

Faculty of Business

**Effects of Psychological Capital on the Relationship between Meaningful
Work, Job Burnout and Employee Engagement of Social Workers in
Singapore**

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Doctor of Philosophy
of
Curtin University**

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Declaration

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

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

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval number: HRE2017-0239.

Signature:

A handwritten signature in black ink, appearing to be the initials 'G' followed by a stylized flourish.

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Abstract

The role of social workers is getting more significant over the years, partly driven by greying population, smaller family size, and growing complex needs of families. The rising stakeholders' expectations see social workers being exposed to higher job demands, leading to resources impairment, with the inevitable corollaries of feeling burnout, disengagement and eventually leaving the social service non-profit organisations (NPO)s. With every departure, social service NPOs suffer lapses in productivity and performance as the quality of care to clients is compromise. Despite advances in social work practices, there are relatively few studies that have examined the motivations and concerns of social workers. Given that the work performed by social workers take on a special significance, this thesis is therefore timely, as the results could help social service NPOs to leverage meaningful work in developing more effective interventions to complement their existing recruitment, retention and motivation strategies.

Following the conservation of resource (COR) theory, the theory of planned behaviour (TPB), the social exchange theory (SET) and the job demands-resources (JD-R) theory, this thesis extends the literature of meaningful work by contextualising it in a non-profit setting. Concomitantly, this thesis develops a single model that encapsulates psychological capital (PsyCap), meaningful work, employee engagement and the three dimensions of job burnout which are reduced personal accomplishments, depersonalisation and emotional exhaustion. It is important to study these constructs as employee engagement and job burnout are inextricably linked to the quality of care provided to their clients. Besides, social workers require the right dispositions, other than formal qualifications, to excel in this profession and to positively appraise their job demands which have an impact on the job outcomes.

Taken together, the purpose of this study is thus to examine the role of PsyCap, as a mediator and a moderator, on the relationship of meaningful work on the outcomes of employee engagement and the three dimensions of job burnout. Primary data for this thesis were collected from 223 social workers working in Singapore. Partial Least Square - Structural Equation Modelling (PLS-SEM) was used as the analytical method

for this study. The reflective-formative measurement model was utilised for the constructs of meaningful work, employee engagement and PsyCap.

The results confirmed that meaningful work was positively associated with employee engagement and PsyCap. On the dimensions of job burnout, negative significant correlation was observed with reduced personal accomplishments, but not with depersonalisation and emotional exhaustion. Significant positive correlations were observed between PsyCap and employee engagement. Concomitantly, PsyCap was negatively associated on all three dimensions of job burnout. On the role of PsyCap as a mediator and a moderator, the results further confirmed that PsyCap displayed mediation effect on the relationship between meaningful work on the outcomes of employee engagement and the three dimensions of job burnout. On the contrary, no evidence was found to support the moderating effect of PsyCap on the same set of relationships.

The contribution of this study is three folds. First, it demonstrated that an integration of theories is needed to holistically describe the phenomenon that is under investigation. In addition, this thesis is the first few reported studies incorporating both personal and job resources within the same model. The results obtained extend the theoretical understanding on the interplay between both resources, enriching the body of knowledge on the JD-R theory as well as the COR theory. Second, this is the first few studies that modelled the constructs in the reflective-formative measurement model, which by doing so, reduce chances of misspecifications that may potentially bias the results and casted doubts on the practical meaningfulness of the implications. Finally, with the malleable attributes of PsyCap and the results showing meaningful work being a strong predictor of PsyCap, social service NPOs should focus on imbuing meaningfulness in work to improve social workers' PsyCap. As demonstrated, PsyCap is a critical resource that they leverage enhancing their engagement level and reducing their propensity for experiencing job burnout. At the same time, it is important to note that the results of this thesis are generated from a single profession in a developed country using cross-sectional data. Accordingly, further studies on other social service professions and from other countries with longitudinal data will enable generalisations.

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List of Abbreviation

AVE	Average variances extracted
CB-SEM	Covariance-based structural equation modelling
COR	Conservation of resource
HCM	Hierarchical components model
HRM	Human resource management
HTMT	Heterotrait-monotrait
IFSW	International Federation of Social Workers
JD-R	Job demands-resource
MBI	Maslach burnout inventory
NCSS	National Council of Social Service
NPO	Non-profit organisation
PCQ	Psychological capital questionnaire
PERMA	Positive emotion, engagement, relationships, meaning, and accomplishment
PLS-SEM	Partial least square - structural equation modelling
PsyCap	Psychological capital
PTSD	Post-traumatic stress disorder
SASW	Singapore Association of Social Workers
SET	Social exchange theory
TPB	Theory of planned behaviour
UWES	Utrecht works engagement scale
VIF	Variance inflation factor
WAMI	Work and meaning inventory

CHAPTER 1: INTRODUCTION

The ever-changing climate of greying population, smaller family size, and the growing intricacy of familial needs have collectively exacerbated the role of social workers. These changes are subsequently reflected in other literature, acknowledging the profession's increasingly demanding job requirements, leading to burnout and poor employee engagement (Lloyd *et al.*, 2002, Schwartz *et al.*, 2007, Kim and Stoner, 2008, Hombrados-Mendieta and Cosano-Rivas, 2013, McFadden, 2015, Wagaman *et al.*, 2015, Travis *et al.*, 2016, McFadden *et al.*, 2018). Social workers working in Singapore especially have reported a replacement rate that is incapable of outpacing the demands for the services (Tai, 2016a). Furthermore, the inadequate number of social workers has been highlighted further in studies conducted by Curtis *et al.* (2009) and Park (2016). They have respectively noted that the global annual average turnover rate for the profession range from 10% to 50% with the average expected working life of 8 years, which is remarkably shorter compared to nurses, doctors, and pharmacists, who logged 15, 25, and 28 years, respectively.

Therefore, this has called for one to explore and leverage an individual's positive psychological capital (PsyCap) that defines one's behaviour, attitudes, and action. This is reflected in this study, demonstrating the manner in which PsyCap as a personal resource posed its potential to influence employee engagement and job burnout. This particular chapter provides the background and context, giving rise to the problem statement and research objectives for the work. Then, an overview of the constructs has followed, alongside the potential theoretical, empirical and managerial significances that could possibly realise as a consequence. Finally, the chapter concludes with an introduction of the scope and structure of the study accordingly.

1.1 Background

1.1.1 Definition of Social Work

One may interpret social work from different perspectives. Fundamentally, it is related to applied social sciences and typically involves the intrinsic passion to help others who are in need. It has been described by Folgheraiter and Raineri (2012) as a

collective profession incorporating multiple roles, with a common purpose of providing support to individuals, families, and communities. Meanwhile, the International Federation of Social Workers (IFSW) has defined social work as a profession that “promotes social change, problem-solving in human relationships, and the empowerment and liberation of people to enhance well-being” (Hare, 2004, p. 409). However, social work has evolved to not only involve seeking positive changes in clients’ lives, but also one’s role as an advocate to promote a social cause that impacts policies, frameworks, and legislations (Brydon, 2010, Garrow and Hasenfeld, 2014).

An amalgamation of these different perspectives has resulted in this study to operationalise social work as working and mobilising the stakeholders encompassing community partners, corporations, legislative bodies and welfare organisations to improve the client’s resilience. These clients could be an individual, family, or community, and such aim is enumerated in enhancing their effectiveness when addressing emotional, psychological, social or financial problems they are facing.

In the same vein, a social worker is a trained individual equipped with the skills and knowledge in mobilising resources and designing interventions. They typically champion the objectives of empowering the different pockets of community in making positive changes to their clients’ environment and advocating for social causes to promote positive changes for policies, procedures, and frameworks, concomitantly.

1.1.2 The Birth and Evolution of Singapore’s Social Work

Social work in Singapore was initiated immediately after the Japanese Occupation, which left its former colonial citizens to face with bread and butter issues. This included problems like poor education, hygiene matters, and disintegrated social and community structure rendering the vulnerable to be susceptible towards crime, trafficking and prostitution (Ang, 2009). This period resulted in the formation of the Social Welfare Development to help the community in managing the immediate post-war hardships (Metha and Wee, 2004). Private organisations aided to the cause with the priority then placed upon provision of affordable and nutritious meals to the population (The Straits Times, 1946a, The Straits Times, 1946b). Following the next few years, more community partners joined in allocating social, emotional and financial support to the war-torn country. Many of these establishments have remained

active, with some of them expanded their services further (Metha and Wee, 2004). The burgeoning amount of community partners onboard for the cause highlighted the apparent need for a regulated and coordinated social services landscape. This consequently spearheaded the formation of the Singapore Council of Social Service in 1958 and subsequently restructured to National Council of Social Service (NCSS) in 1992 (NCSS, 2017).

Beyond these structural changes, the government is also aware of the constant challenges that social workers face in the form of socio-economic, political and cultural issues. These challenges mean that Singapore is facing a precarious position of growing income disparity where wealthy ones accumulated more wealth and the standard of living of the poor slipped even further behind (Yahya, 2018). This gives rise to social immobility resulting in undesired consequences such as division of social classes, marginalised communities, increase risk of violence and cases of mental health (Morley and Ablett, 2017). Such prevalence of social problems implies that there is a growing need for a steady pipeline of highly-motivated and competent group of social workers to develop innovative and creative solutions to lead their clients out of these impediments.

Therefore, NCSS has collaborated with institutes of higher learning to formalise social work education at the tertiary levels of diploma, undergraduate and postgraduate studies. This in turn has opened different pathways for individuals, whether a fresh school leaver or a mid-career individual, to receive formal social work education. Then, continual upgrade has been ensured by the establishment of the Social Service Institute to further develop multi-faceted competencies of the practitioners, ranging from skills training to leadership training (NCSS, 2017). In addition, NCSS has also introduced a slew of initiatives to attract and retain talented individuals in the sector, evidenced by the National Social Work Competency Framework as an example. It was launched in 2015 with the goal of providing clarity on the progression path, career prospects and developmental needs of social workers (NCSS, 2015). Additionally, the “People Practice Consultancy” initiative comprised of NCSS partnership with human resource consultancy firms to provide their services to social service NPOs specifically to attract, motivate and retain employees (Toh, 2018)

Besides activity regulation, upholding the professional conduct and code of ethics in the social work profession resulted in the establishment of Singapore Association of Social Workers (SASW). One of its key functions is to administer the accreditation system of social workers (SASW, 2018). A social worker must provide evidence of their education, work experience, a record of education continuation in the relevant field, and a specified minimum number of hours of social work practice before they are accredited (SASW, 2018). The organisation's 2017 annual report indicated that 1,879 social workers were accredited into either one of these three categories: (1) registered social worker (provisional); (2) registered social worker; and (3) registered social service practitioner (SASW, 2017). Nevertheless, a report underlined the prevailing need for more social workers to meet the needs of the ageing population (Tai, 2016a).

Collectively speaking, social work in Singapore is a reflection of its “Many Helping Hands” approach that emphasises the involvement of community partners and non-state players in supporting individuals, families, and communities in various ways (Brydon, 2011). This is an embodiment of the “kampung spirit”, whereby villagers come together to offer mutual aid and support for the betterment of their immediate community (Rozario and Rosetti, 2012). Many scholars have agreed regarding the manner in which globalisation and new emerging technologies has further cemented the importance of social work towards nation building (Brydon, 2010; Ang, 2015; Mathews and Khidzer, 2015). These new trends have contributed fresh layers of complexities to the social landscape, thereby obliterating geographical, language and communication barriers potentially capable of threatening the social safety net that the country has enjoyed since 1965 (Mathews and Khidzer, 2015).

1.1.3 Social Work's Contribution to Nation Building

Social work is capable of contributing towards nation building by delivering interventions and assisting the community for social functioning. Its key role includes the empowerment of the vulnerable and disadvantaged pockets of the community (Rode, 2017). The early days of Singapore's independence were characterised by heterogeneous population that consisted of immigrants from different countries, speaking various dialects and languages. For a country lacking in natural resources,

the government has foreseen the need to leverage the uniqueness of each ethnic community as a way to move forward. This has been undertaken with concomitant strengthening of social cohesion and deepening of the sense of harmony, achieved by building a common identity among the citizens (Maliki *et al.*, 2015).

Two approaches have been incorporated to attain racial harmony, namely (1) introduction of policies to minimise potential contribution for building tension and culminating inter-racial conflicts, and (2) embedment of a sense of identity and belonging within the citizens. The first approach has resulted in an ethnic quota in Singapore's public housing policy to ensure equal representation of different ethnic groups within a public apartment. This would consequently foster harmony and racial integration as these diverse communities lived together side-by-side as neighbours (Housing Development Board, 2016).

The second approach has been described by Brydon (2010) in the context of social work, whereby it extends beyond merely comprehending the clients' situation. It can be linked to a vital role in instituting policies, as well as implementing programmes and services that promote the well-being of its people. This is parallel with various literature underlining social workers as the advocates for the protection of the vulnerable within a society (Wilks, 2012, Loue, 2013, Talbot and McMillin, 2014). The act of advocacy encompasses highlighting conditions and speaking on systemic issues identified by the community or on the behalf of their clients to affect changes to the administration, norms, legislation, policies and practices (Wilks, 2012, Loue, 2013, Talbot and McMillin, 2014).

In recognition of the potential contributing value that social work offers towards nation building, several legislations have been developed, reviewed and introduced in consideration of the social work community's perspective (Ng, 2016). Beyond its influence towards legislations, social work also plays a key role in setting up facilities and public institutions towards developing a sense of community bonding and identity. This has been reflected in the development of the Residents' Committee, which is a public facility allowing group of residents staying in the same vicinity and coming together to organise multiracial activities for their neighbourhood (Huey *et al.*, 1992). These activities ensure that the spirit of harmony and social cohesiveness among

residents of a community is strengthened, thereby fostering a deeper sense of community spirit and national identity (Huey *et al.*, 1992).

In sum, social work in Singapore has contributed significantly to its national development, specifically in building the common ethos and fostering community spiritedness. This is supplemented by the close collaboration between social works with policymakers and legislators to ensure that the views and values of social work are subsequently translated and reflected in the legislation.

1.1.4 The Role of Social Worker

Social work is a rewarding and an emotionally-charged occupation. Social workers are tasked with handling issues that many would want to avoid (Chiller and Crisp, 2012a), while serving as allies to the people (Glicken, 2011). Their role includes providing counselling and aid to those affected by poverty, unemployment, disability, family breakdowns, and discrimination. Alexander and Charles (2009) describe that the core of social work lies in the worker-client relationship, while Park (2016) highlight the key to implementing effective interventions oftentimes involve social workers developing a deep relationship with a client. Thus, the ability to attract and retain skilled and experienced social workers is integral in order to allow social service NPOs delivering effective services to their clients (Park, 2016).

Such intimate worker-client relationship has been indicated by Camacho (2016) as possible cause to social workers experiencing Post-Traumatic Stress Disorder (PTSD). Their form of PTSD lies in their association of the client's negative traumas as if they were their own, which consequently resulted in intrusive thoughts, images and painful emotional reactions (Camacho, 2016). In fact, PTSD has been known to affect their personal and mental well-being, thereby resulting in burnout and reflected in their poor organisational performance (Choi, 2011b, Galek *et al.*, 2011, Bercier and Maynard, 2015, Wagaman *et al.*, 2015). Various studies have attributed these constant exposures towards rendering social work as an emotionally draining and demanding profession (Brewer and Shapard, 2004, Lin *et al.*, 2016, Welander *et al.*, 2016). If not managed properly, occupational burnout would have detrimental consequences towards the quality of care for the clients (Wilson, 2016).

Various literature have demonstrated social worker's turnover as one of the highest among different professions, ranging from 10 to 50% annually (Park, 2016). A study in Britain has further validated this by highlighting that they have an average working lifespan of 8 years, which is notably shorter than that of 15 years for nurses, 25 years for doctors, and 28 years for pharmacists (Curtis *et al.*, 2009). With changes to population landscape that inevitably increases the demand for social services, it raises the propensity of job burnout for social workers and reducing level of engagement (Brewer and Shapard, 2004). This posits adverse corollaries from three specific aspects, namely for the clients, remaining social workers, and the organisation, respectively.

The clients would be affected by the consistency and quality of care provided by a different social worker (Welander *et al.*, 2016), thereby leading to their loss of trust in the system of care (Geurts *et al.*, 1998). Similarly, the remaining social workers may be burdened further psychologically as they would be tasked with handling the cases left behind by their ex-colleagues (Yang *et al.*, 2015). Meanwhile, the organisation would suffer from decreased productivity and performance due to compromised quality of care for the clients, ultimately resulting in a damaged reputation and an imperilment of goodwill (Yang *et al.*, 2015, Welander *et al.*, 2016).

1.1.5 Growing Importance of Social Work in Singapore

The emerging trends of ageing society, globalisation, and widened social divide have underlined the growing importance of social work in Singapore. These elements have accentuated the demands for social support, thereby putting additional pressures on the society's healthcare and welfare systems (Ng, 2013, Vasoo, 2013, United Nations, 2017, Lin *et al.*, 2016).

The 2018 population trends report sourced from Singapore's Department of Statistics have indicated that the nation has undergone key transformations in the context of its population landscape. The life expectancy at birth in 2017 was 83.1 years, higher than 80.6 years in 2007 and 83 years in 2016 (Singapore Department of Statistics, 2018). This marks Singapore as the country with the oldest population in the region when compared with the median age of late-20s recorded by other South East Asian nations (Kamil, 2017). Furthermore, 13% of the nation's population is marked to be 65 years old and older as of 2017, which is notably higher than neighbouring countries like

Malaysia (6.1%), Indonesia (5.2%) and Thailand (11%). It is projected that by 2030, 27% of the population will be aged 65 years old and older (Kamil, 2017), whereby Toh (2017) has noted this estimation as evidence of the faster ageing pace for the nation compared to other South East Asia nations.

Moreover, the household size has shrunk from 3.53 persons in 2012 to 3.30 persons in 2017, which is a reflection of the low total fertility rate (TFR) of 1.24 experienced by the republic (Singapore Department of Statistics, 2018). Again, this value is comparably lower to Malaysia's TFR of 2.0, Indonesia (2.3), and Thailand (1.5) (World Bank, 2017). Both observations are further compounded by the old-age support ratio that revealed a downward trend, where there is merely 4.8 residents (aged 20-64) to support each resident of 65 years old and older in 2017 (Department of Statistics, 2018). Such pattern is postulated to worsen by 2030 with an estimated ratio of 2.4 (Toh, 2017). World Bank (2016) has definitively described a society that is facing a decrease in population mortality and increasingly smaller family size as an ageing society.

One wonders the manner in which an ageing society is capable of exacerbating the demands for social services, which is subsequently answered by Chan *et al.* (2013). They have highlighted the silver tsunami's capacity to aggravate the financial and emotional burdens that younger families have to shoulder. Families incapable of providing adequate care for their elderly either due to shrinking household size or inadequate financial capability typically shift such responsibility towards social service NPOs, such as nursing homes or day activity centres. These difficulties are particularly pronounced in dual-income households and young adult families taking care of terminally sick elderly, whether their own parents or others. This parallels the need for readily accessible emotional support, as well as social and financial support, particularly in families grieving from their passing of elders. Therefore, social service NPOs are expected to help family members in coping with the grieving process. Hence, this is an excellent summary behind general scholarly consensus regarding an ageing society's influence towards the healthcare and social security system, and subsequently in shaping future economic, political, education and social policies (Yap and Gee, 2010, Webb *et al.*, 2016).

Besides, Vasoo (2013) argue that the widening of income gap caused by depressed wage, which is attributable to the import of cheaper and low-skilled labour, has created

a group of “new poor”. Such phenomenon has also exacerbated the need for social and financial support from the community players. Despite the possibility of multi-faceted reasoning behind the disparity of income distribution, studies have generally attributed this trend to emerging technology towards globalisation, off-shoring of low-skilled processes to labour-plentiful areas, depressing of wages, and obsolete skill-sets. Similarly, limited mobility of low-skilled workers is also one of the key reasons for this worrying gap (Ng, 2013, Vasoo, 2013). In Singapore especially, income inequality is not a new occurrence. Although its Gini coefficient is lower compared to large metropolitan cities like Beijing, London and San Francisco, it remains higher than many other advanced countries (The Straits Times, 2018). Therefore, individuals affected by these widening income gap typically face difficulties in both providing a decent living for their family, as well as preparing for their children’s education adequately. If left unmanaged, such issue will result in a stratified social system, increasing societal polarisation and compromising the social safety net that has served the nation well since its independence.

Acknowledging the growing need for social services has spurred the government to provide more funding and support for initiative implementation to increase the supply line for social workers. Additional funding of approximately S\$100 million is made available in Financial Year (FY) 2018 to support welfare organizations in their bid to build professional and organizational capabilities (Ministry of Social and Family Development, 2017a). The amount is also funnelled to new initiatives (see Section 1.1.2) in attracting and retaining talents within the sector (Ministry of Social and Family Development, 2017b). In total, the budget for FY 2018 allocated for the Ministry of Social and Family Development who is tasked with overseeing the sector stood at S\$2.52 billion (Ministry of Finance, 2017). This is one of the highest amount allocated behind the budget for education, health, national development and the national security (Ministry of Finance, 2017).

1.1.6 Non-Profit Organisations

An NPO can be defined as “any organisation that provides services of benefit to the society without financial incentive” (Valentinov, 2006, p. 436). Distinctly different from their for-profit counterparts, a stark characteristic lies in their position as non-

profit maximisers that have strict prohibitions against allocating residual monies to stakeholders (Valentinov, 2006). Similarly, they also differ according to their value-oriented outlook, rather than being profit-driven. NPOs typically motivate their employees by expediting their alignment with their underlying altruistic mission that is being attained (Firestone and Anngela-Cole, 2015). Their presence is significantly crucial in advanced economies and have further permeated into various industries, such as education and research, culture, healthcare, social services, religion, green efforts and philanthropy (Valentinov, 2006). A report by the John Hopkins Institute for Policy Studies involving 16 countries has revealed that NPOs employ at least 10% of the workforce in these countries, contributing an average of 4.5% to the respective country's gross domestic product (Salamon *et al.*, 2013).

