behaviours: drinking too much alcohol, eating too much fatty food and eating too much sugar, contributed to the particular health problems - high blood pressure, heart 'troubles' and diabetes respectively. Respondents used a five-point scale, ranging from 1 (Not at all) to 5 (Lots). Their responses are shown in Table 23. The effects of age and community on responses to these questions were tested via Chi-square test of association. The effect of gender was tested using the Mantel-Haenszel Chi-square test of trend.

For each question, very few respondents ( $n < 5$ ) chose either of the first two categories (numbers 1 and 2). Hence the first two categories or the first three categories were combined for Chi-square tests. The Chi-square tests were able to detect differences in at least three levels of perceived strength of effect of risk factors on health.

Respondents who stated that they did not know whether or not there was an association between the risk factor and the health problem were combined with respondents who stated that the risk factor did not contribute at all to the health problem (response category 1) for the statistical analyses.

### **Alcohol and Hypertension**

Sixty percent of respondents overall stated that drinking too much grog contributes *lots* or *a fair bit* to high blood pressure (Table 23). Responses did not vary with age ( $\chi^2 = 11.7$ ,  $DF = 12$ ,  $P = 0.5$ ) or gender ( $MH^2 = 2.1$ ,  $DF = 1$ ,  $P = 0.1$ ), but did vary between communities ( $\chi^2 = 26.2$ ,  $DF = 8$ ,  $P = 0.001$ ). The relationship between grog and blood pressure was perceived as being strongest by respondents from Mowanjum and is consistent with this community identifying alcohol (and associated problems) as a health promotion priority. Respondents from Beagle Bay were least aware of the effect of grog on blood pressure (Table 23).

**Table 23: Perceived effect of chronic disease risk factors, by community**

Perceived effect of grog on blood pressure	% Mowanjum (n=73)	% Bayulu (n=62)	% Beagle Bay (n=65)	% Total (N=200)
None or 'Don't know'	3	10	29	13
A little bit	7	14	11	11
Some	18	16	14	16
A fair bit	20	18	18	19
Lots	52	42	28	41
TOTAL	100	100	100	100
Perceived effect of fatty food on heart troubles				
None or 'Don't know'	4	8	15	9
A little bit	7	18	9	11
Some	18	15	17	17
A fair bit	16	19	23	19
Lots	55	40	36	44
TOTAL	100	100	100	100
Perceived effect of sugar on diabetes				
None or Don't Know	1	5	10	5
A little bit	1	11	2	5
Some	14	3	18	12
A fair bit	11	13	22	15
Lots	73	68	48	63
TOTAL	100	100	100	100

### Diet and Heart Disease

Two thirds of the total sample (64%) stated that eating too much fatty food contributed *lots* (44%) or *a fair bit* (20%) to heart 'troubles' (Table 24). About one quarter of the sample felt that eating fatty foods contributed only a little bit (11%) or *some* (17%) to heart troubles. Responses did not vary by age ( $\chi^2=13.9$ , DF=12,  $P=0.3$ ), gender ( $MH^2=0.9$ , DF=1,  $P=0.3$ ) or community ( $\chi^2=13.1$ , DF=8,  $P=0.1$ ), although again the Mowanjum respondents perceived a higher level of association.

## Sugar and Diabetes

Three quarters of the total sample (78%) stated that eating too much sugar contributed *lots* (63%) or *a fair bit* (15%) to diabetes (Table 23). Only 1% of respondents thought that eating too much sugar did not cause diabetes and 5% did not know whether or not sugar was associated with diabetes.

Responses did not vary by age ( $\chi^2=10.7$ , DF=6, P=0.1) or gender (MH<sup>2</sup>=0.9, DF=1, P=0.3) but did vary between communities ( $\chi^2=19.5$ , DF=6, P=0.003). The relationship between sugar and diabetes was perceived as being strongest by respondents from Mowanjum, with respondents from Beagle Bay being least aware of the effect of sugar on diabetes (Table 23).

## Comment

The majority of the respondents perceived that alcohol, fatty foods and sugar significantly contributed to the respective health problems: high blood pressure, heart disease and diabetes. These perceptions did not significantly differ by age nor gender.

The association of sugar and diabetes was far stronger overall than that of alcohol and blood pressure and fatty food and heart problems: 63% of the total sample saying *lots* versus 41% and 44 % respectively. Interestingly in each case, more respondents nominated the *lots* category rather than the *fair bit* or *some* categories. This means that for those for whom there is an association, the association is a strong one.

Community differences are summarised in Table 24. There were no significant differences between communities for perceptions of associations between fatty food and heart troubles. However there was a significant difference between the Beagle Bay community and the Mowanjum and Bayulu communities: the Beagle Bay community in each case had far lower proportions associating grog and sugar with blood pressure and diabetes respectively.

**Table 24: Summary of community differences in perceptions of chronic disease risk factors**

Risk behaviour & risk factor	Community differences <sup>#</sup>
Grog and blood pressure	Mowanjum > Bayulu >> Beagle Bay*
Fatty food and heart troubles	Mowanjum > Bayulu >> Beagle Bay
Sugar and diabetes	Mowanjum > Bayulu >> Beagle Bay*
#	Score could range from 1 (not at all or don't know) to 5 (lots)
*	Significant at P<0.05 level

Overall, respondents from Mowanjum were most likely, and respondents from Beagle Bay were least likely, to perceive that the risk behaviours had *lots* or a *fair bit* of an effect on these three health problems.

As noted in the Method chapter, the Mowanjum community had been the site for a diabetes research and community education project conducted by a university-based researcher with local project personnel over a long period. This project had not only involved screening community members but had included a number of community-based interventions (O'Dea 1997). The other two communities had not had any such long term or specifically focused health interventions at the time of this study. The diabetes project may have been a factor in the high perception of the contribution of sugar to diabetes among Mowanjum respondents, relative to those from the other two communities.

The fact that a number of risk factors contribute to diabetes, including high fat diets and excess alcohol consumption, and that these risk factors (along with sugar) also have been emphasised during the course of the diabetes project, may have accounted for Mowanjum respondents' perceptions of the effect of these risk behaviours on chronic disease risk factors consistently rating higher than the other two communities.



## Hygiene and Sickness

Respondents were asked: *Does bad hygiene, like not washing hands after going to the toilet, before handling food, cause sickness in your family?* The results are presented in Table 25.

**Table 25: Perception of association between hygiene and sickness, by community**

	%	%	%	%
	Mowanjum	Bayulu	Beagle Bay	Total
Cause sickness?	(n=73)	(n=62)	(n=65)	(N=200)
Yes	92	66	62	74
No	3	29	26	19
Don't know	5	5	12	7
Total	100	100	100	100

To test for the effects of age, gender and community, multiple logistic regression was used. The model included age, gender and two dummy variables for community. Age and gender were removed by backward elimination if not significant. The perception that bad hygiene causes sickness in their family did not differ significantly with age ( $W\chi^2=0.7$ ,  $DF=1$ ,  $P=0.4$ ), but did vary significantly with gender ( $W\chi^2=5.0$ ,  $DF=1$ ,  $P=0.03$ ) and community ( $\chi^2=24.2$ ,  $DF=2$ ,  $P<0.0001$ ).

Males (86%) were more likely than females (74%) to identify that bad hygiene causes sickness in their family, and Mowanjum respondents (97%) were more likely than Beagle Bay (70%) and Bayulu (69%) respondents to identify that bad hygiene causes sickness in their family.

## Comment

Mowanjum respondents' strong association between hygiene and sickness relative to the two other communities may have been due to an active community health program in this community.

That males were more likely than females to identify that bad hygiene causes sickness in their family may appear to be an anomaly. Other data in this study suggest that females practised personal hygiene in the form of showering and hand washing more than males. It may be that some females did not consider that sickness is likely to be spread by poor hygiene in their families because of their own good hygiene practices (i.e., they interpreted the question literally).

## Research Question 1.4: Health behaviours

Respondents were asked whether they smoked; drank alcohol (and if so, how much); on how many days in the last week they had eaten bush tucker; whether they ever went hungry for a day; and how many times in the week they had a shower.

Three of the questions relating to health behaviours had categorical responses of an ordinal nature. The effects of age, gender and community were tested using a series of univariate Chi-square tests. Three questions had dichotomous (yes/no) answers. These were analysed using logistic regression.

## Smoking

Overall, 54% of the sample smoked. Smoking was significantly associated with community ( $\chi^2=12.0$ ,  $DF=2$ ,  $P=0.003$ ) (Table 26), gender (MH  $\chi^2=8.5$ ,  $DF=1$ ,  $P=0.004$ ) and age (MH  $\chi^2=8.5$ ,  $DF=1$ ,  $P=0.004$ ).

**Table 26: Prevalence of smoking, by community**

	%	%	%	%
Do you smoke?	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	Total (N=200)
Yes	52	39	69	54
No	48	61	31	46
TOTAL	100	100	100	100

The prevalence of smoking was highest in Beagle Bay (69%), intermediate in Mowanjum (52%) and lowest in Bayulu (39%). Males (63%) were more likely to report that they smoked than females (43%). The prevalence of smoking increased with age from the 18 to 25 year age group to the 26 to 35 year age group, then was lower amongst those aged 36 years and older (Table 27).

**Table 27: Prevalence of smoking, by age group (missing=2)**

Age group:	18-25 (n=49)	26-35 (n=60)	36-45 (n=34)	46+ (n=55)	<i>Total</i> (N=198)
Percent who smoke:	57	68	44	40	54

### **Alcohol Consumption**

The prevalence of persons who drank alcohol did not differ significantly by community ( $\chi^2=3.4$ , DF=2,  $P=0.2$ ) (Table 28), but did differ significantly with gender (MH  $\chi^2=19.6$ , DF=1,  $P<0.001$ ) and age (MH  $\chi^2=4.3$ , DF=1,  $P=0.04$ ) (Table 28). As was the case with smoking, females (31%) were less likely than males (62%) to be drinkers and the prevalence of drinking peaked among the 26 to 35 year age group, then declined after the age of 35 (Table 29).

**Table 28: Self reported alcohol consumption, by community**

	%	%	%	%
Amount consumed	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	Total (n=200)
Not at all	57	56	43	52
Little bit	8	7	20	12
Some	19	8	25	17
Fair bit	10	18	9	12
Lots	6	11	3	7
TOTAL	100	100	100	100

**Table 29: Prevalence of drinking alcohol, by age group (missing=2)**

Age group:	18-25 (n=49)	26-35 (n=60)	36-45 (n=34)	46+ (n=36)	Total (N=198)
Percent who drink:	49	63	35	36	47

Drinkers were then examined separately to determine whether the amount of alcohol consumed by drinkers differed significantly by gender, age or community. The amount of alcohol consumed by drinkers was not associated with gender (MH  $\chi^2=2.0$ , DF=1, P=0.2) or age (MH  $\chi^2=0.5$ , DF=1, P=0.5), but did vary across communities ( $\chi^2=15.2$ , DF=6, P=0.02). Drinkers from Bayulu were most likely to say that they drank *a fair bit* or *a lot* (Table 30).

**Table 30: Self reported amount of alcohol consumed by drinkers, by community**

	%	%	%	%
Amount consumed	Mowanjum (n=31)	Bayulu (n=27)	Beagle Bay (n=37)	Total (n=95)
Little bit	19	15	35	24
Some	45	18	43	37
Fair bit	23	41	17	25
Lots	13	26	5	14
TOTAL	100	100	100	100

### Bush Tucker

Respondents were asked on how many days in the last week they had eaten bush tucker. Around a third (37.5%) of the sample had not eaten any bush tucker in the previous week. Most of those who had eaten bush tucker had done so once (21%) or twice (26%) in the previous week. A small percentage had eaten bush tucker three to six times (6%) or daily (9%). Eating bush tucker varied significantly between communities ( $\chi^2=70.0$ ,  $DF=8$ ,  $P<0.001$ ) (Table 31). Residents from Mowanjum were substantially more likely to have eaten bush tucker in the previous week, while Beagle Bay respondents were most unlikely to have done so.

**Table 31: Number of days respondents had eaten bush tucker in the previous week, by community (missing=8\*)**

	%	%	%	%
Number of days	Mowanjum (n=69)	Bayulu (n=58)	Beagle Bay (n=65)	Total (N=192)
0	9	33	72	38
1	25	31	8	21
2	46	14	15	26
3-6	9	8	2	6
7	11	14	3	9
TOTAL	100	100	100	100

\* missing = not clearly specified

Consumption of bush tucker was not associated with gender (MH  $\chi^2=0.002$ , DF=1, P=0.97) or age ( $\chi^2=15.8$ , DF=9, P=0.7).

### Going Hungry For A Day

Respondents were asked if they ever went hungry for a day. Around one third (35.5%) of the total sample reported that they sometimes went hungry for a day. Abstinence from food was significantly associated with community ( $\chi^2=24.05$ , DF=2, P<0.001) (Table 32).

**Table 32: Ever gone hungry for a day, by community**

	%	%	%	%
Have you ever gone hungry for a day?	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	Total (N=200)
Yes	56	31	17	36
No	44	69	83	64
TOTAL	100	100	100	100

Respondents from Mowanjum were most likely to have gone hungry (56%), Bayulu respondents were intermediate (31%) and Beagle Bay respondents were least likely to have gone hungry (17%). The main reasons given for going hungry were that the respondent did not feel like eating (51%) or did not have enough money for food (30%). Going hungry for a day was not associated with gender (MH  $\chi^2=0.01$ , DF=1, P=0.9) or age (MH  $\chi^2=0.02$ , DF=1, P=0.9).

## Personal Hygiene

The vast majority of respondents showered at least once a day (Table 33). The frequency of showering significantly differed with community ( $\chi^2=79.6$ ,  $DF=6$ ,  $P<0.001$ ), the reported frequency of showering being highest amongst Mowanjum respondents and lowest amongst Bayulu residents (Table 33). This is also consistent with Mowanjum respondents having greater awareness of the association between hygiene and sickness (Table 25).

**Table 33: Frequency of showering, by community (missing=4\*)**

Number of showers per week	% Mowanjum (n=71)	% Bayulu (n=60)	% Beagle Bay (n=65)	% Total (N=196)
1-3	4	5	6	5
4-6	4	8	6	6
7	21	55	20	31
8-14	8	27	49	28
15 +	63	5	19	30
TOTAL	100	100	100	100

\*2 respondents said that they showered 'sometimes', 1 said she showered 'all the time' and 1 gave no answer.

The frequency of showering differed significantly by gender (MH  $\chi^2=4.3$ ,  $DF=1$ ,  $P=0.04$ ). Females tended to shower more frequently than males but the difference was not large. Frequency of showering did not significantly differ with age ( $\chi^2=13.1$ ,  $DF=9$ ,  $P=0.2$ ).

## Comment on health behaviours

A summary of community differences is shown in Table 34. Overall, around half the sample smoked cigarettes, slightly more than half did not drink at all, just under two

thirds had eaten bush tucker in the previous week, one third reported that they sometimes went hungry for a day and the majority showered at least daily.

**Table 34: Summary of differences in health behaviours, by community**

Health behaviour	Community differences
Smoking	Beagle Bay > Mowanjum > Bayulu*
Alcohol (by drinkers)	Bayulu >> Mowanjum > Beagle Bay*
Bush Tucker	Mowanjum > Bayulu >> Beagle Bay*
Going Hungry	Mowanjum > Bayulu > Beagle Bay*
Showering	Mowanjum > Beagle Bay > Bayulu*

\* Significant difference at  $P < 0.05$  level

Smoking was most frequently reported by males, 25 to 35 year olds and respondents from Beagle Bay. A similar smoking rate among Aboriginal people and the higher prevalence of smoking among younger adults and men has also been reported in remote Aboriginal people in the Northern Territory by Watson et al (Watson, Fleming and Alexander 1988). Watson also noted that smoking rates in Top End ('coastal') communities were higher than in Central Australian ('desert') communities. This is consistent with the higher smoking rates observed in Beagle Bay and Mowanjum, which are closer to the coast relative to the desert community, Bayulu.

An alternative explanation may be that there is a relationship between smoking rates and exposure to non-Aboriginal culture, as identified by consumer goods and particularly television ownership, with a consequent increased exposure to non-Aboriginal television advertising. The community with the highest prevalence of white goods and television ownership, Beagle Bay, had the highest smoking prevalence, and Bayulu, with the lowest ownership of these items, had the lowest smoking prevalence.



Around half the sample drank alcohol. Drinking was most prevalent amongst males and 25 to 35 year olds. This level and pattern of alcohol consumption, characterised by a substantial proportion of non-drinkers and young men as the greatest proportion of heavy drinkers, was also similar to that reported in surveys of Aboriginal alcohol use in other remote areas conducted in the Northern Territory by Watson et al (Watson, Fleming and Alexander 1988) and in the Kimberley by Hunter et al (Hunter, Hall and Spargo 1992).

Relative to the other communities, Beagle Bay drinkers were most likely to describe themselves as lighter drinkers while drinkers from Bayulu were most likely to describe themselves as heavier drinkers.

Interestingly, at the time of the study, both Bayulu and Mowanjum were 'dry' communities where the community councils had activated a by-law under which anyone bringing alcohol on to a community could be subject to a fine. Although not statistically significant, these two communities had a higher proportion of non-drinkers (56-57%) than did Beagle Bay (43%). In each of the studies noted previously, these researchers also found that the frequency of drinking decreased with decreasing availability of alcohol. However Hunter noted that in more remote communities, such as Bayulu, while the number of drinkers and frequency of drinkers was lower, intensity of drinking was higher (Hunter, Hall and Spargo 1992).

Around two-thirds of the sample had eaten bush tucker in the previous week, usually about once or twice. Bush tucker was most likely to have been eaten by Mowanjum respondents and least likely to have been eaten by Beagle Bay respondents.

Around one-third of the sample reported that they sometimes 'go hungry for a day'. A similar level in the National Aboriginal and Torres Strait Islander Survey reported that they worried about going without food (Australian Bureau of Statistics 1996).

Respondents from Mowanjum were the most likely to report that they go hungry, while those from Beagle Bay were least likely. An initial assumption might be that insufficiency of food could be related to the seasonal nature of employment and therefore household income. However in regard to these communities, the reverse is the case, as at the time of the pre-test, it was Beagle Bay where least respondents were employed and Mowanjum where most were employed (Table 10). An alternative explanation may be that Beagle Bay, where least respondents report going hungry, had a much larger proportion of respondents with working refrigerators (100%) than the other two communities (Table 15). Therefore the ability to keep food fresh longer may have been a factor contributing to the lower number of respondents who reported not going hungry in this community.

Showering was a frequent, at least daily activity for most of the sample. The frequency of showering was highest amongst females and Mowanjum residents.

#### **Research Question 1.5: Attitude to Health Behaviours**

Most of the attitude questions asked "*How strong is the feeling that you should ....(act on a health related behaviour)*". The questions relating to smoking, drinking alcohol, dog care and eating bush tucker were analysed on those who smoked, drank alcohol, owned dogs, and those who had eaten bush tucker respectively. All other items were analysed using the whole sample.

##### **Attitude to Quitting Smoking:**

##### ***How strong is the feeling that you should give up smoking?***

The total number of smokers was 107. Attitude to quitting ranged from *a little bit* (33%) or *some* (12%) to *a fair bit* (15%) or *a lot* (26%). Only 14% of smokers did not want to give up smoking at all. There was a significant difference between communities ( $\chi^2=19.1$ , DF=4, P=0.001), with smokers from Beagle Bay least likely to want to quit smoking, and smokers from Mowanjum most likely to want to quit (Table 35). Attitude to quitting smoking was not associated with gender (MH $\chi^2=2.6$ , DF=1, P=0.1) or age ( $\chi^2=4.0$ , DF=3, P=0.3).

**Table 35: Attitude of smokers to quitting smoking, by community**

How strong is the feeling that you should give up smoking?	% Mowanjum (n=38)	% Bayulu (n=24)	% Beagle Bay (n=45)	% Total (N=107)
None	5	4	27	14
Some or a little bit	32	58	49	45
Fair bit or lots	63	38	24	41
TOTAL	100	100	100	100

**Attitude to Reducing Alcohol Consumption:*****How strong is the feeling that you should drink less grog?***

The total number of drinkers was 95. About a third of the drinkers felt *fairly strongly* (18%) or *very strongly* (13%) that they should drink less alcohol. Nearly half reported that they felt *some* (21%) or *a little bit* (27%) that they should drink less. One fifth (21%) did not think that they should drink less at all.

Attitude to reducing alcohol consumption by community approached significance ( $\chi^2=4.8$ , DF=2, P=0.09), with Mowanjum drinkers stronger in their attitude to reducing alcohol consumption than drinkers from the other two communities (Table 36). Attitude to reducing alcohol consumption was not associated with gender (MH $\chi^2=0.8$ , DF=1, P=0.4), or age (MH $\chi^2=0.06$ , DF=1, P=0.8).

**Table 36: Attitude of drinkers to reducing alcohol consumption, by community**

How strong is the feeling that you should drink less grog?	% Mowanjum (n=31)	% Bayulu (n=27)	% Beagle Bay (n=37)	% Total (N=95)
None	16	7	35	21
Some or a little bit	39	67	43	48
Fairly strong or very strong	45	26	22	31
TOTAL	100	100	100	100

### Attitude to Keeping Dogs Healthy

Of the 113 dog owners in the sample, most felt *fairly strong* (30%) or *very strong* (53%) about keeping their dogs healthy. Only a small percentage felt *very weak* (4%), *bit weak* (3%) or *not strong, not weak* (9%) about keeping their dog healthy. Attitude to keeping dogs healthy was not associated with community ( $\chi^2=4.1$ ,  $DF=4$ ,  $P=0.4$ ), gender ( $MH\chi^2=1.0$ ,  $DF=1$ ,  $P=0.3$ ) or age ( $MH\chi^2=1.5$ ,  $DF=1$ ,  $P=0.2$ ).

### Nutrition Related Attitudes

#### a) Drinking Low Sugar Drink

Attitude to drinking low sugar drink was fairly evenly spread across the response categories: *not at all* (16%), *a little bit* (26%), *some* (18%), *a fair bit* (17%) to *very strong* (23%). Attitude to drinking low sugar drink was not associated with community ( $\chi^2=7.8$ ,  $DF=8$ ,  $P=0.5$ ), gender ( $MH\chi^2=0.8$ ,  $DF=1$ ,  $P=0.4$ ) or age ( $\chi^2=11.3$ ,  $DF=12$ ,  $P=0.5$ ).

#### b) Eating More Vegetables

Most respondents felt *very strong* (84%) that they needed to eat more vegetables.

Attitude to eating more vegetables was not associated with community ( $\chi^2=2.3$ ,  $DF=2$ ,  $P=0.3$ ) or gender ( $MH\chi^2=1.5$ ,  $DF=1$ ,  $P=0.2$ ). The association with age could not be tested because of the small number of respondents aged less than 45 years who did not feel that they should eat more vegetables. Attitude to eating more vegetables was very strong amongst all age groups except those aged 46 years or more: 96% of 18-45 year olds vs 76% of those over 45 years old.

#### c) Eating More Baked Beans

Attitudes were slightly toward *not at all* or *a little bit* with respect to the need to eat more baked beans: *not at all* (23%), *a little bit* (26%), *some* (22%), *a fair bit* (18%) or *very strong* (12%). This attitude was not affected by gender ( $MH\chi^2=0.4$ ,  $DF=1$ ,  $P=0.5$ ) or age ( $\chi^2=14.8$ ,  $DF=12$ ,  $P=0.3$ ).

Attitude to eating more baked beans approached significance, by community ( $\chi^2=14.8$ ,  $DF=8$ ,  $P=0.06$ ), with Mowanjum respondents holding slightly more

positive attitudes to eating more baked beans than respondents from the other two communities (Table 37).

**Table 37: Attitude to eating more baked beans, by community**

Attitude to eating more baked beans	% Mowanjum (n=73)	% Bayulu (n=62)	% Beagle Bay (n=65)	% Total (N=200)
Not at all	25	15	29	23
A little bit	16	32	31	26
Some	27	25	12	22
Fairly strong	17	15	22	17
Very strong	15	13	6	12
TOTAL	100	100	100	100

#### **d) Eating Less Sugar**

Respondents were fairly evenly split between those who felt *a little bit* (33%) or *some* (14%) and those who felt *a fair bit* (16%) or *very strong* (27%) that they should eat less sugar. Only 12% of the respondents felt *no* need at all to reduce sugar intake.

The attitude to eating less sugar was not affected by gender ( $MH\chi^2=0.5$ ,  $DF=1$ ,  $P=0.5$ ), or age ( $\chi^2=8.8$ ,  $DF=12$ ,  $P=0.7$ ), but approached significance by community ( $\chi^2=14.8$ ,  $DF=8$ ,  $P=0.06$ ). Beagle Bay respondents were strongest in their attitude towards eating less sugar and Bayulu respondents were weakest in their attitude towards eating less sugar (Table 38).

**Table 38: Attitude to eating less sugar, by community**

Attitude to eating less	%	%	%	%
Sugar	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	Total (N=200)
Not at all	16	13	6	12
A little bit	25	45	29	32
Some	16	11	13	13
Fairly strong	11	13	23	16
Very strong	32	18	29	27
TOTAL	100	100	100	100

### e) Eating Bush Tucker

Almost all respondents felt *very strong* (89%) or at least *fairly strong* (6%) about the need to eat bush tucker. The effects of four independent variables on the strength of attitude to eating bush tucker were tested simultaneously in a multiple linear regression. The four independent variables were gender, age, community and whether or not bush tucker had been eaten in the previous week. The need for a multivariate analysis was based upon the significant association between community and the consumption of bush tucker ( $\chi^2=70.0$ ,  $DF=8$ ,  $P<0.001$ ). Given the high percentage of respondents who felt *very strong* about the need to eat more bush tucker (89%), the outcome variable was divided between those who felt *very strong* and all other responses.

A very strong attitude to eating bush tucker did vary between the communities ( $W\chi^2=16.7$ ,  $DF=2$ ,  $P<0.001$ ) (Table 39), but not by gender ( $W\chi^2=2.9$ ,  $DF=1$ ,  $P=0.09$ ), age ( $W\chi^2=0.1$ ,  $DF=1$ ,  $P=0.8$ ) or whether or not bush tucker had been eaten in the previous week ( $W\chi^2=0.4$ ,  $DF=1$ ,  $P=0.5$ ). Both Mowanjum and Bayulu respondents had much stronger attitudes to eating bush tucker than those from Beagle Bay.

**Table 39: Attitude to eating bush tucker, by community**

Attitude to eating	%	%	%	%
Bush Tucker	Mowanjum (n=73)	Bayulu (n=62)	Beagle Bay (n=65)	Total (N=200)
None or some	1	2	15	5
A fair bit	3	3	11	6
Very strong	96	95	74	89
TOTAL	100	100	100	100

### f) Eating More Healthy Foods

Three quarters (77%) of the respondents felt *very strong* or *a fair bit* that they should eat more healthy foods. Attitude to eating more healthy foods was not related to community ( $\chi^2=2.4$ , DF=4, P=0.7), but was significantly associated with age ( $\chi^2=19.0$ , DF=6, P=0.004) and gender (MH $\chi^2=6.3$ , DF=1, P=0.01). Attitude to eating healthy foods decreased with age (Table 40) and was higher amongst females than males: 83% 'very strong' vs 70% for males respectively.

**Table 40: Attitude to eating more healthy food, by age group (missing=4)**

Attitude to eating more	%	%	%	%	%
Healthy food	18-25 (n=49)	26-35 (n=59)	36-45 (n=34)	46 + (n=54)	Total (N=196)
Not at all – some	6	15	12	22	14
Fairly strong	4	3	15	20	10
Very strong	90	82	73	58	76
TOTAL	100	100	100	100	100

### Comment on attitude to health behaviours

Attitude to health behaviours is defined as high if more than 65% state that they felt *a fair bit* strong or *very strong* about a behaviour, moderate if 45% to 64% felt *a fair bit* strong or *very strong* about a behaviour, and low if less than 45% felt *a fair bit* strong or *very strong* about a behaviour. However, care needs to be exercised in

how these results should be interpreted. For example, to the question: *How strong is the feeling that you should eat more vegetables?* people who did not eat vegetables and did not feel motivated to eat any vegetables would give similar responses to those who thought they ate sufficient vegetables and therefore did not feel any need to increase the amount of vegetables eaten.

Among the overall sample, attitude was high to eat more vegetables (91%), eat more healthy food (86%) and to eat bush tucker (95%) and, among dog owners, to keep their dogs healthy (83%). Attitudes to eating more vegetables and to eat healthy foods were high across all age groups, but decreased significantly with age. In addition, the level of attitude to eating healthy foods was higher amongst females than males. The last finding is consistent with national surveys of food consumption patterns that show that women eat more fruit and a broader range of food products (Lester 1994).

Attitude was low among smokers to quit (41%), among drinkers to drink less alcohol (31%), and among the general sample to drink low sugar drinks (40%), eat more baked beans (29%), and eat less sugar (42%).

**Table 41: Summary of attitudes to health behaviours, by community**

Attitude to Health behaviour	Community differences
Quitting smoking	Mowanjum >> Bayulu > Beagle Bay*
Drink less alcohol (by drinkers)	Mowanjum > (Bayulu = Beagle Bay)
Keep dog healthy	Mowanjum = Bayulu = Beagle Bay
Drink low sugar drink	Mowanjum = Bayulu = Beagle Bay
Eat more vegetables	Mowanjum = Bayulu = Beagle Bay
Eat more baked beans	Mowanjum > (Bayulu = Beagle Bay)
Eat less sugar	Beagle Bay > Mowanjum > Bayulu
Eat bush tucker	(Mowanjum = Bayulu) >> Beagle Bay*
Eat more healthy foods	Mowanjum = Beagle Bay = Bayulu

\* Significant difference at  $P < 0.05$  level



For most of the attitudes measured by these items, there were few significant differences by community, although attitudes in Mowanjum tended to be higher than the other two communities on most of these measures (Table 41). Attitude of smokers to quit smoking differed between communities from high in Mowanjum (63%), to low in Bayulu (38%) and Beagle Bay (24%). Beagle Bay smokers were not disposed to quitting despite this community having the highest smoking rate (69%). Attitude to eat bush tucker was high in all communities, but higher in Mowanjum (99%) and Bayulu (98%) than in Beagle Bay (85%). The weaker attitude to eating bush tucker in Beagle Bay was consistent with the fact that this community was one where respondents were significantly less likely to have eaten bush tucker, with nearly three out of four respondents not having consumed bush tucker on any days of the previous week (Table 31).

#### **Research Question 1.6: Perceived Community Health Efficacy**

When asked *How much can the community stop sickness before it starts?*, the majority of respondents answered *lots* (55%) or *a fair bit* (25%) (Table 42).

Whether or not a respondent reported that a community could do *lots* or *a fair bit* to stop sickness before it starts approached significance ( $\chi^2=4.9$ , DF=2, P=0.09) by community. Bayulu and Mowanjum respondents were slightly stronger in their perception of how much the community could do to prevent sickness than Beagle Bay.

**Table 42: Perception of what a community can do to stop sickness before it starts, by community**

How much a community can do to stop sickness?	% Mowanjum (n=73)	% Bayulu (n=62)	% Beagle Bay (n=65)	% Total (N=200)
Not at all / no answer	10	0	2	4
A little bit	4	8	9	7
Some	12	3	12	10
A fair bit	16	21	38	25
Lots	58	68	39	54
TOTAL	100	100	100	100

Perceived community health efficacy was significantly associated with age ( $MH\chi^2=6.5$ ,  $DF=1$ ,  $P=0.01$ ), but not with gender ( $MH\chi^2=0.6$ ,  $DF=1$ ,  $P=0.4$ ). Perceived community health efficacy was lower amongst those aged over 45 years than amongst the younger respondents (Table 43).

**Table 43: Perception that a community can do lots or a fair bit to stop sickness before it starts, by age (missing=2)**

Age group:	18-25 (n=49)	26-35 (n=60)	36-45 (n=34)	46+ (n=55)	Total (N=198)
Percent:	88	82	88	65	80

### Comment

It is interesting to note in regard to this research question that four out of five respondents in the total sample accepted the concept that sickness can be prevented in their communities. This suggests that an awareness of the concept of health risks and preventive health exists in remote Aboriginal communities, at least at a cognitive level, in much the same way as it does among non-Aboriginal people.

Historical factors involving externally imposed controls and government restrictions on Aborigines such as forced removal from their parents and absence of

equal rights in law with non-Aboriginal Australians, may have affected remote Aboriginal people over 45 years of age more directly than younger age cohorts in health 'locus of control'. This could have played some part in the lower perceptions of community health efficacy held by older respondents. However the strong perception of community health efficacy held by younger people would indicate that this group are at least amenable to appropriately structured prevention programs.

### **Research Question 1.7: Current disease prevention strategies**

#### **Individuals**

Respondents were asked what they did to stop sickness before it starts. The most common individual strategies were to clean up the house (69%), look after personal hygiene (44%), talk to the family about health troubles (18%), eat properly or eat bush tucker (18%), exercise (15%), get medical advice or a clinic check-up (10%), and to keep busy or keep working (10%).

#### **Communities**

Respondents were asked what their community does now to stop sicknesses before they start. The most commonly mentioned community strategies for preventing sickness were cleaning up the community (87%), health check-ups (29%) and cleaning up the house (24%).

#### **Comment**

While respondents in this sample listed lifestyle behaviours such as eating properly, personal hygiene and increasing exercise among the things they could do to prevent sickness, a clean environment was the highest priority; 'cleaning up the house' being the most frequently nominated response by two out of three respondents. Bayulu respondents nominated this strategy more frequently than the other two communities, although the difference was not large. The perception of the importance of the environment on health was reinforced in the item on community

strategies to prevent sickness, where 'cleaning up the community' was the most frequently nominated strategy to prevent sickness in the community by four out of five respondents, almost uniformly across all three communities. This was nearly three times the frequency with which the next community strategy, 'having health check-ups', was nominated.

In acknowledging that preventing sickness required improving the home and community environment, Aboriginal people in this sample indicated their awareness of the contribution of the poor environments in which they live to their own health.

**Research Question 1.8:      What are the perceived health needs of communities?**

Respondents were asked what things the community needed for better health. The most frequent responses were more housing (22%), to have healthy food available (20%), more recreation facilities (18%), more equipment (15%), health workers (12%) and improved housing or housing repairs (11%).

**Comment**

Combining the 'improve housing/repair housing' response and the 'more housing' response, a 'better housing' category emerges as a clear priority for these communities. This need is consistent with the level of overcrowding noted in this study (Table 12), and the generally poor standard of housing and level of overcrowding in remote Aboriginal communities (Pholeros, Rainow and Torzillo 1993).