Furthermore, NPOs also concomitantly strive to meet their clientele's needs, whether of the individual, community, or society level accordingly. Their significant role towards nation building is indispensable, as they maintain the social fabric through championing the issues for marginalised communities or being involved in initiatives that strengthen the ethos of the community. Additionally, the burgeoning need for social services in Singapore is ascertained by the recent report by the National Volunteer & Philanthropy Centre (2018). It has underlined the difference of financial support received by social service NPOs that has far exceeded those of other economic sectors. Further estimation has projected for 3,000 new job openings to be expected between 2017-2019 (Tai, 2017a) so as to meet the demand for such services. Thus, this section has collectively demonstrated that the purpose, operating nature and focus of NPOs are different compared to a for-profit organisation.

1.2 Gaps Analysis

Despite the ongoing efforts, this study has identified practice and theoretical gaps alike that led to the formation of the problem statement, research questions and research objectives underpinning this work.

1.2.1 Theoretical Gaps

Four theoretical gaps have been identified within the existing literature, allowing the building of the problem statement. Firstly, many of the existing scholarly

investigations are primarily on the effect of meaningful work focus on for-profit organisations. Therefore, this study has extended the body of knowledge by examining whether similar outcomes can be elicited in social service NPOs, where the employees are generally motivated by the organisation's altruistic mission. This is a response to the arguments championed by Johnson and Jiang (2017, p. 555), calling for "future research to investigate individual differences and contextual variables that can enhance or dampen the effects of meaningful work on employee outcomes".

Secondly, findings outlining the role of PsyCap as a mediator and moderator are largely inconclusive. As a personal resource, it has functioned similarly as a job resource in buffering the undesirable effects and enhancing the positive ones (Grover *et al.*, 2018). Therefore, an examination of its role as a mediator could deepen the understanding on the reason behind meaningful work that translates into job and personal outcomes. Meanwhile, assessing its role as a moderator would identify parties who would benefit the most from meaningful work. Moreover, many of the existing studies have not examined meaningful work and PsyCap within the same model. As far as this study is concerned, this serves as the first few literature that pioneers both variables together. Therefore, an integration of both job and personal resources into a single model could potentially enrich the existing knowledge regarding the manner in which these resources interact with one another. This would consequently provide fresh perspectives to the Job Demands-Resources (JD-R) and Conservation of Resources (COR) theories, respectively. Given the malleability of PsyCap, this study elucidated further the knowledge in seeing the possibility of leveraging meaningful work environment to develop the social workers' PsyCap.

Thirdly, Bailey *et al.* (2017a) revealed that there was only a handful of literature examining meaningful work as an antecedent to employee engagement. Furthermore, this handful of literature produced mixed results. For instance, Mendes and Stander (2011) indicated that meaningful work was associated with higher levels of employee engagement, but a study by Van den Heuvel *et al.* (2009) showed otherwise. As such, this warranted detailed examination on the effect of meaningful work on employee engagement furthers one's understanding of the relationship between these variables.

Finally, this study responded to the issue underlined by Brenninkmeijer and VanYperen (2003) in examining job burnout as a multi-dimensional construct. Various

studies indicated that the same predictor may display differentiated effects on the dimensions of job burnout (Bakker *et al.*, 2000, Roncalli and Byrne, 2016). Nevertheless, this study is one of the pioneering studies that extends the body of knowledge on meaningful work and PsyCap relative to the dimensions of job burnout, which were not provided by earlier studies.

1.2.2 Practice Gaps

Social workers are synonymous with the pivotal role they offer in providing quality care towards their clients (Ng and Sim, 2012, Daniel, 2013, Hombrados-Mendieta and Cosano-Rivas, 2013, Wermeling, 2013, Loue, 2013, Camacho, 2016, Othman, 2016). The fluid population landscape is also attributable to their increasingly significant role in meeting the health and social needs of a nation. Today's social work environment requires for social workers to extend beyond the dyadic client-worker relationship, and into the realm of macro practices instead. This is evident based on the growing interconnectedness and interdependence between communities that go beyond geographical boundaries, indicating once-localised issues that take on an international perspective. It is reflected in an IFSW's international symposium of social workers that resulted in pooling of ideas to discuss interventions that can best support countries afflicted with refugee crisis (Hardy, 2016). The call for social workers as macro practitioners is due to factors such as increased awareness regarding socioeconomic inequality and human needs, empowerment of new communities, and emerging multi-cultural society. Openness towards new ideas and solutions to long-standing issues is also underlined as a component, thereby calling for them to be an advocator and a vehicle of change. These expressive and fluctuating expectations from stakeholders that are placed upon these social workers, alongside with their increasing occupational demands, have consequently resulted in them feeling burnout and experiencing disengagement (Brewer and Shapard, 2004, Hombrados-Mendieta and Cosano-Rivas, 2013).

Social worker's occupational disengagement and job burnout resulted in undesirable consequences to their clients, remaining colleagues, and organisation (Kim and Stoner, 2008, Chiller and Crisp, 2012a, Welander *et al.*, 2016). A survey on the top three reasons for Singapore social workers to leave the profession underscored burnout at

52%, low pay (68%), and high workload (54%) (SASW, 2017). Similar observations are also made in other countries, such as Ireland (Murray, 2017), Canada (The Chronicle Herald, 2017), and the United States of America (USA) (Baginsky, 2013, Torpey, 2018). This has substantiated the fact that social worker burnout is a global phenomenon requiring immediate attention rather than a localised issue.

Moreover, healthcare workers' engagement has also been found to be instrumental in improving the clients' health and well-being. The King's Fund commissioned a study that revealed health workers who are more engaged in their work resulted in higher patient satisfaction and improved patient's mortality rate (West and Dawson, 2012). Similarly, a study by Lowe (2012, p. 29) found that a "high level of employee engagement is related to retention, patient-centred care, patient safety culture, and employees' positive assessments of the quality of care or services provided by their team". This is also applicable for social workers, where Ravalier (2018) elicited responses from 1,049 social workers in England that revealed engagement leads to individual outcomes of lesser stress, lower turnover intentions, lesser absenteeism and greater job satisfaction. While individual and organisational outcomes are commonly reported in studies investigating for-profit organisations, but social worker's engagement is instrumental towards an additional dimension that is not frequently seen in studies on for-profit organisations -- enhancing client's wellbeing. Alas, Singaporean employees, regardless of profession, have been reported to be the least engaged in Asia (Chan, 2017), resulting in various organisational implications. They include higher turnover, higher absenteeism, lower quality of care, and lower patient satisfaction eventually.

In recognition of this, NCSS has implemented various initiatives in attracting and retaining social workers within the profession (see Section 1.1.2). This has subsequently displayed a modest growth in the profession's population, which remains insufficient still to meet the needs of the ageing population (Tai, 2016b, Tai, 2016a). Collectively speaking, the current set of initiatives has been noted to emphasise governmental focus on supporting social service NPOs towards establishing relevant systems and processes such as an equitable payscale or a transparent performance appraisal exercise with objective criteria. According to Fletcher and Robinson (2016),

this approach results in employees to adopt a transactional mindset and perform only to a minimally acceptable level.

Hence, this study collectively argued that the first practice gap involves meaningful work being not taken into consideration in the development of the initiatives. This argument is built on the premise that attraction and retention of social workers extend beyond putting policies and systems in place. Social workers who choose to remain in this profession attributed the decision towards the nature of the work, specifically their ability to elicit positive changes in the clients' lives (Kim and Lee, 2009, Jessen, 2010, Hombrados-Mendieta and Cosano-Rivas, 2013, Smith and Shields, 2013, Healy *et al.*, 2015). A survey by SASW has identified that more than half of the social workers in Singapore underlined the importance of "sense of fulfilment" as a component of meaningful work that is important in attracting, engaging and retaining these professionals (SASW, 2005). Another UK-based survey corroborated such finding, underscoring social workers' goal of improving someone else's life as the motivation behind the social workers' persistence (Murray, 2015). Therefore, the work they are tasked with is collectively associated to a special meaning and plays a paramount role in attracting and retaining their membership in this profession.

Having said the above, social workers are highly susceptible to burnout and experiencing occupational disengagement despite finding their work meaningful. It is an implication of the possibility that work meaningfulness may not be the silver bullet in addressing job burnout. Furthermore, it also implies the possible presence of an intervening variable in explaining the relationship between relevant exogenous and endogenous variables. The profession is undeniably synonymous with an arduous occupation, requiring social workers to handle various job demands such as long hours, high workload, under-resourced organisational operation, fluid societal landscape, changing demographic profiles, and high stakeholders' expectations (Ooi, 2017). Besides, social workers typically operate in inter-disciplinary teams rather than in isolation (Ambrose-Miller and Ashcroft, 2016) which require another set of skills beyond technical knowledge. Moreover, their demonstration of traits on hopefulness and resilience are especially needed for them to build and nurture the time-consuming process of building the worker-client relationship. In brief, a proficient social worker calls for more than formal education, but rather in them having a set of common ethos,

displaying the right personality, and having an appropriate working style (de las Olas Palma-García and Hombrados-Mendieta, 2016).

In the same vein, this study presented the second practice gap, namely that the existing efforts by the government are not focused on improving social workers' PsyCap. In the context of personality traits, PsyCap has gained popularity as various studies, including one conducted by Choi and Lee (2014, p. 134) that indicated "the unique effect of PsyCap goes beyond other personality traits, such as the Big Five traits". Moreover, it is differentiated by its malleable nature, serving as a good rationale for social service NPOs to introduce interventions to develop social workers' PsyCap (Köse *et al.*, 2018). Align to Köse *et al.* (2018) who highlight that PsyCap's capacity in facilitating health care professionals to have a positive appraisal of their work environment, this study argued that PsyCap could be the intervening construct explaining the relationship between meaningful work and the outcomes variables.

1.3 Problem Statement

The profession of social work is worthy of further research as it is a growing vocation that is key in advocating for the vulnerable and the disadvantaged communities. Moreover, it also positions for positive changes in helping individuals to thrive in their local environment (Truell, 2018). For social service NPOs to fulfil their altruistic mission, it hinges upon the quality of their social workers that social service NPOs must be capable of attracting and retaining. Yet, the gaps highlighted earlier revealed the minimal influence and assistance that the initiatives introduced so far have resulted in. Supported by the burgeoning amount of research on meaningful work and the fact that social workers' work is of a special significance to them, it is timely to examine the capability of meaningful work to leverage the engagement level and reducing the propensity of burnout. Additionally, researchers have also been called to focus on the innate abilities displayed by social workers (Munro, 2011). The paucity of research in these areas merited further investigation regarding the effectiveness of PsyCap in enhancing engagement and reducing the propensity of burnout. In sum, there is a notable growth of research interest in the social services sector. This study has thus responded to the call made by Travis *et al.* (2016) for researchers to look at the sector's

assets, including the analysis on the state of manpower and assessment of the developmental needs of social service practitioners.

1.4 Research Questions and Objectives

Based on the above, the research questions are as follows:

- (a) Does meaningful work have a significant influence on enhancing social workers' PsyCap, engagement level and reducing their propensity of experiencing the different dimensions of job burnout?
- (b) Does PsyCap have a significant influence on social workers' engagement and alleviating social workers' propensity of experiencing the different dimensions of job burnout?
- (c) What is the mediation and moderation effect of PsyCap in the relationship between meaningful work and employee engagement, as well as the dimensions of job burnout?

Per the research questions, this work aimed to investigate the empirical relationship between meaningful work, employee engagement, and dimensions of job burnout with PsyCap as the mediator and moderator alike. Therefore, the research objectives are to examine the effect of:

- (a) Meaningful work on PsyCap, employee engagement and dimensions of job burnout.
- (b) PsyCap on employee engagement and dimensions of job burnout.
- (c) PsyCap as a mediator and moderator alike in the relationship between meaningful work, employee engagement, and dimensions of job burnout, specifically emotional exhaustion, depersonalisation, and losing personal accomplishments.

1.4.1 Objective One

Meaningful work has always been perceived as a conceivable way to motivate employees. It is an individual's experience and perception that their work is seen as purposeful, fulfilling a larger need beyond them and providing an identity to their

individuality (Chalofsky, 2003, Rosso *et al.*, 2010, Steger *et al.*, 2012, Michaelson *et al.*, 2014). Its definition posited by Steger *et al.* (2012) has been widely adopted in different studies (e.g. Duffy *et al.*, 2015, Allan *et al.*, 2016a, Lopez and Ramos, 2016), rendering it to be explainable using three dimensions. Firstly, positive meaning in work refers to the extent to which an individual finds their work purposeful and having a personal significance. Secondly, meaning making through work reflects individual's perception of the work that they are doing contributes to a larger meaning in life. Meanwhile, the third dimension of greater good motivations is linked to the perception of one's work that is yielding positive contribution for the greater good (Steger *et al.*, 2012, Steger *et al.*, 2013).

Evidence from different studies have shown that individuals who perceive work as meaningful demonstrated higher occupational enthusiasm, greater job satisfaction, higher productivity, as well as experiencing better teamwork and superior work performance (Chalofsky and Krishna, 2009, Lips-Wiersma and Wright, 2012, Hoole and Bonnema, 2015, Allan *et al.*, 2016a). Conceptually, researchers have also correlated meaningful work with employee engagement, where several studies revealed that work environment as one of the significant causes influencing employee engagement (May *et al.*, 2004, Rich *et al.*, 2010). These views support Kahn's (1990) proposition that a sense of meaningfulness at work is one of the conditions for sustainable employee engagement. However, minimal amount of studies are available in furthering the elucidation regarding the impact of PsyCap towards this relationship, specifically as a mediator and moderator accordingly. Thus, this study responded to the call by Johnson and Jiang (2017) in uncovering additional mediators and moderators that may possibly impact the relationship between meaningful work and outcome variables.

Furthermore, multiple studies have recognised social worker's susceptibility towards job burnout due to the nature of the work, as well as the changing expectations from stakeholders (Vasoo, 2013, Wagaman *et al.*, 2015). Minimising this occurrence requires social service NPOs to recognise that resources availability is critical to support their social workers in managing the variety of job demands (Kim and Stoner, 2008, Yang *et al.*, 2015). Clausen and Borg (2011, p. 676) suggest for meaningful work to be considered as a job resource as it "is predicted by environmental factors, at

the same time, simultaneously associates with important individual and organisational outcomes”. Similarly, Fairlie (2011) has also provided empirical support espousing the negative relationship between meaningful work with job burnout.

However, other studies implied the possibility that job resource, in this study meaningful work only addresses specific dimensions within job burnout (Bakker *et al.*, 2000, Roncalli and Byrne, 2016). To the best knowledge of this study, most of the literature on meaningful work has assessed job burnout as a unidimensional construct (e.g. Fairlie, 2011, Hoole and Bonnema, 2015). However, its impact of meaningful work on the different dimensions of job burnout has yet to be clarified. Such limited literature is nevertheless utilised for this study to advance the theoretical understanding, specifically by examining the relationship between these variables.

1.4.2 Objective Two

PsyCap is a branch of study within the field of positive psychology. Luthans *et al.* (2007, p. 542) have defined it as “an individual’s positive psychological state of development that is characterised by: (1) persevering towards goals and, when necessary, redirecting paths to the goals (hope) in order to succeed (2) having the confidence (efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (3) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success; and (4) making a positive attribution (optimism) about succeeding now and in the future”.

A considerable amount of studies drew similar conclusions regarding PsyCap’s effectiveness as a personal resource in predicting work-related outcomes and individual behaviour (Abbas *et al.*, 2014, Karatepe and Karadas, 2015, Park *et al.*, 2015, Cenciotti *et al.*, 2017). This has paralleled with the propositions by the JD-R theory, whereby personal resources can reduce impairment of resources (Bakker and Demerouti, 2017). Nevertheless, scholars like Grover *et al.* (2018, p. 68) indicate that the comprehension on personal resources is yet at the infancy stage, as their “connection to job demands and resources is still not clear”. Similar point has also been raised by Bakker and Demerouti (2017) regarding the limited support demonstrating the proposition of personal resources as a buffer against their undesirable impact on job demands. Thus, this study would collectively focus on

examining this phenomenon, with particular emphasis on PsyCap's role in influencing employee engagement and the dimensions of job burnout.

1.4.3 Objective Three

PsyCap as a motivational construct has played the role of a mediator and moderator both between meaningful work and employee engagement, as well as job burnout. Notwithstanding that, meta-analysis by Avey (2014) and Newman *et al.* (2014) respectively have highlighted the inconclusive findings on its effectiveness as a mediator and moderator. Similarly, some studies have also suggested it as a resource in mitigating the negative effects of a stressful work environment (Roberts *et al.*, 2011, Abbas *et al.*, 2014). Meanwhile, others contested the notion to show that work environment displays the potential to affect PsyCap (Wang *et al.*, 2012, Gupta and Singh, 2014). Therefore, this is the building premise behind Newman *et al.* (2014) who call for future researchers to identify more and other forms of antecedents, one of which is organisational-level policy. Findings from this study will be valuable in advancing the understanding regarding PsyCap's role as a moderator and mediator.

1.5 Potential Significance

1.5.1 Theoretical Significance

Theoretically, this study could potentially contribute to the literature in three different aspects. Firstly, multiple studies have demonstrated the impact of meaningful work towards employee engagement and job burnout (Fairlie, 2011, May *et al.*, 2014), where most have focused on job burnout as a unidimensional construct. In contrast, literature depicting the manner in which how meaningful work affects the different dimensions of job burnout is conspicuously missing. As Brenninkmeijer and VanYperen (2003) suggest, combining these dimensions would result in considerable loss of information. Outcomes of this study thus would advance the literature on meaningful work as a form of job resource specifically on emotional exhaustion, depersonalisation and reduced personal accomplishments.

Secondly, this study responded to different PsyCap scholars' call to further the understanding and gathering new insights regarding the roles that PsyCap plays. Avey

(2014) and Newman *et al.* (2014) respectively mention the need for future researchers to concomitantly continue in identifying more antecedents for PsyCap and assessing it as a moderator and mediator both for possible human resource and organisation behaviour relationship. Therefore, this study could potentially contribute to the existing body of knowledge by addressing the “major omission in the theoretical development and empirical research on PsyCap, as there are very few studies that measured anything pertaining to the formation of PsyCap, that is, the antecedents” (Avey *et al.*, 2011, p. 141).

Similarly, PsyCap as a personal resource and meaningful work as a job resource collectively play a motivational role in facilitating individuals towards overcoming the effects of their job demands (Halbesleben *et al.*, 2014, Bakker and Demerouti, 2017). Various studies have shown that individuals who lose resources without any replenishment are more susceptible to experience job burnout, depression and undue psychological outcomes (Hobfoll *et al.*, 2003). However, much of the research up to now has examined job and personal resources separately, and a minimal amount has incorporated job resource and personal resource both within a model. Moreover, Mayerl *et al.* (2016, p. 1) highlights that “the results of previous studies on how these resources are related to each other and how they operate in relation to the health-impairment process of the JD-R model are ambiguous”. Thus, the third theoretical significance revolves around linking job resource and personal resource together in a single model to advance the body of knowledge on JD-R theory and COR theory.

1.5.2 Empirical Significance

This study potentially provides empirical evidence by validating the mediating and moderating role of PsyCap. Besides, it also extends insights regarding the extent of the relationship possessed by these variables with one another, hence providing further empirical support to the study by Clausen and Borg (2011) in recognition of meaningful work as a form of job resource. Secondly, there is a paucity of studies conducted in the context of social workers in Singapore, as well as examining the influence of meaningful work on employee engagement and the dimensions of job burnout. Much of the existing literature focused on this demography has gravitated towards examining the role of funding and remuneration (Ng, 2010). In view of the

growing importance of social workers to the changing population and economic landscape in Singapore, this study argued that there is a need to provide empirical evidence in understanding the motivation behind its social workers to fix the job crunch.

1.5.3 Managerial Significance

Using a sample of social workers working in social service NPOs, this study offers practical insights in the attraction, retention and management of social workers. Typically motivated by the altruistic mission of their organisation, many social workers are driven by a sense of calling and their capability to induce changes in people’s life. It can be said that social workers are motivated by a different set of variables (Park *et al.*, 2018), as the work that they are doing underlines a special significance for them. As much of the existing literature on meaningful work has been developed from the perspective of for-profit organisation (e.g. Bunderson and Thompson, 2009, Dimitrov, 2012, Raub and Blunschi, 2013, Ben-Itzhak *et al.*, 2015), direct application of their findings may yield limited effect given the different organisational context. Therefore, outcomes of this study are timely in offering insights that can support social service NPOs in recruiting, retaining and motivating their social workers.

1.6 Scope of the Study

This study focused on social workers accredited by the SASW. As of December 2017 (see Table 1), there are 1,879 practitioners across three different groups of practitioners, namely the Registered Social Worker (Provisional), Registered Social Worker, and Registered Social Service Practitioner (SASW, 2017).

Table 1. Number and Type of Accreditation as at 31 December 2017

Category	Criteria	Number
Registered social worker-provisional	Possess at least a recognized qualification and have less than 1 year of post-qualification full-time practice in a social work position in Singapore.	275
Registered social worker	Other than possessing recognised qualification, a registered social worker must have at least 1 year	1432

	of post-qualification full-time practice in a social work position in Singapore. He or she must have at least of 80 hours of relevant in-employment training and 1,000 hours of supervised practice.	
Registered social service practitioner	Professionals and practitioners who do not have a degree or graduate diploma in social work but have years of experience in the field.	172
		1,879

Source: SASW (2017)

1.7 Key Definitions

Depersonalisation	A state where one would distance himself or herself from relationships and develop a negative and insensitive attitude to objects such as work and people.
Emotional exhaustion	A state where one feel emotionally drained from job demands.
Employee engagement	A positive fulfilling work-related state of mind characterized by vigour, dedication, and absorption. (Schaufeli <i>et al.</i> , 2002) This study operationalised employee engagement as a construct involved dual responsibility from employer and employee. From employees’ perspective, it involved a sense of self-responsibility where the individual put in effort by putting in emotional, psychological and cognitive resources to connect to the work and the environment. At the same time, employers had the responsibility to create a work environment that foster engagement among employees by instituting holistic management policies and practices, In alignment with Bailey <i>et al.</i> (2017a), the terms of work engagement, job engagement and employee engagement are used interchangeably.
Job burnout	Job burnout has been defined conceptually as a “syndrome of emotional exhaustion, depersonalisation

	<p>and reduced personal accomplishments that can occur among individuals who do ‘people work’ of some kind” (Maslach, 1993, p. 2)</p> <p>For this study, job burnout is operationalised as a syndrome that will affect everyone, regardless of professions, that involve stressors of different forms with the potential to affect one’s sense of pride in own accomplishments, losing their personality and being emotionally exhausted.</p>
Meaningful work	<p>“Meaningful work consists of (at least) skill variety, opportunity to complete an entire task (task identity), task significance to other people, military pride, engagement, a sense of calling, challenge, work role identity, work centrality, work values, intrinsic work orientation, spirituality, good pay, and reputation.” (Steger <i>et al.</i>, 2012, p. 232)</p> <p>This study operationalised meaningful work as a subjective experience based on one’s social, cultural and historical background, that every employer collaborates with the employee, to provide the necessary conditions that enhance one’s intrinsic motivation towards work, aligning work perform with one’s value system and enrich one’s sense of belonging to the larger ecosystem.</p>
Psychological capital	<p>An individual’s positive state of development that is characterized by (a) having confidence (efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (b) making a positive attribution (optimism) about succeeding now and in the future; (c) persevering toward goals and when necessary, redirecting paths to goals (hope) in order to succeed; and (d) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success.” (Youssef-Morgan and Luthans, 2015, p. 132)</p>
Reduced personal accomplishments	<p>It is an outcome of emotional exhaustion and depersonalisation where one disregard earlier accomplishments, and as a result, become less</p>

Social work	<p>satisfied with the job, less effective and drop in performance.</p> <p>Social work was defined as one that “promotes social change, problem-solving in human relationships, and the empowerment and liberation of people to enhance well-being” (Hare, 2004, p. 409)</p>
	<p>For this study, social work involves working and mobilising stakeholders, which includes community partners, corporations, legislative bodies and welfare organisations, with the aim to improve the resilience of its clients, whether it is an individual, a family or a community, to further improve their effectiveness in addressing the emotional, psychological, social or financial problems that they may be facing.</p>
Social Worker	<p>A social worker is a trained individual who has the skills and knowledge in mobilising resources and designing interventions, with the objectives of empowering different pockets of community in making positive changes to their clients’ environment, and at the same time, be an advocate in promoting social causes that can positively change policies, procedures, and frameworks.</p>

1.8 Structure of the study

This study was initialised with Chapter 1 that outlined the context and background of the study, including the evolution of social work movement in Singapore and the reasons for its continuous importance for the future. It also presented the research objectives of the work, as well as the motivations and expected theoretical, empirical and managerial contributions. Chapter 2 features a review of the existing literature and highlighted the research gaps and inconsistencies currently present in the body of knowledge, followed by Chapter 3 detailing an overview of the research methodology. This encompassed the research design, population and sample, measurement instruments and data analysis methods. Next, Chapter 4 provides a discourse and

interpreted the results obtained from the collected data, whereas Chapter 5 ensues as the concluding chapter for this thesis. It elucidated the theoretical, empirical methodological and managerial contributions of this thesis, and limitations, as well as highlighting possible directions for future research.

CHAPTER 2: LITERATURE REVIEW

This chapter introduces the theories that this study leveraged. Thereafter, it is followed by detailed discussions on the background, the evolution, and the growing significance of the selected constructs, namely meaningful work, PsyCap, employee engagement, and job burnout. This chapter concludes with discussion on the research gaps and justifications for hypotheses development.

2.1 Theories

Theories are explanation that determines relationships between variables, and as part of the process, highlighting the necessary conditions that must be present for inter-relatedness to take place (Stewart and Klein, 2016). From the literature, theories play three important purposes. First, it allows researchers to understand, predict, and explain relationships between sets of dependent and independent variables, which enhance the robustness and rigour of the study (Colquitt and Zapata-Phelan, 2007, Garner *et al.*, 2009, Stewart and Klein, 2016). Second, it provides a framework to comprehend and to organise the body of literature around specific subjects, generating information and data that fit into the larger framework of other studies (Stewart and Klein, 2016). Finally, it offers lenses to help researchers in focusing attention on complex issues, through identification of underlying assumption of the topic under study (Reeves *et al.*, 2008, Garner *et al.*, 2009, Stewart and Klein, 2016). As for this study, it anchored against the JD-R theory, the COR theory, the TPB, and the SET.

2.1.1 Job Demand-Resources Theory

Formerly known as the JD-R model, it has evolved into a substantial theory over the last 15 years with inclusion of several new propositions, such as interactions between job demands and resources, evolution of demands from job demands to personal demands, and employees' self-starting behaviour as a form of personal resource (Bakker and Demerouti, 2017). As one of the most widely used theories of work and organisational psychology, the JD-R theory is suitable for this study from several perspectives.

First, the JD-R theory provides holistic elucidation on the manifestation of job burnout. Job demands and resources operate in two different psychological processes; health-impairment and motivational process (Bakker and Demerouti, 2007). The presence of job demands operates through a health impairment process that exhausts employees because they require sustained effort and energy (Bakker and Demerouti, 2007). Instances of job demands include heavy workloads, uncertain job procedures, and emotional job demands. Job resources are defined as “physical, psychological, social, or organisational aspects of the job, that are functional to achieve work goals, to reduce job demands, to minimise associated physiological and psychological costs, and/or to stimulate personal growth, learning, and development” (Bakker and Demerouti, 2007, p. 312). Studies found that job resource possesses motivational characteristics that could drive an individual intrinsically, such as inspiring growth and learning, as well as extrinsically where individuals decide to dedicate additional efforts to fulfil their work tasks (e.g. McGregor *et al.*, 2016, Roncalli and Byrne, 2016, Van Den Broeck *et al.*, 2017). Collectively speaking, the JD-R theory is a heuristic and parsimonious theory, specifying how job strains and job motivation could be created through the interplay of job demands and job resources (Xanthopoulou *et al.*, 2007, Clausen and Borg, 2011, Van den Broeck *et al.*, 2013, Birtch *et al.*, 2015, Hur *et al.*, 2015b).

Second, the JD-R theory highlights that personal resources, such as hope, efficacy, resilience and optimism, contain motivational characteristics that individuals leverage to mitigate undesirable effect resulting from job demands (Bakker and Demerouti, 2017). Personal resources are defined as “aspects of self that are generally linked to resiliency and refer to individuals’ sense of their ability to control and impact upon their environment successfully” (Xanthopoulou *et al.*, 2007, p. 124). Personal resources have similar attributes to job resources, inuring one’s ability in managing demands, resources and outcomes (Bakker and Demerouti, 2017). This implies that the JD-R theory allows for a larger coverage of resources and job demands ranging from physical, psychological, social, and organisational aspects of the job. Despite the growing interests, understanding how personal resources interact with job outcomes and job resources remains vague and unclear. As indicated by Bakker and Demerouti (2017, p. 275), “more research is needed to test the interaction between job demands and personal resources”.

2.1.2 Conservation of Resources Theory

According to Woerkom *et al.* (2016), the COR theory is developed to address issues related to dysfunctional individual and organisation outcomes. The COR theory expounds that individuals are motivated to increase and to maintain their current resources, in order to buffer against possible job strains resulting from job demands (Halbesleben *et al.*, 2014, Woerkom *et al.*, 2016, Madden *et al.*, 2017). Hobfoll (2002), Gorgievski *et al.* (2011) and Halbesleben *et al.* (2014) further explain that resources are generally anything that one perceives to help in attaining his or her goals. In precise, the COR theory emphasises common and shared appraisals of certain stimuli held jointly by individuals with common biological and culture frame that they leverage to interpret affairs and phenomena. This precisely implies two key points. First, the classification of specific factors as whether it fulfils as resources differs across individuals depending on their cultural and personal values. The second point is that the impact of the same resource differs across individuals since they would have been exposed to different forms of influences (Hobfoll, 2002). These two points are essential in this study as they offer explanation on why studies have shown that the same resources demonstrated differentiated results on respective dimensions of job burnout (Rasmussen *et al.*, 2016, He *et al.*, 2017). There are two key tenets within the COR theory that makes it suitable for this study.

First, the COR theory states that when an individual is threatened with resource loss, stress occurs. In order to address the effects of possible resource loss, individuals would “invest more of their resources, and employees with more resources are at less risk of losing them and are better able to gather more” (Madden *et al.*, 2017, p. 647). In parallel, individuals with lesser resources feel stress and result in job-related negative outcomes. Multiple studies revealed that other aspects of physiological and psychological costs included, reduced level of knowledge sharing (Kim *et al.*, 2016), reduction of innovative behaviour (Montani *et al.*, 2018), a sense of job insecurity (Debus and Unger, 2017), increased job tensions (Zhu *et al.*, 2017), and diminishing employee voices within the company (Ng and Feldman, 2012). On the contrary, the presence of sufficient resources resulted in positive work outcomes, which served as motivation to accomplish their goals (Halbesleben *et al.*, 2014). Many scholars suggested that resources are finite and can deplete (Hobfoll, 1989, Gorgievski *et al.*,

2011, Madden *et al.*, 2017). Therefore, individuals would attempt to build up their resources through acquirement and investment, and at the same time, strategic allocation of available resources. In this regard, meaningful work and PsyCap have been described as a form of resource across multiple literature (e.g. Allan *et al.*, 2016a, Fouche *et al.*, 2017, Jiang and Johnson, 2017, Allan *et al.*, 2018), which individuals leverage to buffer against undesirable effect arising from work.

Second, Halbesleben *et al.* (2014, p. 1345) highlight that the key to understand COR theory lies in the concept of complementarities, where “resources will be enhanced only if they come after other resources are acquired”. This showcases that resources could create more resources, implying that resources do not exist in isolation. This appears to be a key proposition that this study anchored against, as it evaluates if meaningful work triggers the upwards spiral process in enhancing one’s PsyCap. At the same time, this reflects the concept of a resource caravan implying that organisations with the objective to manifest desirable job outcomes and behaviours must maximise the “ecology that fosters resource caravan enrichment and challenge that promotes excellence, dedication, and commitment (Hobfoll, 2011, p. 113). From this basis, social service NPOs could offer members a market place of resources for employees to leverage. This is especially for emotionally demanding professions, such as social work, wherein the presence of resource caravan supports individuals to be resilient towards experiencing PTSD (Hobfoll, 2014). Without the caravan, employees would become counter-productive and less engaged. This study, therefore, responded to the call to further explore “how resources combine to meet goals” (Halbesleben *et al.*, 2014, p. 1345).

2.1.3 Theory of Planned Behaviour

TPB is an extended version of the theory of reasoned action. As one of the most influential theories in determining one’s decision, TPB advocates that an individual’s behaviour is dependent on one’s attitude and intention (Ajzen, 1991). It is built on the belief that individuals exercise high degree of volition when making decisions (Ajzen and Fishbein, 1980), and they make the most reasonable choices given a range of alternatives after taking into consideration the implications of their actions (Ajzen and Fishbein, 1980).

According to Ajzen and Fishbein (1980), one's behavioural intention lies primarily on two factors; attitude and subjective norm. Attitude refers to behavioural belief. The decision on whether to execute a certain behaviour depends on one's perception on the favourableness of the outcomes (Ajzen and Fishbein, 1980). The other ingredient is subjective norm. Also known as normative beliefs, it is the social pressure that the one faces either to perform or not to perform a certain behaviour (Ajzen and Fishbein, 1980). TPB includes an additional dimension of perceived behavioural control, which is the extent of ease or difficulty for one to perform the said behaviour (Ajzen, 1991). TPB is considered as one of the most validated and accepted theories in predicting human behaviour. It has been deployed in different domains of study, such as in change management (Jimmieson *et al.*, 2008), choices of hotel accommodation (Han *et al.*, 2010), measurement of proactive behaviour (Shin and Kim, 2015), online game behaviour (Alzahrani *et al.*, 2017), recycling behaviour (Lizin *et al.*, 2017), and social media adoption rate (Tariq *et al.*, 2017). These studies revealed a common point that individuals with positive views on behaviour, and who sees that they have volition in executing that behaviour, displayed stronger intention in performing it. In sum, this study contends that the TPB is a relevant theory as the outcomes of engaging and experiencing job burnout are largely dependent on one's volitional appraisal of the work environment, as well as the job demands.

2.1.4 Social Exchange Theory

SET has been widely adopted as one of the frameworks explaining workplace behaviour, which involves transactions that generate obligations with the potential of improving relationships among the different actors (Cropanzano and Mitchell, 2005). It has been deployed in literature across different contexts, such as on transformational leadership (X. Zhang *et al.*, 2017), knowledge sharing (Park *et al.*, 2015, Yan *et al.*, 2016, Wu and Lee, 2017), risk appetite of public employees (Clark, 2016), and turnover intention (Flint *et al.*, 2013). Two common themes retrieved from the literature support SET as a suitable theory for this study.

First, SET posits that when individuals receive a certain form of benefits or services, the recipients are obliged to reciprocate with something in return that is mutually acceptable, beneficial and gratifying (Gouldner, 1960, Cropanzano and Mitchell, 2005,

Mearns *et al.*, 2010). Interestingly, Ko and Hur (2014) argue that such reciprocation need not necessarily be in monetary form, but it could take the form of perceived organisational support or socio-emotional form. From the perspective of this study, it refers to displaying higher levels of engagement, demonstration of PsyCap, and reduction of experiencing job burnout.

Second, SET highlights that recipients' perception on the value of the benefits would determine the magnitude of the reciprocation. For instance, DeJoy *et al.* (2010) discovered that employees reacted more positively when they perceived that the management offered higher support to fulfil its obligations. Similarly, Wu and Lee (2017) found that empowering leadership style created a sense of reciprocation where the recipients were more open towards knowledge sharing. In precise, the magnitude of responses differs across individuals depending on the valence of the stimuli to them.

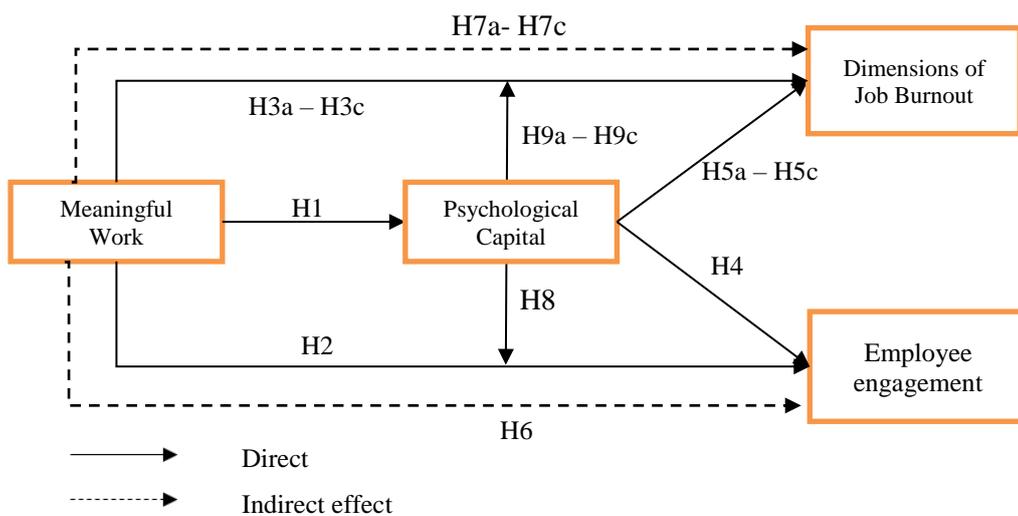
2.1.5 Integration of Theories and Model

Taken together, all TPB, SET, COR, and JD-R theories offer a holistic view on the behaviour of employees in workplaces. Both COR and JD-R theories posit that individuals are motivated to acquire and to protect their job resources and personal resources in managing their job demands. From the perspective of this study, meaningful work and PsyCap fit into the definition of job resource and personal resources, respectively. TPB further elaborates on how the availability or absence of these job resources influences one's capacity in interacting with the immediate work environment, leading to changes in intention, attitude, and behaviour impacting outcomes, such as motivation, work engagement, one's mental state, and physical resources (Bakker *et al.*, 2005, Xanthopoulou *et al.*, 2007, Clausen and Borg, 2011). Upon complementing the strengths of COR, TPB, and JD-R theories, SET depicts that exchange relationships between two parties include economic and social exchanges (Gouldner, 1960). The model posits that when individuals receive a certain form of benefits or services, the recipients are obliged to reciprocate with something in return that is mutually acceptable, beneficial, and gratifying (Gouldner, 1960, Cropanzano and Mitchell, 2005, Mearns *et al.*, 2010). However, the magnitude of reciprocation depends on the valence of the benefits or services to that individual, which means it differs from one to the other.

2.1.6 Conceptual Framework

Based on the research objectives outlined in section 1.4 as well as the theories highlighted in section 2.1, this study posited that social workers leverage meaningful work, and individual's PsyCap to buffer against the undesirable effects of job demands. They parallel the COR and JD-R theories accordingly, whereby the resources initiate a motivational process that influences job outcomes. Besides, the efforts by social service NPOs to improve work meaningfulness results in social workers feeling obliged to respond in-kind, translating to attitude and behavioural changes towards work. Subsequently, this would cause an improvement in employee engagement and diminishes propensity of experiencing job burnout, as predicted by the Theory of Planned Behaviour (TPB) and Social Exchange Theory (SET). Finally, the impact of meaningful work towards employee engagement and job burnout differs across individuals. Hence, there is a possibility for PsyCap to play the role of an intervening variable of a mediator and moderator to the relationship between meaningful work and its outcome. This is especially true when "both job and individual characteristics are good long-term predictors of psychological and physiological stress reactions" (Mayerl *et al.*, 2016, p. 2). These relationships are shown below in Figure 1 accordingly.

Figure 1. Conceptual framework



2.2 Meaningful Work

In present organisations, employees represent an indispensable element in achieving its objectives. This is especially relevant to client-facing sectors, such as social service sector, where the presence of highly competent and engaged employees brings numerous benefits to the organisations, such as being more dedicated and committed in deploying additional efforts to achieve the required success. Despite the advances in engagement literature, studies, such as that conducted by Corbin (2017), showed that the majority of employees still remained disengaged and experienced burnout, in which researchers would want to have an in-depth understanding on the related determinants. In order to have a holistic appreciation on the relationship between resources and outcomes of work, researchers, Nawrin (2018) alike, claims that an important psychological mechanism that demands more understanding is meaningful work.

2.2.1 Introduction to Meaningful Work

Work has dominated much history of mankind. Through work, individuals constantly seek safety, food, water, shelter, and companionship not only for themselves, but also for their dependents. With the evolution of society, as well as the appearance of new manufacturing paradigms and advances in technologies, individuals develop their own niches, which in turn, define their identity within the ecosystem that they belong to (Steger and Dik, 2010). In precise, the “reasons, means, activities and products of work define who we are because, from history, working and performing tasks are required as our social group and this is how we survive as a species” (Steger and Dik, 2010, p. 131). Putting these together, it presented the key role that work plays.

Nevertheless, far reaching changes in the present work places are witnessed in these recent years. Breakthrough in technologies, uprooting of traditional jobs, growing precarity of employment with no stable contract of employment, growing of human machine intelligence, and intensification of job market competition have created unknown consequences of work. These evolutions have shaped how individuals interact, how businesses are structured, how businesses communicate, and how individuals obtain their services, information, and goods. In these circumstances, individuals face challenges in balancing work commitments and life priorities. In

Steger's (2017, p. 61) words, meaningful work, therefore, is viewed as a way to "bring harmony, if not, balance to workers' lives, providing them with well-being at the office and providing organisations with enhanced productivity, performance and dedication".

The understanding of meaningful work could be traced back to the 19th century based on Dr Frankl's existentialist view that man's search for meaning is the primary motivation of his life (Frankl, 2006). That is, men are ineluctably searching for the meaning of their existence. Building onto this principle, Frankl's work has extended by psychologists to examine in greater depths on work meaningfulness and why it matters so much to individuals. Drawing out the dominant themes from the different studies on meaningful work, meaningful work is more than just getting monthly emoluments or simply discharging the responsibilities. The weight of this evidence tends towards the unitarist conceptualisation of meaningfulness falling into the ambit of positive psychology (Seligman and Csikszentmihalyi, 2000). Meaningful work, therefore, is an individual's perception on whether if the work is seen as purposeful and significant, and whether it provides an identity to the individual, not limited only in the workplace, but also to the society at large (Chalofsky, 2003, Michaelson *et al.*, 2014, Rosso *et al.*, 2010, Steger *et al.*, 2012). The determination on work being meaningful, therefore, primarily depends on the cognitive valuation of the work as significant, which can differ across individuals.

Studies observed that the pursuit of meaningful work is not restricted to a specific group of occupation. It applies to employees performing different forms of work and across different organisational settings (Lips-Wiersma *et al.*, 2016, Bailey and Madden, 2017, Lepisto and Pratt, 2017). Hoole and Bonnema (2015) revealed that the pursue of meaningful work applied to different demographic groups. It is precisely for this reason that resulted in the growing popularity of meaningful work in recent years. One could also attribute the growing interest to the positive outcomes associated with it, such as improvement in working attitude that resulted in better employee engagement (Cartwright and Holmes, 2006), improved sense of self-esteem (Walumbwa *et al.*, 2013), improved organisational commitment (Geldenhuis *et al.*, 2014) and self-efficacy (Yeoman, 2014, Allan *et al.*, 2016a, Allan *et al.*, 2018), as well as reduction in burnout (Lips-Wiersma *et al.*, 2016).