This finding again reinforces the awareness that Aboriginal people in this study are aware of the importance of the physical environment and environmental infrastructure for better health. In fact, only 19 respondents nominated individual strategies in the form of 'people should look after themselves' when asked what the community needs for better health. This was less than 10% of all responses. Apart

from the 12% who nominated having more health staff or services, all the other strategies were related to the physical environment.

The second highest priority, 'having more healthy food available', suggests that Aboriginal people are aware of the scarcity and paucity of their food supply, where fresh fruit and vegetables are often unavailable or highly priced. For example, a typical 'market basket' of groceries in Aboriginal communities in the Kimberley can cost up to 40% more than in the Perth metropolitan area (Sullivan, Gracey and Hevron 1987).

The third priority for community health needs, 'more recreation facilities', shows the value which remote Aboriginal people place on sport and activity. However the demand for the provision of other basic services in these communities frequently means that recreation facilities are a luxury that often cannot be afforded ahead of other basic services (Tatz 1995).

## **Research Objective 2: Results of the evaluation of the media intervention**

### ***The Health Promotion Advertisements: Look Out (Mowanjum) and Pride and Respect (Bayulu)***

At the health promotion workshops, community participants developed health promotion advertisements that reflected each community's health priorities. The Bayulu community's advertisement was titled *Pride and Respect* and the Mowanjum community's advertisement was titled *Look Out*. A description of each community's advertisement and its main messages and themes follows:

#### **Look Out (developed by Mowanjum Community)**

*Look Out* included messages for men and women, although its primary target audience was men (Storyboard at Appendix G). It depicted inappropriate behaviours in regard to health issues considered by the community workshop to be principal concerns. Its style was somewhat confrontational, depicting scenes of drunken behaviour with stern warnings of dire consequences of alcohol abuse

delivered as a 'voice-over' by Aboriginal presenters. The main health issues covered in the advertisement were:

- Alcohol and its effect in lowering inhibition and facilitating unsafe sex ('long grass' behaviour): "...*shame, ruin ourselves*".
- The risk from unsafe sex of sexually transmitted diseases (STDs), including HIV, was implied rather than stated, particularly focussing on the health and socio-cultural implications for men of contracting these diseases: "...*proper sorry fella...can't have baby, can't be man.*"

As well as the health implications, with the permission of tribal elders, a 'Wandjina' or traditional spirit figure was included in the advertisement by the workshop participants to emphasise the serious implications for Aboriginal life and culture of these issues.

A final message aimed at motivating family and cultural support to maintain a healthy life was included: "*Look after yourselves and each other.*"

### **Pride and Respect (Developed by Bayulu Community)**

*Pride and Respect* targeted Aboriginal men (Storyboard at Appendix G). Rather than the 'negative' execution of the messages in *Look Out*, *Pride and Respect* was more 'positive'. Like *Look Out*, it was an 'umbrella' of messages in story form, but these were reinforcing of cultural themes indirectly related to health rather than the highlighting of health risk behaviours. It modelled appropriate male behaviour in regard to family (cultural) responsibility.

An image of a boab tree was used to symbolise the interconnectedness of family, community and cultural life:

*"Tree is just like community - branches and leaves like people coming out. Roots hold tree up - roots are culture - pride, respect and law. Where tree grows is our country. Seeds fall, smaller trees grow but still under shade of big tree - like outstations feeding on same culture."*

The specific health issue highlighted was the lack of money for food in families as a result of men's income being spent on other things (e.g., grog, gambling) and therefore unavailable to wives to buy food for children. The television

advertisement modelled appropriate budgeting of income to provide sufficient money for food for families. A man was featured paying off his 'book down' debt at the community store and passing money to his wife with which she bought groceries. Another dimension to the advertisement was the cultural responsibility of men to their sons, depicted through the same man taking his son bush hunting with an elder.

**Research Question 2.1: Media Reach: What percentage of the sample recognised the health promotion advertisements/logo?**

**Television Ownership and Viewing**

Television ownership by respondents varied significantly between the communities at pre-test: Bayulu respondents were significantly less likely to have a television (45% ownership) than respondents from Mowanjum (73%) who in turn were less likely to own a television than Beagle Bay respondents (88%) ( $\chi^2=27.5$ ,  $DF=2$ ,  $P<0.0001$ ). Television ownership by respondents in the post-test sample showed a similar distribution.

Consistent with television ownership, the amount of television watched by respondents varied significantly between the communities at pre-test: respondents from Bayulu and Mowanjum watched television less often than Beagle Bay respondents ( $\chi^2=25.6$ ,  $DF=2$ ,  $P<0.0001$ ) (Table 44). Frequency of television viewing in the post-test sample showed a similar distribution.

**Table 44: Frequency of watching television in each community at Pre-test (N=200)**

Frequency of watching TV	% Mowanjum (n=73)	% Bayulu (n=62)	% Beagle Bay (n=65)
5-7 days a week	41	37	74
1-3 days a week	52	45	20
Never	7	18	6
TOTAL	100	100	100
Mean number of days:	3.7	3.5	5.5

Given these community differences in exposure to television and the expected association between frequency of watching television and recognition of the advertisements, community differences in recognition of the advertisements were tested after adjusting for the amount of television watched by each respondent.

### **Recognition of Health Promotion Television Advertisements:**

#### ***Look Out* (Developed by Mowanjum Community)**

After being shown pictures from the *Look Out* advertisement, 54% of the post-test sample (n=87) stated that they had seen it before. Recognition was significantly associated with community ( $W\chi^2=14.8$ ,  $DF=2$ ,  $P<0.0001$ ) and age of respondent ( $W\chi^2=31.6$ ,  $DF=3$ ,  $P<0.0001$ ), as well as the amount of television watched ( $W\chi^2=11.6$ ,  $DF=1$ ,  $P<0.0007$ ). After adjusting for the effect of the amount of television watched by the respondent, recognition of *Look Out* was not associated with gender ( $W\chi^2=1.2$ ,  $DF=1$ ,  $P=0.3$ ).

From the raw data, recognition of *Look Out* was similar for Beagle Bay and Mowanjum respondents at 63% and 61% respectively, while Bayulu was much lower at 36%. However, after adjusting for the effects of the amount of television watched and age, respondents from Mowanjum were 6.1 times (95% CI 2.2-16.8) and respondents from Beagle Bay were 4.1 times (95% CI 1.5-11.0) more likely to have seen *Look Out* than respondents from Bayulu.

Recognition of *Look Out* did not significantly vary between respondents aged 18-45 years, but respondents aged 45 years or older were 0.1 times (95% CI 0.1-0.4) less likely to report that they recognised the advertisement than 18-25 year old respondents. Within the sample of 87 respondents who reported they recognised *Look Out* (LO-viewers), the distributions of age ( $\chi^2=5.7$ ,  $DF=4$ ,  $P=0.2$ ) and gender ( $\chi^2=0.4$ ,  $DF=2$ ,  $P=0.8$ ) were not significantly different between communities, and there was no significant association between age and gender ( $MH\chi^2=0.8$ ,  $DF=1$ ,  $P=0.4$ ).



### ***Pride and Respect* (Developed by Bayulu Community)**

After being shown pictures from the *Pride and Respect* advertisement, 58% of the sample (n=92) reported that they had seen it. Recognition was significantly associated with age ( $W\chi^2=20.6$ ,  $DF=3$ ,  $P<0.0001$ ) as well as the amount of television watched ( $W\chi^2=23.1$ ,  $DF=1$ ,  $P=0.0001$ ). After adjusting for the effect of the amount of television watched by the respondent, the rate of recognition of *Pride and Respect* did not differ significantly between the communities ( $W\chi^2=3.0$ ,  $DF=2$ ,  $P>0.2$ ) and was not associated with gender ( $W\chi^2=0.01$ ,  $DF=1$ ,  $P=0.9$ ).

Recognition of *Pride & Respect* did not significantly vary between respondents aged 18-45 years, but respondents aged 45 years or older were 0.1 times (95% CI 0.0-0.3) less likely to report that they recognised the advertisement than 18-25 year old respondents. Within the sample of 92 respondents who reported they recognised *Pride and Respect* (PR-viewers), the distributions of age ( $\chi^2=7.2$ ,  $DF=4$ ,  $P=0.1$ ) and gender ( $\chi^2=0.08$ ,  $DF=2$ ,  $P=0.96$ ) were not significantly different between communities, and there was no significant association between age and gender ( $MH\chi^2=0.2$ ,  $DF=1$ ,  $P=0.7$ ).

### **Recognition of the *Caring and Sharing* logo**

The television advertisements and associated print materials all included the *Caring and Sharing* logo. This logo had been developed with Aboriginal health workers and community people in the Northern Territory for a 'culturally-based' health promotion program. It was readily accepted by workshop participants in the pilot study and was adopted as the logo for the Kimberley Aboriginal Health Promotion Project. An item was included in the survey to check recognition of the logo and what it meant to respondents.

All respondents were shown the picture from the *Caring and Sharing* logo without the words "Caring and Sharing" and asked if they had seen the picture before. Those who had seen the picture were asked where they had seen it and what it meant to them.

Overall, 71% of the sample had seen the picture before. This percentage did not vary significantly by community ( $\chi^2=0.06$ ,  $DF=2$ ,  $P=0.97$ ) or gender ( $MH\chi^2=0.04$ ,  $DF=1$ ,  $P=0.5$ ), but did decrease significantly with increasing age ( $MH\chi^2=4.9$ ,  $DF=1$ ,  $P=0.03$ ) (Table 45). This is consistent with previous data on advertising recognition.

**Table 45: Recognition of Caring and Sharing logo, by age group (missing=5)**

Age group:	18-25	26-35	36-45	46+	Total
	(n=34)	(n=50)	(n=25)	(n=47)	(N=156)
Recognised symbol (%):	85	72	72	62	71

Most of those who recognised the picture had seen it on television (47%), in a health clinic or welfare office (16%), or on a poster (15%).

All respondents were asked what the logo meant to them, including those who had not recognised the logo. The majority mentioned Aboriginal culture as it related to a family sharing traditional bush tucker (77%). Sixteen percent specifically mentioned people 'caring and sharing', while 11% did not know or understand what the logo meant.

### **Comment**

Overall, approximately 70% of respondents owned a television and nearly half watched television every day. The pattern of television ownership (i.e., lowest in Bayulu and highest in Beagle Bay) was consistent with the pattern of white goods ownership across the three communities (Table 15). This level of penetration of television to remote Aboriginal communities could be considered quite high, particularly considering that at the time of this study in 1991, satellite television broadcasting to remote areas had been operating for only three years.

Recognition of the television advertisements was high for the total sample, with just over half reporting having been exposed to each advertisement. This reach was achieved despite the relatively low number of placements that the advertising budget permitted (each advertisement was shown just over 50 times on a paid

schedule over a twelve week period). This reach would have been assisted by placing advertisements in television programs that respondents in the pre-test survey had indicated were their favourites. Also, interviewers reported observing during the post-test that the uniquely Aboriginal and local content of the advertisements had generated considerable interest in all the communities of the region. This could have been a factor in increasing respondents' recall of the advertisements as many people began to actively watch for the advertisements to appear on television or attended more closely to them when they did appear.

The significantly higher recognition of *Look Out* by Mowanjum respondents could be attributed to that community's participation in the development and filming of the advertisement. However with regard to the other advertisement, *Pride and Respect* (developed by Bayulu), differences in recognition between communities were not significant. While Bayulu respondents' recognition of *Pride and Respect* was high (62%), so was recognition of this advertisement by the other two communities. Nevertheless Bayulu respondents' recognition of their own advertisement, *Pride and Respect*, at 62%, was much greater than their recognition of *Look Out* (36%), which they did not develop. Hence there would appear to be some association between community participation in development of health promotion advertisements and recognition of the advertisement on television, although the association is not a strong one.

**Research Question 2.2:      Message Recall: What messages were recalled by the sample?**

Viewers of each advertisement were asked: *What is the ad trying to say to Aboriginal people?* A content analysis of responses is provided below. Respondents who recognised *Look Out* are referred to as 'LO-viewers'. Respondents who recognised *Pride and Respect* are referred to as 'PR-viewers'.

***Look Out* (developed by Mowanjum Community)**

The main messages perceived by LO-viewers were: *Stop drinking or try to stop drinking* (39%), *drink less or drink safely* (25%), *about health/look after yourself*

(15%), and *look after each other* (13%). Only 7% stated that they did not know what the advertisement was trying to say.

Some community differences were evident, although the small numbers indicate caution in interpreting these differences (Table 46). In particular, only Mowanjum LO-viewers detected the message about looking after each other and they were most likely to mention the messages about looking after your health and thinking about culture.

**Table 46: Main messages of Look Out recalled by viewers from each community (N=87, missing=0)\***

Messages of Look Out	%	%	%
	Mowanjum	Bayulu	Beagle Bay
	N=35	n=18	n=34
Stop drinking	34	33	47
Drink less/	6	50	32
Drink safely			
About drinking/	14	6	3
Shows effects of grog			
Think about culture	17	6	0
Look after/ care for each other	31	0	0
Look after yourself/ your health	23	0	15
Don't know	9	5	6

\* Open-ended responses - totals may be greater or less than 100

### ***Pride and Respect* (Developed by Bayulu Community)**

The main messages perceived by PR-viewers were that it was *about the importance of Aboriginal culture* (22%) and *about families and caring for families* (17%). However just over one-quarter of those who saw *Pride and Respect* (29%) stated that they did not know what the advertisement was trying to say.

Some community differences were evident, although, as before, the small numbers indicate caution in interpreting these differences (Table 47). In particular, Beagle Bay PR-viewers were least likely to detect the messages about Aboriginal culture and family and Mowanjum viewers were most likely. No Bayulu respondents mentioned the message about looking after each other. More Mowanjum respondents picked up the message about spending money wisely. Finally, Beagle Bay respondents were

most likely to report that they did not know what the advertisement was trying to say, with just over half in this category.

**Table 47: Main messages of Pride and Respect recalled by viewers from each community (N=92, missing=0)\***

Messages of Pride and Respect	%	%	%
	Mowanjum n=35	Bayulu n=18	Beagle Bay n=34
Aboriginal culture	39	26	6
Care for families	31	26	0
Look after yourself	8	10	0
Care for/respect each other	19	0	15
Bush hunting	12	0	0
Eat healthy food	4	7	9
Spend money wisely/save	15	7	6
Don't know	12	19	51

\* Open-ended responses - totals may be greater or less than 100

## Comment

Overall it would appear that participation in the development of an advertisement did influence recall of the main messages of that advertisement for Mowanjum, but not for Bayulu.

With regard to *Look Out*, while viewers from all three communities recalled the main messages concerning drinking, primarily Mowanjum viewers recalled the more subtle messages of 'caring and sharing' and 'culture'. Interestingly, LO-viewers from neither community mentioned the messages in the advertisement relating to sexual behaviour, where a man and a woman, in the context of a drinking scene, were depicted, in outline, lying down in the 'long grass'. This may reflect a reluctance to talk openly about sexual topics rather than non-recall of the message.

With *Pride and Respect*, the two study communities primarily recalled messages about 'culture' and 'family'. However almost no Beagle Bay viewers recalled such messages. It would appear that the majority of Beagle Bay viewers did not relate to the more 'subtle' cultural messages in *Pride and Respect*. It may well be that

participation in the process made the study communities more sensitive to each others' advertisements - a sensitivity not evident in the comparison community. Alternatively it may be that Beagle Bay is less traditional culturally-orientated and therefore perceived less of the culturally-based messages than the other two communities.

**Research Question 2.3: Emotional Arousal: How strong is the advertisement for the sample?**

Viewers of each advertisement were asked, "When you see this ad on television, how *strong* is it for you?"

Given the small sample sizes and the lack of association between the independent variables, univariate Chi-square tests were appropriate for testing for associations between strength of each advertisement and age, gender and community. However, as recognition of the advertisements was significantly related to age and community, the perceived 'strength' of the advertisements was analysed by multivariate logistic regression.

***Look Out***

About half of the LO-viewers reported that it felt a *fair bit* strong (22%) or *very strong* (28%) (Table 48).

The perceived strength of *Look Out* by community approached significance ( $W\chi^2=4.4$ ,  $DF=2$ ,  $P=0.1$ ). This was due to the lower ratings given by LO-viewers from Bayulu in terms of whether they felt this advertisement was *very strong* or a *fair bit strong*.

**Table 48: Perceived strength of Look Out, by community**

How strong is Look Out ?	%	%	%	%
	Mowanjum (n=35)	Bayulu (n=18)	Beagle Bay (n=34)	Total (N=87)
Very strong or a fair bit strong	57	28	53	50
Some or a little bit strong	14	72	35	34
Not at all	17	0	6	9
Don't know	0	0	6	5
No answer	12	0	0	2
TOTAL	100	100	100	100

The perceived strength of *Look Out* was not significantly associated with age ( $W\chi^2=2.4$ ,  $DF=3$ ,  $P=0.5$ ) or gender ( $W\chi^2=1.0$ ,  $DF=1$ ,  $P=0.3$ ).

These results were equivalent to the results of univariate Chi-square tests.

### ***Pride and Respect***

About three-quarters of the respondents who saw *Pride and Respect* (PR-viewers) reported that it felt a *fair bit* strong (29%) or *very strong* (45%) (Table 49).

After adjusting for the effect of gender, the perceived strength of *Pride and Respect* was significantly related to community ( $W\chi^2=21.8$ ,  $DF=2$ ,  $P<0.001$ ). PR-viewers from Mowanjum (OR=0.1; 95% CI 0.01-0.97) and from Beagle Bay (OR=0.02; 95% CI 0.003-0.2) were less likely to report that *Pride and Respect* felt *strong* than those from Bayulu. (Table 49).

**Table 49: Perceived strength of Pride and Respect, by community (n=92)**

How strong is Pride and Respect?	%	%	%	%
	Mowanjum (n=26)	Bayulu (n=31)	Beagle Bay (n=35)	Total (N=92)
Very strong or a fair bit strong	77	97	48	73
Some or a little bit strong	19	3	37	21
Not at all/don't know	4	0	14	6
TOTAL	100	100	100	100

The perceived strength of *Pride and Respect* was not significantly related to age after adjusting for community and gender ( $W\chi^2=1.6$ ,  $DF=3$ ,  $P>0.5$ ).

After adjusting for the effect of community, the perceived strength of *Pride and Respect* was significantly related to gender ( $W\chi^2=7.1$ ,  $DF=1$ ,  $P=0.008$ ), with males more likely than females to perceive this advertisement as strong (Table 50).

**Table 50: Perceived strength of Pride and Respect, by gender (missing=1\*)**

Gender:	%	%	%
	Females	Males	Total
	(n=50)	(n=41)	(N=91)
Perceived Pride & Respect as a fair bit - very strong (%)	63	85	74

\* missing = Don't know

### Comment

In this study, participation in the development of an Aboriginal health promotion advertisement by a community would appear to have positively affected perceived strength of that advertisement, to a greater or lesser extent, depending on whether the advertisement itself was 'positive' or 'negative'.

The majority of Mowanjum respondents, whose community developed *Look Out*, perceived this advertisement as strong, but no stronger than did Beagle Bay respondents. Bayulu respondents gave less endorsement of strength, but registered no unfavourable responses to the advertisement. However almost one third of Mowanjum respondents either rated 'Look Out' as 'not at all strong' or gave no response. This may have been a reaction to the 'confrontational' nature of the advertisement, which had the effect of polarising sections of the Mowanjum community.

Some respondents, perhaps those with church affiliations, or those involved in the production of the advertisement, approved of the community's problems of grog and unsafe sex being 'laid bare' to the general viewing public. However others



may have perceived this as a 'shame job' and registered their disapproval in this survey.

With *Pride and Respect*, Bayulu's participation in development could explain the significantly higher rating given by this community to strength, particularly relative to Beagle Bay. *Pride and Respect* specifically targeted men and it was effective in gaining their strong endorsement in terms of perceived strength relative to female PR-viewers.

As noted in Research Question 2.2, it may have been the more 'traditional' approach that incorporated local cultural themes that resulted in the comparison community, Beagle Bay, having the lowest percentage rating *Pride and Respect* as 'strong'. The more 'Western' and consumer-oriented lifestyle of this community may have made respondents less amenable to traditional cultural messages. Also, the more positive *Pride and Respect* ad generated higher strength ratings than did the more negative execution of *Look Out*.

#### **Research Question 2.4: Acceptance of the advertisements**

##### **Personal acceptance**

Viewers of each advertisement were asked: "How does the advertisement make you feel when you see it on television." This was an open-ended question and respondents were able to give multiple responses. Their responses were classified as positive, neutral or negative.

There were insufficient data to permit multi-variate analysis of the ratings of *Look Out* as positive or negative so the results of uni-variate Chi-square tests are reported for this variable. There was insufficient variance in the data to permit any testing of the effects of age, gender or community for *Pride and Respect*.

### ***Look Out***

The main responses to the question of how *Look Out* made LO-viewers feel were *good* (23%), *sad* (16%) and *shame/embarrassed* (12%). Fifteen percent of the LO-viewers reported that they did not know how the advertisement made them feel.

A number of variations by community were evident, although small numbers dictate that these differences should be interpreted with caution (Table 51). LO-viewers from Mowanjum and Bayulu were more likely to report that the advertisement made them feel *good* than LO-viewers from Beagle Bay. LO-viewers from Beagle Bay and, to a lesser degree, Bayulu, were more likely to report that *Look Out* made them feel *sad* or *nothing*, than LO-viewers from Mowanjum. Finally, LO-viewers from Bayulu were the most likely to say that they did not know how the advertisement made them feel.

**Table 51: How Look Out made viewers feel, by community\***

Feelings	% Mowanjum n=35	% <b>Bayulu</b> n=18	% Beagle Bay n=34
Positive Feelings			
Good/Okay	48	33	3
Proud/Positive	8	0	15
Happy	6	6	9
Interested/Amused	8	0	9
Neutral Feelings			
Nothing	0	6	15
Don't know	3	44	12
Negative Feelings			
Bad/Angry	6	0	6
Sad	0	17	32
Shame	17	0	12
Other	5	0	0

\* Totals may exceed 100% as multiple responses were permitted

### *Pride and Respect*

The main response to the question of how *Pride and Respect* made PR-viewers feel was *good* (58%). The remainder mainly stated *nothing* (12%) and *don't know* (11%).

A number of variations by community were evident (Table 52). PR-viewers from Bayulu were most likely to report that the advertisement made them feel *good*, followed by Mowanjum then Beagle Bay PR-viewers. PR-viewers from Beagle Bay were the only ones to say that *Pride and Respect* made them feel *nothing*, and were the most likely to say that they *did not know* how the advertisement made them feel.

**Table 52: How Pride and Respect made viewers feel, by community\***

Feelings	%	%	%
	Mowanjum	Bayulu	Beagle Bay
	n=26	n=31	n=35
Positive			
Good	57	87	37
Okay	15	0	0
Happy	4	7	6
Proud/Positive	15	3	3
Interested	8	0	0
Neutral			
Nothing	0	0	31
Don't know	4	3	23

\* Totals may exceed 100% as multiple responses were permitted

The *Look Out* ad generated positive feelings amongst the Mowanjum and Bayulu communities but not so much amongst the Beagle Bay community where the responses were generally negative or neutral. However a significant proportion of both Mowanjum and Bayulu respondents also reacted negatively with either shame or sadness respectively, toward *Look Out*. On the other hand, the *Pride and Respect* ad generated far more positive feelings across all three communities, especially in Mowanjum and Bayulu. However in Beagle Bay, *Pride and Respect* generated mainly neutral feelings. The *Pride and Respect* ad generated no negative feelings at all. This is consistent with the *Pride and Respect* ad's positive

execution, featured mainly positive behaviours whereas the Look Out ad modelled negative behaviours.

### Acceptance to Aboriginal people

Viewers of each advertisement were asked the question: "Do you think it is a good thing for Aboriginal people or a bad thing for Aboriginal people to have this ad on television?"

#### *Look Out*

Overall, 80% of those who saw *Look Out* (LO-viewers) thought that the advertisement was a good thing for Aboriginal people. This perception of *Look Out* was significantly associated with community ( $\chi^2=10.2$ ,  $DF=2$ ,  $P=0.006$ ). LO-viewers from Beagle Bay were the most likely to see *Look Out* as good for Aboriginal people (Table 53).

**Table 53: Community perception of Look Out as good for Aboriginal people (missing = 11\*)**

Community:	%	%	%	Total
	Mowanjum	Bayulu	Beagle Bay	(N=76)
	(n=33)	(n=17)	(n=26)	
Perceived Look Out as good (%)	73	65	100	80

\* Missing includes respondents who felt that the advertisement was neither good nor bad and respondents who felt the advertisement was both good and bad.

The perception that *Look Out* was a good thing for Aboriginal people was not associated with gender ( $MH\chi^2=0.03$ ,  $DF=1$ ,  $P=0.9$ ) or age ( $MH\chi^2=0.1$ ,  $DF=1$ ,  $P=0.8$ )

#### *Pride and Respect*

There was almost unanimous agreement (99%) among PR-viewers that *Pride and Respect* was good for Aboriginal people. Clearly there could be no significant effect of community, age nor gender on this variable.

## Comment

The results in terms of acceptance of these advertisements to a great extent paralleled those for perception of strength. For both advertisements, the study community that developed the advertisement felt most positively about their advertisement while most of the negative and/or neutral feelings were experienced by viewers from the other two communities, most notably from the comparison community, Beagle Bay.

*Pride and Respect* was rated more positively than *Look Out*. While some viewers felt neutral about *Pride and Respect*, no PR-viewers felt negatively about the advertisement.

Because of the positive nature of the advertisement, acceptance of *Pride and Respect* as being a good thing for Aboriginal people was greater than that for *Look Out*, even though *Look Out* also rated highly, with 80% of the total sample rating it as good for Aboriginal people. Interestingly, respondents from the comparison community, Beagle Bay, who had been the most ambivalent in their feelings about each of the advertisements, were the most accepting of both advertisements as being good for Aboriginal people. This may reflect a general endorsement by Beagle Bay respondents of Aboriginal people appearing on the mainstream medium of television, even if there is some lack of understanding of what the meaning of the communication.

### **Research Question 2.5: Summary of community participation in the development of an advertisement and reach and impact of that advertisement relative to the other communities?**

*Look Out* was developed by the Mowanjum community; *Pride and Respect* was developed by the Bayulu community, and Beagle Bay served as a non-intervention comparison community. The results of Research Questions 2.1 to 2.4 are summarised here with a view to assessing whether community involvement in the development of an advertisement was related to reach and impact of those advertisements.

The results are summarised by simple comparisons of the percentage of responses of the viewers from each community, without repeating the exact value of those percentages. For example,  $(Mowanjum = Beagle Bay) > Bayulu$  denotes that the prevalence figures for an item were similar among Mowanjum and Beagle Bay respondents and that both of these prevalence figures were higher than the figure for Bayulu.

***Look Out:*      Developed by Mowanjum community**

The results in Table 54 provide weak support for a community participation effect. However recognition of *Look Out* by Mowanjum respondents was significantly higher than their recognition of *Pride and Respect*.

**Table 54: Summary of community differences in reach and impact of Look Out**

Indicator	Community differences
Recognition	$(Mowanjum = Beagle Bay) > Bayulu$
Message Recall	
- Drinking	Bayulu > Beagle Bay > Mowanjum
- Aboriginal culture	Mowanjum > Bayulu > Beagle Bay
- Caring for each other	Mowanjum >> (Bayulu = Beagle Bay)
- Looking after yourself/your health	Mowanjum > Beagle Bay >> Bayulu
Perception of the strength of the advertisement	None
Made viewers feel good	$(Mowanjum = Bayulu) > Beagle Bay$
Made viewers feel sad	Beagle Bay > Bayulu
Made viewers feel shame	Mowanjum > Beagle Bay
Did not know how it made them feel	Mainly Bayulu
Good for Aboriginal people	Beagle Bay > Mowanjum > Bayulu

### ***Pride and Respect: Developed by Bayulu community***

The results of Table 55 indicate moderate support for a community participation effect: respondents from Bayulu had the highest recognition and the most positive response to *Pride and Respect* (Table 55).

**Table 55: Summary of community differences in reach and penetration of *Pride and Respect***

Indicator	Community differences
Recognition	(Bayulu = Beagle Bay) > Mowanjum
Message Recall	
- Aboriginal culture/ bush hunting	(Mowanjum > Bayulu ) >> Beagle Bay
- Care for families/care for/respect each other	Mowanjum > Bayulu > Beagle Bay
- Look after yourself/ eat healthy food	Bayulu > Mowanjum > Beagle Bay
Perception of the strength of the advertisement	Bayulu > Mowanjum > Beagle Bay
Made viewers feel good	Bayulu > Mowanjum > Beagle Bay
Did not know how it felt or felt nothing	Beagle Bay only
Good for Aboriginal people	Bayulu = Mowanjum = Beagle Bay

### **Comment**

Overall, several general findings have emerged in this evaluation of the reach and acceptance of Aboriginal health promotion advertisements in these three communities. Firstly it is evident that a relatively high reach of the target audience, particularly young Aboriginal people, may be achieved with a modest advertising budget, through the use of a media schedule which selects popular television programs. These advertisements depicted Aboriginal people and Aboriginal themes, a content that is infrequent in television advertising. Hence the very fact that they depicted Aboriginal people and themes may have attracted more attention to the ads than they would have otherwise. Also, the Aboriginality of the ads may have led to them being rated very positively by the three communities.

Secondly, participation in the development of health promotion advertisements by Aboriginal communities does appear to be associated with greater recognition, message recall and acceptance, although the observed association is not a strong one. However, more localised, 'traditional' cultural themes may be better understood in the community where they were developed. Their appearance may gain broader endorsement among other Aboriginal communities, but their specific

messages may not necessarily be understood to any depth outside of the local area where they were developed.

Finally, in this study, we found that positive messages and executions, such as those used in *Pride and Respect* had more positive impact. The use of 'negative' or 'confrontational' executions in Aboriginal health promotion advertisements, such as in *Look Out*, may be regarded as appropriate and necessary by many people in the community, or within the health agency which is sponsoring them, but have the potential to be counterproductive if they arouse strong negative emotions. This may have confounded the relationship between participation and advertising effects.

**Research Objective 3:      Evaluation of the impact of the intervention  
on the communities**

**Research Question 3.1:      Did the intervention increase community attitude to  
acting on the issues addressed by the workshop and  
advertisements?**

The objectives of *Look Out* were to draw attention to issues of drinking less alcohol, safe sex practices and caring for each other. Due to the umbrella nature of the questionnaire, as outlined in the Method, only the attitude to drinking less alcohol was assessed by the questionnaire.

The objective of *Pride and Respect* was to reinforce the traditional (and contemporary) responsibility of males to provide for their family and to tell young people about Aboriginal culture. The questionnaire assessed motivation to tell young people about culture. The questionnaire did not assess motivation to provide for their family.

Differences in pretest-posttest changes were tested separately for each community, then the Breslow-Day test for homogeneity ( $BD\chi^2$ ) was used to determine whether the pattern of change was significantly different between communities. Where there was no significant difference between communities, the Cochran-Mantel-



Haenszel statistic ( $CMH^2$ ) was used to describe the pooled statistical significance of pretest-posttest differences across the three communities. Where there was a significant difference between communities in pretest-posttest differences, the Mantel-Haenszel Chi-square statistic ( $MH\chi^2$ ) is reported for each individual community.

All dependent variables were dichotomised. *Lots* and *a fair bit* were combined to form one category. *Some, a little bit* and *not at all* were combined to form the other category. Dichotomising the responses ensured a sufficient number of cases in each cross-tabulation cell to enable valid statistical analyses using Chi-square statistics. It also enabled the conduct of the Breslow-Day tests for homogeneity. Prevalence statistics provided below refer to the prevalence of *lots/a fair bit* responses.

The sample base for the analysis of items concerned with the effect of the intervention is the total sample rather than only those who saw the advertisements. This approach is consistent with the 'intention to treat' principle.

### **Attitude to drinking less alcohol**

Differences between communities in the pretest-posttest differences in attitude of drinkers to drinking less alcohol approached significance ( $BD\chi^2=5.6$ ,  $DF=2$ ,  $P=0.06$ ). This was due to a significant decrease in attitude to drinking less alcohol from pre-test (56%) to post-test (19%) in Bayulu ( $MH\chi^2=7.8$ ,  $DF=1$ ,  $P=0.005$ ). There was no significant pretest-posttest difference in motivation to drink less alcohol in Mowanjum ( $MH\chi^2=0.3$ ,  $DF=1$ ,  $P=0.6$ ) or Beagle Bay ( $MH\chi^2=1.8$ ,  $DF=1$ ,  $P=0.2$ ).<sup>1</sup>

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<sup>1</sup> Attitude to drinking less alcohol actually fell here from 41% to 25%. Presumably the small sample size ( $n=69$ ) affected the significance.

### **Talking to young people about Aboriginal culture**

There was no significant difference between communities in the pretest-posttest differences in the strength of feeling for telling young people about Aboriginal culture ( $BD\chi^2=0.5$ ,  $DF=2$ ,  $P=0.8$ ). Across the three communities combined there was a significant pretest-posttest difference on this variable ( $CMH^2=4.8$ ,  $DF=1$ ,  $P=0.03$ ). Respondents at post-test were 2.3 times more likely to feel that they should tell young people about Aboriginal culture than respondents at pretest (95% CI 1.1-4.7).

### **Research Question 3.2: Did the intervention increase community awareness of the issues addressed by the advertisements?**

The only issue for which awareness was assessed was the trouble caused by men and women drinking, as addressed in *Look Out*. No items assessed awareness of issues covered by *Pride and Respect*.

There was no significant difference between the communities in the pretest-posttest trend of awareness that men drinking in the community caused trouble ( $BD\chi^2=4.0$ ,  $DF=2$ ,  $P=0.1$ ). There was a significant pretest-posttest difference in this awareness across the three communities ( $CMH\chi^2=3.9$ ,  $DF=1$ ,  $P=0.049$ ). Odds ratios indicated that, overall, respondents at post-test were 1.6 times more likely (95% CI 1.002-2.6) to perceive that men drinking caused a *fair bit* or *lots* of trouble.

There was no significant community difference in the pretest-posttest trend in respondents' awareness that women drinking in the community caused trouble ( $BD\chi^2=0.3$ ,  $DF=2$ ,  $P=0.9$ ). Across the three communities, there was no significant pretest-posttest difference in the sample's assessment of the amount of trouble caused by women drinking in the community ( $CMH\chi^2=1.5$ ,  $DF=1$ ,  $P=0.2$ ).

**Research Question 3.3: Did the intervention increase community strength?**

There was a significant difference between the communities in the pretest-posttest trend in the reported number of community talks ( $BD\chi^2=8.9$ ,  $DF=2$ ,  $P=0.01$ ). There was a significant decrease in the percentage of respondents who stated that there were *lots* or *a fair bit* of community talks in Mowanjum from pre-test (67%) to post-test (32%) ( $MH\chi^2=16.1$ ,  $DF=1$ ,  $P<0.001$ ). There was no significant pretest-posttest trend in Bayulu ( $MH\chi^2=0.04$ ,  $DF=1$ ,  $P=0.8$ ) or Beagle Bay ( $MH\chi^2=1.3$ ,  $DF=1$ ,  $P=0.3$ ).

There was a significant difference between the communities in the pretest-posttest trend in the reported strength of the community ( $BD\chi^2=25.2$ ,  $DF=2$ ,  $P<0.001$ ). The percentage of the community samples who stated that their community was *very strong* or *fairly strong* declined significantly between pre-test and post-test in Mowanjum from 74% to 44% ( $MH\chi^2=12.1$ ,  $DF=1$ ,  $P=0.001$ ) but increased in Bayulu from 76% to 100% ( $MH\chi^2=13.8$ ,  $DF=1$ ,  $P<0.001$ ). There was no significant trend in Beagle Bay ( $MH\chi^2=0.4$ ,  $DF=1$ ,  $P=0.5$ ).

**Research Question 3.4: Did the intervention increase feelings of community empowerment in participating communities?**

Across the three communities combined, there was a significant decrease in the prevalence of respondents who perceived that the community could do *lots* or *a fair bit* to prevent sickness from 80% at pre-test to 57% at post-test ( $CMH\chi^2=22.1$ ,  $DF=1$ ,  $P<0.0001$ ). There was no significant difference between the communities in this pretest-posttest trend ( $BD\chi^2=5.3$ ,  $DF=2$ ,  $P=0.07$ ).

There was a significant difference between community samples in the pretest-posttest trends in the respondents' perceptions that they could prevent sickness in themselves before it starts ( $BD\chi^2=8.4$ ,  $DF=2$ ,  $P=0.02$ ). There was a significant decrease in this perception in Mowanjum (80%→63%;  $MH\chi^2=4.7$ ,  $DF=1$ ,  $P=0.03$ ) and Bayulu (77%→52%;  $MH\chi^2=7.9$ ,  $DF=1$ ,  $P<0.005$ ), but no significant change in Beagle Bay (66%→74%;  $MH\chi^2=1.0$ ,  $DF=1$ ,  $P=0.3$ ). Thus respondents from Mowanjum and Bayulu were *less* likely at post-test than at pre-test to perceive that they could personally prevent sickness.

**Research Question 3.5:      Summary of participation in the development of the advertisements and the pretest-posttest pattern of motivation, awareness, community strength and community empowerment.**

Table 56 summarises the hypothesised and measured pretest-posttest changes that have been detailed above. The hypothesised improvements in motivation, awareness, community strength and empowerment of participating communities tended not to be found by this study. Where positive results were found, there was no significant difference between the communities that did participate in the intervention and the community that did not participate in the intervention.

**Table 56: Summary of pretest-posttest attitudes, health awareness and community strength, by community**

Dimension	Dependent Variable	Mowanjum	Bayulu	Beagle Bay	Significant difference between communities
<b>Attitude to:</b>	Drinking less alcohol	- (↑)	↓	-	Yes
	Telling about culture	↑	↑ (↑)	↑	No
<b>Awareness of trouble from:</b>	Men drinking	↑ (↑)	↑	↑	No
	Women drinking	- (↑)	-	-	No
<b>Community Strength:</b>	Number of community talks	↓ (↑)	- (↑)	-	Yes
	Community strength	↓ (↑)	↑ (↑)	-	Yes
<b>Community empowerment:</b>	Perceived community efficacy in preventing sickness	↓ (↑)	↓ (↑)	↓	No
	Perceived individual efficacy in preventing sickness	↓ (↑)	↓ (↑)	-	Yes

\*Note: Arrows in parentheses denote the hypothesised direction of change for intervention communities. “-” indicates no change. Arrows not in parenthesis show actual direction of change.

## Comment

As noted in the Method chapter, this study was vulnerable to limitations in terms of instrumentation, history and maturation. As such the results of the intervention evaluation need to be assessed from the perspective of a case study rather than a formal evaluation with random assignment to experimental and control conditions.

The results of the intervention evaluation of awareness of nominated health issues, attitude to acting on nominated health issues and community strength indicate some changes in the desired direction in some variables. For example, ‘awareness that men drinking causes trouble’, demonstrated pre-post significance. That the change in this attitude was significant across all three communities rather than confined to the two study communities could have been due to the fact that the comparison community,

because it could not be excluded from the television satellite broadcast area, was also exposed to the television advertisements.

Nevertheless several of the variables which were hypothesised to change in a positive direction following the intervention failed to do so. Some, such as community strength, actually declined following the intervention. Several factors may have influenced these results.

First, a fundamental principle of the KAHPP project was that the community should retain the right to nominate the issues in their own community health promotion workshop that were to be developed into health promotion advertisements, rather than these being nominated by an external agency, as is frequently the case in public health research and interventions. This process was intended to build greater ownership of the health promotion process within the Aboriginal communities. This process created an evaluation problem in that attitudes and behaviours which may be sensitive to change under the intervention could not be precisely known prior to the pre-test, so an 'umbrella' instrument was developed that did not include such measures.

The need for a range of individual health indicators, balanced with the overall length of the survey instrument meant that most major issues (e.g. drinking) could be represented by just one or two items rather than a battery of items. This also meant that other issues (e.g., sexual behaviours), were either not represented at all or not appropriate to represent in a survey instrument of this type, particularly among Aboriginal people.

Second, some of the items relating to changes in the community were vulnerable to maturation and also sensitive to a number of confounding factors. These include the influence of community leadership and the dynamics of power and influence which may exist in a range of external agencies which may relate directly to the community, for example, government departments, policy, Aboriginal resource agencies and so on. That is, there is a multiplicity of factors and events that operate in Aboriginal communities that make both the implementation and evaluation of any intervention research in such communities problematic. During the course of just one year in the KAHPP project, one of the communities had two changes of community council

leadership. The effect of this change on community feelings of strength could not be underestimated and certainly would have more impact on the lives of community members than an intervention such as KAHPP. It should be noted that the community in which community strength did rise significantly was Bayulu. This was the community where leadership was observably most strong and stable throughout the course of the project.

**Research Objective 4:           Evaluation of the role of Aboriginal Health Workers in Health Promotion**

**Research Question 4.1:       Can Aboriginal Health Workers be utilised as facilitators of health promotion activity in remote Aboriginal communities?**

Training Aboriginal people to work as Health Workers began in the Northern Territory in the early 1980's, although Aboriginal women had worked as 'camp nurses' in Aboriginal camps and communities for many years before. Early training was, and in many cases, still is provided 'on-the-job', mainly by nursing staff. More recently, sub-tertiary and tertiary level courses have been established to formally train Aboriginal Health Workers and a career structure has been or is being established in several states, including Western Australia, Queensland and the Northern Territory (Collins 1995).

Because health promotion in the form of 'health education' was identified within the job description of Aboriginal Health Workers employed in the Kimberley, it was decided as part of the Kimberley project to provide specific in-service training in health promotion for Aboriginal Health Workers and later to involve these Aboriginal Health Workers in the community health promotion workshops.

Including the Health Workers in the workshops was seen as a way of involving them in the process of prioritising the health needs of the community and facilitating their potential role as health promotion 'agents' within the community who could then have a legitimate role in actioning health promotion issues and needs raised in the workshops and beyond.

Prior to the commencement of the pilot study workshops, in June 1990, Aboriginal Health Workers from all communities in the Fitzroy Valley area were invited to a five-day workshop on health promotion. This was conducted by Aboriginal Health Promotion training personnel from the Northern Territory Health Department's Aboriginal Health Promotion Program. A resource manual developed there, the Aboriginal Health Promotion Training Manual (Northern Territory Department of Health and Community Services 1989), was the main training document for this workshop.

Seven Health Workers attended. The group was composed of one Health Worker from each of Wangkatjungka (pilot community), Bayulu (main study community), Noonkanbah and Junjawa communities. These were the sole Health Workers in these communities. Two Health Workers also attended from Looma (pilot study community) and one from Fitzroy Crossing Hospital. Health Workers were also invited from Mowanjum (pilot study comparison community and main study community) and Beagle Bay (main study comparison community). The Health Worker from Mowanjum was intending to attend but sickness prevented her attendance.

All of the seven Health Workers were female and they ranged in age from 26 to 48 years. Their years of experience as Health Workers ranged from two to 13 years with an average of seven years experience.

A short questionnaire was developed to investigate the current state and future potential for health promotion activity as part of these Health Workers' normal duties (Appendix C). The questionnaire required participants to complete their own responses to a set of written questions. As in the main instrument, circles of increasing size were used to visually support items that called for responses along a five point scale.

Respondents were asked the question: *"As a Health Worker, how important for you is working in the community to stop health troubles before they start?"* All seven Health Workers selected the category labelled 'very important'. The respondents



were also asked how much of their work time was spent in carrying out a number of the main duties that constitute the Health Worker's role. These were:

- bandaging and dressing
- dispensing drugs
- conducting mother and baby clinics
- talking to people in the clinic about stopping health troubles before they start
- talking to people out in the community about stopping health troubles before they start.

The duties which the Health Workers nominated as taking up most of their time were 'bandaging and dressing' and 'mother and baby clinics', with five Health Workers indicating that they spent 'a fair bit' or 'lots' of their time on each of these activities.

Less of their time was indicated as being spent in talking to people about prevention, with only one of the Health Workers indicating they spent 'a fair bit' of time in the clinic talking to people about stopping health troubles before they start, and only two indicating they spent 'a fair bit' or 'lots' of time out in the community on this same activity.

While a sample of seven is not a representative sample of Health Workers, the information gathered was useful in indicating that Aboriginal Health Workers reported that they spend relatively little of their time actively involved in health promotion activities despite the fact that they rate these activities as important. The demand for treatment services means that most of their time is taken up with providing basic primary care services in the clinic.

This survey finding was confirmed in the community health promotion workshops. In each of the pilot communities and the main study communities where health promotion workshops were held, the Health Workers attended the community workshop either not at all or for a short period of time. The large number of people presenting for treatment at the clinic each morning prevented the Health Worker

from becoming involved in the workshops. Even where nursing staff provided cover to enable Health Workers to attend, they were reluctant to do so.

A barrier to involvement may be that Health Workers do not feel they currently have the skills to carry out health promotion activities and so would be reluctant to do this work, even if more time were available for it. On the item relating to this in the health worker survey, four out of the seven indicated they needed either 'a fair bit' or 'lots' of training and additional skills to do work in their community to 'stop health troubles before they start' (i.e., health promotion).

A deeper issue affecting Health Worker involvement in health promotion, and one more difficult to overcome, may be a cultural one related to their carrying out a one-to-one 'health education' role. It may be that, *'talking to people about stopping health troubles before they start'* by a Health Worker, either in the clinic or in the community, could be viewed in Aboriginal terms as an invasion of privacy. Such advice would be likely to involve subjective comment to close community contacts (possibly relatives) on health behavioural matters such as smoking, alcohol consumption or how to provide better hygiene or nutrition to children.

In traditional Aboriginal society, where tribes moved in a small, tightly-knit groups, a complex set of laws developed which governed who could be approached, what could be discussed and how this was done. Fundamental to this was a respect for personal space and privacy. These cultural mores are still strong, particularly among remote Aboriginal people and they do not condone intrusion into the personal behaviours of others. A Health Worker resident in their own Aboriginal community who would break this code of behaviour would risk being ostracised by the community. Such 'finger-wagging' behaviour could be considered 'too white' by many Aboriginal people.

The experience of the health promotion workshop and the reality of finding time to do this work within a clinical role did have a personal effect on one of the seven Health Workers who was trained at the training workshop for Health Workers and whose community later received a health promotion workshop. As a result of

observing this role conflict and becoming confirmed in the need for health promotion in her community, the same Health Worker lobbied the community council to support a Community Development Worker position. Once this was created she resigned her position as Health Worker to take up the new position.

## CHAPTER FIVE     DISCUSSION

In this final chapter, each of the KAHPP project objectives and research objectives will be discussed in turn. The limitations of the study will then be listed and discussed and recommendations for future research will be presented.

### **KAHPP Project Objectives**

***Project Objective 1: To develop instruments for and to collect baseline health data to assist in the planning and evaluation of Aboriginal health promotion activities.***

A culturally appropriate survey instrument (Appendix A) was developed for KAHPP and used to conduct cross-sectional surveys of three remote Aboriginal communities in the Kimberley region. The questionnaire and field study methods were piloted in 1990 (Spark et al. 1992), and the main study conducted in 1991.

Overall, the survey provided useful and apparently reliable information. Interviewers reported that the graphics used in the questionnaires assisted those with little English. This addressed, at least in part, a limitation noted by Cunningham et al of most 'quality of life' surveys among remote Aboriginal people, where English is often a second or third language (Cunningham, Sibthorpe and Anderson 1997). The interviewers reported that the ratings scales employed in the survey questionnaire were clearly understood. This was confirmed by a distribution of responses over the five points rather than clustering at either the end points or the middle. Consistency between the rating scale responses, open-ended responses, the observations of the interviewers and external indicators suggested that the responses were reliable.

Despite the utility of these scales in producing reliable information, one interviewer observed that one descending slope with the best situation at the top may have been better than the 'hill' with the moderate or middle position at its top. It was felt that the point at the top of the hill was occasionally mistaken for the superior position (for example, very happy), instead of the moderate or average rating position, requiring interviewer intervention and clarification for the respondent.

Several researchers have since used the KAHPP instrument as a model for developing questionnaires for projects that required surveys of health-related behaviours among remote Aboriginal communities in the Kimberley. These include a dog health program from Murdoch University (Williamson et al. 1994), a giardia prevention program by Murdoch University and the University of Western Australia, and a road safety project by Roadwatch at the University of WA (Cercarelli 1994). The questionnaire is also being used as a model in other areas of Aboriginal research (e.g. Senior, 1999), and also features prominently in an international marketing research text as an example of cross-cultural research (Craig and Douglas 1999).

The need in the KAHPP to gather baseline information on which to measure any changes where the program priorities were not known prior to the intervention resulted in a large 'umbrella' survey instrument. Despite the time that the survey questionnaire took to complete (approximately 45 minutes), most respondents gave this time willingly and no respondents failed to complete the interview. Furthermore, the style and format of the questionnaire minimised fatigue on both the interviewer and respondent. Analysis of open-ended questions at the front and end of the questionnaire showed no decline in willingness to volunteer responses. It was noted that respondents were more and more comfortable as interviews progressed and quite keen to have their say.

Compliance may have been enhanced by using a modified 'street-intercept' method of selecting natural community meeting points to conduct interviews, such as shade trees and outside the community store, along with the offer of a free soft drink ('cool drink').

Despite its apparent effectiveness in gathering survey information, it should be noted that several KAHPP questionnaire items were viewed as intrusive by some respondents. These were those concerning personal health-related attitudes and behaviours. For example, one Aboriginal interviewer reported of an older female respondent that: "You could see that some questions kind of *hurt* her". This relates to differing conceptions of what is private and public information between traditional Aboriginal and contemporary western societies. This is likely to be more of an issue

for older (more traditionally-orientated) respondents. One way to mediate such concerns is to acknowledge to the respondent when seeking cooperation that while the interview process might be disconcerting there is nevertheless a need to gather information in this way.

Another issue that the survey method raised was the use of Aboriginal and non-Aboriginal interviewers. Initially it was perceived that Aboriginal interviewers would be most acceptable to Aboriginal respondents. However the drop-out rate of Aboriginal interviewers was higher than that of the non-Aboriginal interviewers. The non-Aboriginal interviewers had considerable experience with Aboriginal communities and were aware of cultural issues and Aboriginal etiquette. Given the histories of the three communities (as ex-missions, stations etc.), the non-Aboriginal interviewers may have achieved an equally high response rate as Aboriginal interviewers because they were perceived as an authority figure. Respondents also may have felt quite willing to disclose information of a personal and community nature to a non-Aboriginal person who was perceived as external to the community.

Overall, by introducing some of the first applications of this kind of research applied to this context, the KAHPP methodology contributed to the development of a set of guidelines for the conduct of survey research in remote Aboriginal communities (Donovan and Spark 1997). These guidelines are gaining wide acceptance amongst public health researchers (Cercarelli 1994; Senior 1997) and are being used in a Masters of Public Health course, Approaches to Problems in Public Health, at the University of Sydney (Hawe 1997).

***Project Objective 2: To trial and evaluate a health promotion intervention in the Kimberley region based upon the Northern Territory Aboriginal health promotion approach.***

Kimberley community-level interest in KAHPP had its origins in Darwin in March 1989 when the then Director of the Kimberley Aboriginal Medical Services (KAMSC), Mr Kevin Cox, attended the launch of the Northern Territory Aboriginal Health Promotion Training Manual (Northern Territory Department of Health and Community Services 1989). This manual had been developed by the Aboriginal

Health Promotion program of the Northern Territory Department of Health. After examining this resource and the health promotion process involved, Mr Cox expressed enthusiasm for this approach to be implemented in communities served by KAMSC in the Kimberley. However KAMSC communities were delayed from being involved in KAHPP until towards the end of the project in late 1990. Nevertheless the willingness of Kimberley Aboriginal communities to accept and become involved in KAHPP was evident in both those served by the Health Department of Western Australia (HDWA) and KAMSC.

An illustration of this community-level support occurred at the end of the first (pilot) year of the KAHPP project in 1990. Several dozen residents from Wangkatjungka and Looma communities drove nearly 400 kilometres to attend the launch of KAHPP resources that had been developed in their communities at the Top End Health Minister's Meeting in Broome in December of that year (Media Release at Appendix H). Overall, the level of sustained support for the Kimberley Aboriginal Health Promotion Project from participating communities and health service organisations in the Kimberley confirmed the cultural appropriateness of the KAHPP intervention methodology.

This invites consideration of what were the key elements of the Northern Territory Aboriginal Health Promotion Program that enabled them to transfer readily to the Kimberley region. Health-related programs targeting Aboriginal people have been criticised where these programs have been designed specifically for a group of Aboriginal people from one region and then been transplanted to another group in a different geographic region. It has been claimed that this action denies the heterogeneity that has always been and remains a fundamental characteristic of Aboriginal society (National Aboriginal Health Strategy Working Party 1989). However, four key elements of the NT Aboriginal Health Promotion Program are identified that could have assisted the transfer to the Kimberley of this approach. These include:

#### **1. Engaging experienced Aboriginal health promotion facilitators**

Prior to the initiation of the Northern Territory Aboriginal Health Promotion Program in 1987, most 'health educator' positions in the Northern Territory had been occupied

by non-Aboriginal people. This had not been so much a case of deliberate discrimination as one where Aboriginal people were not actively recruited for positions. Also, at the time, mandatory educational qualifications presented a barrier to most Aboriginal people for the few positions available. The Northern Territory Health Department was preoccupied at the time with the recruitment, training and accreditation of the much larger, more 'clinical' workforce of Aboriginal Health Workers to staff primary health care centres in communities. Hence recruiting Aboriginal people to work in health promotion was not considered a priority.

This situation changed with the appointment of the first Indigenous person to the position of Coordinator of the NT Aboriginal Health Promotion Program in August 1987. The newly-appointed Coordinator began actively recruiting and training other Aboriginal people to fill further positions created within the program, culminating in a total of ten Aboriginal health promotion officer positions from 1989. The new positions were funded jointly by the Northern Territory and Commonwealth Governments as an initiative under the National Better Health Program (a Cabinet Submission to the NT Government was prepared by the author in March 1989).

The value of Aboriginal people working with Aboriginal people to promote better health has been described elsewhere (Spark and Mills 1988). Some of the advantages are obvious, such as the ability of Aboriginal people to gain acceptance and to 'speak the same language' when dealing with their own people (McFarlane and Fehir 1994). Others are less so; for example, Aboriginal people are more likely than non-Aboriginal people to appreciate and elicit for input and support, the various formal and informal groups of influence in the community, such as the community council, elders and Law custodians, women's groups, young people's groups, etc. Accessing these community networks is crucial in gaining consensus on health issues within communities and particularly for taking action on them.

An experienced health promotion officer from the NT program facilitated the community workshops during the pilot phase of KAHPP. The following year in the main study, community health promotion workshops were facilitated by a Kimberley Aboriginal person with a strong background in media and community development,



who would later become the first Manager of the Kimberley Aboriginal Health Promotion Unit.

## **2. Addressing community-nominated priorities**

Working from the community level has two benefits for health promotion in remote Aboriginal communities. Firstly, the principle assures greater relevance and appropriateness of the programs to the people affected, and it offers greater opportunity for people to be actively involved in the planning process themselves (Spark, Donovan and Howat 1991). Secondly, as Green and Kreuter have observed, this involvement should lead to greater ownership by the community:

*“The overwhelming weight of evidence from research on the value of participation in learning and behaviour indicates that people will be more committed to initiating and upholding those changes that they helped design or adapt to their own purposes or circumstances”* (Green and Kreuter 1990, p.322).

Mainstream health promotion has evolved from a health system that is disease-focussed. However, Aboriginal health promotion initiatives have, in general, concentrated on informing or educating on specific disease prevention or risk factor modification, as ascribed by an agency or organisation external to the Aboriginal group or community (e.g., diabetes, sexually transmitted diseases, injury, etc).

However well-intentioned on the part of health professionals and governments, or urgent in terms of the appalling state of Aboriginal ill-health, this approach can present non-Indigenous explanations of health problems which Aboriginal people may view with entirely different etiological interpretations. This can approach what Friere calls *cultural invasion*, in which the educator “...seeks to penetrate another cultural-historical situation and impose his system of values on its members” (Friere 1973, p.113).

This situation not only fails to build true community ownership of health problems, it may overlook, in instances where health promotion messages focus on behavioural changes, the underlying factors which predispose illness in communities. As Travers has observed:

*"Targeting culturally-biased health promotion programs toward a socially-disadvantaged population group may also perpetuate inequities if the program fails to address the environment within which the poor must attempt to implement health promotion recommendations" (Travers 1997, p.345).*

In terms of broader application to other Aboriginal contexts, the KAHPP approach of working with community-assigned priorities for the development of health promotion programs will not suit all situations. If anything, the current focus on health outcomes in the health policy sphere is likely to see future funding for health promotion programs even more closely aligned to externally-assessed priorities, and provided by category of disease and associated risk factors (Commonwealth Department of Community Services and Health 1994; Hawe et al. 1997).

However there are several mechanisms for ensuring that the integrity of the above process can prevail. Firstly, where a health issue is identified by an outside group as significant for a particular community (e.g., road injury), the project staff may adopt the process utilised in KAHPP of canvassing this issue with community stakeholders, as described previously. This may also reveal hitherto unknown aspects relating to the issue in the particular community or communities that may be relevant to any proposed intervention. This has been the approach adopted by the Kimberley Dog Program (Williamson et al. 1994) and the Kimberley Aboriginal Road Injury Program (Cercarelli 1994).

Another approach that embodies the NT/KAHPP philosophy is for an Indigenous community or group of communities to hold a community forum on health. This should be representative of all stakeholder and community reference groups and have the task of identifying and listing a set of community priorities for intervention. An example is the Torres Strait Health Strategy (Torres Strait Health Council 1993) which, in the years since its publication, has been a useful mechanism to attract additional resources for health improvement in both treatment and prevention services for the Torres Strait community. This approach has the advantage of being pro-active in that a community may invite potential funding and research bodies to submit proposals to collaboratively address the community's own nominated health priorities.

### **3. Operating within an Aboriginal cultural context**

It has been noted that Aboriginal concepts of health and illness may differ from that of non-Aborigines and that this may influence the way Aboriginal people access treatment services and take preventive measures to improve or protect their own health (Reid 1983). An understanding of this led to a bi-cultural approach to clinical service delivery for remote Aboriginal people in the Northern Territory (Devanesen 1985). It also served to create an awareness that health promotion programs for Aboriginal people in the Northern Territory needed to be culturally-appropriate (Spark and Mills 1988).

Pasick et al have employed the term 'cultural tailoring' to describe health promotion interventions, strategies and materials developed to conform with specific cultural characteristics. This term is distinguished from 'targeting' that implies identifying a population group for the purpose of ensuring exposure of this group to a particular intervention. 'Cultural tailoring' implies the adaptation and, potentially, the total redesign of the program to best fit the needs and characteristics of the particular group or community (Pasick, D'Onofrio and Otero-Sabogal 1996). The cultural tailoring of KAHPP was not confined to the form or language of the health promotion resources. It began with the needs assessment and underpinned the form and conduct of the entire intervention.

Using themes and concepts from Aboriginal culture to inform Aboriginal health promotion programs was a fundamental component of the Northern Territory Aboriginal Health Promotion Program (Spark and Mills 1988). However such approaches were not new and had been applied in the development of health education resources for the National Campaign Against Drug Abuse with Aboriginal communities in the Northern Territory and elsewhere (Frape et al. 1988; Sago 1988).

One element that was different in the Northern Territory and KAHPP approaches from previous Aboriginal health promotion programs was the application of the community-nominated health promotion messages to the production of television advertisements, rather than print media or radio. Television provided a medium where cultural themes could be incorporated into health communications through a short visual 'story' format. How this process operated and why it was considered effective

was described to the author by Wayne Barker, a Kimberley Aboriginal (Yarwuru) man who worked on the KAHPP project team in 1990/91 as follows:

*"...Aboriginal people are probably the easiest people to use multimedia techniques, over Europeans who are much more conditioned to thinking in terms of written word and patterned thinking; this component equals that component equals this outcome. Here you don't have to have an outcome; you don't have to have an end of the story."*

*".....(The ads were)..dozens of different messages - little mini stories....Aboriginal people are aural and visual people where messages presented come together in a montage format - because of the dynamics of thought patterns. Messages are not seen in terms of first contact - recall is important - a multiple collection of images or sounds that are associated through a whole cultural context so a thing may mean one thing one way but you turn the context the other way and it is open to re-interpretation. So to touch upon the realisation of those interpretations within Aboriginal people is the fine art of juggling a whole heap of messages together so that collectively they say, 'Right, this is about health promotion. This is not a message about respect yourself, this is not a message about drunken blackfellas, this is not a message about Safe Sex. This is a message about health promotion, like the general well-being of our people.'" (Barker, pers. comm. 1992)*

The use of stories as a legitimate strategy in health promotion practice has gained wider acceptance in recent years (Labonte and Feather 1996). However the health promotion 'stories' of KAHPP that became television advertisements less resembled formally-structured health education programs and bore more resemblance in form to the 'myth stories' of traditional Aboriginal society:

*"..myth-stories could be told in narrative or in song; but they could also be told through visual art forms and a variety of objects (rock art, ground and body paintings, emblems, string figures and so on) as well as through the medium of religious ritual; and they could be alluded to, perhaps added to or even partly reframed, in ordinary ceremonies or song-compositions or dreams" (Berndt and Berndt 1989, p.9).*

Some non-Indigenous Australians might consider programs such as KAHPP that rely on re-affirming traditional Aboriginal culture to be 'backward looking', dwelling almost sentimentally on a disappearing culture and unhelpful in equipping today's Aboriginal people for a place in contemporary Australian society. However, as has been discussed previously in this thesis, the 'proximity of the past' which exists in remote Aboriginal communities such as the Kimberley, due to the relatively recent

history of white settlement, means that the framework for Aboriginal culture remains strong. More importantly, as Hunter observes:

*"...contemporary Indigenous health promotion necessarily involves recovery and incorporation, that is, respect, renewal and adaptation of such previously held health promoting practices"* (Hunter and Garvey 1998, p.5).

Hunter and Garvey emphasise that this approach is far from a turning back of the clock; cultural and spiritual revival represents the fluidity and connection of the past in the present.

#### **4. Delivering back a short-term 'product' to the community**

An everyday aspect of life for residents of Aboriginal communities is the high level to which they are subject to research, and more recently, consultation, as to their health and social needs and priorities. The largest and most recent example of this was the National Aboriginal and Islander Health Survey in 1994. While research is important and consultation laudable, it is sometimes the experience of these communities that there is little tangible return from their involvement with this growing band of researchers and government agencies conducting 'community consultations' for a range of different purposes.

It was an aim of KAHPP to motivate community action on nominated health issues through the people's involvement in the health promotion workshops and the development of the television advertisements. KAHPP project officer, Wayne Barker described to the author how this process operated in relation to the production of *Pride and Respect*, the health promotion television advertisement from Bayulu community, which focussed on men's responsibilities for their families:

*"The filming of the advertisement was supported by the community. It was their project - they did the acting, the dialogue, it became a community effort. Informal feedback afterwards demonstrated that the community had approved of what the ad portrayed. It showed that the strength in the community was right across the board. It takes in women/the community/traditional knowledge and the community's coordination to be able to pull off the process of making the ad. Women sat down and discussed it as well and when we went there the second time, there was a big discussion about which group of people (women) would be in the shop scene. The ad was aimed at men in a way but it is the whole community's initiative. It is primarily based on men's input but the women had a say in how things should be seen, such as re-arranging the shelving in the shop scene - their contribution happened at that level."* (Barker, pers. comm. 1992)

This thesis has noted previously that Aboriginal communities have historically often been passive recipients of programs resulting from a plethora of (frequently changing) government policies. The introduction of a program such as KAHPP that encourages active participation by the community and documentation of their own issues is similar to the technique of 'Photo Novella', which seeks to use people's photographic documentation of their everyday lives as an educational tool to record and reflect their needs:

*"The power to seek out images and consciously to document them belongs not to outsiders, strangers, nor photo-journalists, but rather to the people who experience powerlessness as their dominant social reality"* (Wang and Burris 1994, p.185).

However a criticism of programs like KAHPP is that, while they may provide a medium for participants to express their own health issues, they do not offer solutions to broader socio-environmental problems that may predispose them. Programs such as KAHPP could be criticised for 'glossing over' serious health problems with health promotion advertisements seen as 'diversions' from the important business of addressing these problems in more concrete and specific ways.

Miller and Rainow have proposed that health researchers and program developers in Aboriginal communities should 'take a plumber' when conducting surveys or needs assessments (Miller and Rainow 1997). This refers to a responsibility upon researchers to provide 'concrete' outcomes for communities that can benefit them directly and immediately, particularly given their poor physical environments. These sentiments are commendable, however such interventions could be equally labelled as 'band-aid' and short-term and are a temptation to take a traditional 'expert' role and impose a solution from outside. They also overlook the reality that underlying social problems such as poverty do not lend themselves to rapid solutions.

Syme has observed that focussing on 'big picture' socio-environmental factors to improve health, while important longer-term objectives, can also become an excuse for not taking opportunities to initiate programs which provide modest and practical benefits, and which are possible to achieve in the short term with available resources (Syme 1997). It could be argued that programs such as KAHPP provide Aboriginal

communities with an opportunity to 'hear their own voices' and that these are valid and important intermediate experiences in accomplishment and power on the way to building participation in the solution of wider social problems.

***Project Objective 3: To establish a mechanism whereby further health promotion programs with Aboriginal communities could be sustained.***

Given the high level community and organisational support for KAHPP towards the end of the final year of the project in 1991, a number of individuals and organisations approached the author to canvass the possibility of continuing the health promotion activity in the Kimberley that KAHPP had initiated. A grant proposal was prepared by the author in consultation with community and organisational stakeholders, for the establishment of a Kimberley Aboriginal Health Promotion Unit (KAHPU).

This submission was later funded by the Health Department of Western Australia (HDWA) and the Kimberley Aboriginal Health Promotion Unit, was formed and based in Broome. The KAHPU was officially launched by the then Commonwealth Minister for Health in June of the same year. The KAHPU (also known by its Aboriginal name, *Mardja Bulli Ubbadijinga*, meaning 'strong healthy mob' in a local Aboriginal language, Walmatjarri), operated with an all-Aboriginal staff, consisting of a full-time Manager and several Health Promotion Officers (see Appendix I).

Despite a high staff turnover, the KAHPU, in the years since its establishment, has undertaken a variety of Aboriginal health promotion projects, several sponsored by Western Australia's Health Promotion Foundation, Healthway. These projects have covered health issues ranging from alcohol moderation to hookworm eradication. The success of KAHPU prompted the HDWA to fund several other Aboriginal Health Promotion Units in the State. The KAHPU is now integrated within the broader framework of the Kimberley Public Health Unit. Its 'Aboriginal Health Promotion' identity and function have been retained within this broader framework (Kimberley Public Health Unit 1998).

The author was later involved in gaining Queensland Health Department support for the establishment of an Aboriginal and Torres Strait Islander Health Promotion Unit in

Cairns, Far North Queensland, in 1992. The first coordinator of this Unit was an Aboriginal Health Promotion Officer from the original Northern Territory team.

### **KAHPP Research Components**

There were three main research components in KAHPP: Health Indicators; Media Evaluation; and the Intervention Impact. A fourth component examined the feasibility of using Aboriginal Health Workers in health promotion.

#### ***Research Component 1: Health Indicators***

The research objective for this component was to describe and compare the health indicators of adult males and females in three different remote Aboriginal communities in the Kimberley region and to consider the implications of the results for Aboriginal health promotion. In this study, three different types of community were surveyed according to a range of attitudes and behaviours relating to personal and environmental health:

- (i) an ex-mission community (*Beagle Bay*),
- (ii) a community excised from and adjacent to a cattle station (*Bayulu*), and
- (iii) a community on the fringe of the town of Derby, a centre for government services in the region (*Mowanjum*).

The health indicators assessed included items from Phases One, Three and Four of Green's PRECEDE-PROCEED model outlined in Chapter Two.

#### **Self-Assessed Health and Happiness**

The overall finding in this study of Aboriginal people rating their health as much better than it would be assessed objectively was consistent with results of the National Aboriginal and Torres Strait Islander Survey (Australian Bureau of Statistics 1996). However the author would agree with Senior that "...the way people define, react to and treat illness depends on the perceptions of the particular society in which they live" (Senior 1997, p.13). Therefore further research would seem to be needed to



develop instruments which can accurately measure this and other indicators of quality of life, particularly for remote Aboriginal people.

Despite this general finding, comparisons of results from the KAHPP on self-assessed health with a similar item from the National Health Survey (WA sample) (Australian Bureau of Statistics 1996), showed that the KAHPP result most resembled that of low socio-economic group West Australians (as determined by highest educational qualifications). This would indicate that for Aboriginal, as well as non-Aboriginal people, socio-economic status affects not just health status but people's perceptions of their own health. It could therefore be postulated that interventions that would improve employment, education and income for remote Aboriginal people might assist in improving their perceptions of their own health.

With regard to comparisons among the three study communities, Brady has observed that higher levels of pride and self-esteem appear to exist among Aborigines from communities formerly associated with the pastoral industry. This may provide some explanation for the consistently higher health and happiness ratings of self and others by Bayulu respondents, relative to the other two communities (Brady 1992).