Despite the multiple studies on meaningful work, many scholars have maintained the view that the current understanding on meaningful work is at its infancy stage (Rosso *et al.*, 2010, Bailey *et al.*, 2015, Bailey and Madden, 2017). Scholars have acknowledged that the potential of meaningful work has remained largely untapped. For example, Schwartz (2014) indicated that 55% out of 19,900 surveyed employees across a wide range of industries struggled to find their work meaningful. With this as the background, this study extends the present understanding of meaningful work by probing into the effects that PsyCap have on the relationship between meaningful work, and outcome of employee engagement and dimensions of job burnout. The subsequent sections provide an in-depth presentation on meaningful work, by introducing the basic tenets that form meaningful work and by discussing its growing importance.

2.2.1.1 Definition of Meaningful Work

Many scholars have constantly tried to define ‘meaningful work’, but with limited success. One reason is that individuals identify meanings according to their life experiences and the sources of meaning differ from one another (Chalofsky, 2003, Overell, 2008). This is evident from a study conducted by Meaning of Working International Research Team, where the researchers deliberately left the question on work definition as an open question, as it was challenging to “design a research instrument that allowed the respondents from diverse groups and backgrounds to express their understanding of working and its meaning” (Ruiz-Quintanilla and England, 1996, p. 517).

From the multitude of definitions (see Table 2), common elements are identified, including meaningful work representing an all-inclusive term of several constructs of positive connotations (Steger *et al.*, 2010), a sense of higher purpose (Steger *et al.*, 2010), and an individual’s values that one actively pursue (Chalofsky and Krishna, 2009). In the same vein, the definitions could be broken down into two components of comprehension and purpose. Steger and Dik (2010) elucidates that comprehension as making sense of one’s experience, while purpose is identifying and pursuing of higher-order goals.

In the context of work, comprehension personifies the concept of fit where individuals’ satisfaction in work is predicated by how well knowledge, skills, and aptitudes match

the organisation’s requirements or the society’s expectations. Purpose is “rooted in the idea that provides people with a bridge from where they are now to the achievement of their future aspirations and achievements” (Steger *et al.*, 2010, p. 7). These explanations are aligned with the worker-centric points of view where “perceptions of meaningfulness must necessarily travel through the self” (Rosso *et al.*, 2010, p. 15). From another perspective, these definitions reflect work-centric arguments where organisations have the responsibility of providing and managing meaning. Scholars have opined that having the right elements in work context, such as appropriate leadership styles, jobs that allow utilisation of skillsets, autonomous work environment, presence of feedback mechanism, and task identification, encourage the fostering of meaningfulness in work places (Hackman and Oldham, 1975, Bono, 2003, Rosso *et al.*, 2010).

With this as the background, this study operationalised meaningful work as a subjective experience based on one’s social, cultural, and historical background, wherein every employer collaborates with the employee, to provide the necessary conditions that enhance one’s intrinsic motivation towards work and enrich one’s sense of belonging to the larger ecosystem.

Table 2. Definition of meaningful work

Author(s)	Definition
Hackman and Oldham (1975)	“The degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile” (p. 161).
Kahn (1990)	“Positive meaning can be seen as a feeling that one is receiving a return on investment of one’s self in a currency of physical, cognitive, or emotional energy” (p. 703).
Pratt and Ashforth (2003)	“By meaningful, we mean that the work and/or its contexts are perceived to be, at a minimum, purposeful and significant” (p. 310).

Chalofsky (2003)	“Meaning at work implies a relationship between the person and the organisation or the workplace in terms of commitment, loyalty and dedication. Meaning in work, suggests an inclusive state of being. It is the way we express the meaning and purpose of our lives through the activities that comprise most of our waking hours” (p. 73).
May <i>et al.</i> (2004)	“Meaningfulness is defined here as the value of a work goal or purpose, judged in relation to an individual’s own ideals or standards” (p. 14).
Cartwright and Holmes (2006)	“The concept of meaningful work, an important element in self-identity and self-worth, also reflects the growing interest in the field of positive psychology which emphasizes the need to focus on actively developing the positive aspects of life and work rather than just attempting to identify and address the negative aspects” (p. 202).
Overell (2008)	“Meaningful work is work of substance, significance and importance; it is expressive. One way to think of meaningful work is through the relationship of content and context: meaningfulness comes about when a particular aspect of life finds itself in a harmonious relationship to an overall context” (p. 18).
Steger and Dik (2010)	“Meaningful work can be considered an umbrella term, which subsumes a range of constructs, including work meaning, work meaningfulness, and the positive connotations associated with the meaning of work” (p. 3).
Rosso <i>et al.</i> (2010)	“Meaningful work is, therefore, work experienced as particularly significant and holding more positive meaning for individuals” (p. 95).

Clausen and Borg (2011)	“The concept of experience of meaning at work points towards experiences at work that add purpose and significance to the lives of individual employees.” (p. 667)
Lips-Wiersma and Wright (2012)	“There are four dimensions of meaningful work: These are developing the inner self, unity with others, service to others, and expressing full potential” (p. 660).
Steger <i>et al.</i> (2012)	“Meaningful work consists of (at least) skill variety, opportunity to complete an entire task (task identity), task significance to other people, military pride, engagement, a sense of calling, challenge, work role identity, work centrality, work values, intrinsic work orientation, spirituality, good pay, and reputation” (p. 323).
May <i>et al.</i> (2014)	“Meaningful work design is defined as involving physical welfare, complex work that provides opportunities for growth and self-expression, emotional engagement, and financial security” (p. 652).
Allan <i>et al.</i> (2015)	“Conceptually, meaning in work is considered a sub-domain of meaning that acts as a potential source of meaning in life” (p. 324).

2.2.1.2 Sources of Meaningful Work

Despite scholars agreeing that meaningful work manifests numerous benefits to organisations and to individuals, there are much discourse on the sources of meaningful work (Rosso *et al.*, 2010, Ghadi *et al.*, 2015). Table 3 shows that sources of meaningful work could come in two forms. First, there must be organisational support. Scholars reported that meaning of work happens within an organisational context, such as pay, employment relationships, and work environment (Kuchinke *et al.*, 2009, Kuchinke *et al.*, 2011). Empirically, it is found that high-performance work practices improved employees’ engagement and performance outcomes, which

included enhancing one’s perception of work meaningfulness (Combs *et al.*, 2006, Macky and Boxall, 2007, Karatepe, 2013).

Second, it must be accompanied by individual’s motivation to have a positive attitude to the task. A considerable amount of literature depicts that intrinsic motivation is needed to manifest meaningful work in several forms, such as one’s values, beliefs, culture, and spiritual, as well as responding to a calling. For instance, a report by Harvard Business Review indicated that one’s motivation at work brought about a sense of purpose, which appeared to be important in enhancing employees’ engagement and manifesting organisational desired outcomes, such as being more innovative at work and providing better customer services (Keller, 2015).

Table 3. Sources of Meaningful Work

Author(s)	Sources of Meaningful Work
Pratt and Ashforth (2003)	Sources of meaningful work can be classified into “meaningfulness in work” and “meaningfulness at work.” “Meaningfulness in work” relates to how one perceives the roles and tasks that individual is working on, and whether the work is purposeful, engaging and significant. “Meaningfulness at work” relates to the social context of that individual, and how one perceives his or her membership within the society.
Chalofsky (2003)	There are three main sources of meaningful work – “sense of self”, “work itself” and “sense of balance”. “Sense of self” refer to individuals bringing their mind, body, emotion and spirit to their work which will be affected by one’s value, beliefs and outlook of life. “Work itself” refers to the design of the work and the level of autonomy and responsibility that comes with it. “Sense of balance” refers to work and life being in equilibrium.

Rosso <i>et al.</i> (2010)	Four main sources of meaningful work have been identified – “the self”, “the other person”, “the work context” and “the spiritual life”. “The self” refers to the individual’s values, motivations and beliefs that will shape one’s perception of the meaning of the work. “The other person” refers to individual’s interaction and relationship with other persons or groups, both internal and external. This includes co-workers, leaders, peers, family and groups that the individual is belonging to. “The work” includes not only the scope of work. It also refers to organisational related factors such as mission statement, financial circumstances and national culture. “Spiritual life” refers to how one’s faith affect attitudes towards work, which includes the sense of calling towards the vocation.
Steger <i>et al.</i> (2012)	Meaningful work has three dimensions: “meaning-making through work”, “positive meaning in work” and “greater good motivation.” “Positive meaning in work” refers to the idea that meaningfulness is already embedded in the work and there is personal significance attached to it. “Meaning making through work” reflects the fact that work is often a source of broader meaning in life for people, helping them to make sense of their live experience. “Greater good motivations” reflects the degree to which people see that their effort at work makes a positive contribution and benefiting others or society.
Lips-Wiersma and Wright (2012)	Four dimensions have been identified. “Unity with others” refer to working together with peers with a sense of belonging and shared values. “Serving others” refers to the work involved in benefiting others and the

environment. “Expressing full potential” is meaningfulness in creating and applying new concepts with a sense of achievement. “Developing inner self” means being true to oneself and having the qualities to be a higher self.

2.2.1.3 Demand for Meaningful Work

The concept of meaningful work is not new. Motivational theorists, such as Abraham Maslow argues that individuals are constantly searching for meaningful work by achieving the state of self-actualisation (Maslow, 1943). The pre-industrial society was one where the concept of “meaning” was always present as work was done in the same community as they lived in (Chalofsky and Krishna, 2009). There were no unfamiliarity and the workers were aware that success of their work was closely related to the well-being and survival of not one individual, but a community. This is an apt description that arrives at meaningfulness from work. As indicated in several studies, individuals derived meaningfulness from the work they are doing, provided they perceived that the work gave them an identity, the chance to use a variety of skills, and allowed them to have certain degree of autonomy and control (Hackman and Oldham, 1975, Grant, 2008, Bailey and Madden, 2017).

The beginning of the industrial period, however, saw work being alienated from the community, where bureaucracies, hierarchies, processes, and procedures were introduced to regulate workplace environment (Chalofsky and Krishna, 2009). Men no longer worked in an environment that was next to their accommodation, but in buildings called factories or offices. Everybody worked not because they enjoyed it, but to earn a salary to meet their livelihood. Investors financed companies, not because they owned the business, but to earn dividends. Such alienation implies that individuals do not see work as part of their existence, suggesting that the magnitude of meaningfulness they derive from their work could be marginalised (Chalofsky, 2003; 2010).

Notwithstanding the above, studies demonstrated that there would always be a demand for meaningful work. For instance, different literature espoused that individuals from

all generations, regardless of industry, are constantly questioning on the level of work meaningfulness one could possibly derive from their work (Overell, 2008, Chalofsky and Krishna, 2009, Kelly Services, 2014, McKinsey, 2014). This implies that employers must relentlessly develop innovative and “out of the box” ways of instilling meaningful work within individuals, and it should address both lower and higher order needs. According to Maslow (1943), individuals seek to achieve higher order needs, only when their lower level needs are fulfilled. Seeing from this perspective, the interpretation of meaningful work differs from one to another depending on their needs and wants. Thus, implementing strategies pitching meaningful work should take on diverse forms to address individual’s unique needs. That is to say, having strategies focusing on higher order needs, but ignoring the lower order ones, might see limited success.

2.2.1.4 Responsibilities under Meaningful Work

There is always a constant discourse on whose responsibility it is to foster a meaningful work environment. Literature give the impression that the responsibility is with the employer as many of the recommendations involved (1) redesigning of job to improve skills variety, as well as developing task significance and enhancing task identify (Cartwright and Holmes, 2006, Chalofsky and Krishna, 2009, Pratt *et al.*, 2013), (2) improving recruitment and selection processes to ensure better fit between person and organisation (Cartwright and Holmes, 2006, Scroggins, 2008a), and (3) adopting appropriate leadership styles to influence work meaningfulness (Walumbwa *et al.*, 2013, Tummers and Knies, 2014).

This school of thought, however, is challenged by several scholars from different perspectives (Pratt and Ashforth, 2003, Michaelson, 2011, Bailey and Madden, 2017). First, Bailey and colleagues caution that provisioning of organisational support to build meaningful work should be offered in the balance of being authentic and coherence (Bailey *et al.*, 2017b). Any mismatch between coherence and authenticity reduce the impact and the effectiveness of the interventions, resulting in erosion of meaningful work as well as development of scepticism and trust issues among the employees.

Second, scholars maintain their views that meaningfulness is a subjective experience that varied from one individual to another, which means, the responsibility to search for meaningful work is with the employees and not a pure result of organisational practices (Pratt and Ashforth, 2003, Michaelson, 2011, Bailey and Madden, 2017). Michaelson (2011), however, cautioned that allowing employees the full volition to search for the meaning of work could result in ethical and moral concerns as this presents opportunities for nefarious activities that run contrary to the mission and vision of the employer.

Hence, Michaelson (2011) opine that providing a meaningful work environment should be a joint effort between employer and employees. Taken together, this study argued that fostering of meaningful work involve confluences of both individual's motivation and the efforts from the organisation. Apart from being meaningful for the individual, it should neither compromise on the productivity benefits nor run contrary to organisation's vision and mission.

2.2.2 Antecedents to Meaningful Work

Work has been a central construct in one's quest for meaningfulness. Individuals in adulthood spend most of their time at work, which according to Pratt and Ashforth (2003) and Rosso *et al.* (2010) also refers to the environment where one finds his/her identity, purpose, and sense of belonging.

On average, each Singaporean worked about 45.5 hours per week in 2016, which was slightly lower, compared to 2014 and 2015 (Ministry of Manpower, 2017). Despite that, not many people would stop and think if their work was meaningful. As Bailey (2016b) mentioned, "meaningfulness" is not something that weighed in people's daily thoughts, especially when they are focused on meeting their day-to-day livelihood. Though not frequently thought of, many scholars agreed that meaningfulness at work is something that everyone would strive to achieve at a certain point of time (Overell, 2008, Pavlish and Hunt, 2012, Hoole and Bonnema, 2015). This is because work acts as a process of achieving self-realisation, and meaningful work is a state that every individual yearns for, and a desired level of employee readiness that every employer hopes to leverage (Pratt *et al.*, 2013, Jung and Yoon, 2016).

Hence, this section examines the antecedents of work meaningfulness. From the available literature, this study surmised that the antecedents could be classified into three main components: (1) sense of calling, (2) self-concept-job fit, and (3) relationship with self and others.

2.2.2.1 Sense of Calling

Individuals who find work as calling see it as a revelation and are awakened to a sense of mission, normally as a result of national or societal needs or a form of family legacy (Duffy and Dik, 2013). In precise, it gives a special meaning at the moral, social, and personal levels of the individual (Bunderson and Thompson, 2009). Studies have affirmed that those who perform work based on calling contributed to perceptions of meaningful work and better work engagement (Bunderson and Thompson, 2009, Duffy and Dik, 2013, Fouche *et al.*, 2017). On the other hand, Van Vuuren (2017) espoused that performing work with a sense of calling could be a double-edged sword, especially when the goals of calling were hard to accomplish, thus generating tension and stress within the individual.

2.2.2.2 Self-Concept-Job Fit

Job characteristics, such as autonomy, task identity, skill variety, task significance, and feedback, affects one's perception of work meaningfulness (Fouche *et al.*, 2017). Studies confirmed that the presence of these job characteristics enhanced one's perception of work meaningfulness. For example, Janik and Rothman (2015) demonstrated that the presence of job enrichment and work-role fit enhanced one's perception of meaningful work, which in turn, improved employee engagement and the reduced propensity of job burnout. Within the domain of job characteristics, one critical aspect is the self-concept-job fit. The notion of self-concept-job fit revolves around the propositions that meaningful work involved the interaction of tasks, work environment, and one's self-concept (Shamir, 1991). The fit occurs when one's self-concept comprising values and self-perception of abilities, is congruent with the outcome of the task performance. This is validated by Scroggins (2008b), where self-concept-job fit appeared to be a significant predictor of meaningful work, accounting for 14% of the variance for meaningful work.

2.2.2.3 Relationship with self and others

Relationship refers to how one evaluates himself or herself relative to the social context and membership within the society (Pratt and Ashforth, 2003). This point is emphasised in several definitions of meaningful work put forward by scholars. For instance, Lips-Wiersma (2002) define that one plausible source of work meaningfulness is “unity with others”, which essentially implies working together with co-workers to establish a sense of community, belonging, and shared values. Similarly, Rosso’s *et al.* (2010) definition of meaningful work indicates that one’s interaction with internal and external persons of groups are essential in establishing meaningfulness in work. Having positive relationships enhance work meaningfulness through process identification where individuals’ preferred identities are reckoned through acceptance into the community. Empirically, studies have found that relationship was able to enhance one’s meaningful experience in varied contexts. For instance, Nevison *et al.* (2017) showed that positive relationship with peers helped in fostering conducive learning environment, thereby making their experiences more meaningful. In sum, a warm, amicable and supportive relationship encourages a sense of connectedness, which leads to positive meaning.

2.2.3 Outcomes of Meaningful Work

Meaningful work has become an important vocational construct that has been measured and found to have a positive relationship with individual well-being and positive work-related outcomes (Hall *et al.*, 2013, Yeoman, 2014, Fletcher and Robinson, 2016, Allan, 2017). As this study explained below, meaningful work is a key construct in predicting work-related and individual-related outcomes.

For work-related outcomes, multiple studies demonstrated that individuals who perceived their tasks to be meaningful display higher level of individual performance (Rosso *et al.*, 2010, Schnell *et al.*, 2013, Allan *et al.*, 2014, Allan *et al.*, 2016a, Allan *et al.*, 2016b), a reduction in turnover intention, and absenteeism (Bunderson and Thompson, 2009, Clausen and Borg, 2011, Fairlie, 2011, Dimitrov, 2012, Janik and Rothman, 2015). Another key work-related outcome shown in most studies is enhancement to employee engagement. Kahn (1990) indicates that one of the conditions for engagement to happen is to feel a sense of meaningfulness at work. This

point was further demonstrated by May *et al.* (2004) that there was a moderate correlation ($r = 0.63$) between employees' engagement and meaningfulness, while Hoole and Bonnema (2015) established weak correlation ($r = 0.43$).

Apart from work-related outcomes, studies have shown that the presence of meaningful work could lead to better well-being. For instance, Steger *et al.* (2010) and Vidwans and Raghvendra (2016) showed that meaningful work brought about lower rates of depression, anxiety and stress. Similarly, Vidwans and Raghvendra (2016) discovered a positive correlation between meaning in work and meaning in life, indicating that when one perceived their work to as a "calling", it helped in developing overall meaning in life (Steger and Dik, 2010). This corroborated with Kolodinsky *et al.* (2017), where individuals who interpreted work as a form of "calling" would perceive it as deeply meaningful, develop a higher-order purpose, and see the job as part of their identity.

2.2.4 Growing Importance of Meaningful Work

Apart from academic literature, a number of related surveys highlighted the growing importance of meaningful work. The Asian Millennium Workforce and the Travel Industry survey conducted by McKinsey showed that almost half of the respondents agreed that meaningful work was indeed a key driver for employee engagement and connection, while 20% of the respondents are prepared to compromise on lower salary in exchange for meaningful work (McKinsey, 2014). In another global survey involving 23,000 respondents, 73% of their respondents indicated that purpose in work helped them in achieving job satisfaction (Linkedin, 2016). The same report observed that individuals prioritised the value of work, above two other measuring factors of money and status (Linkedin, 2016).

Having said that, Kelly Services in their 2014 survey, which involved 230,000 respondents across 31 countries, revealed that employees' perception of meaningful work reduced by eight to 12 percentage points across different regions, when compared to the previous survey (Kelly Services, 2014). The same survey also showed that only 38% of the respondents agreed that the employers were instilling the sense of meaning in employees' work (Kelly Services, 2014). This reflected a slump of nine percentage points, in comparison to the previous survey (Kelly Services, 2014).

Responding to the drop-in percentage points, the report highlighted that employers who failed to recognise the importance of fostering a “sense of meaning” in employees’ work would find themselves in a disadvantaged position of not being able to attract and retain talent (Kelly Services, 2014). In fact, instilling the “sense of meaning” in employees’ work would take on added importance, especially during pessimistic economic conditions where employees look for alternative ways to improve their work life, in lieu of the fact that employers might not be able to increase their financial compensation (Kelly Services, 2014).

These survey results corroborated views from different scholars, highlighting that work meaningfulness plays an important and pervasive role within organisations. For instance, meaningful work is described as “one of the most important things we can impart to our children” (Lepisto and Pratt, 2017, p. 100) and an article in Harvard Business Review describing meaning as the new money (Erickson, 2011). Piecing the literature and practitioners’ surveys together, it undoubtedly cements the importance of meaningful work in the present manpower landscape. Together with its growing importance, new puzzles on meaningful work have risen, which this study has highlighted and would be addressing.

2.2.5 Analysis of Literature Gap

Despite the burgeoning research, gaps remain. There is an agreement across leading scholars that researches on meaningful work has remained scarce (Michaelson *et al.*, 2014, Bailey, 2016b, Bailey and Madden, 2017, Bailey and Madden, 2016). Lips-Wiersma *et al.* (2018) assert that many of the existing studies failed to provide details for “future researchers to hypothesise specific relationships between antecedents and outcomes of meaningful work” (p. 1), which is essential as meaningful work is a complex, deep, and rich concept that looks at issues beyond self-interest.

This study surmised that the existing literature pertaining to meaningful work focused largely on individual-level. Regarding this, Lips-Wiersma *et al.* (2018) emphasise that this ran the danger of meaningful work being overly romantic by neither acknowledging how one’s personality can affect the outcome of meaningful work, nor setting the criteria for the type of work. Moreover, Van Wingerden and Van der Stoep (2018, p. 2) assert that “little is known of the processes through which meaningful

work actually influences these positive or negative outcomes”. In other words, there is a lack of literature examining on the motivational potential that meaningful work brings about, which is identified as probably the “individual characteristics, traits, and abilities that, when engaged, energise and allow a person to perform at his personal best” (Van Wingerden and Van der Stoep, 2018, p. 3). Collectively, this necessitates the need to examine in detail the effect of meaningful work, which this study bridged this literature gap from three fronts. One, by examining how one’s personality differences influenced the effectiveness of meaningful work. Two, by exploring if different organisational contexts affected the outcomes of meaningful work, and three, by bringing both personal resources and job resources to be analysed under the same model.