In terms of self-assessed health and happiness, respondents from Mowanjum community saw a bigger difference between themselves and their community, relative to the other two communities, rating the health and happiness of others in their community much lower than their own. It may have been that a long-term diabetes research and intervention project at Mowanjum (O'Dea, pers. comm. 1998), that included community screening and feedback, had provided information which had served to lower their perception of their community's health, greater than it did their own. This explanation is consistent with the Mowanjum community generally having greater knowledge of chronic disease risk factors and more positive attitudes to adopting or maintaining health-enhancing behaviours. Previously described historical factors in Mowanjum, along with contemporary issues creating disharmony also could have affected Mowanjum people's general perception of the well-being of their community.

In terms of gender it is noteworthy that in all communities in this study, men were rated by both men and women as lower than women in terms of perceived health and happiness. Young people were rated higher in health and happiness by both men and women.

### **Health Behaviours and Attitudes**

Self-reported health behaviours and risk factors were consistent with health surveys of remote Aboriginal people conducted elsewhere, particularly with regard to alcohol consumption (Fleming et al. 1991; Hunter, Hall and Spargo 1992). With nearly 70% of young adults in this study found to be smokers, this would seem to emphasise the need to address the risk to health that tobacco smoking poses to Aboriginal people, particularly when considered along with other risk factors contributing to respiratory disease in Aborigines (Williams, Gracey and Smith 1997).

While limiting access to alcohol in communities such as Bayulu does appear to result in reduced frequency of alcohol consumption, it may also lead to higher intensity of drinking (and therefore potential harm) for those who do drink (Hunter, Hall and Spargo 1991). However anecdotal reports during the project from communities where alcohol was banned (through community by-laws that ban consumption of alcohol), such as in Bayulu and Wangkatjungka (pilot study), cited the positive impact that banning alcohol had in reducing family and social disruption and interpersonal violence, and in making more food available for children. It should also be noted, that the major reason given by KAHPP main study respondents for assessing themselves and others in their communities as having poor health or being unhappy, was 'grog problems'.

In general this study found a readiness among these remote Aboriginal people, particularly the young, to adopt health-enhancing behaviours. This was more so for some issues such as eating healthy food, than for others such as quitting smoking or reducing alcohol consumption. Nevertheless the latter two were still higher than might be expected, indicating at least the potential for intervention.

Based on the findings of this study it would appear that culturally-appropriate health promotion programs which were developed on these topics would be likely to gain acceptance. Since the time of KAHPP, the Health Department of Western Australia has acknowledged the need for health promotion programs to be appropriate to Aboriginal people and adopted such an approach for reaching the Aboriginal community for quit smoking cessation campaigns (Walley and James 1995; Walley and Sullivan 1998). However a caveat to this approach would be the existence of social and structural supports to sustain the behavioural changes, such as continued access to smoking cessation programs.

In acknowledging that preventing sickness required improving the home and community environments, Aboriginal people in this sample indicated their awareness of the contribution of the poor environments in which they live to their own health. The continuing paucity of these environments and the lack of sustained improvements in remote Australia have been re-emphasised in a recent study (Gracey, Williams and Houston 1997).

Therefore a recommendation from the KAHPP study would be that an early priority for health promotion programs in remote Aboriginal communities is the improvement of environmental health. Given the success of the KAHPP intervention in generating community support and participation, approaches to environmental health which involve communities in making the improvements to their physical environments, such as those adopted by Pholeros et al in remote communities in Central Australia, may be more likely to be sustained (Pholeros, Rainow and Torzillo 1993).

Overall then, a summary of the implications for health promotion suggests that environmental and nutrition issues are both vital and viable issues for intervention. Alcohol consumption and smoking, while at high levels, appear less amenable to a traditional health promotion intervention. Further community development and regulatory strategies would be needed to reduce alcohol consumption. Although the situation has since changed, at the time of KAHPP, smoking was not seen as either an individual or a community priority.

## ***Research Component 2: Media Evaluation***

The research objective for this component was to evaluate the reach and impact of the media component of the intervention. As noted previously, participants created storyboards from which health promotion advertisements were produced for television. These advertisements were later screened on a paid schedule on the Golden West Network (GWN) across the Kimberley region.

It was hypothesised that the community-devised health promotion television advertisements would have some impact on the awareness of the health issues covered by the advertisements and motivation to act upon those health issues in all communities, whether or not those communities developed the advertisements. It was further hypothesised that, as a result of community participation, these effects would be enhanced within the community that produced a particular advertisement.

Several general findings emerged in the evaluation of the reach and acceptance of Aboriginal health promotion advertisements in these three communities. Firstly it was evident that a relatively high reach of the target audience, particularly young Aboriginal people, may be achieved with a modest advertising budget, through the use of a media schedule which selects television programs popular with the intended audience. These advertisements depicted Aboriginal people and Aboriginal themes, a content that is infrequent in television advertising. Hence the very fact that they depicted Aboriginal people and themes may have attracted far more attention to the ads than they would have otherwise. Also, the Aboriginality of the ads may have led to them being rated very positively by the three communities.

Secondly, participation in the development of health promotion advertisements by Aboriginal communities does appear to be associated with greater recognition, message recall and acceptance, although the observed association is not a strong one. However, more localised, 'traditional' cultural themes may be understood in the community where they were developed and, while their appearance may gain broader endorsement among other Aboriginal communities, their specific messages

may not necessarily be understood to any depth outside of the local area where they were developed.

Finally, this study found the positive message executions used in *Pride and Respect* appeared to have greater acceptance and generated more positive feelings than the 'negative' or 'confrontational' execution in *Look Out*. While negative approaches may be regarded as appropriate and necessary by many people in the community, or within the health agency that is sponsoring them, they have the potential to be counterproductive if they arouse strong negative emotions. The impact of the media intervention might have been confounded in this case by the fact that the negative execution of *Look Out* generated less acceptance and less strength in Mowanjum, where the ad was created, which may have inhibited the community participation effect from appearing in the results.

Overall, it is very likely that the KAHPP health promotion television advertisements, *Look Out* and *Pride and Respect*, were quite different in style from advertisements that might have been developed for the same communities by external health agencies. External agencies would have been unlikely to include local Aboriginal cultural content, and advertisements would have been most likely to focus specifically on issues relating to known and accepted health risk factor behaviours in Aboriginal communities, such as excess alcohol consumption, diet and hygiene. This more conventional, 'categorical' approach is appropriate to most non-Indigenous contexts and is grounded in sound behavioural theory and accepted health promotion practice. However it was not the approach taken in the KAHPP study.

Nevertheless, the KAHPP study communities did produce advertisements that addressed issues of significance for Aboriginal health and focussed on at least two specific health priorities: alcohol and nutrition. These two health issues were also ones that these communities had prioritised in the Pre-test Survey. The salience of the issues of alcohol and nutrition for the study communities is reinforced by the fact that they were later nominated as community health priorities in the Derby ATSIC regional sample of the National Aboriginal Health Survey in which the study communities were included (Australian Bureau of Statistics 1996).

For both of the study communities, the messages of their health promotion advertisements were drawn less from the specific health problems and risk behaviours themselves (PRECEDE Phases Two and Three), and more from the predisposing, reinforcing and enabling factors which underpin them (PRECEDE Phase Four) (Green and Kreuter 1991). These factors included loss of power, self-esteem and identity, demotivation and a sense of hopelessness, alienation, peer group pressure, resentment towards imposed authority, lack of coping and assertiveness skills and lack of traditional authority structures.

Wayne Barker described how an appreciation of these factors informed the production of the advertisement, *Look Out*, by Mowanjumb community:

*"... We dealt with the supreme problem - alcohol and the transmission of STD's and things like that and the violence that erupts around it. And when we made the ad it was something that I felt a little uneasy about because we were going down the road of making a television ad about Aboriginal people being in distress and, unless we handled it correctly, all we were going to do was reinforce those stereotyped images of most of us of being no-good layabouts and stuff like that. But that was something that the community wanted to pursue, particularly the women. Long grass came from younger women - a real fear element for them they feel they are the victims of alcohol in that alcohol breaks down their resistance to say 'No'. And they're the ones that end up carrying the problems (STD's are very high here). Unless they say 'No', which is very difficult, within the cultural context and the social situation - the pressures are enormous on young women. These women are realising the problems but they are not empowered to make a choice. The message (in Look Out) is two-fold: can't have baby for women, and for the men - Aboriginal men are preoccupied with finding a mate. Aboriginal people are very social, bonded in a small group. The pressure to have children is enormous on men - the pride that men have in their children, the closeness that small unit has - the feelings of accomplishment as you have a child". (Barker, pers. comm. 1992)*

It has been noted previously that there is a tendency for Aboriginal health promotion programs that focus just on clearly-defined health risk factors to potentially reinforce Aboriginal people's powerlessness to act against the background of social dysfunction in Aboriginal communities (Travers 1997). What Wayne Barker highlights above is that, despite the execution being confrontational, *Look Out* focussed on a fundamental underlying issue: personal identity and status for Aboriginal males. Status for men in this case was derived from finding a mate and being a father. A primary message was that alcohol and consequential unsafe sex, with the risk of sexually transmitted infections, threaten that status through infertility and disease.

The Bayulu community's ad, *Pride and Respect*, was not confrontational in execution but there were similarities in theme to *Look Out*. In *Pride and Respect*, male identity and status were also central. The ad encouraged men to provide food for their families (with the inference of not spending all their money on alcohol), and to accept their responsibility to pass on cultural practices such as bush hunting skills to their sons.

A senior female Aboriginal Health Worker in Central Australia once ascribed Aboriginal society's problems, including health problems, primarily to the low self-esteem of Aboriginal men. Aboriginal women, she claimed, derived esteem from elements of their traditional roles, which were essentially intact; as mothers and carers. However, she observed that Aboriginal males' traditional position as powerful figures in their own society had been eroded and devalued by white society. Even a 'transitional identity' for many remote Aboriginal men, as stockmen in the pastoral industry, that was a source of great esteem and pride to many, was lost in the 1960's; ironically, as a result of gaining equal pay rights for Aboriginal workers (Hunter 1993). The Health Worker described the contemporary situation of many Aboriginal men as being like "...camp dogs around the white man's camp" (Abbott 1988).

Aboriginal men are grossly over-represented in data on incarcerations, injuries, suicides and alcohol-related deaths. These are symptoms of a precarious predicament. According to Hunter, the situation for Aboriginal men has worsened since the 1960's in remote regions such as the Kimberley where the shift from institutional dependency to welfare dependency for Aborigines has entrenched the male loss of power (Hunter 1993).

Media messages that promote Aboriginal male identity are no substitute for the things that Aboriginal men have lost or are denied, such as traditional land and contemporary education and employment. However the roles of the media are to educate or inform and to motivate or persuade (Egger, Donovan and Spark 1993). The issues of identity, self and societal esteem, and personal power and control, which were embodied in the KAHPP health promotion advertisements, are those which underpin Aboriginal ill-health and societal breakdown and also hold the keys to Aboriginal healing and recovery.

Brady, in an assessment of HIV/AIDS media strategies for Aboriginal and Torres Strait Islander people, cited the work of the author, including findings from the KAHPP study throughout her monograph. One of the findings listed in her report was:

*“The pride and self-esteem of Indigenous Australians are enhanced by their involvement in creating health promotion media and by seeing and hearing other Aboriginal people on screen, on radio and in print” (Brady 1994, p.vi)*

The value of the media intervention of KAHPP, particularly in the way in which it depicted images of Aboriginal men, was not so much in how it promoted individual health-related action (which is where the evaluation was focussed), as how it could have served to provide a vehicle for social action. In this way the media can be a tool for advocacy rather than education alone. Wallack has observed that a behaviour-change-focussed social marketing approach uses media to ‘give people a message’. By contrast, he notes that the role of the media in media advocacy is to ‘give people a voice’ (Wallack 1991).

While we are working for the longer-term solutions of building the social and environmental supports and infrastructure to improve the lives and health of Aboriginal people, we also need Aboriginal people who are motivated to be part of building that better future. A healthier future cannot be prescribed for them. The use of the media in this process, particularly where the messages are clearly Aboriginal, such as in KAHPP, can play their part in building this motivation. The following quote from an interview with Wayne Barker further illustrates this point:

*“Well, we had to pull out from the general community-type meeting and talk to people in their homes. We then had to find the focal point to use as a vehicle that showed that it doesn't take a great deal to be successful in anything that you do; what it does is takes commitment or motivation. What we did was tapped into the musicians that were there and they have got strong views on the role model that they play. Like the Looma project, once people saw that something was going to come out of it, that they had a large input into, suddenly we saw the motivation there. People started gathering around, turning up, talking, which at the very beginning we didn't have. Then we had to drag people out of the door to talk to them and now they were coming to us. So they were recognising us and the fact that we were developing a project within their community that required their input.”*



The KAHPP study informs us that remote Aboriginal people may choose to present their messages in a different way that may not have to be 'spelled out' in the way they might have to be for non-Aboriginal audiences. The presentation of these messages in mainstream media also provides a potential 'platform' on which to place Aboriginal issues on the agenda of policy makers and the wider community, as a media advocacy strategy (Wallack and Dorfman 1996).

The KAHPP study demonstrated that remote Aboriginal communities are very capable of appreciating and articulating not only their health problems but also their underlying influences. They are also capable of participating in a process to convey their messages to external audiences through the media. Considering that community mobilisation on health issues can be achieved in such adverse health circumstances as remote Aboriginal communities, future research interventions could profitably focus on how this can be sustained for intermediate and longer-term organisational and policy level changes and the development of instruments to measure these changes.

### ***Research Component 3: Intervention Impact***

The research objective for this component was to evaluate the impact of the KAHPP intervention on community strength and on community motivation to act on health issues.

In the limited time frame of this study, and given the limited nature of the intervention, changes in health indicators and health risk factor behaviours were not expected at the time of the post-test (approximately three months after the health promotion workshops). However it was hypothesised that:

- (i) participation in the community workshop and subsequent exposure to the television advertisements developed in the workshops would lead to increased motivation to act on health issues and an increased sense of community empowerment; and

- (ii) these changes would be greater within the communities that participated in the production of the advertisements relative to the comparison community.

It must be acknowledged that some of the impact variables that were hypothesised to change in a positive direction following the intervention failed to do so. Some, such as community strength, actually declined following the intervention.

A similar finding has been reported by Eng and Parker following an evaluation of a community health promotion program with an empowerment agenda (Eng and Parker 1994). In this study, the researchers observed that raising community consciousness among groups where there is a history of poverty and racial discrimination may produce negative as well as positive experiences. However in the KAHPP evaluation it is also likely that a number of methodological problems contributed. These include:

- the representation of complex constructs such as ‘empowerment’ or ‘community strength’ by only one or two items due to the constraints inherent in the process adopted; and
- some of the items relating to changes in the community were vulnerable to maturation and also sensitive to a number of confounding factors, including the influence of changing community leadership and fluctuating internal and external power structures.

Finally, the results invite some examination of what is realistically possible in terms of changing community attitudes, some of which may be well entrenched, from short-term community and media interventions alone. It may well be that given the overall dynamics of life in remote Aboriginal communities, the KAHPP was unduly optimistic in its output expectations. Therefore these findings should be assessed more from the perspective of a case study rather than as a formal randomised-control evaluation.

#### ***Research Component 4: Use of Aboriginal Health Workers in Health Promotion***

A fourth objective was to examine the feasibility of using Aboriginal health workers as facilitators of Aboriginal health promotion programs. It was thought that Aboriginal

Health Workers could undertake this within their work roles, and, as community residents, initiate and participate in community development programs. This objective sought to investigate whether Aboriginal health workers could be utilised as facilitators of health promotion activity in remote Aboriginal communities and to identify what barriers exist to Aboriginal health workers doing health promotion.

The number of Aboriginal Health Workers involved in this study was small and so caution must be exercised in generalising the findings of KAHPP in regard to this research component. However several broad observations may be made on the basis of both the small health worker survey and the project implementation itself:

- Current workloads and staffing ratios mean there is little time available to Aboriginal Health Workers to do health promotion. Most health services operating in remote Aboriginal communities are stretched to capacity in the face of the epidemic of chronic and infectious disease and injury that pervades in most communities. The Aboriginal Health Worker to community population ratio target, in most state and community-controlled health services in remote northern Australia, is one Aboriginal Health Worker for 150 community residents. However few services are able to meet this target. Therefore the Aboriginal Health Workers, along with nursing and medical staff, spend the majority of their time attending to the treatment of the patients that queue for the health centre to open. There is little time left for health promotion strategies, apart from opportunistic patient education.
- In reality, despite the rhetoric of primary health care philosophy as it is espoused, Aboriginal Health Workers work predominantly within a 'medical model'. Their role in this model involves a series of clinical procedures. After a while, Aboriginal Health Workers are used to and comfortable within the clinic-focussed role. As stated previously, despite the occasional intervention of a motivated doctor, nurse or Aboriginal Health Worker Manager who is interested in outreach programs, in most clinics there is little time for anything other than treatment, predominantly palliative. The prevention focus of most health clinics or centres in remote Aboriginal communities is at best, secondary or tertiary prevention. Therefore, to many remote Aboriginal people, the focus of 'health' in their

community (the health centre) is actually the focus of illness. Even primary prevention activities involving Aboriginal Health Workers, such as 'well baby' and immunisation clinics, generally occur at the health centre. It was illuminating to a community chairperson in one of the KAHPP pilot communities that the KAHPP concept of health promotion involved 'health' in an Aboriginal community being "*..more than just the health clinic*" (Killer 1990).

- Aboriginal Health Workers can believe they do not have the training to undertake health promotion. While state and community-controlled health services have developed training programs for Aboriginal Health Workers for primary health care certificates and diplomas, many still have no formal qualifications. Those who do may have some brief introduction to basic principles of health promotion, but this is unlikely to be sufficient to enable them to plan, implement and evaluate health promotion interventions outside of basic patient education, as described previously. The Northern Territory Health Department has taken a lead in this area in developing in-service courses to provide several levels of health promotion training programs available to Aboriginal Health Workers in the Northern Territory (Public Health Strategy Unit 1997; King and Smith 1998).
- Aboriginal Health Workers may feel awkward or ashamed to undertake Aboriginal health promotion in their own communities. Aboriginal Health Workers, unlike nursing or medical staff working in remote communities, are from the communities in which they work. It may seem appropriate from a health promotion perspective for an Aboriginal Health Worker to provide opportunistic patient education, for example, to a diabetic patient to cut down on fatty food or to a patient with respiratory complaints to give up smoking. However from an Aboriginal cultural perspective, depending on the gender and status of the Aboriginal Health Worker and of the patient, such advice may not be appropriate or welcomed.

Since the time of the KAHPP project, state and community-controlled health services have made efforts to address at least some of these issues. Specific initiatives have included splitting the roles of Aboriginal Health Workers within health centres to allow those who wish to concentrate on clinical skills to do so, while others can work

in outreach projects in the community, including health promotion projects. However this is only possible in larger communities of sufficient size and health service staffing establishment to allow such an arrangement.

A recent approach has been for some Aboriginal Health Workers to work in specialised fields where specific training is provided and prevention activities are highlighted. These include nutrition, sexual health and significantly, environmental health. Forrest has observed that most Aboriginal Health Workers have been recruited as generalists and in the past either undertook specialist roles without training or saw these roles performed by non-Indigenous people (Forrest 1995).

The value of investing in specialist training for Aboriginal Health Workers is highlighted in Environmental Health Worker Training Programs now available in technical and health training institutions in northern Australia. Environmental Health Workers can now be found in remote Aboriginal communities in Western Australia, the Northern Territory and North Queensland. This initiative not only promotes better environmental health in the community outside of the health clinic, but also provides meaningful and important work for Aboriginal men. Aboriginal men have tended to be the minority of generalist Aboriginal health workers, but make up the majority of Environmental Health Worker numbers.

Aboriginal Health Workers are potentially important agents for health promotion activity in remote Aboriginal communities. Their role in this field has the potential to expand as their numbers expand within health services. However to carry out this role effectively, Aboriginal Health Workers also need training and professional support in health promotion, the latter being best supplied by specialist Aboriginal health promotion officers working at a large community or district level.

### **Limitations of the KAHPP Study and Suggestions For Future Research**

The methodological limitations of this study, mainly concerning internal validity, have been listed at the end of Chapter Three, Method. However there are some broader issues relating to both the external validity of the findings and matters that might be worthy of consideration in future research in this field. These are discussed below.

### **Sampling Issues**

The KAHPP study included three communities only: two in the intervention condition and one as a control or comparison community. With the population of KAHPP communities being relatively small (200-300), there were implications for statistical power in the interpretation of certain results. For example, under Research Question 2, the Media Evaluation, with respect to some variables relating to viewership of the health promotion television advertisements, cell sizes fell below 30 for at least one community. This may have been overcome with a greater expenditure on the paid advertising schedule, to increase the percentage of the target audience exposed to the ads. While it was quite acceptable by comparison with mainstream advertising campaigns that approximately one half of the total sample had seen the advertisements, an exposure of 70-80 percent would have largely addressed this problem.

### **Comparison Community**

A related problem to the above was that the comparison community, Beagle Bay, could not be a 'true' control community as it was incidentally exposed to the television advertisements. While a lack of historical association meant there was little detectable 'drift' between residents of any of the three communities, no mechanism existed for Beagle Bay to be blocked from broadcast within the Golden West television satellite 'footprint'. This may have confounded some potential intervention/comparison community effects in the Media Evaluation. To overcome this would have meant having a comparison community outside of the Golden West 'footprint' such as in the Northern Territory. While possible, this would have created logistical problems and been resource-intensive. Also the Northern Territory communities had already been exposed to previous health promotion advertisements by the Northern Territory Aboriginal health promotion program in 1988-89.

### **Study Size**

As well as the issue of instrumentation for complex constructs such as empowerment, discussed previously, the absence of detectable pretest-posttest changes due to the impact of the intervention may have been affected by the overall size of the study. It may be that, given factors such as fluctuating community numbers, the variety of

different interventions occurring concurrently in remote communities, and changing community leadership, an increase in the number of communities to 10 or 12 in each condition is needed for changes to be detected in such variables.

Researchers such as Steckler et al., in a recent review of mainstream health promotion interventions in the United States have argued for such large-scale interventions involving multiple communities in both experimental and control conditions to scientifically assess the effect of community-level interventions (Steckler et al. 1995). However they also note that such large-scale community studies are expensive and difficult to do. The resources devoted to large-scale interventions would be far greater than the total funding that was available for the KAHPP project (\$150,000) and the intervention time much longer. This would particularly be so if these interventions were also to address socio-environmental factors as well as behavioural and attitudinal factors.

### **Research Methods: Including Qualitative Methods**

In a recent paper on health promotion practice, Syme questioned the reliance on current linear multivariate statistical methods to detect changes in health behaviours in populations. He suggests that such methods may be missing the important issues, such as quality of life issues, particularly for sub-groups of the population such as ethnic minority groups and recommends that practitioners might be better served by qualitative methods (Syme 1997).

The KAHPP study included qualitative methods in the pilot phase and to generate items for the questionnaire. Further research in this field might explore greater use of qualitative methods to evaluate the effectiveness of Aboriginal health promotion interventions. These may not replace, but could at least complement the use of quantitative methods. Such methods would be relatively somewhat easier to train Indigenous health promotion workers to employ. Some work in this area has been effectively undertaken by Donovan et al. in training Indigenous people to undertake qualitative research to gather information for the evaluation of health promotion campaigns to reduce Indigenous alcohol consumption in the Northern Territory and Western Australia (Donovan et al. 1997). Qualitative research methods are also emphasised in a guide for health promotion evaluations in remote Indigenous

communities that recommends participatory methods of evaluation as most appropriate for these situations (Colin and Garrow 1998).

### **Conducting Health Promotion Interventions in Remote Aboriginal Communities**

Undertaking health promotion interventions in remote Aboriginal communities presents a range of challenges. Several of these are discussed below with a view to informing future research interventions in this field:

#### **Remoteness**

Perhaps the most fundamental of barriers to undertaking research in areas such as the Kimberley is the remoteness of the study area itself. This requires a different scale of research planning, both in human and financial resource input, compared with urban and rural health interventions, and in terms of factors such as accessing target populations, and maintaining research links with the University base. A parallel issue is the seasonal nature of working in remote areas of northern Australia, particularly with regard to the social and physical barriers presented by the wet season. While some work can be done outside of this period, because the seasons influence migration of community residents, the effective year for field-work is reduced to the eight months from March/April to November/December.

#### **Study 'Lead Time'**

Cultural issues relating to the conduct of survey research in remote Aboriginal communities have been discussed elsewhere (Donovan and Spark 1997). However an essential principle of working effectively in such environments is the need to establish trust between the researcher and the community. The researcher in a remote Aboriginal community suffers from being 'the outsider' in an environment where many other researchers have come before. Because of this, an attitude of scepticism has developed in many communities toward the value of participating in research that does not appear to produce tangible benefits. This fact was noted in the National Aboriginal Health Strategy Report in 1989 (National Aboriginal Health Strategy Working Party 1989). This attitude was observed during interviewing for the KAHPP main study when one respondent, an old man, stated prior to sitting down to begin his interview: "*...all my life white people have been*



*coming here asking me questions.....but nothing ever changes."* Fostering trust in the face of such attitudes often requires considerable time and 'in-person' meetings with relevant community leaders and groups to establish what the project objectives are and what they are not, so as not to raise expectations beyond the scope of the project.

It was the need to build up trust in the Kimberley communities that demanded a full year for the pilot phase of KAHPP. Any truncation of this period could have jeopardised the willingness of communities to participate further in KAHPP. The value of this period was borne out by the level of the support that the project received in the study communities and health services of the region; sufficient for them to wish to establish an ongoing structure based on the KAHPP approach. However this 'establishment year' was costly in terms of overall project resources.

Nevertheless, provision for adequate lead time should be a consideration in future health promotion research interventions in remote Aboriginal communities, particularly where the project team are mostly external to the study area.

### **Future Directions for Aboriginal Health Promotion**

The establishment of Aboriginal health promotion in the late 1980's was always to be a difficult task as it had to evolve from within a discipline that itself is just decades old and is still struggling to gain acceptance within a clinically-focussed health system. However the 1990's have seen Aboriginal health promotion develop to a point where it can make a valuable contribution to the larger and challenging task of improving Aboriginal health. This is greatly due to the incremental recruitment and retention of a critical mass of talented Aboriginal and Torres Strait Islander people working in health promotion. The way in which this field develops and evolves is largely for these Aboriginal health promotion professionals to determine. However, some tentative principles are offered for consideration:

### *Some Principles for Aboriginal (and Torres Strait Islander) Health Promotion*

#### *1. Aboriginal Health Promotion by Aboriginal people.*

This principle has been discussed previously and needs little further elaboration. The concept of trained Indigenous people working in health promotion has diffused quickly through community-controlled and government health services to the point where it is now uncommon to see non-Indigenous people working in health promotion positions that serve predominantly Aboriginal populations, except on a short-term, training basis.

Designated Aboriginal Health Promotion Officers form the 'second tier' of health promotion services, providing support, piloting projects, developing proposals, building community capacity and creating networks with those workers at the ground level. The 'first tier' workers could be either community-based Health Promotion Officers if resources permit, or motivated Aboriginal Health Workers. Depending on the health issue, they could also include community-based workers from other government agencies such as Sport and Recreation or Community Services, or volunteers or members of local resource centres, such as women's resource centres.

The Aboriginal health promotion workers at the 'first tier' are crucial for developing direct linkages with community networks and are best placed to build up long term relationships to enable the building of health promotion capacity within the community, among individuals and groups.

#### *2. Adopt a comprehensive range of strategies*

The Northern Territory Health Services' publication 'Health Promotion Training in the Northern Territory' identified a change in approach from the late 1980's to the early 1990's. The 'change' was described as being from a "*....media/campaign generating and focussed unit, to using participative and community development approaches to improving the health of the community*" (Public Health Strategy Unit 1997, p.2).

This change of direction may have been a positive move, to broaden the service's experience of a different strategy direction. However it could also be symptomatic of a view current in some Indigenous health services in Australia. This view is that as Aboriginal people are disempowered and belong to the lowest socio-economic group, only community development strategies should be employed in Aboriginal health promotion. Taken to extremes, this could mean that only programs developed within a particular community could be used in that community. This kind of ideologically-driven 'strategy purity' clearly limits the experience of the Aboriginal health promotion workers of the broad range of health promotion strategies and methods available to them. This in turn could limit the effectiveness of their interventions.

The philosophy of the KAHPP's intervention was to work from 'the ground up' and to draw from communities' own experiences in nominating health issues and participating in the process of developing health promotion messages. Taking these messages to a mass medium did not diminish the integrity of this community-informed process and this was evidenced by the communities' enthusiasm for the project. In fact it created an opportunity for mass media approaches to 'blend' with community development in a strategy 'mix'.

It is likely that, as elsewhere in the health promotion field, Aboriginal health promotion programs will be most effective where, depending on the issue, they also include the appropriate mix of contemporary health promotion strategies, including educational, motivational, economic, regulatory and technological strategies (Egger, Spark and Lawson 1990). For example, if a remote Aboriginal community or a group of remote Aboriginal communities were to nominate improved nutrition as a health priority for intervention, the following strategy mix could be applied:

*Educational:*

Healthy cooking classes begin in the community to teach mothers and carers how to cook easy, low-fat meals using available foods.

*Motivational:*

Health workers develop good nutrition stories with community musicians to broadcast on local radio station.

*Economic:*

Community store subsidises fresh fruit and vegetables to equal city prices.

*Regulatory:*

Community council passes resolution for community store to substitute high fat take-away foods with healthy alternatives and also provide healthy 'community breakfast' for pre-school and school children.

*Technological:*

Solar-powered hydroponics systems installed for family-groups to cultivate 'family gardens' for fresh vegetable supplementation.

A mechanism for determining the appropriate mix of strategies for Aboriginal health promotion would be to adopt Hawe and Shiell's 'Portfolio Approach' to health promotion program selection (Hawe and Shiell 1995). This approach advocates allocating resources for health promotion in the way that one would construct a prudent personal investment portfolio. This would mean balancing 'safe and best programs' where health outcomes are more certain, such as vaccinating 'at risk' Aboriginal adults against pneumococcal pneumonia, with programs that might provide less certain health outcomes at higher risk (but potentially high gain) such as conducting Aboriginal men's health groups.

### 3. *Function within a public health framework*

One way of ensuring that Aboriginal health promotion enlists a comprehensive strategy mix is for this area to function within a broader public health framework. This approach was taken with the organisational integration in 1997 of the Kimberley Aboriginal Health Promotion Unit, established following the KAHPP, within the Kimberley Public Health Unit. The importance of applying a broader framework in addressing the problems of Aboriginal health has been emphasised by Mathews:

*"Health service planning has sometimes been misdirected because of a romantic attachment to third world models, a commitment to the new public health which runs the risk of neglecting the old public health, a reluctance to consider medical and scientific solutions, and an implicit assumption that culturally appropriate services need not aspire to equity in health outcomes for Aboriginal people"* (Mathews 1993, p.8)

A caveat to this kind of integration would be that the identity and philosophy of Aboriginal health promotion, including a community-informed approach, is not subsumed within a totally medical-scientific model, and that some of the 'higher-risk' programs mentioned above are not overlooked in favour of the safer, more conventional approaches.

Some advantages of Aboriginal health promotion functioning under the broader framework of a public health unit include gaining access to resources such as health status information and epidemiologists who can assist with formative research and evaluation of programs. Co-location with other health professionals such as nutritionists and environmental health officers also provides important linkages in assisting intersectoral approaches for areas such as food supply and housing improvements. Conversely, the culturally appropriate approaches of Aboriginal health promotion can influence the programs conducted throughout the public health unit and facilitate health promotion opportunities for all of the unit's programs.

Not all situations where Aboriginal health promotion operates would be suitable for this sort of integration, such as Aboriginal health promotion workers operating within community-controlled medical services. However, what is being espoused for more strategic public health outcomes is a philosophical rather than merely a physical integration of services. The main benefit is collaboration for enhanced Aboriginal health promotion activity. This could avoid the frequent criticism made by sole-practitioner Aboriginal health promotion workers that they work in isolation with inadequate professional support.

#### *4. Operate from a strong cultural foundation*

The study population of KAHPP was remote-dwelling Aboriginal people of the Kimberley region. 'Remote' distinguished this population from urban and rural-dwelling Aboriginal people elsewhere. Associated with this geographic distinction were tangible elements of Aboriginal culture evident in terms of traditional language and customs. Yet within this remote grouping, differences were acknowledged, arising mainly from historical experiences since white colonisation. Some of these historical differences were reflected in the origins of the three study

communities: *mission, station and town camp*. Yet while the health promotion media messages of KAHPP were most salient in those communities that had created them, they were also considered 'strong' across all three communities. This was particularly evident in the almost unanimous acknowledgment that the ads were '*a good thing for Aboriginal people*'.

The reason for this appeal for Aboriginal people may be found in what Hunter terms 'pan-Aboriginality'. Borne of a reaction to Aboriginal people's separation from each other with colonisation and exclusion from white society, pan-Aboriginality binds together Aborigines, particularly those of mixed descent attempting to consolidate their links with tradition, with a reaffirmation of what it is to be Aboriginal (Hunter 1993).

In the 1960's and the 1970's, pan-Aboriginality was represented in terms of protest and struggle to achieve equal rights for Aboriginal people in mainstream society. In the 1980's and 1990's this has broadened to appreciate and include traditional Aboriginal culture in a multicultural Australian society. A modern symbol of pan-Aboriginality is the Aboriginal flag. While not belonging to any particular group or region this symbol unites Aboriginal people across Australia, whether rural, urban or remote.

Traditional Aboriginal society was once an ordered society. Following colonisation, in remote areas like the Kimberley, structures such as missions and stations provided a transitional order for those who were part of them, albeit with great repression.

Today Aboriginal society is not an ordered society (Tatz 1995). The full impact of a changed lifestyle is reflected in the level of illness that exists among Aborigines. If health to Aboriginal people means life then perhaps, as well as treating the sick, strengthening Aboriginal life, including culture, can help to place Aboriginal society on the path to recovery. For some time it has been necessary to make Aboriginal and non-Aboriginal Australians aware of the drastic state of Aboriginal ill health. A negative consequence of this is that we may make Aboriginal people believe that their fate is inevitable.

Aboriginal health promotion is uniquely placed to assist in the job of healing Aboriginal society. In promoting not just healthy behaviours and healthy environments but those elements of traditional culture that were health-enhancing, it sends a message of hope and renewal to all Aboriginal people.

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## LIST OF APPENDICES

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## APPENDIX A

### KAHPP Survey Instrument

(Post-test only – includes all Pre-test items plus media intervention items)

**KIMBERLEY ABORIGINAL  
HEALTH PROMOTION PROJECT**

**Wave 2**



**curtin**  
University of Technology  
Perth Western Australia



**CARING AND SHARING**

# Personal Consent Form

I, \_\_\_\_\_ understand that this survey has been designed to find out needs in my community as part of a program to promote better health for the people of the community.

I understand that as part of this the Health Worker/Interviewer will be asking me some questions. I know that I do not have to answer these questions and I may stop at any point. I have had a chance to ask them any questions I had.

I am willing to be part of this survey.

signed \_\_\_\_\_

witness \_\_\_\_\_

date \_\_\_\_\_

# INTERVIEWER INSTRUCTIONS

(Read this before starting)

This survey is designed to find out information about some health needs of people in your community upon which to base programs. Questions ask things like what people do and think about their own health and the health of other members of the community.

Before starting the interview, say:

*"I would like to ask you some questions to find out about health needs in our community. This will take about half an hour. Is that okay with you?"*

Make sure the person is comfortable, knows what the interview is for and signs the Personal Consent Form. If possible, do the interview somewhere reasonably quiet, where the person won't be distracted too much.

Make sure the person has heard the question clearly and understands what is asked, has time to answer and gives his or her own opinion. Use the pictures and, if possible, use language as well as English to get the meaning across.

Where someone doesn't know how to answer a question, doesn't say much or says "I don't know", you should ask the question another way before moving on. If you don't understand the answer you need to PROBE, by asking "What do you mean by that?" or "Why do you say that?".

Have the survey form open so that the person being interviewed can see clearly any pictures and also the different options they can choose for an answer and have them point to the one they want. Fill in the survey form yourself in pencil or pen. Write extra comments anywhere except in the margin on the right hand side.

Some questions need a tick in a box or circle, or a word to be circled. Some questions need a few words written on the form. Print these if you can.

You need to interview fifty (50) men and fifty (50) women from the community. These should be adults, eighteen (18) years or older. See if you can get people from different age groups; some younger adults, some middle aged and some older people.

If possible, don't interview more than two people from the one house. Interview some people from all parts of the community and from the different groups which make up the community.

Each interview should take you about half an hour.






Thank you for assisting with this project and good luck!

**EXAMPLE (Do this first as a practice)**






In some questions I will ask you how strong something is for you, or how much you think something is true. You should answer by pointing to one of these circles where the biggest circle means 'a lot' and the littlest circle means 'not at all'. For example, let me ask you this question...

How much do you like drinking cool drink?

If you like drinking cool drink "Lots", you should point to the biggest circle (Interviewer points).  
If you like drinking cool drink "A fair bit", point to the next biggest circle (Interviewer points).  
If you like drinking cool drink "Some", point to the next biggest circle, the one in the middle (Interviewer points).  
If you only like drinking cool drink "a little bit", that is, not much, point to this (Interviewer points).  
If you don't like drinking cool drink at all, point to the dot (Interviewer points).

Lots	A fair bit	Some	A little bit	Not at all
				
(5)	(4)	(3)	(2)	(1)

Now let the person do this one.  
How much do you like eating icecream? (Tick one circle or dot)

Lots	A fair bit	Some	A little bit	Not at all
				
(5)	(4)	(3)	(2)	(1)



Do Not write in  
this space

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	(1-5)
----------------------	----------------------	----------------------	----------------------	----------------------	-------

1. Sex (Circle one)

male (1)

female (2)

<input type="text"/>	(6)
----------------------	-----

2. Age

\_\_\_\_\_ years

<input type="text"/>	<input type="text"/>	(7-8)
----------------------	----------------------	-------

3. (a) Were you born in this place? (Circle one)

Yes (1)

No (2)



(b) If not born here, where were you born? (Write in)

<input type="text"/>	(9)
----------------------	-----

<input type="text"/>	<input type="text"/>	(10-11)
----------------------	----------------------	---------

4. How many years have you lived in this community? \_\_\_\_\_

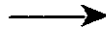
<input type="text"/>	<input type="text"/>	(12-13)
----------------------	----------------------	---------

**5.** Do you have a job right now? (Circle one)

☐

(14)

Yes (1)



No(2)

If yes, what is it? (Write in) \_\_\_\_\_

☐

☐

(15-16)

**6.** Do you own a car? (Circle one)

Yes (1)

No(2)

☐

(17)

**7.** (a) Do you smoke? (Circle one)

Yes (1)



No (2)

☐

(18)

(b) If yes, how strong is the feeling that you should give up?

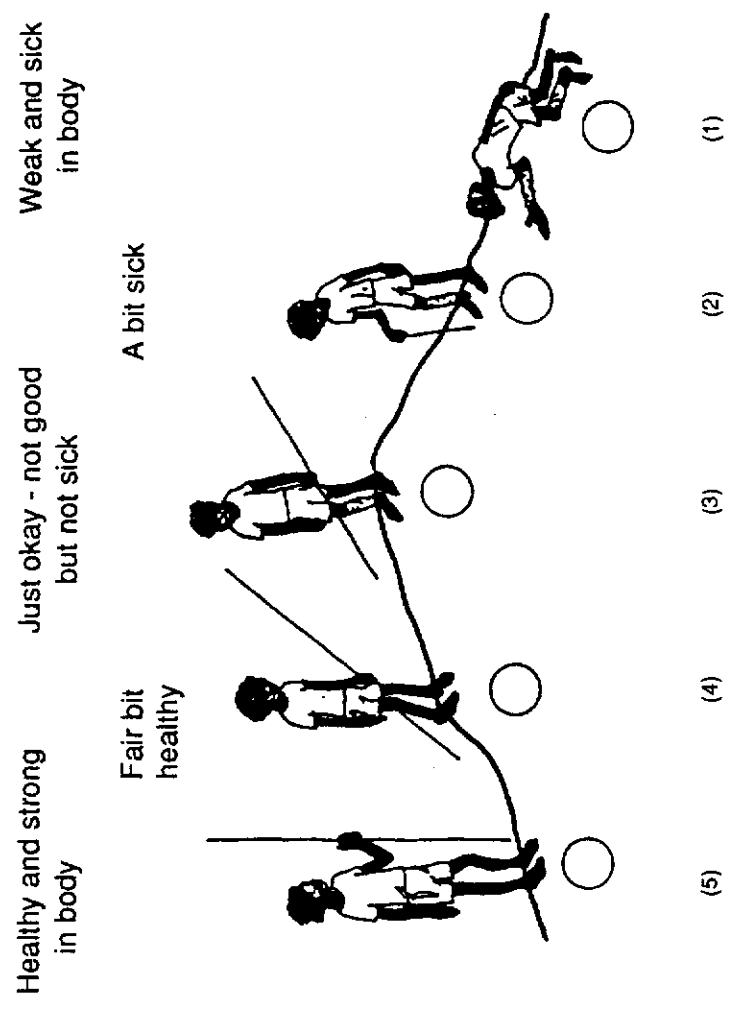
	Lots	A fair bit	Some	A little bit	Not at all
	(5)	(4)	(3)	(2)	(1)

☐

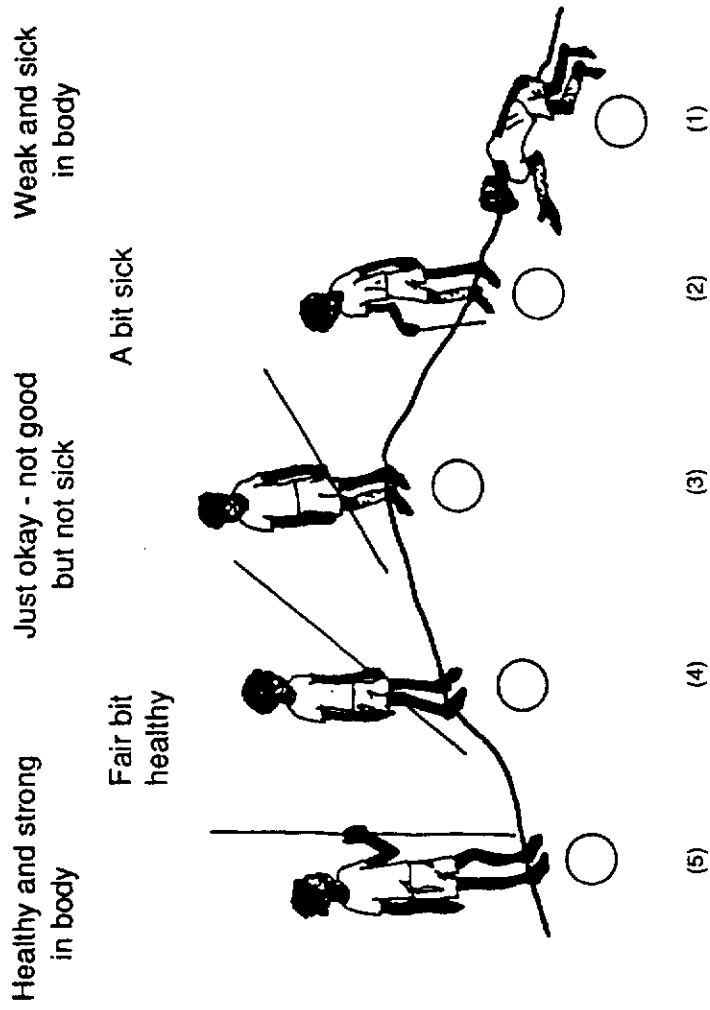
(19)

Read this story before Questions 8, 9, 10 and 11.

There is a hill and on one side there are people who are healthy and strong in their bodies and on the other side are people who are sick and weak in their bodies. In the middle are people who are just okay - not very sick, but not with good health either. Half way down one side are people who are a fair bit strong and healthy. Half way down the other side are people who are a bit sick.



8. (a) Where are most of the MEN in your community on this hill? (Tick one circle)



☐ (20)

(b) **Why do you think so?** Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer. (When they have finished, ask "Are there any other reasons?")

**Healthy and strong - Why?**

(01) ☐ looking after themselves

(02) ☐ busy working

(03) ☐ hunting and fishing

(04) ☐ exercise/physically active

**Weak and sick - Why?**

(05) ☐ grog problems

(06) ☐ don't eat good food

(07) ☐ cold sick

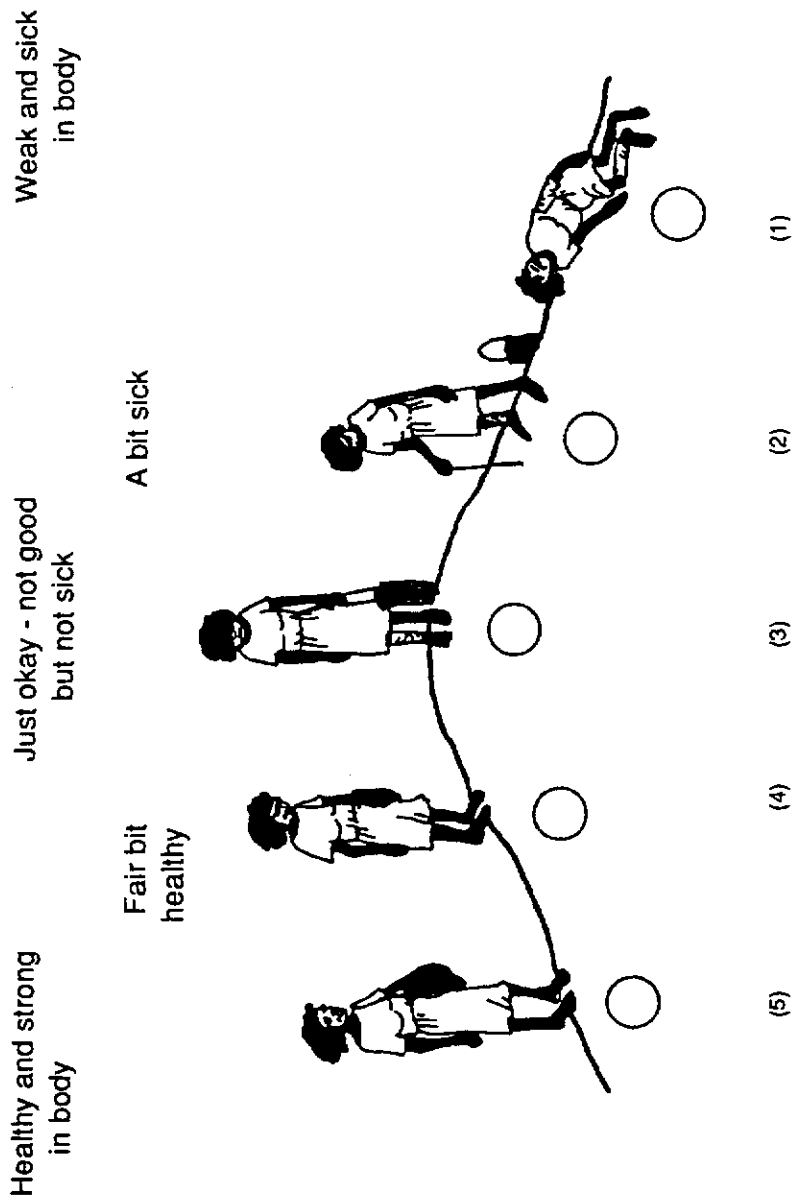
Other (Write In) \_\_\_\_\_

☐ ☐ (21-22)

☐ ☐ (23-34)

☐ ☐ (25-26)

9. (b) Where are most of the WOMEN in your community on this hill? (Tick one circle)



(b) **Why do you think so?** Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer. (When they have finished, ask "Are there any other reasons?")

Healthy and strong - Why?

- (01) ☐ looking after themselves
- (02) ☐ busy working
- (03) ☐ hunting and fishing
- (04) ☐ exercise/physically active

Weak and sick - Why?

- (05) ☐ grog problems
- (06) ☐ don't eat good food
- (07) ☐ diabetes & high blood pressure

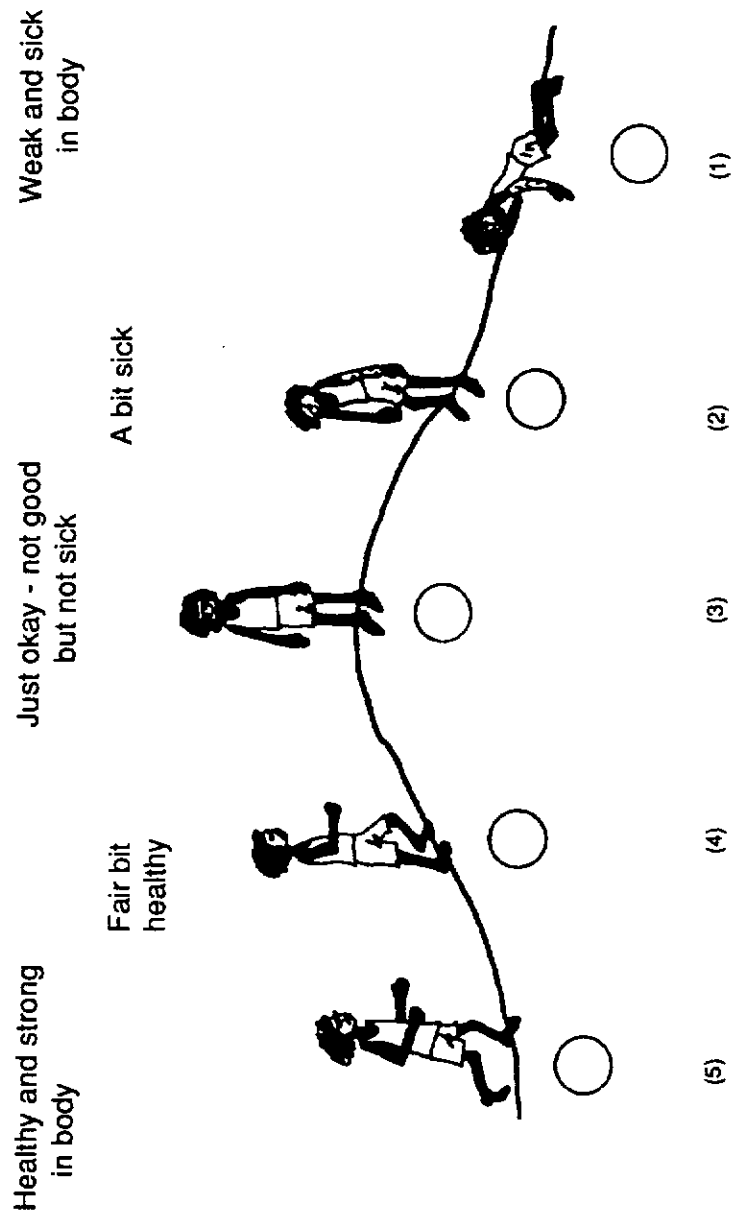
☐ ☐ (28-29)

☐ ☐ (30-31)

☐ ☐ (32-33)

Other (Write In) \_\_\_\_\_

# 10. (a) Where are most of the YOUNG PEOPLE in your community on this hill? (Tick one circle)





(b) **Why do you think so?** Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer. (When they have finished, ask "Are there any other reasons?")

Healthy and strong - Why?

(01) ☐ have enough good food

(02) ☐ no grog problems

(03) ☐ happy playing sport

Weak and sick - Why?

(04) ☐ grog problems

(05) ☐ don't eat good food

(06) ☐ cold sick

Other (Write In) \_\_\_\_\_

☐ ☐ (35-36)

☐ ☐ (37-38)

☐ ☐ (39-40)

11.

## MEN

Where are YOU on this hill? (Tick one circle)

Healthy and strong  
in body

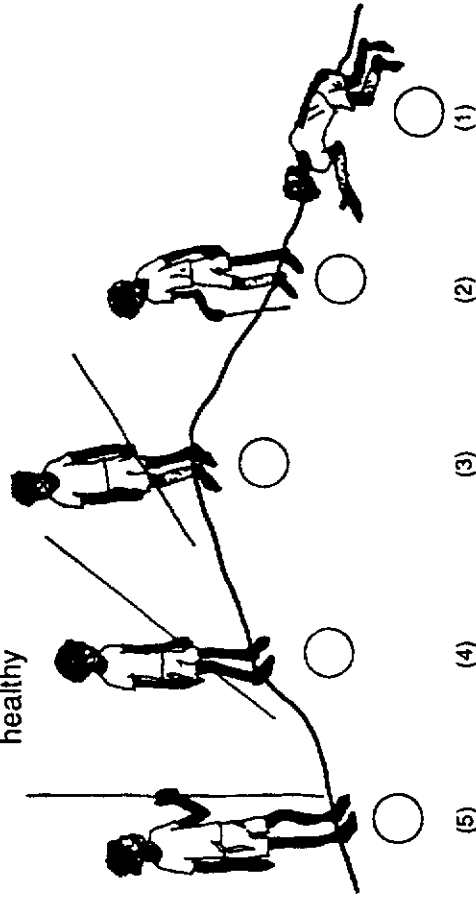
Just okay - not good  
but not sick

Weak and sick  
in body

Fair bit  
healthy

Fair bit  
healthy

A bit sick



☐ (41)

## WOMEN

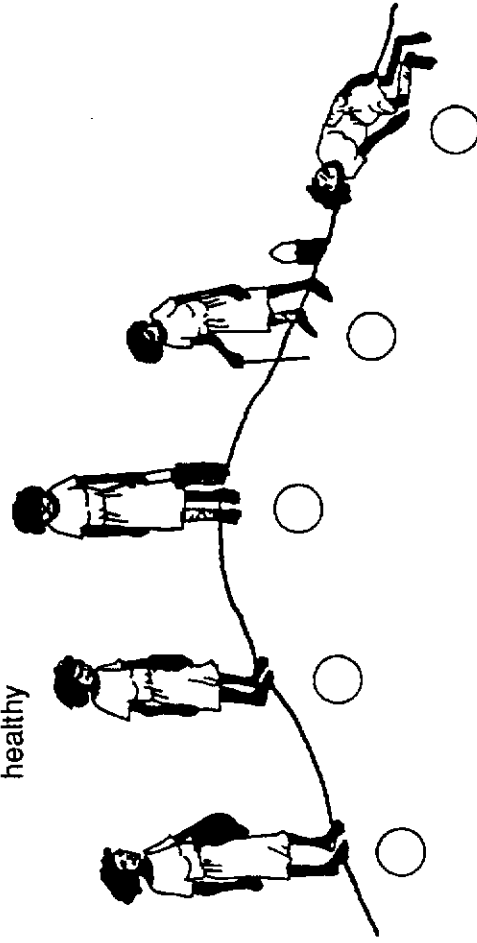
Healthy and strong  
in body

Just okay - not good  
but not sick

Weak and sick  
in body






A bit sick

Fair bit  
healthy



☐ (42)

**12.** How much do you think you can stop sickness in yourself before it starts? (Tick one circle or dot)

	Lots	A fair bit	Some	A little bit	Not at all
(5)					
	(4)	(3)	(2)	(1)	

☐ (43)

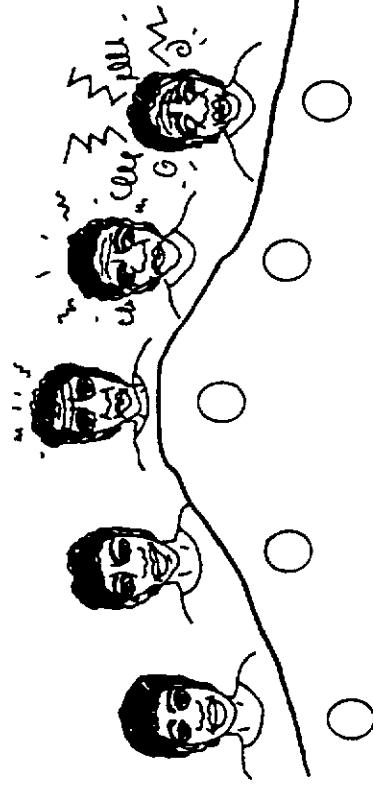
Read this story before Questions 13, 14, 15 and 16.

There is a hill and on one side there are community people who are happy in their minds and the other side are people who are sad in their minds. In the middle are people who are just okay - not happy, but not sad either. Half way down one side are people who are a fair bit happy. Half way down the other side are people who are a bit sad.

happy in mind	just okay - not happy but not sad	sad in mind
------------------	--------------------------------------	----------------

A fair bit  
happy

A bit  
sad



(5)	(4)	(3)	(2)	(1)
-----	-----	-----	-----	-----

13.

(a) Where are most of the MEN in your community on this hill? (Tick one circle)

happy in mind	just okay - not happy but not sad	sad in mind
A fair bit happy	A bit sad	

(b) **Why do you think so?** Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer. (When they have finished, ask "Are there any other reasons?")

Happy - Why?

(01) ☐ busy working

(02) ☐ can see it on their faces

(03) ☐ no grog problems

Sad - Why?

(04) ☐ grog problems

(05) ☐ don't work

(06) ☐ family troubles

Other (Write In) \_\_\_\_\_

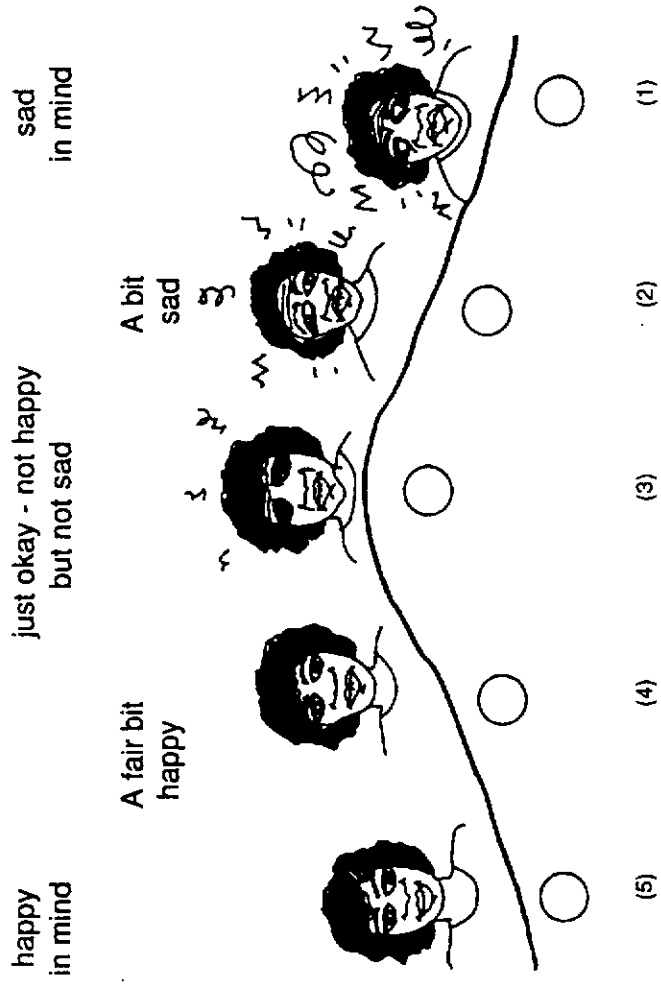
\_\_\_\_\_

☐ ☐ (45-46)

☐ ☐ (47-48)

☐ ☐ (49-50)

**14.** (a) Where are most of the **WOMEN** in your community on this hill? (Tick one circle)



(b) **Why do you think so?** Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer. (When they have finished, ask "Are there any other reasons?")

Happy - Why?

- (01) ☐ busy working
- (02) ☐ see it on their faces
- (03) ☐ no grog problems

Sad - Why?

- (04) ☐ grog problems
- (05) ☐ family troubles
- (06) ☐ not enough money

Other (Write In) \_\_\_\_\_

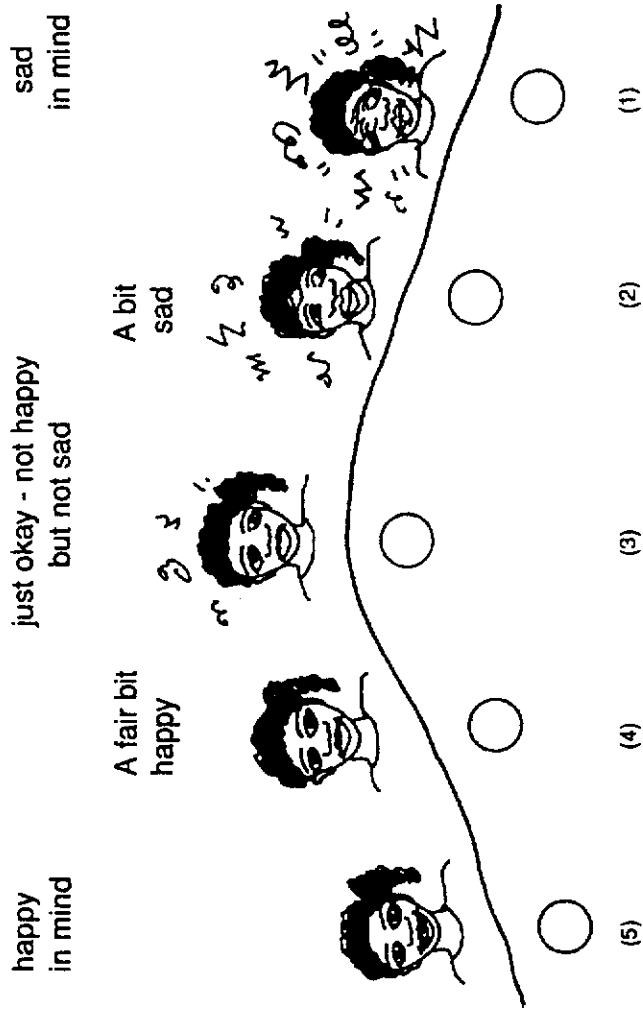
☐ ☐ (52-53)

☐ ☐ (54-55)

☐ ☐ (56-57)



**15.** (a) Where are most of the **YOUNG PEOPLE** in your community on this hill? (Tick one circle)



(b) **Why do you think so?** Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer. (When they have finished, ask "Are there any other reasons?")

**Happy - Why?**

(01) ☐ playing

(02) ☐ busy working

(03) ☐ nothing to worry about

**Sad - Why?**

(04) ☐ grog problems

(05) ☐ cold sick

(06) ☐ don't look after themselves

Other (Write In) \_\_\_\_\_

☐ ☐ (59-60)

☐ ☐ (61-62)

☐ ☐ (63-64)

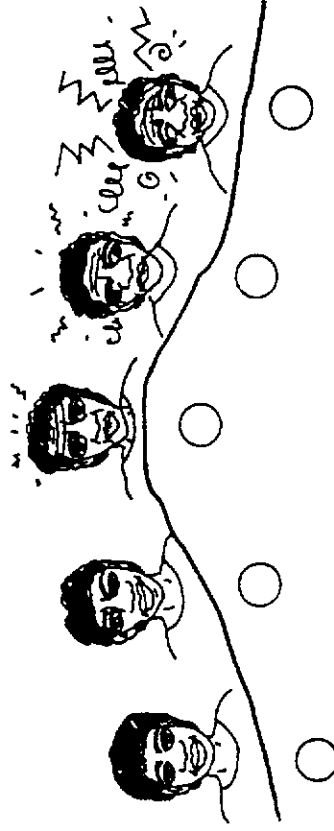
16. (a) Where are YOU on this hill? (Tick one circle)

## MEN

happy in mind      just okay - not happy but not sad      sad in mind

A fair bit happy

A bit sad

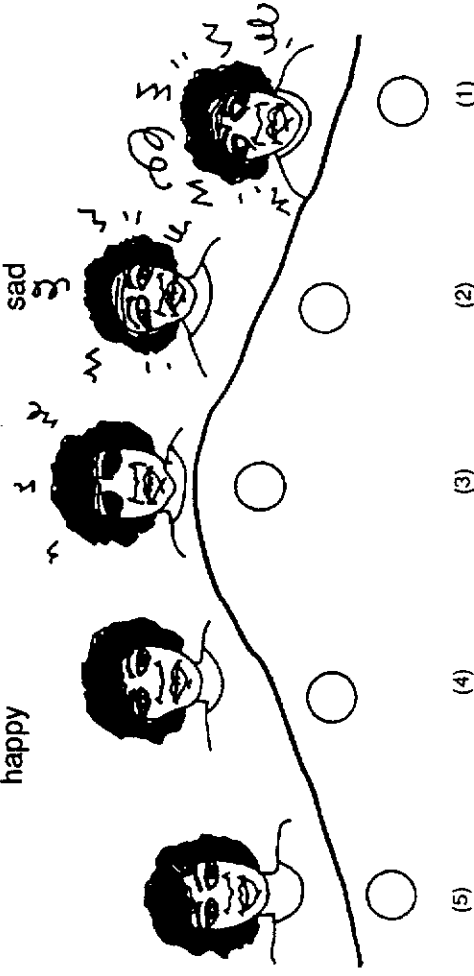


## WOMEN

happy in mind      just okay - not happy but not sad      sad in mind

A fair bit happy

A bit sad



- 17. What things do you do to STOP SICKNESS BEFORE IT STARTS?** Do not read these out.  
Let them talk, then tick the box. If what they say is not listed, write in their answer.  
(When they have finished, ask "Are there any other reasons?")

☐ (01) clean up house

☐ (02) talk to family about health troubles

☐ (03) personal hygiene

Other (Write In) \_\_\_\_\_

☐ ☐ (67-68)

- 18. What does your community do now to STOP SICKNESSES BEFORE THEY START?**  
Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer.  
(When they have finished, ask "Are there any other reasons?")