2.2.6 Summary

In summary, recent years have been particularly exciting for meaningful work. With the plethora of studies detailing on the many desirable characteristics, antecedents and outcomes of meaningful work, it has enhanced scholars’ understanding on this subject matter. From the literature review, meaningful work is inextricably linked to greater personal well-being and meaning in life, better satisfaction and happiness at work, stronger commitment and engagement with the organisation, as well as higher performance and highly effective employees. With this progress, one certainly has compelling reason to feel enthusiastic about the potential of meaningful work and the value it creates across all levels of the organisation. As depicted by Steger (2017, p. 60), meaningful work is the “next big thing organisations should leverage for improving performance and it is time to move beyond engagement and commitment and strive for meaningful work”.

2.3 Psychological Capital

Developed by Luthans and Youssef-Morgan (2017), PsyCap is a state of positive psychology characterised by the dimensions of hope, efficacy, resilience, and optimism. Drawing from the JD-R theory, PsyCap is reported to have negative associations with undesirable employee behaviours, such as reducing turnover intention, work stress, and absenteeism (Cheung *et al.*, 2011, Roberts *et al.*, 2011). The

following sections discuss the development of PsyCap, beginning with a brief introduction to positive psychology so as to provide a broader context.

2.3.1 Positive Psychology

Developed by Seligman, positive psychology addresses the modern psychology gap of focusing on the deficit-and-disorder aspect of one's mental health (Seligman, 2011a). Positive psychology encourages psychologists to adopt an open mind-set on "human potentials, motives, and capacities" (Sheldon and King, 2001, p. 216). It is the "study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions" (Gable and Haidt, 2005, p. 103). Having said that, critics are sceptical about positive psychology (Vazquez, 2013) citing that positive psychology promotes the Pollyanna view of the world and "blanket-branding" of other psychology interventions as "negative". Gable and Haidt (2005) rebutted these criticisms, reiterating that positive psychology is not meant to discredit other forms of interventions. Rather than denying the presence of suffering, selfishness, dysfunctional family systems, and ineffective institutions, positive psychology acts as a mechanism for growth after adversity by building one's resilience and strength (Mills *et al.*, 2013).

In order to operationalise the concept of positive psychology, Seligman and his colleagues developed a well-being model. The model identifies five pathways within positive psychology, which essentially are positive emotions, engagement, relationship, meaning, and accomplishment, or PERMA (Seligman, 2011a). The PERMA model is deployed widely across different contexts, such as education (Kern *et al.*, 2015), military (Reivich *et al.*, 2011), music (Ascenso *et al.*, 2017), and consumer behaviour (Doyle *et al.*, 2016). These articles draw a similar conclusion. PERMA offers a more precise measurement of one's status of well-being, and such precision allows employers to identify and to implement specific interventions in addressing well-being needs of their employees (Kern *et al.*, 2015, Doyle *et al.*, 2016).

The first element of PERMA is positive emotions. As a key element within the well-being model, positive emotions, such as hope, compassion, contentment, love, empathy, and gratitude, have always been considered as the most important condition in well-being (Seligman, 2011a). Slavin *et al.* (2012) highlights that positive emotions

have the capacity to reduce stressors and have been linked with outcomes such as openness in receiving and brainstorming of new ideas that result in better adaptability (Sheldon and King, 2001).

The second element of PERMA is engagement. As defined by many scholars, engagement is the intensity of immersion and concentration in performing a task (Higgins, 2006, Schaufeli *et al.*, 2006). From the perspective of positive psychology, when one is fully engaged in his or her role, one is bound to experience “flow”. “Flow” is a state of mind where one is so involved psychologically, cognitively, and behaviourally, such that there is “little distinction between self and environment; between stimulus and response or between past, present and future” (Csikszentmihalyi, 2014, p. 137). The concept of “flow” is deployed primarily across the domains of sports (Schüler and Brunner, 2009, Schüler and Brandstätter, 2013), leisure (Su *et al.*, 2016), consumer behaviour (Liu *et al.*, 2016), and education (Mills *et al.*, 2013).

Relationship is the third domain within PERMA. The ability to create and to maintain a positive relationship with family and peers help individuals to develop positive emotions, as it makes one feel supported, accepted and connected to a group or a community (Lee *et al.*, 2017, Doyle *et al.*, 2016). Much of the existing literature, such as Gruman and Saks (2011), explains that socialisation and building relationship developed positive long-term effect on one’s emotions, which eventually translated to organisational related outcomes, such as extended membership with the organisation, lower turnover intention, and better emotional well-being.

The fourth dimension is “meaning”. As highlighted earlier, two key perspectives linked with “meaning” stood out - meaning in life and meaning in work (Frankl, 2006, Ju *et al.*, 2013, Martela and Steger, 2016). Meaning, as the word suggests, indicates that the subject or an object has a special significance to that individual (Seligman, 2011b). Martela and Steger (2016) elaborate meaning as being unique to individual and differs from one to the other, with its significance being determined by one’s personal cultural background and life experiences.

The last domain within PERMA is accomplishment. Depending on the type of fields, measurement of accomplishment is different. Accomplishment could be advancement towards a pre-set goal, such as a medal at international sporting events, national or

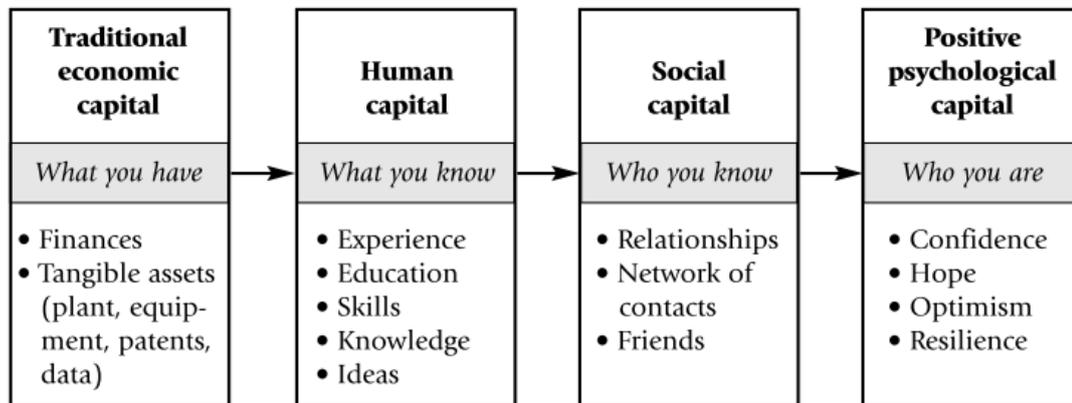
regional honours and awards, marks and grades in academic pursuits or promotion to a position within the organisation. The literature revealed diverse views on the effect that sense of accomplishment would bring. Seligman (2011a) views that this domain could be pursued for its own sake, even when it did not bring any positive emotion and meaning. On the other hand, it is well-established that having a sense of achievement gave positive reinforcement required in meeting one's need for satisfaction, competence, relatedness, and autonomy (Ryan and Deci, 2000, Seligman, 2011a). Whichever argument one subscribes to, it is undeniable that the presence of accomplishment is inextricably tied to the fulfilment of one's well-being (Ascenso *et al.*, 2017)

In sum, positive psychology is not just about making individuals happy and feeling positive without any basis. Every domain within positive psychology is built on empirical studies conducted by different scholars. As highlighted by Seligman and Csikszentmihalyi (2000), the current climate for psychology goes beyond repairing clients' weaknesses. Psychologists should foster the practice of amplifying clients' strengths. This is evident from a Wall Street Journal article emphasising that positive psychology is more popular among business organisations (Wong, 2011). With the advent of positive psychology, the landscape of psychology has witnessed some shifts, where new paradigms are being created, new practices being introduced, and new frontiers of research experiencing evolution (Wong, 2011). One of which, refers to PsyCap.

2.3.2 Introduction to Psychological Capital

There are different forms of capitals that organisations have relied on for success. Over the years, the forms of capitals have evolved from economy capital to human capital, and from human capital to social capital, and eventually, PsyCap (see Figure 2). PsyCap, as highlighted by Luthans *et al.* (2004), is an extension to the concept of economic capital, as well as human capital and social capital. PsyCap is the underlying mechanism that offers better understanding of individuals by focusing on their strengths and how one could make use of these strengths to thrive at workplace.

Figure 2. Evolution on forms of capital



Source: Luthans *et al.* (2004)

2.3.2.1 Economic Capital

The first form of capital is economic capital. As explained by Luthans *et al.* (2004), economic capital comprised of both financial and tangible assets, such as plants and equipment. Traditionally, the value of an organisation used to be tied to assets, such as inventory levels, raw materials, machineries, and finished goods. During the 1980s and 1990s, new manufacturing perspectives emerged. Practices, such as lean manufacturing, and just-in-time concepts “eliminated the luxury of having tangible assets” (Larson and Luthans, 2006, p. 46). In addition, the recent emergence of disruptive technology has re-shaped the competitive landscape, where traditional industries, such as hospitality and transport, with high barriers of entry were broken down to allow new players with the ability in harnessing the power of internet to gain entry. The global economy is undergoing a digital transformation that many scholars, such as Richter *et al.* (2017) have described it as happening in breakneck speed. Faced with this suite of changes, many business organisations have reckoned that having economic capital alone is insufficient (Luthans *et al.*, 2004).

2.3.2.2 Human Capital

This present highly globalised and competitive business environment has accentuated the importance of human capital, where every individual’s knowledge and skills must be maximised and fully utilised (Davis and Simpson, 2017). The challenge is for the

managers to identify, to leverage, and to deploy individual's capability in meeting a company's strategic and productivity needs.

Over the last two decades, researchers who work on the resource-based theory of competitive advantage concurred that human capital seemed to be the key reason on why organisations gain competitive advantages (Barney *et al.*, 2011, Crook *et al.*, 2011). Empirical evidence demonstrated that appropriate utilisation of human capital produced positive effects on different facets of performances, including knowledge management (Birasnav *et al.*, 2011), wages (Mane and Waldorf, 2013), new venture performance (Chen and Chang, 2013), organisation strategy (Hitt *et al.*, 2000), nation's economic growth (Tsai *et al.*, 2010), entrepreneurial performance (Santarelli and Tran, 2013), and innovativeness (Cabello-Medina *et al.*, 2011).

These findings drew similar views on human capital. First, human capital involves knowledge, skills, and abilities that each individual acquires from their education, training and work experience (Crook *et al.*, 2011). Second, human capital is non-duplicable and when employers maximise their potential, it brings about desired personal and organisational outcomes, including growth, acquiring of new skills and knowledge, as well as discovering new business opportunities (Cabello-Medina *et al.*, 2011). Lastly, holistic human resource management practices must be in place to effectively acquire, develop, foster, motivate, and deploy human capital (Birasnav *et al.*, 2011). In sum, having a highly competent and highly competitive human capital is crucial for labour-intensive organisations. Organisations tend to spend a considerable amount of resources in acquiring, training and retention of their employees to increase the overall human capital of the organisation.

The question arises if human capital is the only capital that an organisation needs to invest in? On this, Augusto *et al.* (2014, p. 351) replied that "human capital alone is not enough to ensure success". With the growth of enterprise social networking, social dimensions of work are gaining attention within organisations. The social relations of each employee appeared to be instrumental in generating new ideas that trigger entrepreneurial ventures, leading to progress in the operational process and improvement in organisational performance (Augusto *et al.*, 2014). This is also known as social capital.

2.3.2.3 Social Capital

Broadly speaking, social capital refers to factors of effectively functioning groups, such as networks and interpersonal relationship. Adler and Kwon (2002) developed a conceptual model, where they differentiated social capital into substance, source, and effects. They defined social capital as the “goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from information, influence, and solidarity it makes available to the actor” (Adler and Kwon, 2002, p. 23). This definition highlights three key characteristics of social capital.

First, social capital is an asset that with constant investment, actors can collectively augment their social capital and benefit by having privileged access to information. In addition, social capital is appropriable where depending on the actor’s position within the social network; it can be converted into other kinds of capital, such as economic capital.

Second, social capital could substitute or complement other forms of resources. For instance, Augusto *et al.* (2014) highlights that human capital must be nested within the relevant social context in order to be successful. This view is supported by Coleman (1998), Adler and Kwon (2002), and Reed *et al.* (2006) where the intangible value of human capital could be enhanced by social relations. They reason that competent individuals, through their network of relationship, allowed them to obtain better quality and more precise information at a reduced amount of time and investment required, which in the process, enhanced their human capital and potential contribution to the organisation (Reed *et al.*, 2006).

Lastly, social capital does not reside within actors, but in the relations among the other actors. In precise, no actor can claim exclusive ownership to social capital. The strength of social capital rests on the goodwill two actors have with one another. While it takes “mutual commitment and cooperation from both parties to build the relationship, a defection by only one party will destroy it, together with any social capital contained in it” (Adler and Kwon, 2002, p. 22).

Other than having privy to privileged information, social capital is found to have several other benefits. It has positive influence on one’s well-being and health as it

created the perception that he or she is being cared for (Villalonga-Olives and Kawachi, 2017). From an organisational perspective, McFadyen and Cannella (2004) espoused that the strength of the relationship had a positive effect on the creation of new knowledge. It encouraged cooperative behaviour resulting in innovation and value creation within the organisation (Tamer *et al.*, 2014). Taking together, this study surmised that the effectiveness of social capital hinge on two aspects. First, the individual's cognitive, communication aptitude, and strength of relationships; and second, having a well-rounded process, systems, and policies to capture and to document down both explicit and tacit knowledge.

2.3.2.4 Psychological Capital

While human capital and social capital seemed vital for organisational success, there are discussions pertaining to their inadequacy. Newman *et al.* (2014) view that there is a lack of understanding on the underlying mechanism explaining the reasons that caused extraordinary performance of human capital within the organisation. Similarly, there is discourse on how leaders could “leverage a constrained resource base to navigate across crisis and create a path for the future” (Milosevic *et al.*, 2017, p. 141). It is with such inadequacies that Luthans and his colleagues introduce PsyCap, which is “one's positive state of development that is characterised by (1) persevering toward goals and when necessary, redirecting paths to goals (hope) in order to succeed; (2) having confidence (efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (3) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success and (4) making a positive attribution (optimism) about succeeding now and in the future” (Youssef-Morgan and Luthans, 2015, p. 132).

Taking reference from positive psychology, PsyCap is a construct that measures one's psychological capacities that could be further developed and leveraged on for organisational performance (Newman *et al.*, 2014). Using criteria of (1) being measurable, (2) extensively researched on, (3) positive impact to employees' attitudes, behaviours and performance outcomes, and (4) malleability, four dimensions have been identified to form PsyCap - hope, efficacy, resilience, and optimism (Luthans, 2012). PsyCap displayed a key role in a study concerning healthcare workers. It

accounted for 38% of variances in employee engagement of new nurses (Boamah and Laschinger, 2016). Similarly, a study by Sweet and Swayze (2017) discovered that different generational cohorts exhibited different effects on the overall level of PsyCap with baby boomers having the highest overall PsyCap. In sum, PsyCap is a critical resource for the current economic landscape where technology as well as demographic changes cause upheaval disruptions to jobs, skills and inclusivity. With these in mind, the following sections enumerate in detail the PsyCap dimensions of hope, efficacy, resilience, and optimism.

2.3.2.5 Hope

The concept of hope is made popular by Snyder, where it has been conceptualised as an individual variable involving two cognition types of agency and pathway (Snyder, 2002). Snyder's definition of hope is one that goes beyond pure positive thinking. It is an expression of expectation and the cognitive determination that the goals would be achieved ("agency"), while concurrently reflecting one's commitment through the identification and deployment of resources and strategies (pathways) to achieve these goals (Bernardo, 2010, Du *et al.*, 2015).

Yet, the definition is criticised for ignoring external environments, such as family, peers, and faith beliefs, which play critical roles in influencing hope within the individual (Aspinwell and Leaf, 2002). For instance, Du and King's (2013) study on Chinese university students found that family hope had a positive influence on one's self-esteem and life satisfaction. This finding is an apt reflection of a collectivist society, such as China where family plays a key role in influencing one's sense of self-worth and life satisfaction (Fu and Kamenou, 2011). This evidence gravitated towards the perspective that hope is a learned response and is influenced by external sources, such as parents, peers, and the community (Bernardo and Nalipay, 2016).

Over the last 15 years, Snyder's definition of hope is adopted in studies across different fields, such as medical rehabilitation (Smedema *et al.*, 2014), psychological strength (Valle *et al.*, 2006), job performance (Peterson and Byron, 2008), quality of life (Feldman and Snyder, 2005), consumer behaviour (Fazal-e-Hasan *et al.*, 2018), post-traumatic stress (Zhou *et al.*, 2018), and academic performance (Onwuegbuzie and Snyder, 2000). People who are high on hopes demonstrated motivation and

resourcefulness in achieving the goals, and as a result, produced positive thoughts about the job that translated into lower turnover, higher engagement, and better performance (Wrzesniewski *et al.*, 2003, Luthans and Youssef, 2004, Roche *et al.*, 2014). Taken together, hope meets the criteria of being measurable, extensively researched on, positive impact on employee attitudes, behaviours, and performance outcomes; and malleability. These are the key characteristics qualifying hope to be part of PsyCap.

2.3.2.6 Efficacy

Originated from the work of Bandura (1977), efficacy, as described by Stajkovic and Luthans (1998), refers to the confidence to generate the necessary cognitive resources, to develop motivation, and to draw up action plans with the objective of completing a task. Studies on the effect of self-efficacy was adopted across several domains. For example, self-efficacy is proven to be critical in helping victims to overcome PTSD (Cieslak *et al.*, 2008a, Bosmans *et al.*, 2015, Bosmans and van der Velden, 2015). Another study conducted amongst university students showed that self-efficacy had the strongest correlation to life satisfaction (Azizli *et al.*, 2015). There are four ways to develop self-efficacy.

First, the experiences of personal mastery in previous tasks allow one to have confidence in completing the work-on-hand. Interestingly, personal mastery does not ignore the facts of failure. Ability to overcome occasional defeats would have a positive effect on building self-efficacy in completing future tasks (Bandura, 1982). In other words, building self-efficacy through personal mastery is more than just applying routine actions, it involves “acquiring and applying cognitive, behavioural and tools for creating and executing action plans among the ever-changing life circumstances” (Bandura, 1997, p. 3).

The second source for developing self-efficacy is vicarious experience. Witnessing others completing tasks without undesirable consequences helps in generating expectations within individuals that they too can do it with effort and persistence (Bandura, 1977; 1982; 1997). In order to enhance the effect of self-efficacy, Bandura (1977) suggest that demonstration of any behaviour must be accompanied by clear and unambiguous outcomes.

The third source is verbal persuasion. Using words, people could be led to believe that they could complete tasks that seem beyond them, and this is the power of verbal persuasion (Bandura, 1977). Key to success in verbal persuasion resides in one's ability to convey positive appraisals through the use of framing. As explained by Conger (1991), effective framing allows reinforcement of commitments and provision of guidance for daily actions.

The final source of self-efficacy is emotional arousal, which refers to elicit positive emotions from a stressful and taxing situation (Bandura, 1997). In other words, one's emotional arousal can affect one's sense of efficaciousness and behaviour. For instance, the feeling of anxiety before attempting a task would likely reduce one's confidence in completing it. Hence, acquirement of techniques to reduce negative emotions, or to appraise negative emotions from a positive perspective increases one's self-efficacy (Rand, 2018). On this premise, this demonstrate the malleability characteristics of self-efficacy, where it could be learned, fostered, and trained.

In sum, the key to determine one's efficacy towards a certain task lies in the cognitive processing of the efficacy information available from environmental events. Prior to individuals selecting their course of action, one takes into consideration issues such as belief of one's own capabilities, perceived difficulty of tasks, physical and emotional state, as well as the availability of external support. These can impact one's perception of efficacy. From the theoretical perspective, this phenomenon is in line with the TPB, as the outcome of self-evaluation of performance reflects one's perception of self-efficacy which influences one's intent towards the task, thereby affecting the behaviour, its intensity of the effort, and the sustainability of this exertion.

2.3.2.7 Resilience

Resilience is the “the capacity to rebound or bounce back from adversity, conflict, failure or even positive events, progress and increased responsibility” (Luthans, 2012, p. 2). Made popular by positive psychology, studies on resilience began flourishing in the 1970s where scientists investigated reasons on why some children thrived despite living under adverse situations (Masten, 2001, Deppa and Saltzberg, 2016). The outcome of their study refuted many misconceptions, such as resilience resulting in invincibility or resilience was an extraordinary trait residing in selected individuals

(Deppa and Saltzberg, 2016). In fact, studies showed that resilience is a common phenomenon arising from one's basic tendency of adaptation towards the presence of a threat (Masten, 2001). This view is supported by Russell (2015, p. 164) where he described resilience as "a virtue that is expressed in the ability to adapt positively to significant adversity". The topic of resilience has been widely researched on in relation to well-being (Wright *et al.*, 2013), behavioural health (Deppa and Saltzberg, 2016), spousal loss (Infurna and Luthar, 2017), emotional intelligence (Armstrong *et al.*, 2011), and mental health (Davydov *et al.*, 2010).

From the literature, common themes could be identified. First, the concept of resilience has metamorphosed to one that focuses on competence and adaptive behaviour (Deppa and Saltzberg, 2016). Masten (2013) highlights that individuals must be exposed to a situation, which they consider as a threat or an obstacle for them to manifest resilience behaviour.

Second, resilience is a resource that supports individuals in managing their life and work demands (Yates and Masten, 2004, Masten, 2013). Given the heterogeneity in individuals' response to different adversities, resilience is an individualised character that is largely a result of one's cognitive processes and interpretation of the risk at a given time within a given context (Rutter, 2012).

Lastly, resilience can be learned. Resilience has been described as a set of skills with adaptive processes that help individuals in managing hardships (Masten, 2001). Deppa and Saltzberg (2016) further cited instances of adaptive processes, such as the ability to solve problems, development of strong relationships, and looking out for opportunities to learn new knowledge. While there are reservations on whether instituting training programs inhibits one's resiliency (Bonanno, 2004), studies have shown otherwise. For instance, the master resiliency training programmes introduced to the United States military personnel showed that those who received resiliency training displayed favourable characteristics, such as better emotional fitness, as well as more adaptable and better-coping skills (Seligman, 2011a).

In all, resilience is a dynamic process that fits the criteria of being a dimension of PsyCap. Using valid and reliable measures for resilience, it has been empirically

proven that, with intervention, one can learn to enhance resilience. This reflects the malleability characteristic of resilience that can be moulded, trained, and developed.

2.3.2.8 Optimism

Optimism is an individualised trait that reflects one's perspective of the future. Scheier and Carver (1985) describes optimistic individuals as having the belief that the future is bright for them with events happening in their favour. Pessimists, on the other hand, anticipate uneventful outcomes and believe that such outcomes would be perpetual, apart from disregarding earlier efforts and successes that one may have attained (Seligman, 2006). Studies have shown that optimistic individuals perform better at work (Gordon, 2008), have better self-worth (Maras *et al.*, 2014), possess better coping skills (Welbourne *et al.*, 2007), and reduction in insecurity (Yuan and Wang, 2016).

From the literature, this study synthesised that optimism could be seen from two perspectives. First, dispositional optimism refers to the effect of one's perception of the outcome against the state of optimism (Carver and Scheier, 2014). When facing with impediments, individuals of dispositional optimism temporarily suspend their behaviour and re-assess if further efforts would remain futile before carrying it on. Individuals of dispositional optimism see obstacles as less disruptive and surmountable, where it results in them to put in renewed efforts in achieving the goals (Carver and Scheier, 2014).

Second, learned optimism is introduced by Seligman (2006) where he observed that individuals would explain their success or failures by attributing them to causes. In precise, the interpretation of one's past events form a clarification and expectation for future events (Peterson and Seligman, 1984, Weiner, 1985, Gordon, 2008). From this perspective, individuals with learned optimism attribute success to internal, stable, and global processes, while attributing failures to external, specific, and temporary processes (Zhang *et al.*, 2014). Pessimists, on the other hand, attribute successes caused by external, unstable and situational factors, while failures as internal, stable, and global (Seligman, 2006). For instance, an optimistic individual would attribute unpleasant events as temporary conditions by describing situations using the following statements: "the boss is in a bad mood today" or "you have not talked to me lately". Likewise, a pessimist attributes similar situation but with statements reflecting a state

of permanency, such as “the boss is forever in a bad mood” or “you never talk to me at all.”

Taking both perspectives together, optimism is similar to other dimensions of PsyCap (i.e. hope, efficacy, and resilience). As described by Martin Seligman (2006), the interpretation of adverse events is influenced by one’s thought, often a result of upbringing and culture. Herein lies the point that optimism reflects malleability, where it can be learned and be influenced by one’s culture, family background, social settings, and education. This is aligned with the literature, where scholars, such as Welbourne *et al.* (2007), recommend organisations to implement attributional retraining to shape individuals’ attribution style towards events.

Second is the characteristics of being measurable. Based on the literature, the common instrument used to measure attribution is the attributional style questionnaire developed by Seligman *et al.* (1979). This instrument serves as a cornerstone for the development of latter instruments, such as attributional style questionnaire for adolescents (Rodríguez-Naranjo and Caño, 2010).

As described earlier, optimism has been widely researched on by different scholars over the years, and are empirically proven to have positive outcomes with better quality of life (Jowsey *et al.*, 2012), enhance life meaningfulness (Ho *et al.*, 2010), more committed to pursuing goals (Monzani *et al.*, 2015), enjoy better physical health (Ford, 2014), better decision making (Zhao *et al.*, 2015), and better psychological health (Black and Reynolds, 2013).

Finally, the literature reckons optimism as a form of personal resource with the capacity to manage job demands, such as work stress and job burnout (Riulli and Savicki, 2003), thereby influencing one’s intention, attitude, and action towards achieving the goal.

2.3.3 Psychological Capital as a Higher-Order Construct

From the different dimensions, three common themes could be identified regarding PsyCap. First, Luthans and Youssef-Morgan (2017) highlight that the four dimensions shared a sense of control, a sense of intent, and a sense of achieving a goal. That is to

say, the four dimensions had their roots at positive psychology, where positiveness was maintained in every given situation, with the purpose to influencing one's intention, attitude, and effort towards achieving the goal (Krasikova *et al.*, 2015). Snyder (2002) illustrates this point by citing an example of how an optimist with confidence would deliberately select a more challenging goal to achieve. The presence of hope supports the individual in developing multiple pathways and in deploying the necessary resources towards the goal. Should there be impediments, resilience act as the function of providing the individual with energy and determination to recover and bounce back. In precise, it is the simultaneity of these four elements that form the higher-order construct of PsyCap.

Second, the four dimensions complement each other such that they could provide deeper insight into one's psychological profile, thereby creating the potential for improved performance individually and to the entity that they associated with (Hobfoll, 2002, Luthans *et al.*, 2007, Avey, 2014). Empirically, it is proven that overall psychological factor predicted a higher level of performance, as compared to individual ones (Grover *et al.*, 2018). It is on this premise that this study adopted similar positioning where PsyCap was treated as a higher order construct.

2.3.4 Antecedents of Psychological Capital

PsyCap gain popularity in many fields over the last few years. Early scholars placed emphasis on human capital and social capital (Adler and Kwon, 2002, Chen and Chang, 2013, Augusto *et al.*, 2014). However, the growing popularity of positive psychology identified PsyCap as the alternate form of capital (Luthans and Youssef, 2004). The proponents of PsyCap draw similar conclusions of PsyCap being highly unique and valuable, hard to imitate, renewable, trainable and non-substitutable (Luthans *et al.*, 2004, Youssef and Luthans, 2012). Having said that, there are questions about what variables would influence PsyCap. Knowledge of the antecedents provide organisations with insights on developing suitable interventions to improve PsyCap amongst employees. This allows identification of gaps for future studies to bridge. Based on four review papers by Avey (2014), Newman *et al.* (2014), Srivastava and Maurya (2017), and Nolzen (2018), three categories of antecedents are identified.

2.3.4.1 Individual Differences

Ngo *et al.* (2014) found that individuals with different gender role orientations experienced different levels of PsyCap. Their study showed that individuals who displayed stronger orientation in gender role managed challenges better and attributed success internally, which seemed to be associated with a positive relationship with PsyCap. Similarly, Combs *et al.* (2012) found that ethnicity played a role in explaining one's level of PsyCap. Interestingly, multiple studies demonstrated that the level of PsyCap could be explained by individual's attitudes. For instance, Siu *et al.* (2015) demonstrated that positive emotions were key in facilitating one to bounce back from adversities, as well as having a positive appraisal towards future events. In line with positive psychology, this resembles the dimensions of resilience and optimism. Finally, studies showed that differences in personal and cultural background contributed to variations in PsyCap. For instance, older people seemed to have higher PsyCap than younger ones (Liu *et al.*, 2012). Plessis and Barkhuizen (2012) pointed out that extroverts with high intuition and thinking scored better in all dimensions of PsyCap. These results offer a basis to further examine if PsyCap can interact with job resource of meaningful work.

2.3.4.2 Leadership and Supervisory Support

Leadership characteristics and behaviour are found to affect employees' level of PsyCap. For instance, Gupta and Singh (2014) conducted a study on engineers and found that positive leadership was significantly related to the positive PsyCap of employees. In another study, Maher *et al.* (2017) did a qualitative study and concluded that authentic leadership was able to influence PsyCap at both individual and group levels. Apart from leadership style, a study by Liu (2013) on Taiwan's life insurance industry showed that perceived supervisor support had a positive effect upon developing individual's PsyCap, which in turn, improved job performance. Nolzen (2018) depicted that positive supervisor support provided a collaborative climate among leaders and employees, which is essential in supporting employees in overcoming challenges.

On the contrary, it is revealed that leaders displaying negative behaviour had a detrimental effect on employees' PsyCap (Liao and Liu, 2015). These evidences

pointed out that leaders with high PsyCap tend to have a positive view of their leadership appointment. In turn, such positivity influences their team members, which affects their PsyCap. Besides, leaders who display high PsyCap show higher confidence and trust in employees' abilities in succeeding professionally, which influence employees' confidence in taking on challenging tasks, aside from displaying optimism in making positive attribution in future outcomes.

2.3.4.3 Organisation-Level Antecedents

At the organisational level, it is found that workplace environment influence employee's PsyCap. For example, when an employee experiences skill variety, task identity, significance, as well as autonomy from the job, it has a positive influence over the psychological states of the employee, such as experiencing work meaningfulness and improving PsyCap (Avey, 2014). Similarly, if one is given a task that he or she does not have the skills for, he or she would experience lower PsyCap, as opposed to one with a well-designed task that incorporate the components of the job characteristics model. In addition, it has been validated that provisioning of workplace support mechanism, such as feedback sessions, facilitated the development of PsyCap in employees (Luthans *et al.*, 2006, Luthans, 2012).

Another aspect of workplace support is illustrated by Nigah *et al.* (2012) where their study espoused that having a social mechanism (such as a buddy system) would lead to higher psychological capital among the employees. Interestingly, a study by Venkatesh and Blaskovich (2012) showed that opportunity to participate in decision-making process resulted in higher levels of PsyCap, compared to those not involved. These results showed that individuals who were involved in the process of influencing resources or in collaborative works with supervisors supported the development of PsyCap. On the contrary, a study showed that effort-reward imbalances, perceived inequity in compensation policy or experiencing organisational stress lowers one's PsyCap (Liu *et al.*, 2012).

2.3.5 Outcomes of Psychological Capital

Literature on PsyCap is deployed across different industries, such as in hospitality (Karatepe and Karadas, 2015), food and beverage (Mathe *et al.*, 2017), manufacturing

(Joo *et al.*, 2016, Wang *et al.*, 2017), and airline (Hur *et al.*, 2015a) industries. Empirically, outcomes of PsyCap can be classified into attitudinal and behavioural (Avey *et al.*, 2011).

2.3.5.1 Attitude-Related Outcomes

Studies confirmed that PsyCap resulted in positive employee attitudes that every employer desired for. For instance, PsyCap manifested higher job satisfaction, improved employee engagement, and enhanced organisation commitment (Luthans *et al.*, 2007, Cheung *et al.*, 2011, Fu *et al.*, 2013, Bergheim *et al.*, 2015, Abbas *et al.*, 2014). As mentioned earlier, PsyCap provides employees with hope, self-efficacy, resilience, and optimism to navigate in adverse work situation and to take up challenges. Empirically, Abbas *et al.* (2014) found that individuals with high PsyCap moderated the relationship between perceived work politics and job satisfaction. The moderating effect could be interpreted as individuals with high PsyCap display capacity in positively appraising a challenging work environment, which boiled down to their sense of hopefulness, sense of self-efficacy, resilience, and optimism in developing different pathways and mobilising resources in achieving their goals.

Meanwhile, Kim and Noh (2016) established the relationship between PsyCap and intrinsic motivation that provided them the additional drive needed to complete their work tasks. Additionally, it is found that individuals with high PsyCap would maintain longer membership with the organisation, hence displaying lower propensity of resignation (Avey *et al.*, 2010a, Siu *et al.*, 2014). Having said that, Abbas *et al.* (2014) revealed that having employees with high PsyCap could be a double-edged sword as they seemed to be more confident, willing to assess available options and, because of that, displayed higher intentions of resigning and joining another firm.

2.3.5.2 Behaviour-related Outcomes

On behaviour-related outcomes, numerous studies have demonstrated that the presence of PsyCap led to better job performance (Luthans *et al.*, 2007, Abbas *et al.*, 2014, Rabenu *et al.*, 2017, Tüzün *et al.*, 2018), primarily driven by the dimensions that made them more hopeful, resilient, optimistic and higher self-efficacy. Interestingly, studies also showed that merit compensation system, sales performance data, and

customer referrals resulted in positive relationship with PsyCap and job performance (Avey *et al.*, 2010b). Other than job performance, PsyCap is seen as an improvement to different forms of behaviour. For instance, PsyCap improved individual innovation and creativity (Ziyae *et al.*, 2015, Maymand *et al.*, 2016), which enhanced leadership behaviour (Vogelgesang *et al.*, 2014). Studies also demonstrated that individuals with high PsyCap reduced undesired behaviour. For instance, PsyCap was found to have a negative relationship with lateness (Karatepe and Avci, 2017) and job search behaviour (Avey *et al.*, 2009). Finally, PsyCap is demonstrated in several studies to have the capacity to reduce job burnout (Cheung *et al.*, 2011).

2.3.6 Growing Importance of Psychological Capital

In today's employment landscape, organisations are paying more attention to employees' psychological and mental health (Wang *et al.*, 2017). On average, organisations could expect three to five dollars of returns for every dollar of investment in employee well-being (Rath and Harter, 2010). A survey by Deloitte showed that at least one in six employees in Singapore is likely to suffer from psychological and mental health condition, which could be due to lack of support from peers and colleagues, workplace bullying and discrimination, as well as role conflict and poor role clarity (Deloitte, 2015). As pointed out by scholars, mental and psychological health conditions could have an adverse impact on organisations as it means a reduction of work productivity with employees not operating at their peak performance (Chen and Kao, 2012, Yang *et al.*, 2015).

As employers learn more about what motivates, attracts and inspires individuals to success, human resource professionals who keep up with these developments can leverage these findings to their advantage, thus resulting in healthier, happier and more productive employees. In the same vein, a report by Deloitte Centre for Health Solutions showed that there was growing public awareness on the importance of organisations putting in place a systemic and holistic mental health and well-being plan for employees (Deloitte, 2017).

Organisations with good practices that improved employees' well-being are publicly recognised. For instance, the American Psychological Association recognised Prudential Financial for their commitment towards employees' well-being and

fostering a positive working climate (American Psychological Association, 2017). A report by PricewaterhouseCoopers, additionally, noted that more organisations were focusing on enhancing PsyCap as they could potentially realise 33% reduction in absenteeism and compensation claims, with small and medium organisations enjoying higher returns compared to larger organisations (PricewaterhouseCoopers, 2015).

2.3.7 Analysis of Literature Gap

From the review literature, it indicates that there is a lack of studies on decision-making behaviour, as well as strategic decision-making from the context of PsyCap. Nolzen (2018) viewed that strategic decision-making is a key research topic within the field of strategic management. While multiple studies deployed PsyCap as a moderator in different contexts, discussion on interaction between PsyCap and emotions is limited. This is especially so when PsyCap influences positive emotions, which in turn, improves job and individual outcomes (Rabenu *et al.*, 2017, Datu *et al.*, 2018). This phenomenon provided initial support for the broaden-and-build concept (Fredrickson and Joiner, 2002), which this study would examine in detail by investigating the effect of PsyCap on the relationship of meaningful work with employee engagement and dimensions of job burnout.

Second, Nolzen (2018) advocates researchers to continue examining PsyCap in the context of strategic human resource management. “Further transparency on how the work environment and characteristics of the job profile moderate the relationship between PsyCap and work-related outcomes will help assess how PsyCap can be integrated in the employee selection process” (Nolzen, 2018, p. 270). On that note, only a handful of studies have evaluated the effect of meaningful work as an antecedent to PsyCap. Though scholars such as Nigah *et al.* (2012), Liu (2013), Gupta and Singh (2014) and Maher *et al.* (2017) have investigated how workplace influenced PsyCap, it gravitated towards more on work processes and work support systems. This is not a complete representation of meaningful work. As highlighted earlier, meaningful work includes the dimensions of how one’s values are congruent with the profession objectives, as well as how one’s work benefits the environment (Steger *et al.*, 2012).

Lastly, this study noted that studies examining the effects of PsyCap and job burnout in the context of social workers are conspicuously missing. To the best of this study’s

knowledge, multiple studies seemed to focus on service workers across different industries, such as in hospitality (Karatepe and Karadas, 2015), food and beverage (Mathe *et al.*, 2017), manufacturing (Joo *et al.*, 2016, Wang *et al.*, 2017), and airline (Hur *et al.*, 2015a) industries. This gap came as a surprise as the services provided by the social workers are as important, because the quality of their services, to a large extent, determines the well-being of an individual (Alexander and Charles, 2009).

2.3.8 Summary

Taken together, Section 2.3 elucidated in detail the development, the evolution, and the gaps of PsyCap. In one of the early works that introduced PsyCap, Luthans *et al.* (2007 p. 568) indicate that employees who are “more hopeful, optimistic, efficacious, and resilient maybe more likely to weather the storm of the type of dynamic, global environmental contexts confronting most organisations today better than their counterparts with lower PsyCap”. While other forms of capital are necessary, it may neither be sufficient nor sustainable in this operating climate (Luthans *et al.*, 2007). Over the last decade, scholars have developed multiple studies demonstrating PsyCap’s effectiveness as a resource in facilitating employees in buffering against job demands, as well as in identifying antecedents that positively enhanced PsyCap within individuals. However, research gaps have been determined in the existing literature, in which this study would address some of them. As indicated by Nolzen (2018, p. 36), “it is essential to continue the scientific work on PsyCap to allow practitioners maximise the benefits that this concept can bring to the field of human resources”.

2.4 Employee Engagement

One objective of this study is to investigate the effect of PsyCap on the relationship of meaningful work and employee engagement. Employee engagement has been a key focus in many of today’s organisations (Bailey *et al.*, 2017a, Knight *et al.*, 2017). Since its inception, it has attracted attention from both practitioners and researchers as a key construct due to its potential effect on performance at both individual and organisation levels. Despite that, Payambarpour and Hooi (2015, p. 316) highlight that “the essence of employee engagement is unclear and confusing among both business practitioners and academic researchers”. A report by Macleod and Clarke (2009) corroborated with this, emphasising that employee engagement required more clarity as it has been often

convoluted on whether it is an attitude, behaviour or an outcome. With these in mind, this section explains the conceptual issues related to this construct, as well as performing an analysis on gaps that this study addressed.

2.4.1 Introduction to Employee Engagement

It was espoused in different studies (e.g. Saks, 2006, Karatepe and Ngeche, 2012, Barron *et al.*, 2014) that engaged employees manifested superior level of service to their customers. From the healthcare and social care perspective, engaged social workers result in improved care treatment for their clients (Loerbroks *et al.*, 2017). Similarly, a study on the United Kingdom National Health Service showed that engaged employees led to higher patient satisfaction and lower death rate (West and Dawson, 2012). Against the TPB and the SET, it is believed that when employees are exposed to favourable work environment, they would reciprocate it with the intention, attitude, and behaviour that are desired by the organisations (Ajzen and Fishbein, 1980, Cropanzano and Mitchell, 2005). It is due to these reasons that many organisations attempt to retain talented employees by creating the conditions for engagement, as they are the key in determining organisation success.

2.4.2 Evolution of Employee Engagement

Employee engagement is an important concept that has been widely adopted and applied by both academic researchers and practitioners. By and large, the literature shows two main schools of thoughts within the domain of employee engagement, which are (1) practitioner's approach and (2) academic's approach (Shuck, 2011, Guest, 2014, Bailey *et al.*, 2015, Bailey *et al.*, 2017a).

2.4.2.1 Practitioner's Approach

The practitioner's approach focuses on the usability of the construct and if the outcomes from the survey are actionable items (Shuck, 2011). Information gathered using the practitioner's approach generally culminates at a macro level displaying the overall health of the organisation or at an aggregated form presenting the data, such as rate of retention, rate of turnover, level of engagement, loss of productivity at equivalent monetary amount, absenteeism rate or presenteeism rate (Wefald and

Downey, 2009). For instance, the 2017 State of The Global Workplace reported by Gallup showed that 85% of the global workforce was neither engaged nor actively engaged, with an estimated loss of productivity at US\$7 trillion (Gallup, 2017). In another example, a report by Disney showed that 87% of its employees were proud to work for the company and 77% perceived there was a job-fit with the organisation's goals and objectives (Kober, 2013).

Although such information is useful for organisations in making policy decisions, Shuck (2011) questioned on the validity and reliability of the instrument deployed, as it is often confused with other organisational constructs, such as job satisfaction or organisational commitment. Besides, Saks (2017) questioned the basis on how practitioners formed their definition of employee engagement. For instance, Aon Hewitt defined employee engagement as the extent of an employee's psychological investment in their workplace (AON Hewitt, 2017), while Gallup Q12 classified employees into three categories of engaged, not engaged, and actively disengaged, with employees from each categorisation behaving differently (Gallup, 2013). Likewise, PricewaterhouseCoopers (2015) classified employees into four categories of champions, tenants, captives, and disconnected. These showed lack of consensus among practitioners on employee engagement. It is explained that practitioners, operating as a commercial entity, attuned the definition of employee engagement to terms palatable to the clients, which appear to be a key factor for clients to award consultancy projects to them (Zigarmi *et al.*, 2009). Macleod and Clarke (2009) added that the differences in definitions to the inherent variances among industries and its composition in sizes, which by itself, have different priorities and expectations on what it means for employees to be engaged.

Regarding this, Bailey (2016a) clarified that definitions of employee engagement by practitioners could be further classified into two main categories. First, employee engagement as a win-win strategy for employee and organisation while second, employee engagement as a form of attitude and behaviour displayed at workplace. As an illustration, employee engagement the art and science of engaging people in authentic and recognised connections to strategy, roles, performance, organisation, community, relationship, customers, development, energy, and well-being as we leverage, sustain, and transform our work connections into results (Zinger, 2018). This

fits the description for the first category as it focuses on how an organisation can benefit from an engaged employee. On the other hand, Gallup defined employee engagement as an individual's involvement and satisfaction with as well as enthusiasm for work (Gallup, 2017). This fits the latter classification as their definition is based on one's behaviour resulting from their engagement level. Given the myriad of definitions, Little and Little (2006) indicates that there are flaws within these constructs as the definitions are not explicit with the nature of employee engagement, as well as the lack of proper pre-testing of instrument compromised on the accuracy of the outcomes.