☐ (01) clean up community

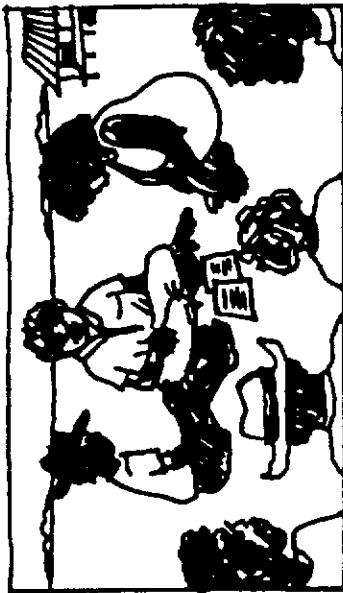
☐ (02) clean up house

☐ (03) health check-ups

Other (Write In) \_\_\_\_\_

☐ ☐ (69-70)

**19.** How many times does your community get together to talk about community business? (Tick one circle or dot)



Lots      A fair bit      Sometimes      A little bit      Never



(5)

(4)

(3)

(2)

(1)

☐ (71)

**20.** How **STRONG** is your community right now in people's hearts and minds? (Tick one circle or dot)

Very strong      Fairly strong      Okay      A bit weak      Very weak

not strong  
not weak



(5)

(4)

(3)

(2)

(1)

☐ (72)

**21.** (a) How many dogs do you have? \_\_\_\_\_ (If no dogs, go to Q. 22)

**(b) How strong is your feeling that you should keep your dog healthy? (Tick one circle or dot)**

**(c) What things do you do to stop your dogs causing sickness? Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer.**  
**(When they have finished, ask "Are there any other reasons?")**

**22.** (a) How much RUBBISH is lying around your community? (Tick one circle or dot)

**Lots**

## A fair bit

**Some**

## A little bit

None at all

•

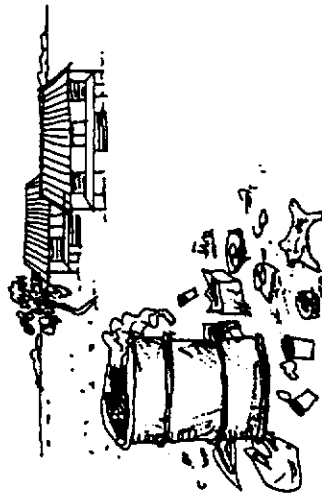
(5)

(4)

(3)

(2)

(1)



**(b) Does the RUBBISH lying around your community cause sickness? (Circle one)**

**Yes (1)**

No (2)

**Don't know (3)**

(77)

1

(79)


(1-5)

2000

6-7)

**23.** Does bad hygiene, like not washing hands after going to the toilet, before handling food, cause sickness in your family? (Circle one)

**Yes (1)**

**No (2)**

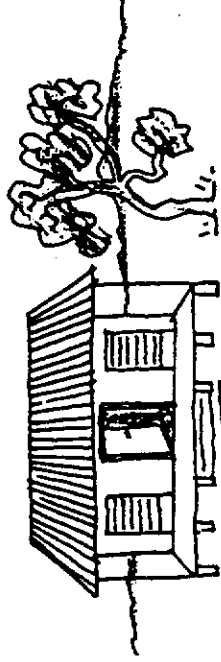
**Don't Know (3)**

**24.** How many times in a day do you wash your hands under a tap? \_\_\_\_\_

25. How many times in a week do you have a shower? \_\_\_\_\_

		(8-9)
--	--	-------

26. How many people are living in your house at the moment?  
\_\_\_\_\_



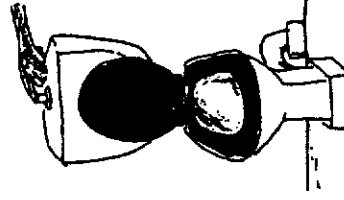
		(10-11)
--	--	---------

27. (a) Do you have a toilet in your house? (Circle one)

Yes (1)

No (2)

→ Go to Q. 28



		(12)
--	--	------

(b) If yes, does your toilet flush okay, or is it blocked? (Circle one)

Okay (1)

Blocked (2)

Don't know (3)

		(13)
--	--	------

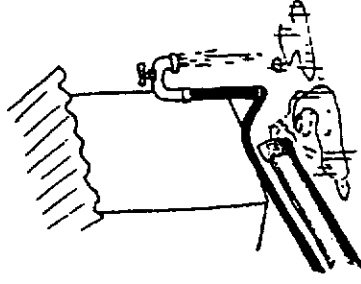


**28.** Are there any leaking taps or drains outside your house? (Circle one)

Yes (1)

No (2)

Don't know (3)



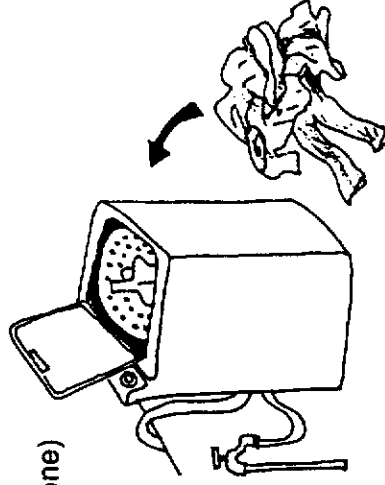
☐ (14)

**29.** Is there a washing machine in your house that works? (Circle one)

Yes (1)

No (2)

Don't know (3)



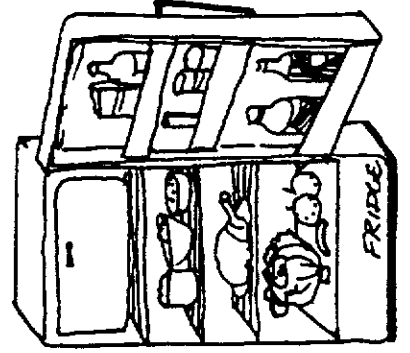
☐ (15)

**30.** Is there a refrigerator in your house that works? (Circle one)

Yes (1)

No (2)

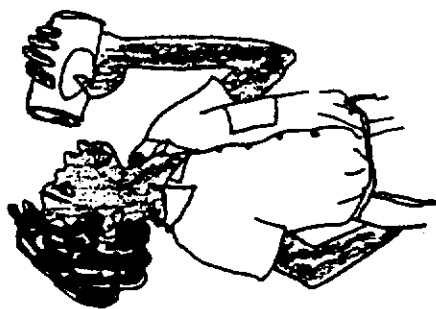
Don't know (3)



☐ (16)

**31. How much of a trouble is MEN drinking grog in your community?**  
(Tick one circle or dot)

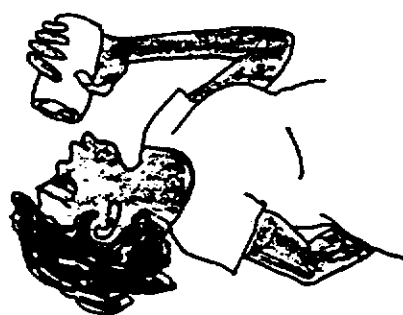
Lots	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)



☐ (17)


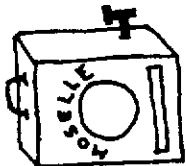


**32. How much of a trouble is WOMEN drinking grog in your community?**  
(Tick one circle or dot)

Lots	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)



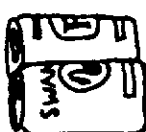
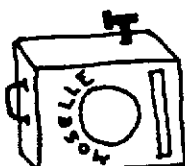


☐ (18)

**33.** How much does drinking too much Grog cause **HIGH BLOOD PRESSURE**? (Tick one circle or dot)

				
Lots	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

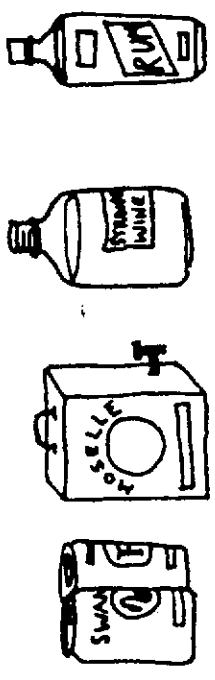
☐ (19)

**(b)** How much does drinking too much Grog cause **DIABETES**? (Tick one circle or dot)

				
Lots	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

☐ (20)

34. Do you drink grog? (Circle one)



	Lots	A fair bit	Some	A little bit	Not at all
(5)					
(4)					
(3)					
(2)					
(1)					

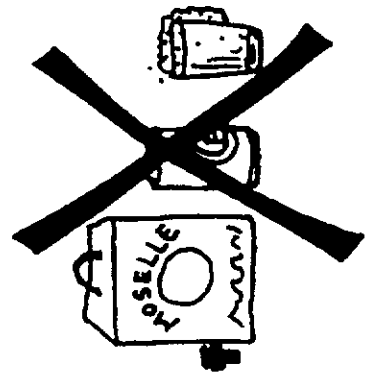
→ Go to Q. 37

☐ (21)

FOR ALL DRINKERS

35. What do you prefer to drink? (Tick the main one)

- (1) ☐ Beer
- (2) ☐ Low-alcohol beer
- (3) ☐ Wine (Cask)
- (4) ☐ Fortified Wine (flagon)
- (5) ☐ Spirits
- ☐ Other    What? (Write in) \_\_\_\_\_


☐ (22)

**36.** How strong is the feeling that you should drink less grog? (Tick one circle or dot)

Very strong	Fairly strong	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

☐ (23)

**FOR ALL NON-DRINKERS**

**37.** Did you give up or haven't you ever drunk grog? (Tick one)

<input type="checkbox"/> (1)	Have never drunk grog	→ Go to Q. 38
<input type="checkbox"/> (2)	Gave up	→

When did you give up? (Tick one)

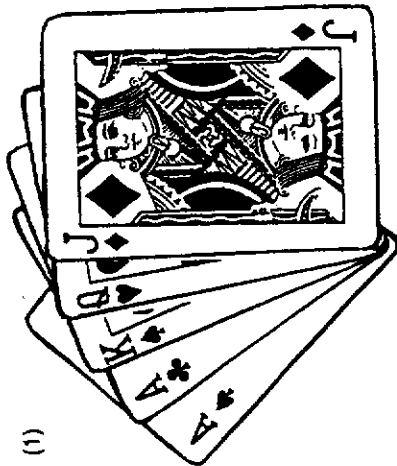
<input type="checkbox"/> (1)	less than 6 months ago
<input type="checkbox"/> (2)	6 months to 2 years ago
<input type="checkbox"/> (3)	more than 2 years ago

☐ (25)

**38.** How much of a trouble is people playing cards for people in your community?  
(Tick one circle or dot)

Lots	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

☐ (26)



**39.** (a) Do you play cards for money? (Circle)

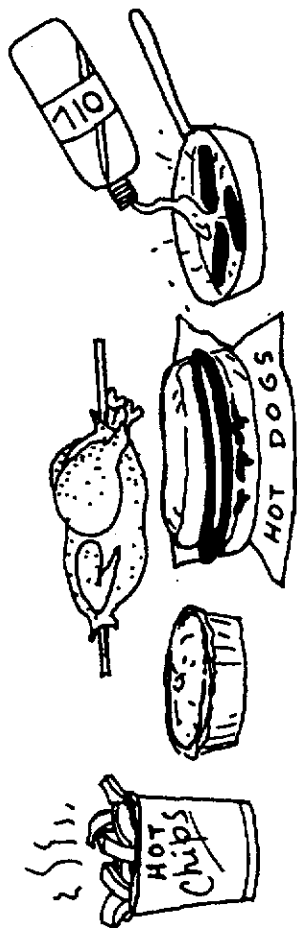
Yes (1)      No (1)      →      Go to Q. 40

(b) If yes, how strong is the feeling that you should stop playing cards?

Very strong	Fairly strong	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

☐ (28)

**40.** How much does eating **TOO MUCH FATTY FOOD** like take-away pies, chips and deep fried chicken, cause **HEART TROUBLES**? (Tick one circle or dot)



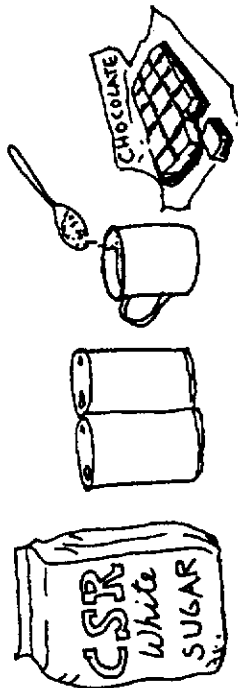
Lots      A fair bit      Some      A little bit      Not at all

☐      ☐      ☐      ☐      ☐

(5)      (4)      (3)      (2)      (1)

☐ (29)

**41.** Does eating too much **SUGAR** cause diabetes? (Tick one circle or dot)



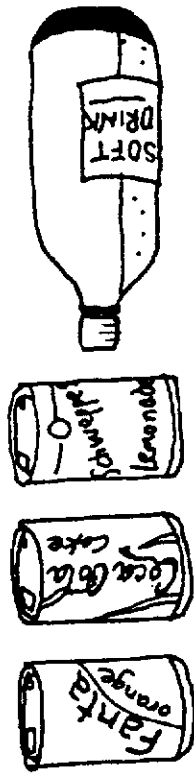
Lots      A fair bit      Some      A little bit      Not at all

☐      ☐      ☐      ☐      ☐

(5)      (4)      (3)      (2)      (1)

☐ (30)

**42.** How strong is the feeling that you should drink **LOW SUGAR DRINK?** (Tick one circle or dot)



Very strong    A fair bit    Some    A little bit    Not at all

☐    ☐    ☐    ☐    ☐

(5)                      (4)                      (3)                      (2)                      (1)

☐ (31)

**43.** How strong is the feeling that you should eat more **VEGETABLES?** (Tick one circle or dot)



Very strong    A fair bit    Some    A little bit    Not at all

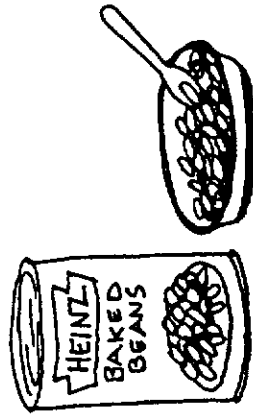
☐    ☐    ☐    ☐    ☐

(5)                      (4)                      (3)                      (2)                      (1)

☐ (32)



**44.** How strong is the feeling that you should be eating more **BAKED BEANS**? (Tick one circle or dot)



Very strong	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

☐ (33)

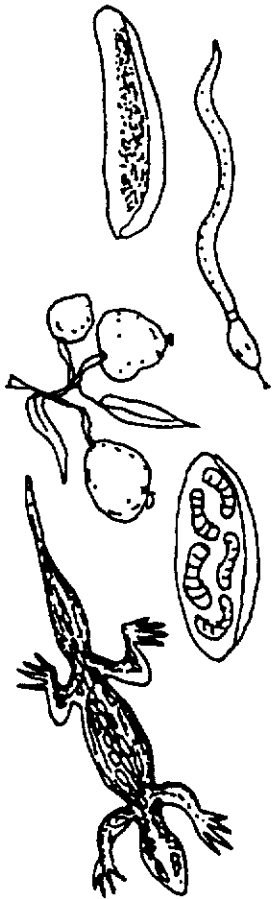
**45.** How strong is the feeling that you would like to eat less **SUGAR**? (Tick one circle or dot)



Very strong	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

☐ (34)

**46.** (a) How strong is the feeling that you should eat BUSH TUCKER? (Tick one circle or dot)



Very strong      A fair bit      Some      A little bit      Not at all



(5)

(4)

(3)

(2)

(1)

☐ (35)

☐ (36)

(b) How many days in the last week have you eaten BUSH TUCKER? \_\_\_\_\_

**47.** (a) Do you ever go hungry for a day? (Circle one)

☐ (37)

Yes                      No      →      Go to Q. 48



(b) If Yes, why? Do not read these out. Tick the box and if not listed, write their answer.  
(When they have finished, ask "Are there any other reasons?")

☐ (1) not enough money

☐ (2) don't feel like eating

☐ (3) not applicable/don't go hungry

Other (Write In) \_\_\_\_\_

☐ (38)

**48.** How strong is your feeling that you should eat more healthy food? (Tick one circle or dot)

Very strong    A fair bit                      Some                      A little bit                      Not at all



☐ (39)

**49.** This survey has asked about grog, food, rubbish, hygiene and dogs.  
**Are there any other things which you think are HEALTH troubles in your community?**  
 Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer.  
 (When they have finished, ask "Are there any other reasons?")

☐ (01) smoking/cigarettes

☐ (02) dust/dirt

☐ (03) none

Other (Write In) \_\_\_\_\_

☐ ☐ (40-41)

☐ ☐ (42-43)

☐ ☐ (44-45)

**50.** How much do you think your community can stop sickness before it starts? (Tick one circle or dot)

Lots      A fair bit      Some      A little bit      Not at all

☐ ☐ ☐ ☐ ☐

(5)      (4)      (3)      (2)      (1)

☐ (46)

- 51. What things do you think your community needs to have for people to have better health?**  
Do not read these out. Let them talk, then tick the box. If what they say is not listed, write in their answer.  
(When they have finished, ask "Are there any other reasons?" )

(01)	<input type="checkbox"/>	more housing	
(02)	<input type="checkbox"/>	more equipment	(list what sort: _____)
(03)	<input type="checkbox"/>	more recreation facilities	(list them: _____)
	Other (Write In) _____		
	_____		

<input type="checkbox"/>	<input type="checkbox"/>	(47-48)
<input type="checkbox"/>	<input type="checkbox"/>	(49-50)
<input type="checkbox"/>	<input type="checkbox"/>	(51-52)

<input type="checkbox"/>	(53)
--------------------------	------

- 52. How strong is the feeling that you want to tell young people and kids about Aboriginal culture?**  
(Tick one circle or dot)

Very strong	A fair bit	Some	A little bit	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(5)	(4)	(3)	(2)	(1)

**53.**

Do you have a TV in your house that works? (Circle one)

Yes (1)

No (2)

☐

(54)

**54.**

How often do you watch TV? (Tick one)

(1) ☐ Every day

(2) ☐ 5-6 days a week

(3) ☐ 2 - 3 days a week

(4) ☐ 1 time in a week

(5) ☐ Never

☐

(55)

**55.**

What are your favourite TV shows? (List up to three)

1.

☐

☐

(56-57)

2.

☐

☐

(58-59)

3.

☐

☐

(60-61)

**56.** Do you have a radio in your house that works? (Circle one)

Yes (1)

No (1)

☐ (62)

**57.** Do you have a radio in your car that works? (Circle one)

Yes (1)

No (1)

☐ (63)

**58.** How often do you listen to the radio? (Tick one)

(1) ☐ Every day

(2) ☐ 5-6 days a week

(3) ☐ 2 - 3 days a week



(4) ☐ 1 time in a week

(5) ☐ Never

☐ (64)






Here are some pictures from a TV ad. (Do not tell people what the ad is.)  
(Show pictures of 'LOOK OUT' AD - NUMBER ONE)

59. Have you ever seen this ad on TV before?

Yes (1)  No (2)  Go to Q. 64

☐ (65)

60. When you see this ad on TV, how strong is it for you?  
(Tick one circle or dot)

Very strong	A fair bit	Some	A little bit	Not at all
				
(5)	(4)	(3)	(2)	(1)

☐ (66)

61. How does the ad make you feel when you see it on TV?  
(Write in)

☐ ☐ (67-68)



## What is the ad trying to say to Aboriginal people?

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**Do you think it is a good thing for Aboriginal people or a bad thing for Aboriginal people to have this ad on TV?**

Good → Why? (Write in)  
Bad →

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

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PAGE 42






Here are some pictures from a TV ad. (Do not tell people what the ad is.)  
(Show pictures of 'PRIDE AND RESPECT' AD - NUMBER TWO)

64. Have you ever seen this ad on TV before?

Yes (1)  No (2)  Go to Q. 69

☐ (74)

65. When you see this ad on TV, how strong is it for you?  
(Tick one circle or dot)

Very strong	A fair bit	Some	A little bit	Not at all
				
(5)	(4)	(3)	(2)	(1)

☐ (75)

66. How does the ad make you feel when you see it on TV?  
(Write in)

☐ ☐ (76-77)

67.

## What is the ad trying to say to Aboriginal people?

(Write in)

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(78-79)

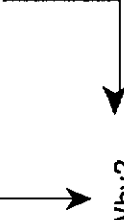
89

**Do you think it is a good thing for Aboriginal people or a bad thing for Aboriginal people to have this ad on TV?**

(Circle)

**Good**

**Bad**



Why?

(Write in)

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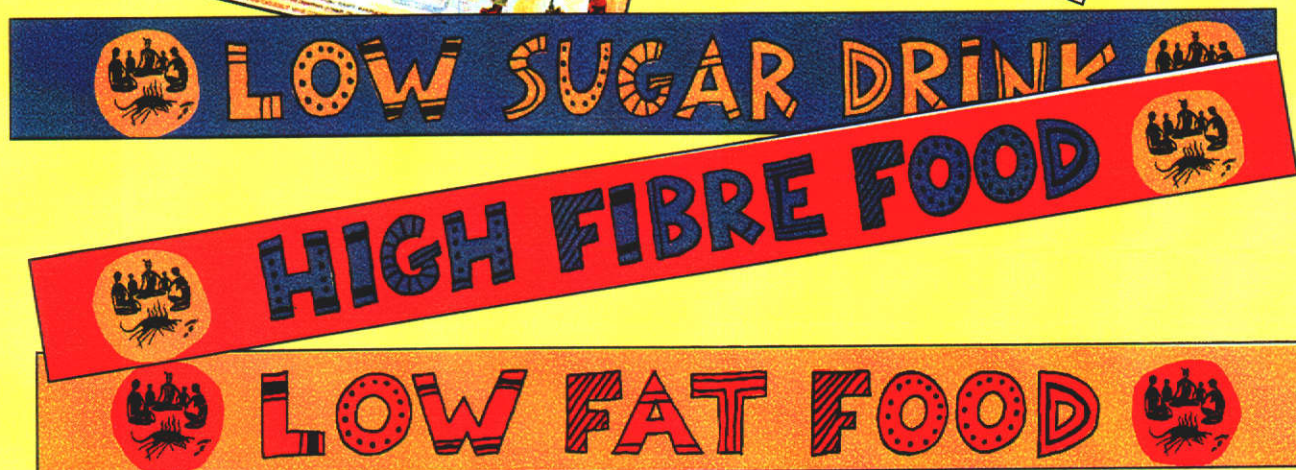
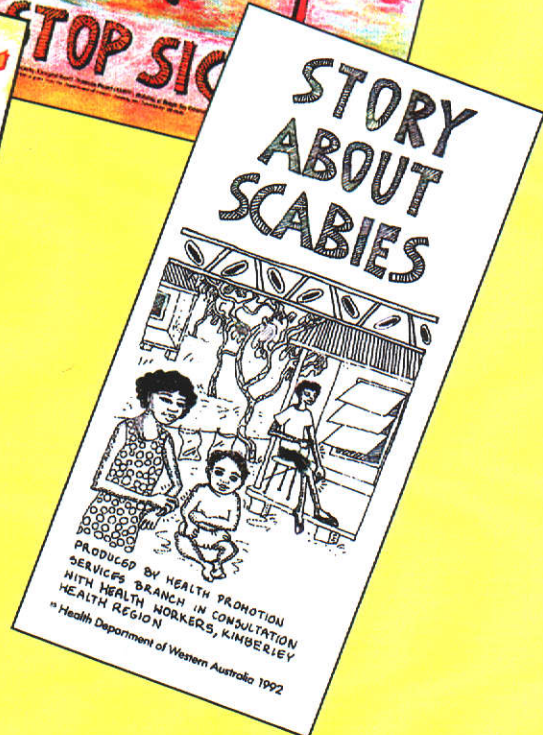
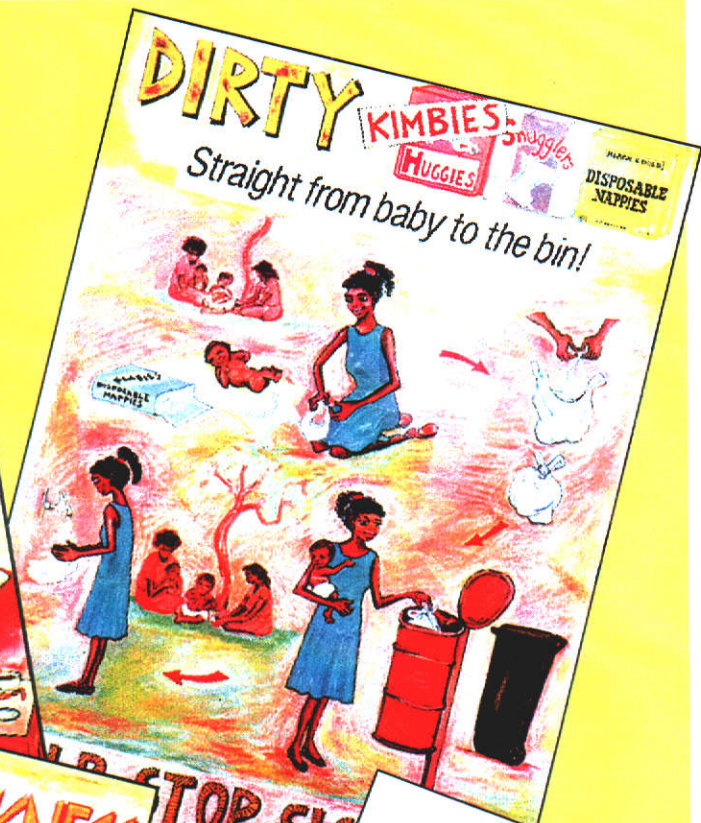
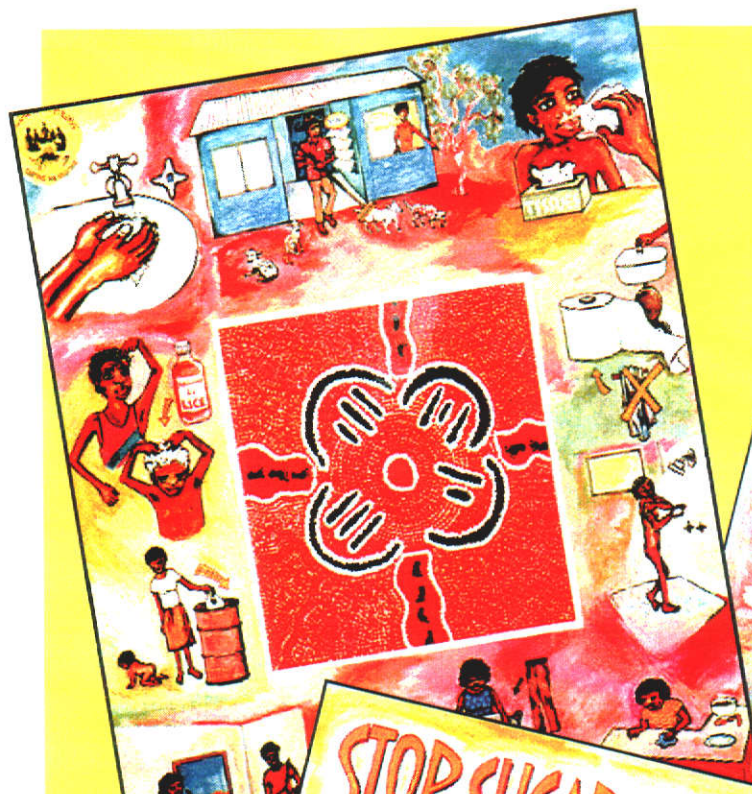
(80)

(81-82)

## APPENDIX B

### Examples of Health Promotion Printed Resources from Community Workshops







## APPENDIX C

### Health Worker Survey Questionnaire

# COMMUNITY HEALTH SURVEY

## ABORIGINAL HEALTH WORKERS

THIS SURVEY FORMS PART OF THE EVALUATION OF THE KIMBERLEY ABORIGINAL HEALTH PROMOTION PROJECT, A RESEARCH AND DEVELOPMENT PROJECT OF CURTIN UNIVERSITY OF TECHNOLOGY, IN ASSOCIATION WITH KIMBERLEY HEALTH REGION OF THE HEALTH DEPARTMENT OF WESTERN AUSTRALIA. THIS PROJECT HAS BEEN INITIATED THROUGH A GRANT FROM THE COMMONWEALTH DEPARTMENT OF COMMUNITY SERVICES AND HEALTH.

COMPLETION OF THIS QUESTIONNAIRE IS VOLUNTARY AND ALL RESPONSES ARE STRICTLY CONFIDENTIAL.

☐ ☐ ☐ ☐ ☐ (1-5)

*Make your choice and circle the number next to it for each question*

1. Sex (Circle one)

male

female

☐ (6)

2. Age

\_\_\_\_\_ years

☐ ☐ (7-8)

3. Were you born in this place? (Circle one)

yes

no

☐ (9)

If not born here, where were you born?

-----

4. Number of years as a Health Worker

-----

☐ ☐ (10-11)

5. Education

primary school 1  
 secondary school 2  
 Diploma (e.g. TAFE) 3  
 Uni/College (degree) 4

☐ (12)

### 6. IN YOUR JOB AS A HEALTH WORKER ...

*How much of your time in a normal week do you do....*  
(Place a tick in one circle or dot)

#### (a) Bandaging and dressing

Lots	A fair bit	Some	A little bit	Not at all	
					(13)

(b) *About how many times a week?* \_\_\_\_\_

(14-15)

### 7. IN YOUR JOB AS A HEALTH WORKER ...

*How much of your time in a normal week do you do....*  
(Place a tick in one circle or dot)

#### (a) Dispensing drugs

Not at all	A little bit	Some	A fair bit	Lots	
					(16)

(b) *About how many times a week?* \_\_\_\_\_

(17-18)

### 8. IN YOUR JOB AS A HEALTH WORKER ...

*How much of your time in a normal week do you do....*  
(Place a tick in one circle or dot)

#### (a) Mother and baby clinic

Lots	A fair bit	Some	A little bit	Not at all	
					(19)

(b) *About how many times a week?* \_\_\_\_\_







(20-21)



### 9. IN YOUR JOB AS A HEALTH WORKER ...

*How much of your time in a normal week do you do.....*  
(Place a tick in one circle or dot)

(a) Talking to people in the clinic about stopping health troubles before they start

Lots	A fair bit	Some	A little bit	Not at all	
					 (22)







(b) About how many times a week? \_\_\_\_\_

  (23-24)

### 10. IN YOUR JOB AS A HEALTH WORKER ...

*How much of your time in a normal week do you do.....*  
(Place a tick in one circle or dot)







(a) Talking to people out in the community about STOPPING HEALTH TROUBLES BEFORE THEY START

Not at all	A little bit	Some	A fair bit	Lots	
					 (25)

(b) About how many times a week? \_\_\_\_\_

  (26-27)

11. As a Health Worker, how important for you, is working in your community to STOP HEALTH TROUBLES BEFORE THEY START? (Place a tick in one circle or dot)

Very Important	Fairly Important	Some	A little bit	Not at all	
					 (28)

12. What things could can you do as a Health Worker to STOP HEALTH TROUBLES BEFORE THEY START?

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 (29)

13. How much training and skills do you as a Health Worker need now to do work in your community to STOP HEALTH TROUBLES BEFORE THEY START?  
(Place a tick in one circle or dot)

Lots

A fair bit

Some

A little bit

None



 (30)

14. What things does your community do now to stop health troubles before they start?

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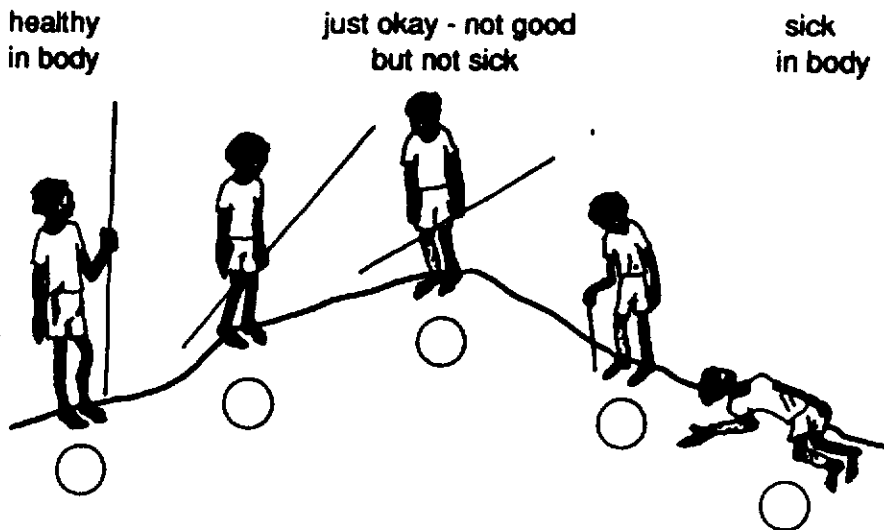
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 (31)

15. There is a hill and on one side there are people with good health in their bodies and the other has people who are sick in their bodies. In the middle are people who are just okay - not very sick, but not with good health either. On the way down each side are people who may be on the way to getting sick or getting good health in their bodies.

Where would you say that most people from the following groups in your community are on this hill?

- (a) Are most of the MEN in your community... (Place a tick in one circle)



(32)

- (b) Why do you think so?..... (Write in any reasons given)

(33)

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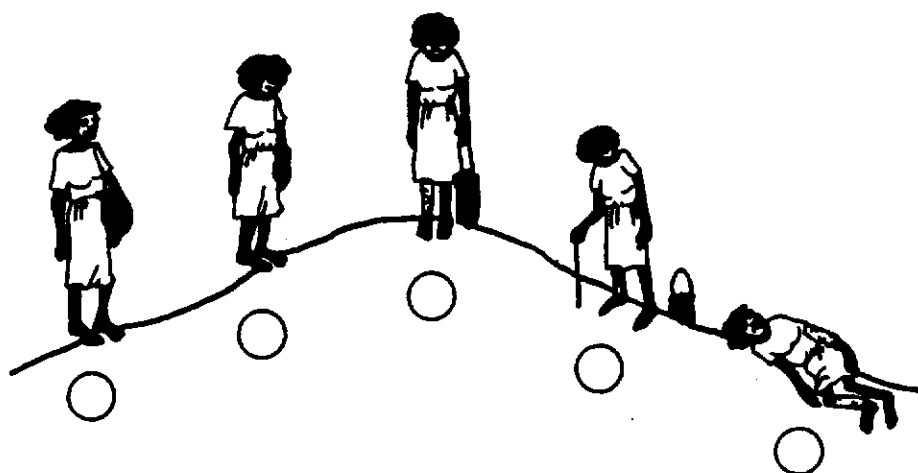
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16. (a) Are most of the WOMEN in your community...(Place a tick in one circle)

healthy  
in body

just okay - not good  
but not sick

sick  
in body



☐ (34)

(b) Why do you think so?..... (Write in any reasons given)

☐ (35)

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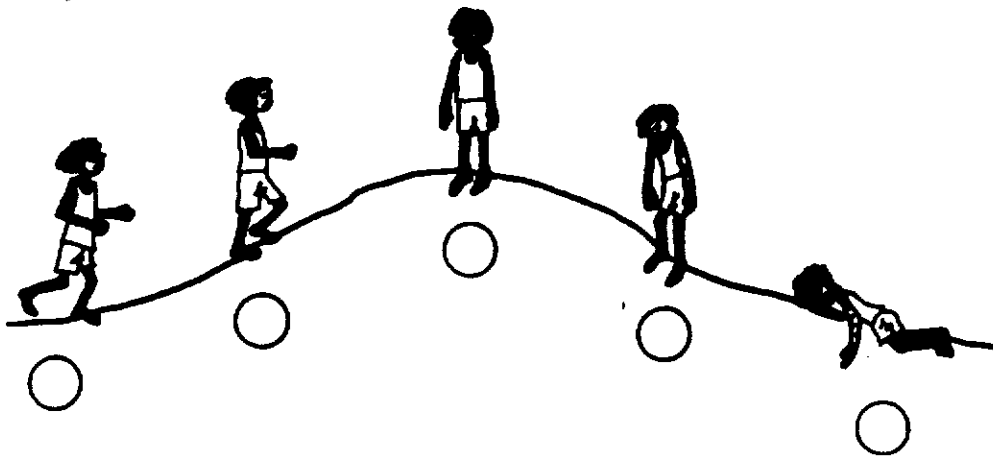
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17. (a) Are most of the CHILDREN in your community...(Place a tick in one circle)

healthy  
in body

just okay - not good  
but not sick

sick  
in body



☐ (36)

(b) Why do you think so?..... (Write in any reasons given)

☐ (37)

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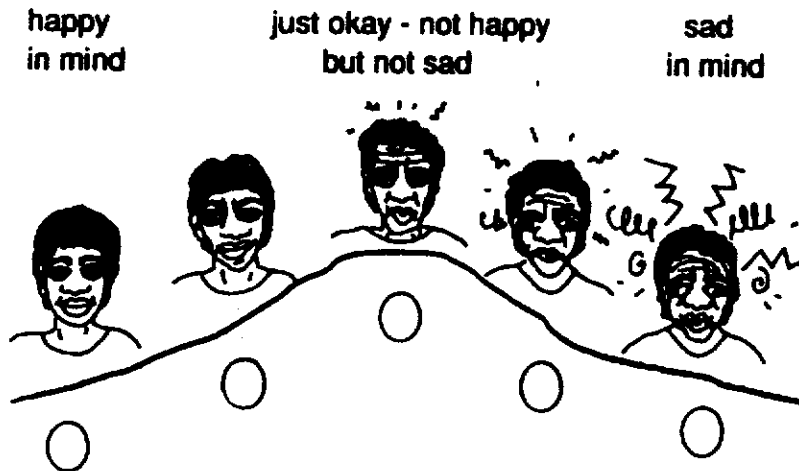
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18. There is a hill and on one side there are community people who are happy in their minds and the other has people who are sad in their minds. In the middle are people who are just okay - not happy, but not sad either. On the way down each side are people who may be on the way to being happy or to being sad in their minds.

Where would you say that most people from the following groups in your community are on this hill?