In sum, the practitioner's approach to employee engagement is not developed based on theoretical foundation but based on a commercially driven mentality. It could be re-packaging of existing terms or to add in fanciful terms that further convoluted the list of taxonomies (Shuck and Wollard, 2010). Scholars raised the concern that unless there is an evidence-based approach towards defining the construct of employee engagement, it would be misleading and not representative of employee engagement in its true essence (Cartwright and Holmes, 2006, Shuck and Wollard, 2010).

2.4.2.2 Academic's Approach

The academic's approach, on the other hand, focuses on the intricacies of the construct, with the purpose of identifying variables leading to employee engagement in the organisation (Saks, 2006, Rich *et al.*, 2010, Saks and Gruman, 2014). The academic's approach pays attention to examining existing models and developing new knowledge within a subject matter, vis-à-vis practitioners whose keen interest is to develop findings with the aim of enhancing clients' business processes (Bailey, 2016a). Even within the ambit of academic research, Table 4 shows the multiple views and interpretations on employee engagements that arrive with different measuring instruments (Saks, 2006, Chalofsky and Krishna, 2009, Bailey *et al.*, 2017a). This has led to researchers, such as Guest (2014), to describe employee engagement as an evolving concept, instead of a construct with theoretical underpinnings. This view is supported by other scholars who agree that there is indeed a lack of consensus and common understanding on how one can define engagement (Bailey *et al.*, 2017a, Shuck *et al.*, 2017).

Table 4. Key definitions and instruments for employee engagement

Reference	Definition	Instrument (if any)
Kahn (1990)	An authentic expression of one preferred self at work.	None. The study was positioned as a qualitative study.
Schaufeli <i>et al.</i> (2002)	A positive fulfilling work-related state of mind characterized by vigour, dedication, and absorption.	Developed instrument of three subscales with items representing vigour, dedication and absorption.
May <i>et al.</i> (2004)	The harnessing of organisational members' selves to their work roles where people employ and express themselves physically, cognitively and emotionally during role performances	Developed instrument of three subscales of cognitive engagement, emotional engagement, and physical engagement.
Saks (2006)	As engagement is role related, the core of employee engagement is dominated by two forms of engagements – job engagements and organisation engagement.	Developed instrument of two scales reflecting job engagement and organisation engagement.
Soane <i>et al.</i> (2012)	The different facets of Kahn's construct are activated simultaneously to create engaged state involving intellectual, social and affective.	Developed instrument of three subscales of intellectual, social and effective engagement.

2.4.3 Definition of Employee Engagement

Following the different definitions as indicated in Table 4, this study amalgamated the key findings and two key observations.

2.4.3.1 First Observation

The field of employee engagement anchored mostly against two studies. The first study was by Kahn's (1990) where he introduced the concept of personal engagement and personal disengagement. He further explained that an engaged employee is more about expressing oneself completely at work by connecting with the job and the environment physically, cognitively and emotionally (Simpson, 2009). At the same time, Kahn (1990) further elucidates that engagement involved the psychological domains of meaningfulness, safety, and availability.

On meaningfulness, the task must allow the acquirement of new skills and the enhancement of existing skills as it provided a sense of competence and growth experience (Kahn, 1990). In addition, there must be a clear delineation of work as it provided individual identity within the ecosystem (Shuck, 2011). Finally, the individual must experience a positive interpersonal relationship both laterally and vertically in both formal and social settings. As Kahn (1990) points out, such positive interactions imbued one with both dignity and a sense of self-worth, which are key ingredients for meaningfulness to manifest.

The second psychological domain of engagement is safety. Safety refers to one's level of comfort in displaying his or her true self without fear of repercussion to one's image, status, self-worth and career progression (Kahn, 1990, Saks, 2006, Shuck, 2011). For this to occur, Shuck (2011) explains that organisations must provide the necessary systems and to display the appropriate leadership style such that individuals have the confidence to experiment with new processes without experiencing any repercussions. As demonstrated by Gokce *et al.* (2014), leadership styles affected the immediate work environment, influencing employees' motivation and their commitment towards the organisation. Besides, there must be a cordial and supportive work environment comprising positive intergroup and intragroup dynamics demonstrated through mutual support, openness, embracing and trust (Kahn, 1990).

The last psychological domain for engagement to occur is availability. Individuals must possess personal resources, in the form of either emotional, psychological or physical elements in order to engage with job and non-job demands at the point of time (Kahn, 1990). This aligns with the JD-R theory and COR theory which posit that

individuals acquire and protect personal resources to engage in the work, as well as managing job demands (Mauno *et al.*, 2007)

The second study popular within the field of employee engagement was by who introduced an engagement psychometric inventory tool called the Utrecht Work Engagement Scale (UWES). Among the different instruments measuring employee engagement, UWES remains the most popular. Indeed, the systemic review conducted by Bailey *et al.* (2017a) found that a total 147 papers cited UWES. Needless to say, the definition of engagement offered by Schaufeli *et al.* (2002) is one of the most frequently used definitions found in the literature on engagement. According to them, engagement involves three characteristics: vigour, dedication and absorption.

Firstly, vigour is described as an individual displaying high energy at work, even in the face of an impediment (Schaufeli *et al.*, 2006). Dedication is characterised by one's involvement in work and the meaningfulness a person derived from the task (Schaufeli *et al.*, 2006). Absorption is experiencing "flow" where one experienced difficulties in detaching from the work (Schaufeli *et al.*, 2006). To make the instrument more pragmatic and to reduce possible attrition, UWES underwent several iterations, where the number of items is reduced from the original 24 items to 9 items (Schaufeli *et al.*, 2006).

2.4.3.2 Second Observation

The second observation revolved around the different approaches that one adopted in explaining employee engagement. As highlighted earlier, there were many academic opinions and views on what constituted employee engagement. In combination, the following salient points were observed.

First, engagement could be explained using a personal approach (Bailey *et al.*, 2017a). Kahn (1990) explained that engagement required an individual to commit his or her personal, authentic expression at work cognitively, physically and emotionally. The second approach reflects the involvement of the psychological involvement towards the work and task, regarding vigour, dedication and absorption (Schaufeli *et al.*, 2006). The third approach of engagement is derived as a form of management practices. The studies by Walden *et al.* (2017) demonstrated that management practices such as

organisational communication supported employee engagement. Similarly, leadership style influences one's perception of its role and identity in the organisation, in the process, thereby affecting his or her attitude and behaviour towards the assigned task (Fu *et al.*, 2013).

Together, these demonstrated that management practices and policies influence individuals' level of commitment and decision to commit resources towards the work and the organisation. Accordingly, engagement could, therefore, be explained from a multidimensional perspective involving three components of cognitive, emotional and behavioural (Saks, 2006, Bailey *et al.*, 2017a).

2.4.3.3 Summary

In combining both observations, this study operationalised the definition of employee engagement as a construct involving dual responsibility from the employer and the employee. From the employees' perspective, it involves a sense of self-responsibility where the individual expended effort by providing emotional, psychological and cognitive resources to connect to the work and the environment. By being engaged, individuals display the characteristics of vigour, dedication and absorption. While at the same time, employers have the responsibility to create a conducive work environment by fostering engagement among employees through institutionalising holistic management policies and practices. This implies providing the necessary resources required for an individual to manage the job demands.

These conceptualisations align with the principles of the SET and the JD-R theory. When employees are exposed to favourable working conditions, they would reciprocate by investing more personal resources such as emotional, psychological and cognitive resources into the work. In turn, these personal resources are translated into behaviour that is desired by the employer. Such behaviour could be in the form of the reduced intention to leave the organisation, being an advocate for the organisation or developing a better-quality relationship with peers. In sum, employee engagement is an experience that requires an individual to contribute their personal resources as well as for the organisations to create the necessary management practices that play the role of job resources.

2.4.4 Antecedents of Employee Engagement

Since its inception by Kahn (1990), the research interests in this subject have flourished over the years. As Macey and Schneider (2008) pointed out, such interests resulted in the development of a new school of thought, new concepts, and theories of engagement. From the different meta-analysis papers, one could classify the antecedents broadly into personal resources and job resources. Following the JD-R theory and the TPB, it is postulated that the presence of personal and job resources would influence one's attitude and behaviour at work, thereby improving the level of employee engagement (Bakker *et al.*, 2005a, Macey and Schneider, 2008).

2.4.4.1 Personal Resources

According to Bailey *et al.* (2017a), personal resources have been identified as one of the key predictors of employee engagement. Furthermore, it is said that personal resources in the form of PsyCap encapsulating hope, efficacy, resilience and optimistic could shape one's intent, attitude and behaviour towards work (Youssef and Luthans, 2007, Sharma and Sharma, 2015, Thompson *et al.*, 2015). Multiple scholars have suggested that individuals possessing personal resources are able to buffer the undesirable aspects associated with the job (Fredrickson, 2001, Xanthopoulou *et al.*, 2007). For example, Paek *et al.* (2015) found that PsyCap had a strong influence on employee engagement. Similar results are obtained from other studies where PsyCap was proven to positively influence employee engagement (Karatepe and Karadas, 2015, Thompson *et al.*, 2015, Karatepe and Avci, 2017). As mentioned earlier, Xu *et al.* (2017) extended the understanding of employee engagement finding that PsyCap of a leader, could influence the employee's engagement level positively.

2.4.4.2 Job Resources

Job resources refer to the different facets of work that provides support to employees in achieving their work objectives, while at the same time, reducing job-related physiological and psychological costs (Bakker *et al.*, 2005a, Bakker and Demerouti, 2017). The availability of job resources have been described to stimulate the learning and development of individuals (Bakker and Demerouti, 2007). Likewise, among the different literature, job resources have been used as an antecedent for research to

include supervisory support, peer support, feedback mechanism and autonomy (Mauno *et al.*, 2007, Swanberg *et al.*, 2011, Bakker *et al.*, 2012). Yet, in a longitudinal study conducted by Mauno *et al.* (2007) on various job resources, mixed results are obtained. It is found that job control and organisation-based self-esteem were generally good predictors of employee engagement, which remained reasonably stable throughout the study.

2.4.4.3 Employees' Perceptions of the Organisation and Leadership

Managers and leaders in organisations are entrusted with employees whom they need to work with together to achieve specific objectives. In organisations, the perceptions of leaders' and employees' play a vital role in shaping the work environment, climate and culture. As Otara (2011) indicated, the observation and assessment by employees often become their perception on the leaders' ability and organisation effectiveness, and such perception is based on one's values which differs from person to person. Regarding this, a systemic review by Bailey *et al.* (2017a) revealed that employees' positive perception of leadership enhances employee engagement (Karatepe and Ngeche, 2012). A positive significant relationship is observed between the perceived level of trust in the leader and positive leader-member exchange with employee engagement (Li *et al.*, 2018). In another study, perceived organisational support is seen as a key lever towards improving employee engagement of 245 firefighters (Rich *et al.*, 2010). The same study also demonstrated that perception on the congruity of values towards the work and focus is found to have a positive significant relationship to enhancing employee engagement (Rich *et al.*, 2010).

2.4.5 Outcomes of Employee Engagement

As explained in the preceding section, employee engagement is about the employers establishing the right working environment, with appropriate conditions, such that the employees were able to immerse themselves in their work, and in return, dedicating their physical, cognitive and emotional resources to the organisation (Kahn, 1990, Saks, 2006, Bailey *et al.*, 2017a). In this regard, the outcomes of employee engagement have been classified into two main categories, namely performance and morale.

2.4.5.1 Performance

Employee engagement has received overwhelming interest from academic researchers on the manner in which it influences bottom line outcomes, both monetary and non-monetary. It was generally agreed that an engaged employee manifested improvement in work performance such as building positive employee-organisation relationships (Walden *et al.*, 2017); reduced turnover intentions (Lu *et al.*, 2016); improved organisational commitment (Gokce *et al.*, 2014); improved job satisfaction (Lee and Ok, 2015); improved psychological empowerment and improved employee performance (Anitha, 2014). Accordingly, one can further classify performance into in-role task performance and extra-role performance.

As explained by several scholars, in-role task performance is the expected behaviours arising from job descriptions that, in turn, contributed to organisational core objectives (Borman and Motowidlo, 1997, Kaur and Kaur, 2014). Empirical evidence has shown that an engaged employee led to an improvement of in-role task performance. For instance, a study by Anitha (2014) showed that employee engagement was a significant predictor of employee performance. Similarly, W. Kim (2017) demonstrated that job resources were key to enhancing the employees' engagement level, which has a positive relationship with their job performance. A study by Bakker and Bal (2010) furthered the understanding on these relationships by measuring the weekly job performance of 54 Dutch teachers, showing that there was a positive significant relationship between being engaged and performance on a weekly basis. Whereas, extra-role performance is the behaviours that not only fulfil the tasks but also strengthening the social and psychological environment (Borman and Motowidlo, 1997). Bailey *et al.* (2017a) indicated that such extra-role performance could be likened to organisational citizenship behaviour and innovative work behaviour. In this regard, it is found that there is a positive significant relationship between an engaged employee and organisational citizenship behaviour (Crawford *et al.*, 2010), innovative behaviour (Alfes *et al.*, 2013) and knowledge sharing (Chen *et al.*, 2011)

2.4.5.2 Morale

According to Bailey *et al.* (2017a), outcomes of morale could be described as working motivation arising from one's perception of positive well-being and health, as well as their positive attitude towards work.

Buys and Rothmann (2010), Shimazu *et al.* (2012) and Freeney and Fellenz (2013) espoused that being engaged means an improvement in one's state of health, such as reduced chances of experiencing job burnout. In this regard, this study highlighted that while it is interesting to examine the phenomenon of the relationship between employee engagement and the dimensions of job burnout, it does not augment well with the objectives of this study. As highlighted earlier, the key motivation of this study is to identify the effect of PsyCap on the relationship between meaningful work and the outcomes of job burnout and employee engagement. Section 1.2 explained that job burnout was selected primarily driven by the literature espousing that social workers have a high risk of experiencing burnout due to work demands. Similarly, employee engagement was also selected given that studies have shown that social workers with poor engagement level translate to a lower level of care. In this case, both undesirable outcomes result in adverse corollaries affecting not just themselves, but clients, their peers and the organisation.

Regarding the attitude towards work, it is cogently described that an engaged employee developed positive employee-organisation relationships (Walden *et al.*, 2017); reduced turnover intentions (Lu *et al.*, 2016); improved organisational commitment (Gokce *et al.*, 2014) and improved job satisfaction (Lee and Ok, 2015, Lu *et al.*, 2016). From these studies, it has underscored the importance of employee engagement in fostering not only job performance but has also provided evidence on how it fostered psychological and social well-being. In sum, these results have lent towards supporting the JD-R theory where it demonstrates that resources could play a key role as a motivational mechanism through employee engagement.

2.4.6 Growing Importance of Employee Engagement

Employee engagement has attracted growing interest and attention from both practitioners and academics alike. The growing importance of employee engagement

could be seen from the work of Bailey *et al.* (2017a, p. 32), where their initial scan of the literature “produced 712,550 items related to engagement from diverse sources”. This growing interest is further confirmed by the MIT Sloan Review in which 71% of their surveyed respondents recognised employee engagement as a key contributor towards achieving organisational outcomes (Kumar and Pansari, 2015). This observation is not surprising given that practitioners such as Gallup, Aon Hewitt and Towers Watson focused their analysis on how employee engagement affects productivity, financial performance and turnover rates. For instance, Korn Ferry (2017) indicated that organisations having engaged employees could improve the retention rate by 54%, resulting in 4.5 times revenue growth. Similarly, Gallup claimed that engaged employees could help organisations to realise a 20% increase in sales (Corbin, 2017). Table 5 provides a summary of the key findings released by the various practitioners’ reports in 2016. While this study is not in the position to authenticate the accuracy of these claims, it nonetheless provided a glimpse into the potential growth that engaged employees could bring to organisations. On the academic front, it is explained earlier that organisations investing in employee engagement initiatives would realise desirable outcomes in performance and morale.

Table 5. Practitioners’ studies on employee engagement

Practitioners	Publication	Highlights of report
Corbin (2017)	2017 State of the American Workplace	Organisations with engaged employees realised 17% increase in productivity, 20% increase in sales, and 21 % increase in profits.
AON Hewitt (2017)	2017 Trends in Global Employee Engagement	Global engagement dropped from 65% (2015) to 63% (2016). Latin America has the largest group of engaged employees at 75%, and Europe at the lowest of 58%.
Korn Ferry (2017)	Engaging Hearts and Minds	Organisations with engaged employees realised 4.5 times revenue growth, return on assets and return on investments increase by 60% maximum and improve

		staff retention rate of 54% maximum.
Deloitte (2016)	Global Human Capital Trends 2016	Organisations with engaged employees affect their commitment to the work, their work environment and relationship with peers and supervisors.
Willis Towers Watson (2016)	Engage: Insights and trends from across the world of employee engagement	Organisations with engaged employees realised operating margin improved by 9.9% to 27.4% depending on the level of engagement.

2.4.7 Analysis of Literature Gap

From the literature review, the following gaps are identified. Firstly, the antecedents of employee engagement are generally align with the JD-R theory, where the presence of job and personal resources would enhance one's engagement level. However, Bailey *et al.* (2017a) revealed that there was only a handful of literature examining meaningful work as an antecedent to employee engagement. Furthermore, this handful of literature produced mixed results. For instance, Mendes and Stander (2011) indicated that meaningful work was associated with higher levels of employee engagement, but a study by Van den Heuvel *et al.* (2009) showed otherwise. As such, this warranted detailed examination on the effect of meaningful work on employee engagement which will further one's understanding of the relationship between these variables.

Secondly, it was generally agreed that personality traits explained for changes in one's engagement. For instance, a review by Mäkikangas *et al.* (2013) showed that Big Five personality traits were able to predict unique variances in employee engagement. Despite their findings, they concluded that the mechanism responsible for personality-work engagement relationship is mostly unknown. As Bakker and Albrecht (2018) put it, it is apparent that "much still needs to be learned about the complex link between stable traits and fluctuating job characteristics on the one hand, and work engagement on the other hand" (p. 5). This aligns with a recent review by Nolzen (2018) where

future researchers are urged to explore the interplay between PsyCap and work environment as well as job characteristics.

Lastly, a key trend among the different engagement literature is analysing on how human resource management systems and processes can be leveraged to enhance employee engagement. For instance, Albrecht *et al.* (2015) developed an integrated approach that encapsulated different facets of work such as job context, organisational context, individual psychological and motivational factors. Similarly, Saks (2017) advocated engagement researcher to leverage the ability-motivation-opportunity model to examine the impact human resource management practices have on employee engagement. Taken together, Albrecht *et al.* (2015) argue that there is a clear direction in existing studies that human resource management (HRM) practitioners should move beyond ritualistically administration of employee engagement surveys but looking at embedding engagement in human resource management practice.

2.4.8 Summary

Together, the review of employee engagement provided the background and spotlighted the complexities involved in defining employee engagement. It highlighted the antecedents and outcomes of employee engagement. The growing interests of both practitioners and academics have enhanced, at the same time, divided one's understanding of this subject area. Nevertheless, the interests displayed from both schools of thought confirmed its importance in today's business context. As mentioned by Bailey *et al.* (2017a, p. 47), there are areas for further research in exploring new models of employee engagement that "take greater account of the organisational and political contexts within which engagement is enacted and experienced". It is therefore, a key focus to make sense of the findings obtained from this study and to provide palatable recommendations to complement organisations' HRM strategies.

2.5 Job Burnout

Job burnout is a process of mental exhaustion, depersonalisation and cynicism. In recent decades, it has attracted considerable interest from researchers and practitioners alike, in examining the causes and consequences that brings along with it (Bianchi *et al.*, 2017). Researchers on burnout revealed that this phenomenon happened to many

professions, especially those dealing in human services, such as teachers, social workers and health professionals (Chang *et al.*, 2000, Kim and Lee, 2009).

As vehicles of change, social workers make emotional and social investments in building up a relationship with the client. Besides, social workers are consistently called upon to manage uncertainty, ambiguity and complexity where there often seems to be a plurality of ways to understand what is happening in practice contexts. Facing with these multiple stressors, it could lead to PTSD that increase social workers' propensity of experiencing job burnout (Wagaman *et al.*, 2015). PTSD is a form of emotional duress resulting from working with clients over an extended period (Galek *et al.*, 2011, Bercier and Maynard, 2015). Symptoms of PTSD could take the form of mental, emotional and behavioural consequences such as intrusive thoughts, imagery sounds and voices, disturbing visions, nightmares and uncontrolled outburst of emotions (Bercier and Maynard, 2015). It is recognised that PTSD impacts one's personal and professional life (Choi, 2011a, Choi, 2011b). Social workers who have PTSD run the risks of making a poorer professional judgment, feeling emotionally exhausted, experiencing cynicism of the stakeholders and eventually feeling burnout (Choi, 2011a, Galek *et al.*, 2011, Bercier and Maynard, 2015).

2.5.1 Introduction to Job Burnout

Since its inception in the 1970s, many researchers have been studying and trying to understand the antecedents and outcomes of its phenomenon, with the purpose of developing ways and methods to manage and to prevent it (Schaufeli *et al.*, 2009). Metaphorically speaking, burnout could be described as a diminishing candle flame, and without sufficient resources, the flame to the candle extinguishes and could not be relit. In other words, employees facing burnout would reduce passion for the job, finding it bearing lesser meaning, and losing the capacity in making impactful contributions to the organisation (Schaufeli *et al.*, 2009). Over history, the development of job burnout could be seen in two phases – the 1970s to 1980s, and the 1980s to present.