(Place a tick in one circle)

- (a) Are most of the MEN in your community... (Place a tick in one circle)



(38)

- (b) Why do you think so?..... (Write in any reasons given)

(39)

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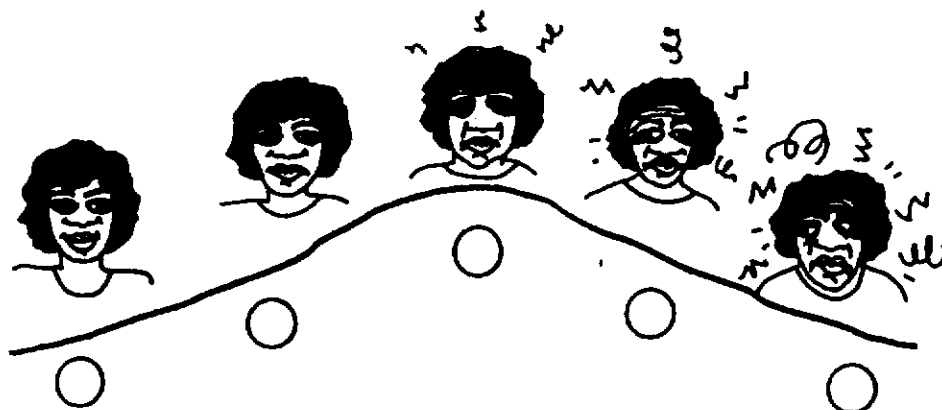
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19. (a) Are most of the WOMEN in your community... (Place a tick in one circle)

happy  
in mind

just okay - not happy  
but not sad

sad  
in mind



☐ (40)

(b) Why do you think so?..... (Write in any reasons given)

☐ (41)

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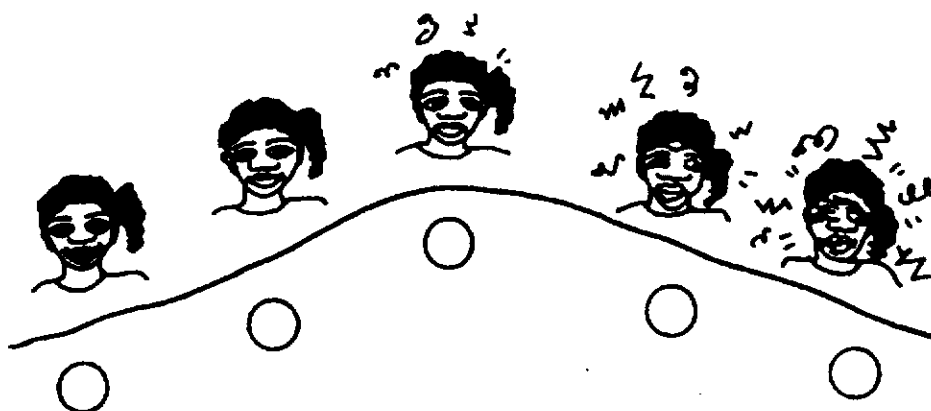
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20. (a) Are most of the CHILDREN in your community... (Place a tick in one circle)

happy  
in mind

just okay - not happy  
but not sad

sad  
in mind



☐ (42)

(b) Why do you think so?..... (Write in any reasons given)

☐ (43)

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21. How do you think these health troubles are in your community.  
(Place a tick in one circle or dot)

(a) How much of a trouble is DRINKING GROG for MEN in your community?



Lots

A fair bit

Some

A little bit

Not at all



(44)

(b) How much of a trouble is DRINKING GROG for WOMEN in your community?



Lots

A fair bit

Some

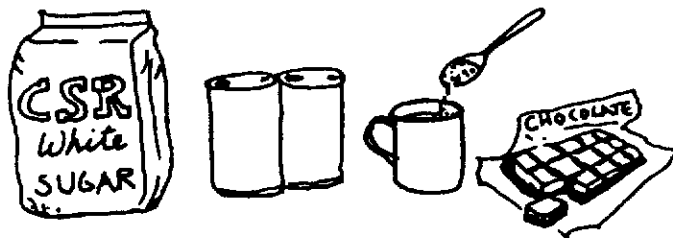
A little bit

Not at all



(45)

(c) Is eating too much SUGAR a big trouble for people's health in your community?



Not at all

A little bit

Some

A fair bit

Lots

.

○

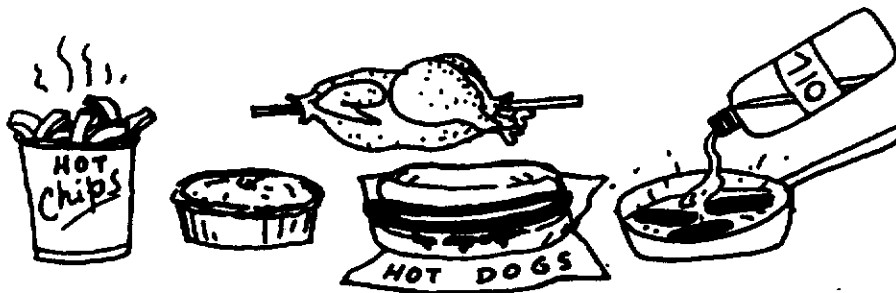
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(46)

(d) Is eating too many FATTY FOODS a big trouble for people's health in your community?



Lots

A fair bit

Some

A little bit

Not at all

○

○

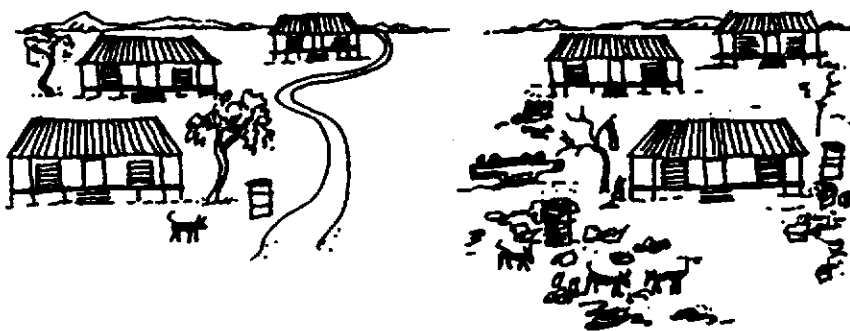
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(47)

(e) Is too much RUBBISH lying around your community a health trouble?



Not at all

A little bit

Some

A fair bit

Lots

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○

○

○

○

(48)

(f) Is BAD HYGIENE in families a health trouble in your community?

Not at all

A little bit

Some

A fair bit

Lots

.

○

○

○

○

(49)

22. How much, do you think, does drinking too much GROG cause these health troubles?  
(Place a tick in one circle or dot)



(a) HIGH BLOOD PRESSURE

Lots

A fair bit

Some

A little bit

Not at all



(50)



(b) DIABETES

Lots

A fair bit

Some

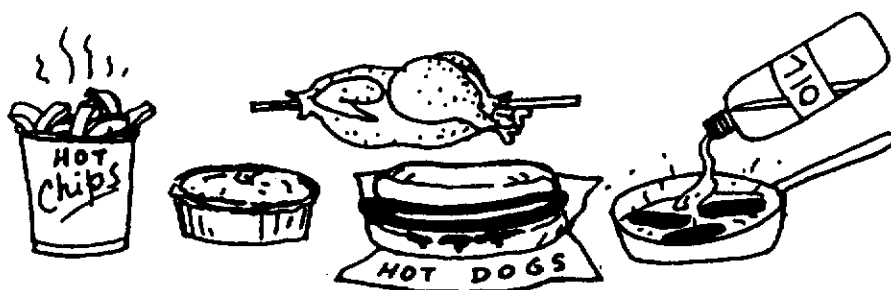
A little bit

Not at all



(51)

23. How much does eating **TOO MUCH FATTY FOOD** cause these health troubles?  
(Place a tick in one circle or dot)



(a) **HIGH BLOOD PRESSURE**

Not at all

A little bit

Some

A fair bit

Lots

.

○

○

○

○



(52)



(b) **DIABETES**

Lots

A fair bit

Some

A little bit

Not at all

○

○

○






○

.



(53)

24. How much do you think people in your community now are able to deal with preventing health troubles themselves? (Place a tick in one circle or dot)

Lots	A fair bit	Some	A little bit	Not at all
				

 (54)

25. This survey has asked about grog, food and environment. Are there any other things which you think are health troubles in your community?

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 (55)

26. What things do you think your community needs to have for people to have better health? (Write in)

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 (56)

## APPENDIX D

### Transcripts of Individual Interviews

# **Kimberley Aboriginal Health Promotion Project**



## **Phase One Research**

### **Transcripts of Structured Interviews - Looma / Wangkatjunga Communities**

**August 1990**

*The Kimberley Aboriginal Health Promotion Project is a research and development project of the School of Community Health, Curtin University of Technology, Perth. It is funded under a grant from the Commonwealth Department of Community Services and Health.*

*For further information contact Ross Spark, Project Co-ordinator,  
School of Community Health, Curtin University of Technology, GPO Box U 1987, PERTH,  
Western Australia 6001. Telephone: (09) 351 7021 Facsimile: (09) 351 2958*



**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Looma 1**

**Date:** 6 August 1990

**At:** Looma Clinic

**With:** Two Female Health Workers, A and B.

**Age:** 19 (A) 23 (B)

*Do you think people here care much about their health?*

B. Well, its mainly from the ages of 20 to about 30, most of them are pretty healthy.

A. The young people, they slack.

*The young people, under 20?*

B. I don't know, its the kids at school... got sores.

A. They don't want to have a shower.

B. And its mainly from the parents who are slack.

*What causes the parents to be slack do you think?*

B. Drinking, playing cards. That's one of the big problems here, playing cards.

*How did they answer in the survey to that question about playing cards. Do they get a bit touchy about that one.*

B. Yeah, some of them laughed.

*Why do you think they play cards all the time?*

B. Oh, nothing to do. That's the only entertainment in this community, is playing cards. And from 17-20 years of age, most of them play basketball. And most of them smoke.

*Out of ten, how many would smoke?*

B. Probably about 9.

*And that's not the older people, but the people under 20?*

B. The real older ones, they fit, but most of them have diabetes.

*What do you think causes that?*

B. Too much sugar.

*You know that question in the survey about sugar? What do most people put down there.*

A. More than two spoons, most of them, in their tea.

B. But some of them drink out of big billy cans so they put about 5 spoons into that.

*Do the young kids take much notice of the old people any more?*

A. No.

B. Like in traditional way?

Yes

B. No, not really.

*Have they got much language?*

B. The younger ones?

*Can they speak Walmatjeri?*

B. Half and half.

*What does it depend on, which young people learn Walmatjeri and which don't.*

B. It depends on the parents. I mean, I had an Aboriginal mother and a white father and so my father was talking English and my mother was talking Walmatjeri to me.

*What about you A?*

A. I don't know much language because I grew up in a hostel in Derby. I understand a little bit but I can't talk it.

B. There's two types of Walmatjeri. There's the hard type and the easy one. The hard one is very hard to understand, like old time one.

A. Well in this community there are three languages. Half of the time I think people are talking Nyigina.

B. It's mainly Pidgin language - Pidgin English.

*Let's say that you were in control of people's health here, what things would you change?*

B. I'd change the standard of living I suppose.

*What thing first?*

A. Bit of cleaning up in the place, fix the fences. Housing really.

B. That's the major problem at the moment.

A. Yeah.

B. There's too many people living in one house.

*How many in the average house?*

B. In the average house there'll be like 8,9,.....

A. 10.

B. 10 people.

*Who's got the worst health do you think, the men or the women?*

B. Well its pretty hard to tell, you know. The women, most of them don't drink. But they sit and play cards all day and they don't get much exercise there. And the men, most of them drink, but they don't play cards.

*They don't drink here though. Where do they drink?*

B. In town, go to Derby. And when they do drink grog they drink it outside the community.

A. Sometime down the river.

*So you think grog is a big problem?*

A. Yeah.

*Do you think people understand that what there are doing is going to affect their health later?*

A. They don't care anymore.

*Why don't you think they care?*

B. Maybe some don't understand what alcohol can do to them. They just do it for the fun of getting drunk I suppose.

B. But there's nothing here for most people you know. There's not enough jobs. And C.D.E.P is not much.

*That's what you are both on, isn't it, C.D.E.P.?*

B. I mean its money but its not enough to keep you going and then some turn to drinking and they haven't got nothing in life to do.

*Do you think there is anything in the old traditional ways that are useful to young people today, because in traditional time people were always healthy?*

B. There was more hunting, I suppose.

A. Yeah, more hunting, fishing, but no car to go hunting and fishing.

*Are young people interested in that?*

B. Not really, I mean there are some who go out and shoot wild turkey and maybe catch goanna but you don't have them ones who really love going out bush and things like that.

So what motivates the young people, what do they get excited about?

A. Basketball.

B. Basketball, live band, disco, playing cards, things like that.

*You said that many of the people don't listen to what you tell them like that they should keep their houses clean. Why don't they take your advice?*

B. Because of their pride. They don't like younger people telling them what to do. Like some of the questions (survey), there was an old lady up there. She was funny about it, but you could see that some of the questions were hurting here, you know?

*Offending her?*

A. Yeah.

B. It's hard. Like one bloke, he kept saying "I don't know, write what you think". I kept saying, "You haven't got the same mind that I've got".

*Do you think that's part of the trouble, that some of the people, particularly the old people, are thinking in Walmajarri and it doesn't mean much to them?*

B. I was trying my best to pronounce it the way so they could understand it. Not in language but in Pidgin.

*Do think at the moment the people see the clinic as the answer to their health troubles?*

B. They think as soon as they get a headache, that the clinic can fix it, or even a cut or a scratch you know. I mean they can easy fix a little scratch up, clean it themselves. They rely on the clinic for everything.

*What we are trying to tell them is that they can stop health troubles before they start. Do you think they will listen to that?*

B. I don't know.

A. Last week I told that mob, "You've got to clean up your houses". They started cleaning up their houses Friday, Saturday. Sunday they got slack.

*Why don't you think they keep their houses clean?*

B. There's one person who always cleans up, but the rest don't.

A. Like me, I've got big mob living in my house.

*How many?*

A. About 5. And they just eat and walk away, leave their dirty things there, and I'll go pick up after them.

*What we did in the Territory was we got people coming up with their own messages, their own prevention messages on t-shirts, posters. Do you think that sort of thing would work here. Do you think people would take much notice of their own messages?*

B. I don't know. It depends who's carrying out that message, because some people look up to other people.

*Who do they look up to here?*

B. Senior Health Worker, Chairperson, Store Assistant Manager.

*You moved here from Fitzroy. Do you think the people's health is better here than Fitzroy.*

B. In Fitzroy you got the pub right there and there's more drinking. You get people coming in with smashed heads.

*Do you think keeping the grog out of here is a good thing?*

B. Yeah.

*What is the answer for Aboriginal health, is it going to get better or worse do you think?*

B. It's hard, I think it will probably get worse. If you don't teach your kids now how to look after themselves, they won't teach their kids, generation after generation. It's a shock to see all the people with diabetes come in here. I do blood sugar level on them. They're young, some of them.

*Do they take much notice of like, eating the right foods once they've got diabetes?*

B. Yeah, most of them are really good actually, if you tell them to keep off the fatty foods, they will.

END OF INTERVIEW

**Kimberley Aboriginal Health Promotion Project**  
**Structured Interview - Looma 2**

**Date:** 7 August 1990

**At:** Looma Women's Centre

**With:** Female

**Age/s:** mid 30's

*How do you see the health of the community, some of the health troubles that are here?*

I see things like showers, taps need maintenance. Toilets get blocked and someone should see to it straight away. It might be the old people, you know, and then they go to someone else's toilet or if that's blocked they go out bush. And things like dogs- you have too many dogs. Its okay to have dogs. We've dogs too and some of the old people have got dogs - they go hunting with them - hunting dogs. But then you get those others, they just keep on breeding and they won't get rid of them, you know. And then they get mangey and just get too many dogs in one place.

*Is there any other health stuff?*

I reckon we should have fences around our place. Keep out dogs. Dogs, stray dogs come round, eh, tip rubbish everywhere. If you've got a fence and gate, you can start to grow lawn and gardens; plant trees and all that. Like now, the way this place was built, its too close together and I reckon it should have been built with more space.

*To achieve that, how do you think you can do that with the people in the community?*

I reckon the young people should help the old people, around the house and that.

*And they don't do that now?*

No, the young people, they haven't got much to do half the time.

*Are many young people on the C.D.E.P program?*

Yeah, but nothing much gets done.

*What do they do on that program?*

Some of them are supposed to be picking up rubbish and now that that paint came today, some of them will be painting the houses again. Otherwise, there's nothing else to do.

*What about the young girls?*

They just don't do anything. Some of them are just lost. They're not interested in doing anything, you know.

*You think they might help the old people clean up, if they're getting paid through that program (C.D.E.P.)?*

Yeah, if they're getting paid. I don't think they're happy with the C.D.E.P. wages. That stops a lot of people.

*Why, because its not good money for the work they do?*

Single people, they get \$119.00, some of them less. If you've got children, you get more.

*How do the people here see the clinic?*

They don't do their own.

*Because they don't want to or do they think the Sister has got to do that?*

Well, ever since the clinic has been up there, people always come up to the clinic.

*What happened when the clinic wasn't there? Did they use bush medicine?*

Well, some did, but if their kids got real bad we used to take them into Derby.

*When you say bad, how bad was the kid when it was sick?*

Bad enough that the mother couldn't handle it. You know, high fever, temperature gone up. Where they're sore so they can hardly walk with a lump under their groin and under their arms. But things, like small things they must be treated as just a mild thing like runny ears and that, they used to just have to wait until Sister come there.

*But you'd think, like, if people learned to live with those problems, like in their home, like instead of going to Sister or into Derby, that they could fix people up in their house, like give cool baths and watch them and give panadol, etc. But people don't do that?*

There's some people who do. See it depends on, through the years you have Sisters and nurses they come and go and they encourage them to bring their children back, they say, "If your baby gets worse, bring him back", you know. And these people learn to trust that lady and then another one comes, who doesn't want to do these things, who wants you to try and do it yourself.

And it causes people to have arguments, and they say, "Oh, you don't care." They think that every Sister has to be dedicated like that one before, you know. They say "Oh, this person never did that and they bring that other lady's name into it." They don't understand, you know.

*So how many Sisters have you had through the place?*

About one a year, I guess.

*So do you think, maybe if the community got together, and had meetings about health instead of relying on the Sister, if she changes all the time, that would be better? Maybe if the community looks at what they can do, no matter how many Sisters come there that things might be better?*

I think for people to start learning, to start relying on themselves, then you'd have to take the clinic away. Just close the whole thing. Or not have a Sister. Or people just do their own, keep their own bandages to fix sores and medical things.

When we used to live down the old camp, before this place was built, we used to use those camp nurses. They had little boxes with things like that. But in those days I don't think we had as much problem as we do now. Its like before the store. Now you get people eating all sorts of junk food and things like that. We never had a store here. Only thing was a truck that went into town. It brought out the main supplies like flour, tea, sugar, milk. You'd have to do without milk too, sometimes. Milk and Weeties and things like that were only what you'd get on pay day.

*What did you eat then, bush tucker?*

Yeah, we still do.

*Down at the camp, though, you ate more bush tucker?*

We used to got out everyday, in a big truck. They'd take big mobs of people and just drop them at the river. Stayed out all day and came back at night.

*But do people know that what they're eating in the shop, like food that's got a lot of sugar, like jam and honey and cool drink, is bad for them?*

No, because they think if white people make it they think, "If it's okay for them, its okay for us". We can't understand why a person would want to give us bad things.

*If they were told that a lot of white fellas have health troubles too and they have these health troubles because of what they've eaten at the shops and maybe because some of the problems Aboriginal people have got that are similar to white people like diabetes and hypertension, then that's because of the food that white man gives us too. Like, if they know that the problems we've got, white man had before us?*

You can tell them this but because they haven't seen it, because they haven't lived with white people, they haven't seen too many sick people in hospital, white people. See they know that

food is supposed to be good for you, that's all they know, they don't think that eating anything is, you know, bad for you. See when you tell them - I might sit next to old people, I might say "Don't put too much sugar". They say "Oh, I can eat sugar". That's what it's there for, you know, they laugh, but they don't think it's wrong, you know, until when they do get sick, and the doctor comes and they're not allowed to have sugar, they've got to have needles and they feel very sick and some of them come to realise it when it's too late.

See even young kids if they've got money they go, if there's no tucker at home they go and buy cool drink, you know, and have a feed.

*Let's say that you could do a couple of things in this community to improve health, what's the first thing that you'd do?*

Well, this is what we did once. We had a store manager that we could work with. When I say work, I mean the food that we wanted on this community, we got like brown sugar and like, cut out a lot of cool drink. People were complaining at first, drinking all that diet drink and that, you know. It was okay and then when that Sister goes away and then somebody else comes and changes the rule and the store or even the council changes and they don't eat this food, they're going to change it back.

*So you think food is one of the most important things?*

Yeah, I think food.

*Grog's not so much a problem here.*

No, not here it's not so much a problem. I reckon they keep getting knocked over the head with drinking and they've settled down a lot, but that's only one area and they should look at other things, like eating.

*Have people got enough money, do you think?*

No, there's very little money. Other C.D.E.P. communities, they get their money every fortnight, but here they want to get it every week because the money doesn't go too far. And the pensioners, on a week that they're not getting paid, there's C.D.E.P. people are having good tucker, buy food.

*Do they use their money well.*

Some of them do and some of them don't. On payday they buy a lot of food. They get bulk flour to last a long time. Flour, tea, sugar, damper (laughter).

*So what is the main reason why the money mightn't get spent on food? Grog?*

Grog, some cards, sometimes gambling.

*But when you have big card game do the people that win, do they usually drink with their winnings?*

Not all of them. Most of those people, they usually buy.....whatever they've got on layby in the store.

*Are cards a problem here then, gambling?*

Umm, not much here. Most days for cards are Fridays and pension day.

*What about the young people, do they take much notice of the old people any more?*

Yeah, some of them do. If they don't listen to their parents they got other members of their family. If they are younger, they get them into gear. If they're drunk and they pick on their parents and that, some other family chip in and sort it out.

*Do the old men, do they talk to the young kids about how it used to be when they were growing up and stuff, or do the young kids ask the old people?*

No.

*They're not interested?*

No, I don't think so. When we used to live in the old camp, there never used to be any lights or anything, so the old people used to tell us stories around the fire. Now that there's TV and other things, there's no time for stories.

*But even in the family, are there stories passed on through the family?*

No.



**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Looma 3**

**Date:** 10 August 1990

**At:** Looma Community

**With:** Male

**Age/s:** 22 years

*How long have you lived in Looma?*

About five years.

*Where are you from originally?*

La Grange.

*What made you come to Looma?*

To get away from grog.

*Had you been drinking down there yourself?*

Mmm.

Soon as I left school I was a teacher-aide. Then on the weekend, seeing all them young people drinking.

*Is there much to do down there for a young person?*

Not really.

*What made you choose Looma? Was there family here?*

Yeah.

*Why do you think life here is better?*

Oh, there's not much drinking going on.

*The health of the people here seems pretty good, do you think?*

Yeah, there's a lot of boys here playing basketball.

*Do you think many of the young people here listen to the old fellas?*

No, not really.

The young people, particularly the young boys, they don't communicate with the old people.

*What do the young people care about then?*

Basketball.

*A lot of Aboriginal people are developing health problems like heart disease and diabetes. Do you think that is something the young people are aware of and concerned about?*

I don't know, I don't think so.

*Is it something you think about, is it a worry for you?*

Yeah.

*In what way?*

You think of your future, what that might be like.

*Does it make you want to do anything?*

It makes you want to look after your health, I guess.

*Let's say you were in charge of improving health in the community. What would be the first thing you would do?*

I'd tell everyone to clean their houses, toilet, everything.

*Why don't they do they do that now?*

Lazy I guess.

*What would you do next?*

Getting good meals.

*You don't think they eat good food?*

No, some of the old people don't eat veges.

*Why don't you think they eat veges?*

Because in the old days they don't eat veges. They're not used to it.

*So you've been here five years. Do you think things are getting better?*

Yeah, they're getting better. There's a lot of young people working on plumbing - toilets, showers, leaking taps.

END OF INTERVIEW

**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Looma 4**

**Date:** 10 August 1990

**At:** Looma

**With:** Old Man

**Age/s:** about 55

*How long has this community been here?*

Since 1974.

*What about the clinic, how long has that been there?*

Yeah, I don't know.

*So when people got sick what did they do?*

Hospital - Derby, or Numbala Nunga (Old People's Home in Derby)

*What about bush medicine and that?*

Cold-sick, had bush medicine.

*What do they use the clinic for now?*

Sick, dressings and that.

*So when people get colds now, they don't use bush medicine?*

No, I don't know why, they just trying to be lazy I think.

*Do you think people should be using bush medicine?*

Yeah, some people use bush medicine. Old people.

*When you were growing up, when did they teach you about bush medicine?*

Sort of like school, bush school.

*Who taught you about bush medicine?*

My mother and father.

*So do you think it is good the school they got now?*

We need people who know how to look after the shop, or.....

*They learn white fella education in the school. Do you think they need to know about the old ways, like bush tucker?*

Most of the young fellas, they buy lollies and tinned meat, you know, they don't know much about bush tucker.

*What did your mother and father do for bush medicine if you were sick when you were a kid?*

They do smoke. Put stick in the room and smoke you - make you strong.

*What sort of sickness did you have when you got sick?*

Mainly cold-sick.

*No ear trouble or eye trouble?*

No. Mainly just blocked up nose, and that smoke, like clear your nose, like that (Vicks).

*How many brothers and sisters have you got?*

I got three - one brother and two sisters. My father had two wives - he was rich (laughs). But I got stepmother.

*Were you told a lot of stories when you were young.*

Yeah, a lot of stories, like how a man can live, you know. You grow up, told don't chase other girls or get into trouble, you know. Learn't Aboriginal law.

*You learn't law?*

Yeah, if you chase girls and that, you get in trouble. But now they just do what they like.

*Is that good or bad?*

Bad. If we had trouble, with girl or something, we might get killed, you know, other Aboriginal might kill us or something.

*Do you think it would be good if they had Aboriginal law still.*

The young fellas got the white man law now, they go jail. And they marry girls, not straight way, maybe their auntie or something.

*They marry girls across that law?*

Yeah.

*But do they know that is their auntie or sister or that?*

Yeah, they know, they don't take any notice.

END OF INTERVIEW

**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Looma 5**

**Date:** 10 August 1990

**At:** Looma

**With:** Male

**Age/s:** 29

*How do young people and old people get on in your community.*

They seem to have lost respect for each other. I don't know how we can get that back.

In the Seventies, when we were little we used to have a lot of old people live with us. We used to have a lot of time with them. In later years we don't seem to have much of a relationship with them. Some old people just lay down and die without even us knowing them. There's no real tears or sorrow for them, just, "These are only old people".

*A lot of the ceremony when people die is gone, is it?*

Well, not really, but it's fast disappearing. Here we still hold culture.

*Do a lot of the young men your age, do they think like that too?*

I really believe that I and my age group are the last lot of people.

*But what about your kids? What is going to happen when they are your age? Will they be still living here do you think?*

Well with this survival sort of thing and with white people world needing education, really I can't look back, I need to go on.

*But you think the school in the community is a good thing?*

To survive, and for the kids, to get them to get as much education for them to survive. Like, I just got a job with the mine, starting on Monday.

*Are you going to travel every day?*

No, I just work for six weeks, then I have a week off.

*So a lot of the mob your age get jobs outside of the community?*

We have to, because we really can't live with the C.D.E.P.

And like my brothers and my cousin, we can always get work outside of the community.

Sometimes we have people from Homeswest come and some of us join them, to get a job.

*You say you have to go outside of the community to get jobs and money, is that because you've got kids?*

I only got two. I was working for the last couple of weeks doing repairs on houses. Trying to get as much as we can get out of the houses. If you got broken window or something, like, that old lady over there (points), she's been asking me for the last couple of months to repair her house but we haven't got no material to work with. We haven't got enough material because we don't have that much money in the community. Like I've got a group of people outside who would be willing to do the work. There is no skills coming in here then.

*Any work on the Council team?*

I try to keep clear of the Council, because, .....I don't know why, I know that is wrong, but we escape the responsibility again.

*You think that working for the Council is taking responsibility from the community?*

Well in one sense that is true because it is the only.....when I come back from somewhere I find the place in so. I keep thinking, "Maybe I should do something."

*What if you had community meetings?*

No. We have community meetings but they are for elections and stuff. But I haven't been to a community meeting for a long time because like I said, I've been going outside trying to get work all the time. I don't really know what policies they have and how they run this community. I just live here. I've been living here for three-quarters of my lifetime. Like I say, I really should get back into the community to find out what is really going on.

*So what you are saying is that you live here but you don't have anything to do with the decisions that are made in the community?*

Sometimes a group of young people like myself want to get involved in the community, and its like.....its like there is nothing there, no respect again.

*No respect for who though?*

The Council sometimes. Because they've got a council here. This council will make decisions and if you're on the outside.....your world is nothing. I don't know how to fix that up sometimes. That's why we just keep going out. We try to abide by their rules sometimes.....sometimes we muck it all up.

*What do you think as a young man growing up under white law, do you know much about Aboriginal law and how they used to be?*

Yeah. Like I told you before, in the Seventies, we used to be in a camp around here and we used to get a lot of good advice from them old people - we used to listen to them and we couldn't break their law because their word was law. But now it's not like that.

*I don't know there is a lot of rebelliousness, even in our own culture. It's happening all over.*

END OF INTERVIEW

**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Wangkatjungka 1**

**Date:** 13 August 1990

**At:** Wangkatjungka Community

**With:** Female

**Age/s:** mid-twenties

*So what do you think the main health troubles are here?*

Dogs, too many dogs. Some got no hair.

*How do you know that affects people's health?*

Dogs sleeping on blankets. Them old people mostly.

*Young people don't have them?*

No, hunting maybe.

*Haven't they dipped the dogs here?*

Yeah, they dipped them, but not all the time, once in a while.

*So what would you do about the dogs?*

Shoot them.

*Have they always been like this, the dog problem?*

Yeah, always.

*So how would you do that, because a lot of the people might complain if you just went and shot them. How would you get rid of them?*

Just go to their owners. Ask them which one they want to keep. Last time they told them to keep two but its hard because those old people, they argue for all of their dogs.

*What about the environmental health surveyor, he hasn't been able to do anything?*

They don't do them too often, the dogs.

*Do people notice that the dogs are making them sick?*

Yeah, most of the kids get sick from the dogs.

*So if you could do something next, after getting rid of the dog problem, what would that be?*

Most of the rubbish, fix that up.

*What would you do then?*

Get proper, good houses.

*What sort of houses would the people want?*

Bigger houses.

*What if the people had some say in the design of the houses?*

It would be best if people designed their houses.

*Because some of these houses here wouldn't be suitable, would they?*

In the wet weather, water comes in, and you need a big verandah, right around, because when this place gets wet it gets really muddy, and that's the time when the kids get sores and diahorrea. That's a hard time for sick people to get out of this place, wet time.

*So after these things, what could be done for the people here next to improve their health?*

I think that store needs a little bit of change. It's the same food that it keeps ordering every time. We need variety.

*Do you think people would eat different sorts of things? Would they choose them for themselves?*

I buy it all the time but its more, fruit and vegetables.

*Do the people have a good idea at the moment about eating the right food?*

Yeah.

*They know which foods are the right foods to eat?*

Not the old people, eh? Yeah, young people know. They buy vegetables and all that. Yeah, young people are taught.

*What about sugar though?*

Yeah, they drink too much cool drink. That's the worst thing now.

*Many people got diabetes?*

Yeah, lots of people. I reckon we'll have more as the children grow older. Every little kid drinks sugar in cool drink.

*Do they drink the cool drink without the sugar, the diet one?*

They drink the one with it.

*Is the one without sugar, the diet one, is that in the store now?*

The store manager puts it in the back fridge. He thinks that people will ask for it. He just wants the people who want to go on diets to buy it.

*So you have to ask for it?*

Yeah, and half of the people don't know there's diet drink in there.

*You've been doing some of those surveys about health in this community?*

I did a couple of them. But its good. You can see the different sides of men and women.

*Do the people like doing it?*

Yeah, they like doing it, but its hard to get them because they're all working. And you can't find them half of the time, because they're all spread out.

*But they didn't mind, eh?*

No, they didn't mind.

*The old people here, they have a meal provided in the morning?*

Yeah, they get a good meal every day.

*So you mob started this off?*

They've had it for a long time, this homemaker thing. That old man up there cooks a meal for them. And that's the lunch for the children, that goes up to the school. Another thing they need is washing, them old people, you know, clean clothes. There really should be a laundromat in this place. So that we could be washing the old people's clothes too.



*How long is it since the community got rid of the grog?*

A long time, I think, before Christmas.

*Have you noticed a difference?*

Yeah, now that the grog is finished we have not as much people in the clinic now. Like when they used to drink, we used to have people with cuts in the clinic, first thing Monday morning.

*Do they drink somewhere else now or not at all?*

Yeah, they just go away in the car, usually into town (Fitzroy Crossing).

*Have some people given up altogether?*

Yeah, a lot of people have given up. Some because of health problems.

*So what do you think is the biggest health or social trouble of people your age?*

Pause.

*Enough work, or things like that?*

There're all working.

*What, on C.D.E.P?*

Yeah, C.D. E.P.

*How do they find that?*

They have to work if they want to get money, so they just find a job anywhere. Like, a lot of young girls work in here (council office). That young fella there, he's Social Security agent - they do the forms for the people in the community. Other people work at the store and some at the Clinic. Lots of young kids collect rubbish and environmental health, and that one there, he works at the powerhouse.

END OF INTERVIEW

**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Wangkatjungka 2**

**Date:** 13 August 1990

**At:** Wangkatjungka Community

**With:** Male

**Age/s:** late 20's

*Where do you think the greatest health problems are in this community?*

In the houses. They aren't kept clean. Toilets block up. People don't use toilet paper, they use rags, anything and they block up.

*About how many people, out of 10 say, would use toilet paper?*

About five out of ten. Particularly some of them old people they don't understand. Them young people, you could get them to clean the houses and toilets for the old people.

*How many people are living in the average house in the community?*

About six or seven.

*How many bedrooms would the average house have?*

Some are three, some are two, some one.  
You need to rebuild them again. To cart sand for the outside (the yard).

*What about the food, do people eat the right food here?*

I don't know. They eat what they want to eat. They get bush tucker all the time.

*What sort of things?*

Snake, goanna, wild potato.

*Many kangaroo around?*

Yeah, out in the desert. They're around.  
In the old times, the kids never got sick from the bush tucker.

*Do you think that was also because they had a lot of exercise, to catch the bush tucker? They hunted it, ran out and speared it. Do they get that now?*

No, they sit down and listen to tape recorder all day, watch TV. Had to walk for it, not with a motor car. It's really hard to get people to do exercise.  
They did that in Derby, one time, I heard that story. Someone took them out bush.

*That was probably the diabetics. They took them out bush to hunt and live on bush foods and after, when they came back in from some time out there, the people didn't have the diabetes.*

They should get the diabetics from here, take them all out.

*A lot of the old people, they talk about the old way, but the young people, do they listen to that? Do they know the old stories?*

(Old man close by, in language, man translates)

He said that when you tell them something, young people don't listen. Young people looking at the new generation, new age. They don't listen to old people anymore.

*What is the future then for Aboriginal people?*

I can't see any.

*You can't see any future?*

I don't know, maybe, but maybe its too far gone. It's hard.

END OF INTERVIEW

**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Wangkatjunga 3**

**Date:** 15 August 1990

**At:** Wangkatjunga Community

**With:** Male

**Age/s:** about 55 (ex-stockman, station cook)

*When did you start work?*

Oh, back in '56.

*So you saw all these houses get built here?*

Yeah, they all came on a truck and put them there near the old garage. Some were in some of them old houses over there and there (points).

*There's different groups of people here aren't there?*

Yeah, desert people and station, all come from different parts. Some originate here, were born here, near the river.

*So when you first came here, what was the health of the people like then?*

Oh, it was poor. Things were terrible here. We were really scratching.

*What were some of the reasons, why people's health wasn't good then?*

Oh, I don't know, probably lack of food. There was just rations, just enough to keep going. You'd get rations from town - they didn't have a good store then. They had a store but there wasn't nothing in it.

*What about grog then, was that a problem?*

Well, yeah, there was drinking, but you didn't see much grog out here then.

*What about in recent years, have things changed?*

Oh, yeah, its changed a lot now, since they got the free rights, you know?

*Do you mean the right over this land...land rights?*

Yeah.

*How have things been in the last year, since they stopped the grog coming in. Has that made it better?*

Yeah, its a lot better now. Oh they sneak the grog in now and then, but not all the time. If they get caught they have to pay so much fine, \$100.00 or something like that, and that's settled them down a bit.

*So it's definitely got better?*

Yeah, it's a lot better now. Everything seems to have brightened up, even the kids, they all look well now. It's the family, you know too, sometimes if their mother or father are in town, the kids walk around here with nowhere to go, lost, you know, they don't know where they're going to get their next feed from. We got the homemaker now (homemaker scheme - lunch for old people and school children), like, it doesn't matter if your parents are in town, they still getting a feed.

*So some things are pretty good, but out there in the community, what do you think now would be the major health troubles that people need to work on?*

Keep the place clean, that's all. If they could all join in and keep the place clean and nice and chase the dogs away and pick up a bit of rubbish here and there. It would make it look better. You wouldn't get so much complaint, you know about kids being sick and the house being so dirty.

*What about the houses, do you reckon that these houses are the right design for the people here?*

I think the ones like the houses in (Pinnacles) would be better. Have you seen those houses, next door. They got a long verandah right round, where kids can play round.

*Are they on the ground?*

Yeah, they're on the ground, but a lot better than this type here. This type get too hot, too jammed in. You have a look at the one in (Pinnacles), they'll give you a good idea. Nice and cool to sleep out on a verandah, you know, got a verandah right round. I've never seen them from inside, but looking from outside, it looks nice.

*A lot of the people here are getting white fella health troubles now, like diabetes and heart disease and things like that. Do you think they've got much idea of how to prevent those troubles before they start?*

I think probably the sugar too, you know. More sugar they put in their tea, I've seen this mob. I saw one bloke here, standing one time here, I saw him put one, two, three, keep going, I was watching him from there.

*Was he an old fella?*

No, he was a young fella. I said to him, "What are you doing, are you going to drink that?" I said to him, "No, don't be silly boy, what happened to you? "Show me that cup!". So I got the cup and there was that much sugar in it.

*I guess it wasn't so bad in the old days because they went out hunting bush tucker and then they burned off a lot with exercise getting the food.*

That was good health for them, but now you don't see them. They'd rather just get a motor car for a ride or something.

You look at them old people now, they still healthy. They're old, maybe skin and bone but they still happy, they still move. They bin living on the bush food, you know. That's much better what they've been getting out there. That's true, too, I've seen a real old bloke that's still strong enough to walk out there for a bit of goanna or something.

*A lot of people are relying on the store tucker now. Cool drink and things like that.*

Yeah, cool drink and chocolate and that. That's a terror that cool drink.

*You can get that diet drink that doesn't have sugar in it. Why don't they have that in the store?*

I don't know, I think you can get some in the store, they'd rather have the sweet tucker, they like sugar. They've worked that out, they'd rather get more sugar.

*Is there much bush tucker around though?*

Yeah, plenty of bush tucker.  
They got them yam, bush potato.

*Kangaroo?*

Oh, yeah, big one off the desert, and snake, they love that snake.

END OF INTERVIEW

**Kimberley Aboriginal Health Promotion Project  
Structured Interview - Wangkatjungka 4**

**Date:** 15 August 1990

**At:** Wangkatjungka Community

**With:** Female

**Age/s:** mid-40's

*So how do you see health in the community here at Wangkatjungka?*

*In the community?*

*Yes, in the community?*

*It's good.*

*Like health worker. Theses times we don't lose a lot of old people and kids, they don't get sick no more.*

*They don't get sick no more?*

*They get little bit, you know, cold-sick.*

*So what did the kids get sick from before?*

*They get sick from things not being clean, they get cuts and sick like that. Now we're working, you know, like around the camp, things look better.*

*That's with that C.D.E.P program, it's much better?*

*Yeah.*

*What about the older people in the community. Do they get sick often?*

*No, they're right now.*

*So people still eat bush tucker?*

*Yes, people want to go hunting, you know, for goanna and things.*

*Do they go often, like every day?*

*Yes. They go out a whole mob of people when they can get tucker for dinner.*

*So, what sort of things did people get sick from before?*

*They get vomiting, you know, and skln diseases, and people didn't feed their kids properly.*

*So since the C.D.E.P program and environmental health, things are better?*

*Yes, people get training and come back to do good things.*

*Are those people young and old people?*

*Yeah, like young girl might get training in the hospital or in the clinic. Teach people things, like to use paper instead of just spitting on the ground.*

*What sort of paper, like tissue?*

*Yes.*

*So how long has Wangkatjungka had no grog here, with the by-laws for no alcohol?*

*A couple of months, (some disagreement among women in this group about the exact time period).*

*So has it been better since the grog has been out?*

Yeah, you can have a good sleep and they are around playing, good for the kids, you know. Not all the fighting. When they used to drink they come into my house and steal all of my tucker. Their clothes, they don't take them off. Now this time they're really good. Sometimes they go away on the weekend, drink other places, but not here. Sometimes when they drink they come back, when they starved for tucker.

*So what was it like when you were a little girl growing up around this area?*

It was good, we used to live in the bush and down by that river. No medicine, only had the bush medicine.

*And people still use bush medicine?*

Yes, we still use bush medicine. For sores and cold-sick. My mother would say, "We're going bush now, we've got to find leaves from a bush that grows near the waterhole".

*So, what do you think health means to Aboriginal people?*

Good for living, like bush, you know, go hunting for goanna, go hunting for bush tucker, you know.

*So that was when you were small, what do you think health is like now?*

Alright now. We do that same, like learning long time, but we do some now like taking my kids, but only sometimes.

END OF INTERVIEW

## APPENDIX E

Published Paper on Results of Pilot Study



**Note: For copyright reasons, the following article has not been reproduced.**

**Spark, Ross et al. 1992 Aboriginal people's perceptions of their own and their community's health: results of a pilot study. *Health Promotion Journal of Australia*, 2(2): 60-64**

**(Co-ordinator, ADT Project(Retrospective), Curtin University of Technology, 1.11.02)**

## APPENDIX F

### Demographics of the Three Communities at Post-test

## Demographic Equivalence of the Three Communities at Post-test

**Table: Sex, Age and Employment Status at Post-test**

Community	% Mowanjum (n=57)	% Bayulu (n=50)	% Beagle Bay (n=54)	Total (N=161)
Sex				
Male	44	50	46	47
Female	56	50	54	53
TOTAL	100	100	100	100
Age				
18-25 years	19	22	22	21
26-35 years	23	42	30	31
36-45 years	19	12	15	16
46 years plus	32	22	33	29
No answer	7	2	0	3
TOTAL	100	100	100	100
Employment				
Employed	37	42	43	40
Not Employed	63	58	57	60
TOTAL	100	100	100	100

There was no significant difference between the three community samples at post-test by gender ( $\chi^2=0.4$ , DF=2, P=0.8) or age distribution ( $\chi^2=5.4$ , DF=6, P=0.48) or employment status ( $\chi^2=0.46$ , DF=2, P=0.79).

## APPENDIX G

Storyboards for Television Advertisements – “*Look Out*” and “*Pride and Respect*”

LOOK OUT!



U.S. 5820 HSS

AIDS • RUIN OURSELVES • SHAME • TOO MUCH • SCARED • SICKNESS • LONG GRASS • WEAK INSIDE •

SORRY

PROPER SORRY FELLA

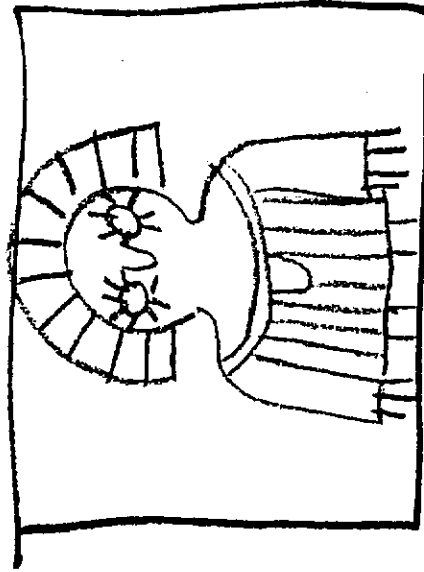
NO GOOD PEOPLE

CAN'T HAVE BABY



4 seconds

CANT BE MAN



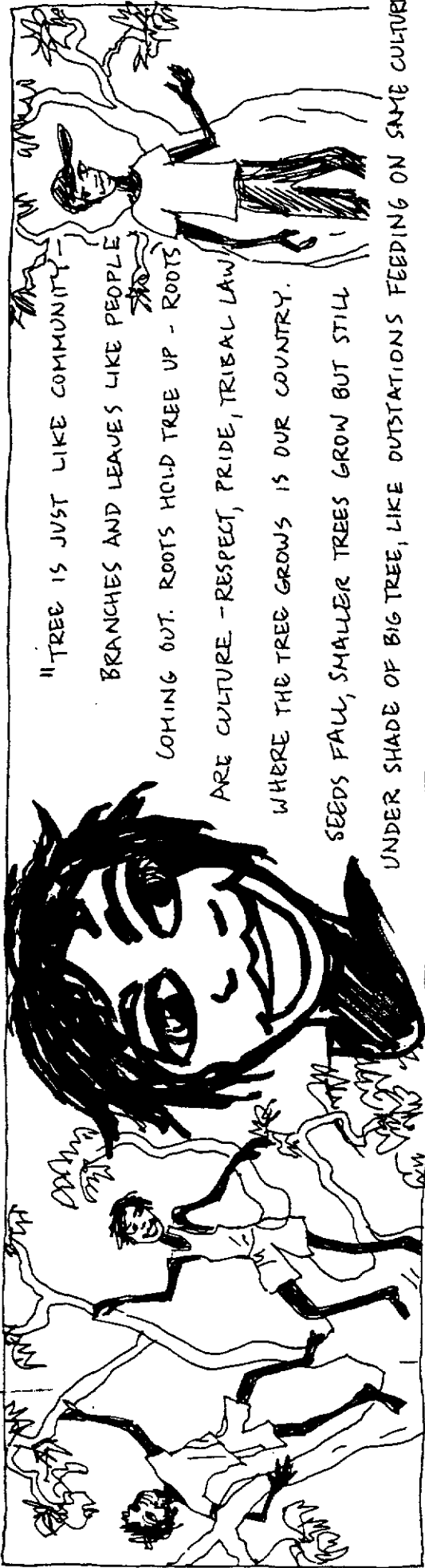
2 seconds



5 seconds

4 seconds

# PRIDE AND RESPECT - BAYULU.



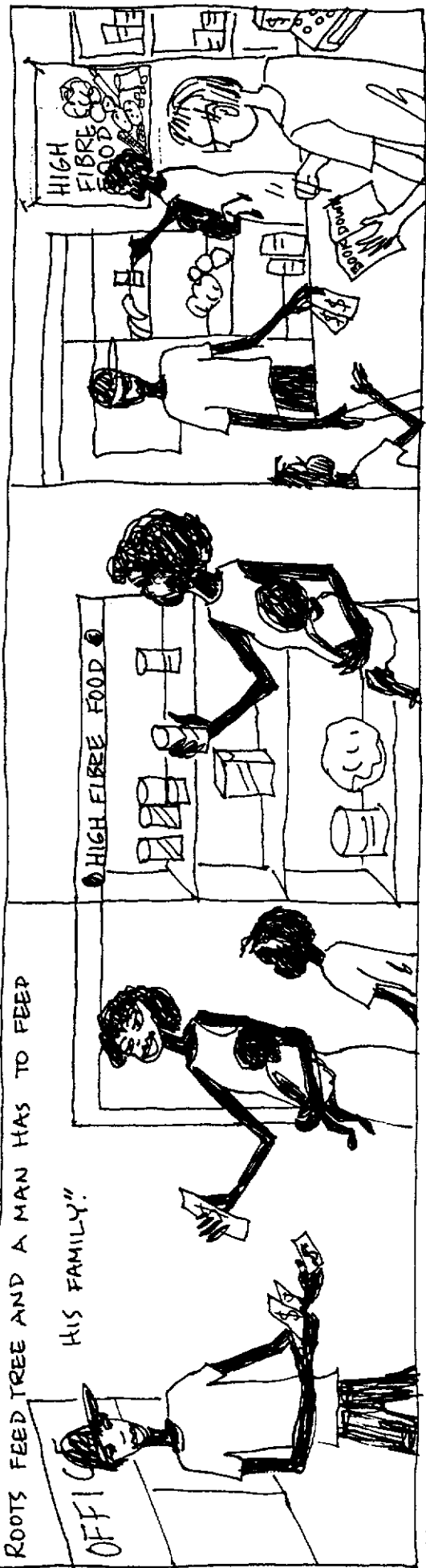
"TREE IS JUST LIKE COMMUNITY -  
BRANCHES AND LEAVES LIKE PEOPLE  
COMING OUT. ROOTS HOLD TREE UP - ROOTS  
ARE CULTURE - RESPECT, PRIDE, TRIBAL LAW  
WHERE THE TREE GROWS IS OUR COUNTRY.  
SEEDS FALL, SMALLER TREES GROW BUT STILL  
UNDER SHADE OF BIG TREE, LIKE OUTSTATIONS FEEDING ON SAME CULTURE..

OPENING SHOT = CLOSE-UP OF LIMB - KID'S FACE FILLS SCREEN - PULL BY SLOWLY

①

ROOTS FEED TREE AND A MAN HAS TO FEED

HIS FAMILY"

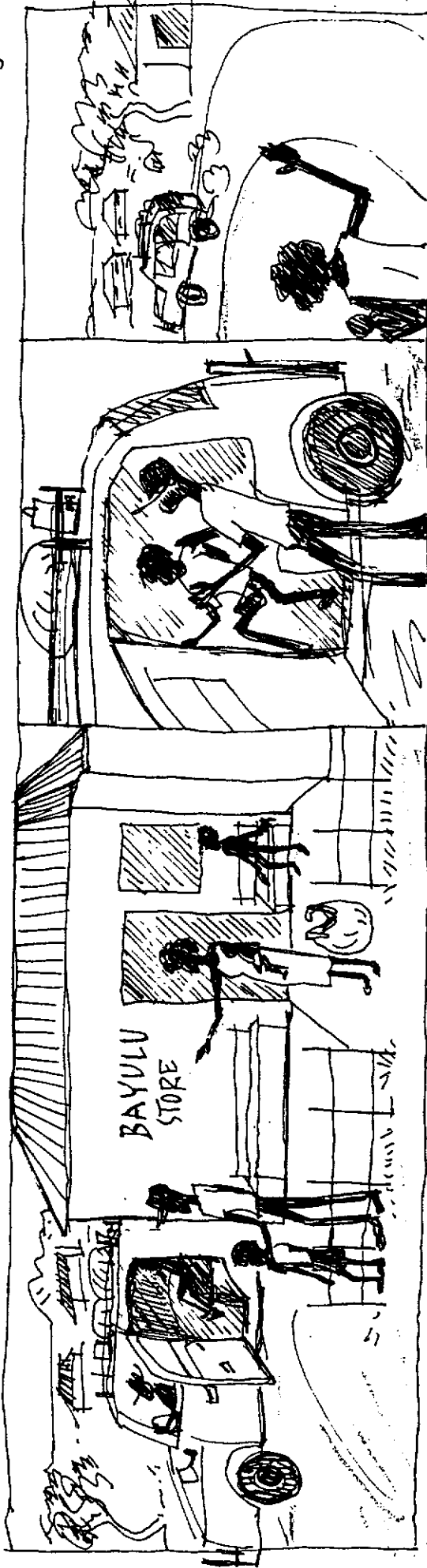


INSIDE SHOP....

②

SELECTING FOOD

BOOK-DOWN (Paying off Debt)

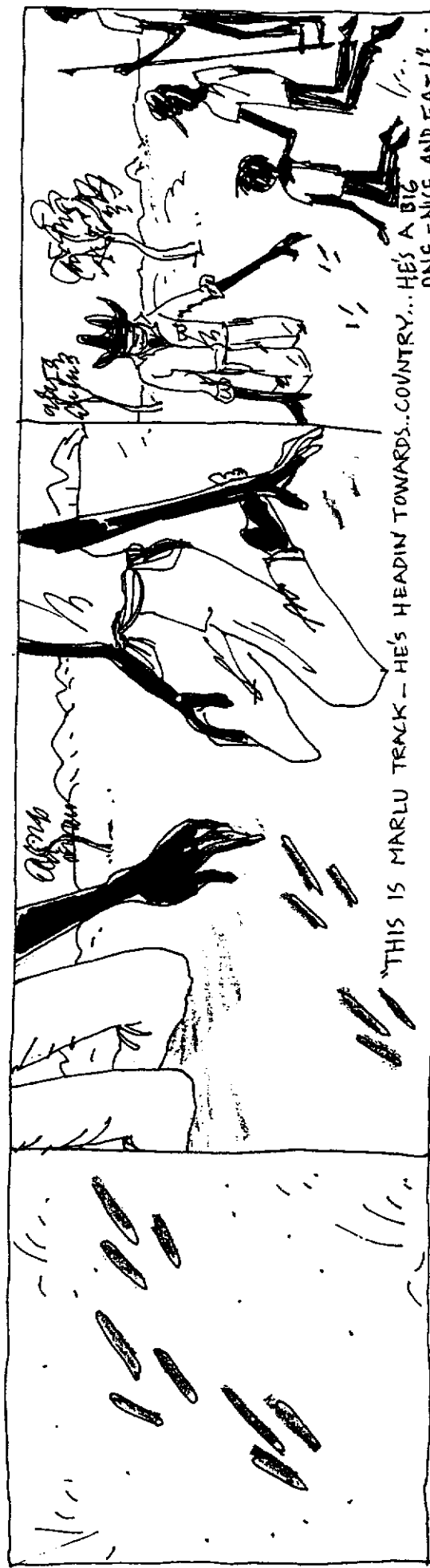


LEAVES SHOP

HELPS HIS YOUNG BOY INTO TRUCK - TRUCK MOVES OFF.

③

DISSOLVE...



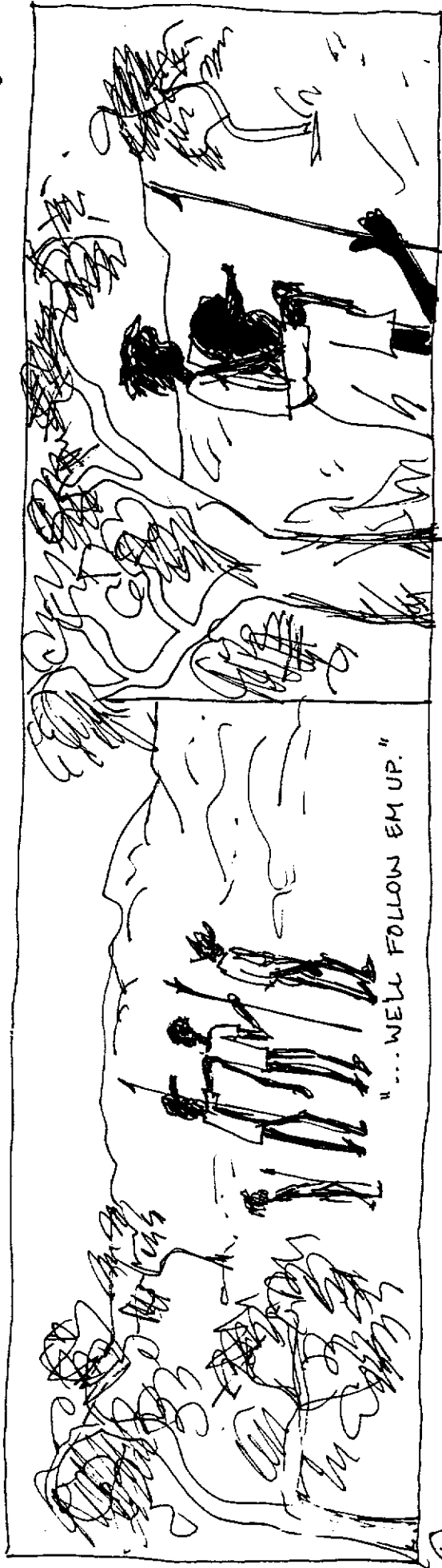
DISSOLVE

OLD MAN KNEELS, FACE TURNS TO CAMERA --- CAMERA MOVES ABOVE OLD MAN... PULLING BACK INTO LIMBS OF TREE.

④

"THIS IS MARLU TRACK - HE'S HEADIN TOWARDS... COUNTRY... HE'S A BIG ONE - NICE AND FAT!"





④ CONTINUED - FROM LIMB OF TREE WIDE SHOT OF GROUP MOVING OFF.

CAMERA FOLLOWS (DOLLY)



WALKS BEHIND TREE.

---- ZOOM IN ---- DISSOLVE ----



## APPENDIX H

Media Release for Top End Health Minister's Meeting

**Note: For copyright reasons, the following news release has not been reproduced.**

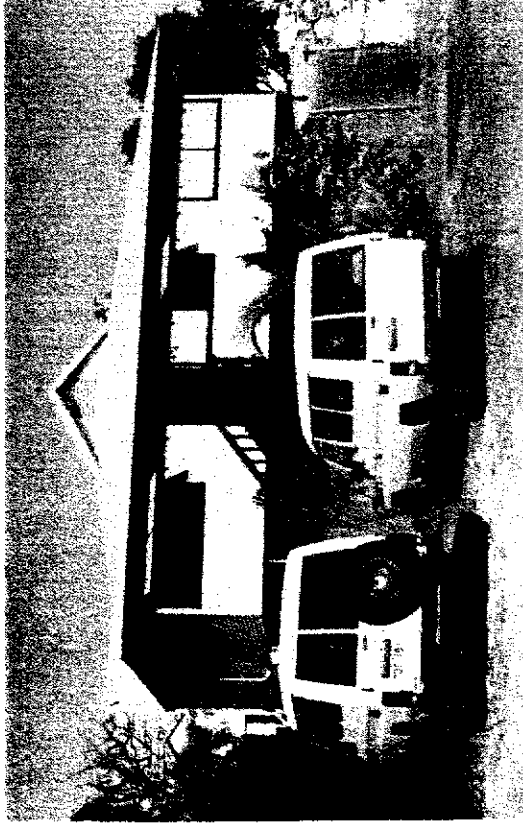
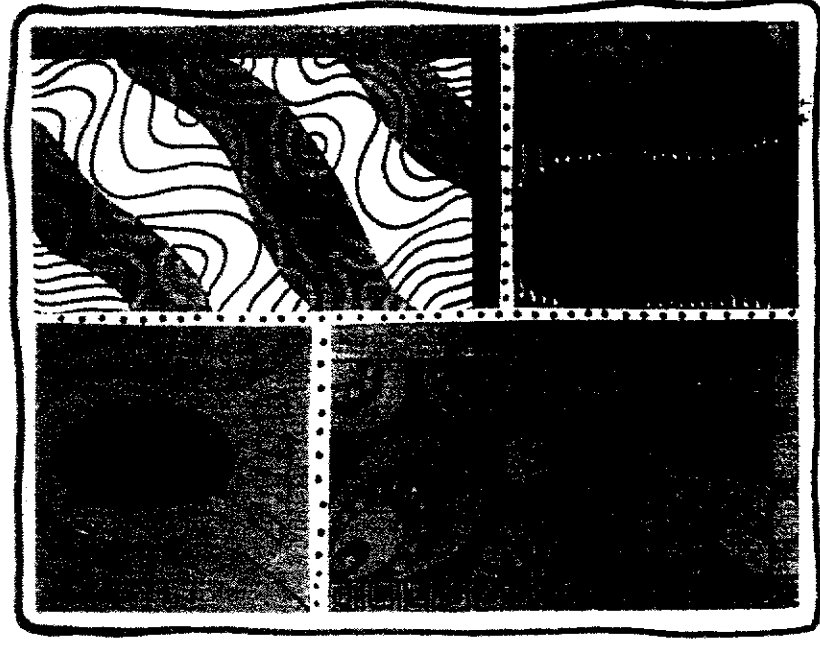
**TV health promotion messages by aborigines for aborigines. (News release) Brian Howe, Minister for Community Services and Health, 29 November 1990**

**(Co-ordinator, ADT Project(Retrospective), Curtin University of Technology, 1.11.02)**

## APPENDIX I

Kimberley Aboriginal Health Promotion Unit Brochure

# MARDJA BULLI UBBADIJINGA



Kimberley Aboriginal Health Promotion Unit  
P.O. Box 525, Broome, Western Australia 6725

Phone: (091) 937 313

Fax: (091) 937 314

Kimberley Aboriginal Health Promotion Unit

## **RATIONALE FOR THE ESTABLISHMENT OF THE UNIT**

In terms of the health related behaviour of Aboriginal people of the Kimberley, it is apparent that current mainstream health promotion programs have not achieved the well-documented successes observed in the broader Western Australian society. Though there are many reasons why this is so, it nevertheless reflects the inappropriateness of health messages that are born of a cultural and social environment far removed from that which is familiar to many Aboriginal people in the Kimberley. Indeed there is much evidence to suggest that health promotion in Aboriginal communities necessitates a unique approach at the individual community level, if positive outcomes are to be realistically expected.

Such an approach requires that community members be empowered to make health related choices through a process which is driven by priorities and strategies which are relevant to, and directed by, Aboriginal people.

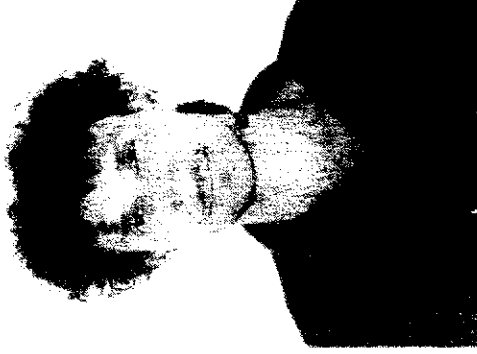
## **HISTORY OF THE UNIT**

The need for the establishment of a Kimberley based Aboriginal Health Promotion Unit was originally identified following a community based health promotion project conducted jointly by the School of Public Health, Curtin University in 1990, and the Kimberley Health Region.

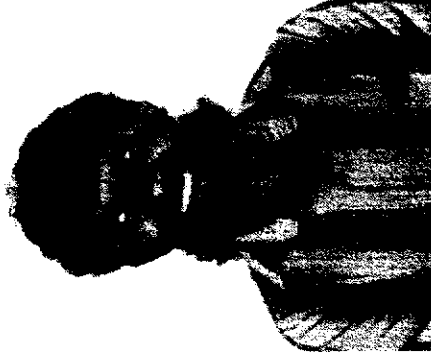
The pilot work has been highly regarded by the Health Department to the extent that the Health Promotions Services Branch has provided Kimberley Health Region with the funds to establish and operate an Aboriginal Health Unit in the region.

Established on the 7th January 1992, the Unit attracts the support of a number of government and non-government agencies. In particular, the Aboriginal Medical Service is committed to active participation on the Steering Committee, which oversees the Unit's operations.

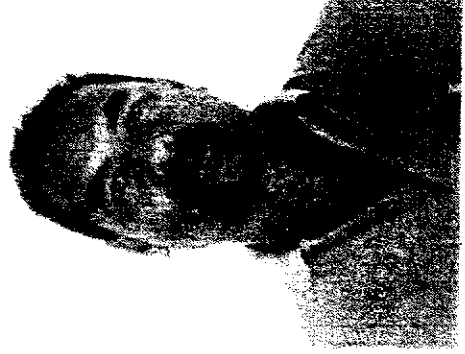
Whilst the Unit is primarily a service for the people of the Kimberley, it is hoped that Units based on a similar philosophy will subsequently be established in other regions.



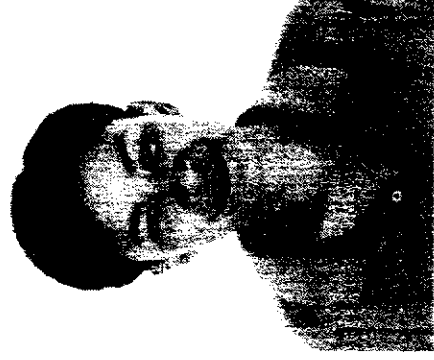
**Wayne Barker**  
Manager



**Gregory Francis**  
Community Health Worker



**John Bin Salleh**  
Community Health Worker



**Carol Tang Wei**  
Health Promotion Officer

## OPERATIONAL STRATEGY

The major operational strategy for the Unit involves a workshop process through which community members identify and prioritise their own health concerns. The concerns are then worked into graphic forms, such as stories or situations, which provides the basis for health promotion stories and messages. These stories and messages are produced in the form of posters, t-shirts, television advertisements and other appropriately developed media.

The comprehensive approach employed by the Unit includes not merely the production of educational and promotion materials but also strategies to address organisational, fiscal, environmental and legislative barriers to the accomplishment of stated objectives.

It is intended that West Kimberley communities be targeted for the first half of the 1992/1993 financial year, the East Kimberley for the second half. A similarly equal division of resources is envisaged for subsequent years, however prioritisation according to health need will be necessary. Should the need for particularly urgent intervention be identified in any community, activities will be directed accordingly through the Regional Director.

## THE PROCESS

- \* Community councils are approached to invite community members to participate, communicate aims/objectives, and to secure the support of the council.
- \* Community profiles are prepared on each Aboriginal community identifying a number of details. These include such information as names of traditional owners of country, current lists of council members, community groups and services who are the motivators in each community, what community members see as health concerns and what they see as immediate needs. The purpose of this stage is not only the mere assemblance of a data baseline but the establishment of trust and promotion of an awareness of broad health issues amongst community members.
- \* These community profiles, the contents of which are confidential, are then used as the basis for the planning of projects and facilitating effective communication between the communities and the Unit.

## THE GOAL

To reduce preventable morbidity and premature mortality amongst Aboriginal people in the Kimberley.

## THE OBJECTIVES

Overall Unit objectives (as opposed to specific, community based objectives) are to be determined by formal agreement between the Unit staff, the Unit Steering Committee, and the Health Promotion Services Branch.

In broad terms they include:

- \* To stimulate community participation and action on prioritised health issues and to assist the community members to develop and implement a comprehensive approach to addressing them;
- \* To facilitate the means whereby Aboriginal people are able to influence the way data relating to their community is collected, utilised and return to them
- \* To promote effective inter-agency collaboration - particularly between Aboriginal controlled health services and the HDWA;
- \* To train AHW's and other community health workers in skills and strategies for health promotion;
- \* To provide a consultancy and training service to organisations, departments and health regions serving rural and remote Aboriginal communities (medium to long term).

## MANAGEMENT AND ADMINISTRATION

Administration of funds for the Unit's operations will be through the Kimberley Health Region. The Steering Committee will oversee activities of the Unit.

A state objective of the Unit is to enhance inter-agency collaboration and in terms of the Unit's overall management, this is achieved in part through the composition of the Unit's Steering Committee.

Its members include:

- \* HDWA Regional Director (Kimberley Health Region), Mrs Christine O'Farrell (Chairperson);
- \* KAMSC representatives, Dr Ian Wronski & Mr Kevin Cox;
- \* HDWA Finance & Facilities Co-ordinator (Kimberley Health Region), Mr Peter Matison;
- \* HDWA Regional Aboriginal Health Liaison Officer, Ms Bennie Birss;
- \* Director, Health Promotion Services Branch, HDWA, Mr Maurice Swanson;
- \* Community Medical Officer, East Kimberley, Dr Michael Douglas;
- \* West Kimberley community representative, Ms Glynis Sibasado;
- \* East Kimberley community representative, to be appointed.

The Unit Manager, Mr Wayne Barker, took up his appointment on the 7th January 1992. The Unit occupied its new office in the 'Sun Pictures Building' on 22nd June 1992 and has since commissioned its service to almost full operational readiness.

The Unit Manager will develop an annual operational plan that specifies strategic objectives, performance indicators and budget. The annual operational plan is to be approved by the Steering Committee and a yearly program evaluation report will be submitted to the Director, Health Promotion Services Branch, prior to the 30th July by the Regional Director of the Kimberley Health Region.

The evaluation report is to address performance indicators and provide details of:

- \* Workshops and follow-up contacts carried out
- \* Resources produced;
- \* Community health promotion action plans developed and implemented;
- \* Where possible, details of health worker and other training activities;
- \* Community education activities undertaken by Unit Staff, including health worker response in terms of the provision of community education and program support.

Continuation of Unit funding support beyond the initial three year period will be contingent upon satisfactory progress in terms of outcomes. Such progress will be assessed both qualitatively and quantitatively.

## PHILOSOPHICAL ORIENTATION OF UNIT

- \* Using a community development approach, aiming to empower Aboriginal people to take greater control of their own health, and actively facilitating maximum community involvement and participation at every stage.
- \* Wherever possible, management of programs being vested in the participating Aboriginal communities.
- \* Reorienting the focus of health care from curative to preventative services, reflecting the realisation that much Aboriginal ill health and premature mortality is preventable.
- \* Recognising the pivotal role of cultural and social factors in determining health status.
- \* Valuing and encouraging a diversity of thought and perception of the issues raised/generated in workshops.
- \* Being flexible enough to adapt to changing needs and priorities.

Priority will be given to addressing those health issues identified by the Aboriginal communities themselves, however the Unit is to be mindful of current statewide health promotion priorities that have been identified as the major cause of preventable morbidity and premature mortality. These include smoking, alcohol abuse, infectious disease and environmental health.

Notwithstanding that, it is a reasonable expectation that many of the priority issues identified by community members will relate to one or all of the factors specified above.