2.5.1.1 The 1970s to 1980s

During the pioneering phase of job burnout, many of the early studies focused on people working within the domain of human services and healthcare, whose key role was to provide aid and social services to the community (Schaufeli *et al.*, 2009). Freudenberger (1980) describes burnout as a chronic condition that is due to work frustrations accumulated over time. He further explained that burnout depletes physical and mental resources as one is trying to achieve a seemingly unrealistic goal set by oneself or by the values of the society (Freudenberger, 1980). During the initial conceptualisation phase of job burnout, Freudenberger attributed the cause of burnout to more than just work environment, but the society as a whole (Nickerson *et al.*, 2003). Reason being that many Americans (at that time) were chasing after the “American Dream”, where the definition of success was in exchanging one’s hard work for financial freedom and upward social mobility (Nickerson *et al.*, 2003). However, the blind obsession with the “American Dream” had its own set of undesirable outcomes such as depression, anxiety, and growing dissatisfaction with life (Nickerson *et al.*, 2003).

Freudenberger (1980) highlights that burnout took a toll on one’s physical, mental and emotional state, ranging from physical exhaustion, detachment and disorientation from reality. It was also during this period that Christian Maslach complemented Freudenberger’s effort by further clarifying the role of job burnout had on one’s daily life (Schaufeli *et al.*, 2009). She and her colleague expound that day-care staff members, like other health and social service professionals, are susceptible to job burnout primarily due to their intense interaction with the clients (Maslach and Pynes, 1977). Corroborating with an earlier study by Maslach and Pynes (1977), it reveals that burnout impacts not just the employees alone, it represented a loss of investment to the organisation as well as transferring remaining workload to other colleagues. It is precisely these reasons that Maslach and Pynes (1977) advocates employers to institute practices and policies to allow employees to seek support and counselling to mitigate the effects of job burnout. From the early literature, common themes could be identified on what constitutes job burnout.

First, the research participants from early studies mostly centred around health and social services professionals and there were several reasons for this. The pursuit of the “American Dream” left many people disappointed, frustrated and depressed when their actual situation did not align with what they had in mind and the efforts they had put in (Freudenberger, 1980). As a result of this situation, calls appealing for volunteers to participate as human services professionals, to help those in need and to eradicate poverty from the country, were issued (Schaufeli *et al.*, 2009). Contrary to their insouciant optimism, many of those who responded to the calls were left disillusioned and emotionally exhausted as they found that, (1) not only were they not able to fulfil what they set out to do, but also (2) their own situations remained the same (Schaufeli *et al.*, 2009). As such, many of them experienced job burnout, which to them was more than an occupational hazard, it was an attack on their professional title as well (Schaufeli *et al.*, 2009). This set the stage explaining why research participants of early studies on job burnout focused on health and social services professionals.

Second, the methodology used during the pioneering phase was mostly applied and qualitative. The key impetus then that led to researchers studying on job burnout (in the 1970s) were more to address a social problem rather than a scholarly pursuit (Maslach and Schaufeli, 1993). Early researchers were generally from a social and clinical background that was more gravitated towards introducing interventions to mitigate the effects of burnout, rather than developing a valid and reliable measuring instrument (Maslach and Leiter, 2016). Adopting a qualitative methodology allows a clear and vivid description of the experience that only those undergoing job burnouts would understand (Schaufeli *et al.*, 2009). Besides, there was a lack of an instrument that could reliably and validly measure job burnout (Maslach and Jackson, 1981).

2.5.1.2 The 1980s to Present

Also known as the empirical phase, the 1980s marked the beginning of an era where scholars began to develop measurement instruments to conduct a quantitative study on job burnout in a more focus and coherent manner (Maslach *et al.*, 2001). The milestone development in this period was the establishment of various instruments such as the Maslach Burnout Inventory (MBI) which measured burnout under three dimensions of emotional exhaustion, depersonalisation and reduced personal accomplishments

(Maslach *et al.*, 2001). Another two instruments developed during this period were the Staff Burnout Scale and the Tedium Scale (Arthur, 1990).

It was also this period that saw a flourish of studies on job burnout. During the early 1980s, research into job burnout was mostly undertaken within the United States (Maslach *et al.*, 2001). It was in the later part of the 1980s that research on job burnout began to flourish outside of the United States (Maslach *et al.*, 2001). This period also saw the application of job burnout beyond healthcare and social service professionals. Literature by Chiang and Liu (2017) and Yang *et al.* (2017) showed that professions like hotel room attendants, North Korean refugees service providers and construction project managers faced the risk of experiencing job burnout. This explained why instruments such as MBI has been conceptualised to include other professions, other than human services and health care, as well as being translated into different languages (Maslach, 2003).

The availability of instruments facilitates for more complex studies on job burnout against potential antecedents and different outcomes (Maslach *et al.*, 2001). For instance, potential antecedents that could cause job burnout such as job stress (Chiang and Liu, 2017), PsyCap (Pu *et al.*, 2017) and secondary traumatic stress (Yeunhee Joyce Kim, 2017) are explored by different scholars. In addition, the effects in different forms such as organisational commitment (Pu *et al.*, 2017); job satisfaction (Lizano and Mor Barak, 2015); work engagement (Demerouti *et al.*, 2010); employee engagement (Crawford *et al.*, 2010, Cole *et al.*, 2012) and workforce retention (Thomas *et al.*, 2014) were also studied. Such flourish of literature allow scholars to further their understanding of the construct, thereby developing more effective interventions to prevent it from occurring or to mitigate the effect of it.

2.5.2 Definition of Job Burnout

Since its inception in the 1970s, job burnout has been made popular and is proven by scholars on its effect on the individual, work, and the organisation. It is of little wonder that Rentzou (2012) highlight that there were multiple definitions of what job burnout is. Such a laundry list of symptoms appears to be non-exhaustive and continually increasing. Two problems arise out of this. First, there is no one key definition that could encompass all the possible symptoms. Second, Schaufeli and Buunk (1996)

opine that early definitions of burnout are a mere compilation of symptoms that one would experience, which ignore the dynamic aspect of job burnout. To overcome these drawbacks, Schaufeli and Buunk (1996) argue that definitions of burnout could be classified as a “state” definition or a “process” definition (see Table 6). By state, it means developing the definition by selecting the most common symptoms, while process definition is describing the dynamic process of the burnout syndromes. As further highlighted by Schaufeli and Buunk (1996), both types of definitions are not mutually exclusive but are complementary in providing a holistic appreciation of burnout.

Table 6. Key definitions of job burnout

Reference	Classifications	Definitions
Maslach (1993)	State	“Syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishments that can occur among individuals who do ‘people work’ of some kind.” (p. 2)
Maslach <i>et al.</i> (1996)	State	“State of exhaustion in which one is cynical about the value of one’s capacity to perform.” (p. 73)
Schaufeli and Greenglass (2001)	State	“State of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding.” (p. 501)
Brill (1984)	State	“An exceptionally, mediated, job-related, dysphoric and dysfunctional state in an individual without major psychopathology who has (1) functioned for a time at adequate

		performance and effectual levels in the same job situation and who (2) will not recover to previous levels without outside help or environmental rearrangement.” (p. 13)
Bianchi <i>et al.</i> (2017)	State	“Burnout has been assumed to be a three-component syndrome combining emotional exhaustion, depersonalization, and reduced personal accomplishment.” (p. 4)
Cherniss (1980)	Process	“Burnout refers to a process in which the professionals’ attitudes, and behaviour change in negative ways in response to job strain.” (p. 1)
Hallsten (1993)	Process	“A form of depression that results from the process of burning out, which is a necessary cause of burnout.” (p. 25)
Dreison <i>et al.</i> (2016)	Process	“Job burnout is a chronic form of occupational strain commonly characterized by feelings of emotional exhaustion, depersonalization/cynicism, and reduced personal accomplishment/efficacy” (p. 18)

2.5.2.1 State Definitions of Job Burnout

From Table 6, the first three definitions by Brill (1984), Maslach and Schaufeli (1993) and Schaufeli and Greenglass (2001) are considered by Schaufeli and Buunk (1996) as definitions that reflect the “state” of burnout, which refer to the “end state of the burnout process” (Schaufeli and Buunk, 1996, p. 314). Among the three, Maslach’s definition and instrument of job burnout is one of the more popular instruments (Taris

et al., 2005, Bianchi *et al.*, 2017). Maslach's definition comprises of three dimensions: emotional exhaustion, depersonalisation and lack of personal accomplishments.

Emotional exhaustion refers to one feeling emotionally drained out and not able to contribute as much as he or she wishes (Maslach and Leiter, 2016). He or she would characterise with a tired physical appearance including an uncivil relationship with colleagues, displaying presenteeism or not motivated to turn up at work (Fernet *et al.*, 2012, Hur *et al.*, 2015a, Arens and Morin, 2016). Feeling of frustrations would be evident as they are not able to maintain the level of commitment and enthusiasm that they had initially shown (Hur *et al.*, 2015a).

Depersonalisation refers to the development of negative, callous and cynical attitudes towards the recipients of one's service (Schaufeli and Buunk, 1996). Unlike the psychiatric definition of alienation from self and world, Maslach (1993) explains depersonalisation as impersonality and dehumanisation to recipients which are demonstrated by individuals refusing to perform required duties due to a reduction in tolerance level (Rumschlag, 2017). At the same time, depersonalisation results in distancing oneself from work and people, resulting them treating customers as impersonal objects. Depersonalised individuals are described as someone who uses pejorative remarks on clients and displaying signs of presenteeism such as taking longer breaks, engaged in non-work conversations over an extended period and intentional use of technical jargons to confuse clients (Larsen *et al.*, 2017)

The final aspect of burnout syndrome is the tendency to give oneself a poor evaluation of his or her work with clients, thereby making themselves feeling negative and unhappy regarding their work accomplishments (Maslach and Jackson, 1981). As such, individuals would feel dissatisfied with his or her performance at work, including the accomplishments obtained so far (Maslach and Leiter, 2016). Such dissatisfaction would result in one feeling inadequate and insufficiency which translate to a decrease in productivity and eventually affecting the quality of the work output (Maslach and Leiter, 2016)

The initial conceptualisation of job burnout by Maslach and her colleagues focused on healthcare and human services (Maslach and Jackson, 1981). As job burnout evolves to include other occupational groups that are susceptible to experiencing similar

syndromes, Maslach and colleagues developed new versions of instruments catering to these research participants (Maslach and Leiter, 2016). It is also for this reason that the new definition of job burnout was more general and more encompassing where reference to the specific form of work was removed. Likewise, Schaufeli and Greenglass (2001, p. 501) adopted a similar perspective in their definition of job burnout as a “state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding”.

Yet, Brill (1984) cited that existing definitions of job burnout are too broad and general, which he opines that another broad theory would further convolute the existing list of taxonomies without providing any additional clarity towards the subject matter. Besides, having a generalised theory without indication of responsibility, would by default, make organisations and the society to be responsible for all cases of job burnout (Brill, 1984).

Realising that the reduction on the propensity of experiencing job burnout required job resources (Delahaij and Van Dam, 2017) and personal resources (Cooper *et al.*, 2017), Brill (1984, p. 15) proposed a narrower definition of job burnout, as “an exceptionally, mediated, job-related, dysphoric and dysfunctional state in an individual without major psychopathology who had functioned for a time at adequate performance and effectual levels in the same job situation and who would not recover to previous levels without outside help or environmental rearrangement”.

Though Brill’s (1984) description is less well-known, it nonetheless offered insights on job burnout from four perspectives. Firstly, the core symptoms of job burnout are dysphoric and reduced job performance, which mean that burnout would cause state of uneasiness and dissatisfaction that affect one’s functional ability at work. Secondly, the cause of it is due to unmet expectations. Unmet expectations could be interpreted as job nature not meeting up to the expectations of the job holders, or the job holder perceives himself or herself not having the requisite knowledge, skills and aptitudes to meet the requirements of the job (Brill, 1984). The third perspective identifies that external support is needed to facilitate individuals to overcome job burnout, which implies that organisational interventions are needed to support individuals in alleviating symptoms of job burnout. Finally, Brill (1984) indicates that the

manifestation of job burnout is restricted only to occupational hazards and excludes individuals who may be undergoing mental syndromes such as depressions.

Taking these definitions together, this study synthesised that the “state” definitions of job burnout focused mainly on emotional and behavioural symptoms that arose due to work and not meeting expectations. Furthermore, its definitions spotlighted that job burnout only occurs with individuals who are not undergoing any form of psychopathology.

2.5.2.2 Process Definitions of Job Burnout

Another school of thought on job burnout related to the belief that burnout is a prolonged process that happened in phases (Burke, 1989, Golembiewski, 1999, Lewin and Sager, 2007). From Table 6, definition by Cherniss (1980) and Hallsten (1993) reflect the dynamic process of job burnout. From the available literature, it is interesting to note that there is no agreement on the sequences of the process. For instance, Cherniss (1980) describes one experiences job burnout over three distinct stages. Resulting from the uneven distribution of resources and demands, stage one would be the manifestation of incremental stress over some time (Schaufeli and Buunk, 1996). Such prolonged exposure to job stress lead to a short-term burst of emotional response such as anxiety attacks, high tensions within oneself and with the environment, as well as a continued feeling of exhaustion, both physically and emotionally (Cherniss, 1980). The final stage would be the change in behaviour and attitude that could take the form of nonchalance to the work environment and a pessimistic view of one’s needs (Cherniss, 1980).

On the other hand, Van Dierendonck *et al.* (2001) argues that the process of job burnout began with reduced personal accomplishments, followed by depersonalisation and emotional exhaustion. Their rationale was such that the sense of personal accomplishments acted as a personal resource to handle job demands (Van Dierendonck *et al.*, 2001). Therefore, a reduction in personal accomplishments affects one’s capability in managing the work requirements, thereby causing him or her in investing fewer resources, culminating to depersonalisation, and eventually to emotional exhaustion. Interestingly, Lewin and Sager (2007) proposes a job burnout

process involving salespeople arguing that the job nature of salespeople is significantly different from earlier professions which Maslach and Golembiewski based on.

Despite the various arguments, a common theme among them is that the burnout process is triggered by the excessive accumulation of job demands over resources. Taris *et al.* (2005) elucidates that long-term job demands triggered emotional exhaustion, which in turn, led to distancing oneself emotionally and physically from the peers, resulting from depersonalisation and low levels of personal accomplishments (Leiter and Maslach, 1988). Taking reference from both “state” definitions and “process” definitions of job burnout, this study operationalised job burnout as a syndrome that affect everyone, regardless of professions, involving stressors of different forms that have the potential to influence one’s responses by reducing their pride in own accomplishments, losing their personality and being emotionally exhausted.

2.5.3 Dimensionality of Job Burnout

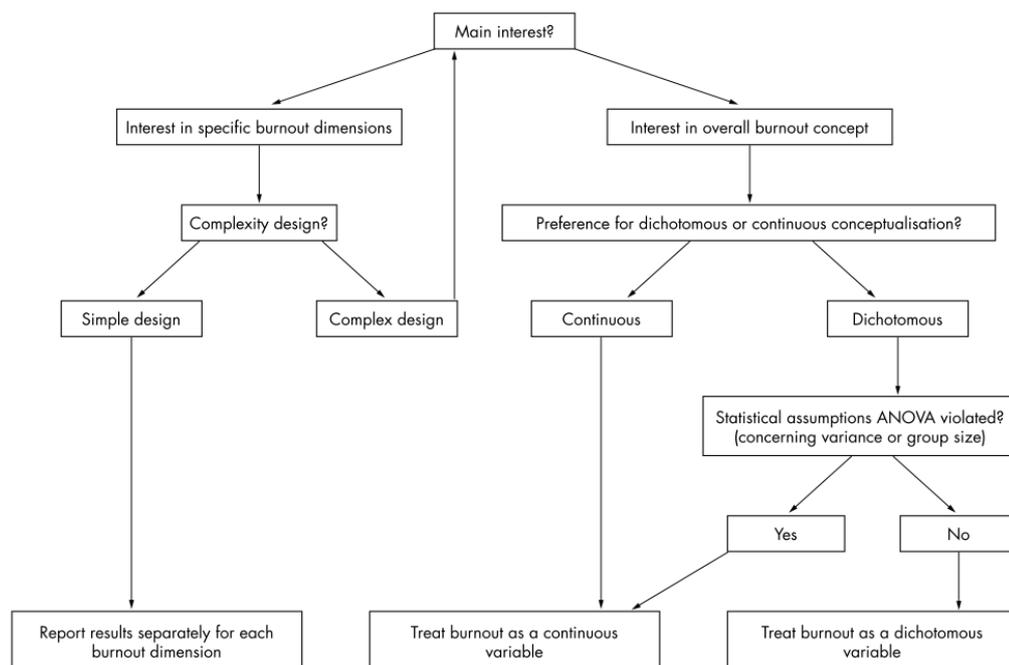
Different scholars have generally agreed that job burnout, over time, would result in the depletion of resources and, not addressing the issue would impact on outcomes such as productivity, performance, absenteeism and turnover intention (Langelaan *et al.*, 2006, Saeidi *et al.*, 2015, Wagaman *et al.*, 2015, Maslach and Leiter, 2016, Taylor and Millear, 2016). Despite that, there are debates on whether to consider job burnout as a unidimensional or a multidimensional construct. Table 7 presents the different propositions put forth by scholars on this point over the years. The propositions for having a multidimensional construct anchors against the argument that each dimension is independent of one another and reporting as a unidimensional construct might represent a serious loss of information. Proponents of unidimensional, on the other hand, argue on the basis that reporting as a single score would provide an overall view of understanding the effect of job burnout.

Table 7. Multidimensional versus unidimensional

Reference	Nature of dimensionality	Propositions
Maslach (1993), Koesk and Koesk (1989)	Multidimensional	Combining dimensions into a single score would mean the loss of information, especially when the relationships among the dimensions are complex.
Maslach <i>et al.</i> (1996)	Multidimensional	Dimensions of burnout have been designed such that they are independent of one another.
Van Dierendonck <i>et al.</i> (2001)	Multidimensional	Unlike other psychological constructs, job burnout dimensions are complex as the syndromes may happen in phases.
Brenninkmeijer and VanYperen (2003)	Unidimensional	<p>As with other multidimensional constructs, the multifaceted syndrome of job burnout does not mean one should abandon the overall concept of analysis. Conducting research and theorising burnout as an overall concept may help to further research into this area.</p> <p>Reporting of burnout as an overall effect score may give a better understanding of the different outcomes, vis-à-vis analysing via its complex effects.</p>

Brenninkmeijer and VanYperen (2003) develops a decision tree (see Figure 3) to further guide researchers in deciding job burnout as a unidimensional or multidimensional construct. The key criterion in deciding the dimensionality perspective resided with the research design. It is the overall strategy that the researchers chose to integrate the different components of the study together, coherently and logically, or to analyse it dimension by dimension that determined the dimensionality. For example, studies with the objectives of (1) understanding the phase modality of job burnout; (2) examining the effect antecedents have on different dimensions of job burnout; or (3) studying the effect of dimensions on different dependent variables might regard job burnout as a multidimensional construct. Combination of scores into a single score could be useful for studies that investigate the prevalence of job burnout within a given sample or examining the plausibility of job burnout between different sample groups.

Figure 3. Decision tree for choosing job burnout dimensionality perspective



Source: Brenninkmeijer and VanYperen (2003)

2.5.4 Antecedents to Job Burnout

Following meta-analysis papers such as Dreison *et al.* (2016) and Maslach and Leiter (2016), the antecedents of job burnout could be broadly classified into six main categories: workload, control, effort-reward imbalance, community, fairness, and values.

2.5.4.1 Workload

In the seminal work by Van Den Broeck *et al.* (2017), work overload is a manifestation of job demands which depletes energy. In other words, without ample job resources such as decision latitude and social support, work overload continues to reduce available resources and increases the chances of one experiencing job burnout (Maslach and Leiter, 2016). Following this line of reasoning, studies have espoused work overload had a direct relationship with the three dimensions of job burnout. (Schaufeli and Peeters, 2000, Van Dierendonck *et al.*, 2001, Bakker and Demerouti, 2007, Schaufeli *et al.*, 2009).

2.5.4.2 Volition

Volition, also known as control or autonomy is the authority accorded to employees to make decisions on how to conduct the work according to one's discretion (Maslach and Leiter, 2016, Liu and Lo, 2018). Following the JD-R theory, the presence of autonomy stimulates creativity at work and develops ownership of tasks, thereby increasing one's motivation, improving engagement and enhancing work performance (Liu and Lo, 2018). Studies demonstrated that autonomy in work buffered against job demands (Liu and Lo, 2018). Fernet *et al.* (2012) furthered the understanding expounding that autonomy in work was a good predictor of the three dimensions of job burnout.

Despite recognising the role of autonomy in alleviating job burnout, Cherniss (1993) highlighted that loss of autonomy resulting in job burnout only happen if it interfered with the accomplishment of an objective. To illustrate this point, Cherniss (1993) referenced an experiment on a group of trainees who are attached to experienced nurses as part of their internship programme. During the internship, these group of

trainees' autonomies are limited to pure observation. In other words, the trainees are not allowed to administer any medication nor attend any patient without supervision. Yet, this group of trainees did not experience any form of burnout. On this, Cherniss (1993) concluded that the reason for them not experiencing job burnout even with a lack of autonomy is because it did not interfere with their goal attainment of gaining knowledge and self-confidence. That is to say, the effect of autonomy on job burnout varies on internal factors such as the over-arching goal at that point of time, one's abilities, and external factors such as organisation policy and culture (Cherniss, 1993).

2.5.4.3 Effort-Reward Imbalance

Reward revolves around the belief that if recognition does not commensurate with the effort put in, it increases the propensity of one experiencing job burnout, as it portrays an impression of devaluing the worker and the work that is being undertaken (Maslach and Leiter, 2016). This phenomenon aligns with the philosophy behind the effort-reward imbalance model. This model postulates that work-related benefits should be reciprocated between efforts and rewards at work (Devonish, 2017).

Any imbalance between efforts and rewards would result in arousal of negative emotions that are associated with syndromes of burnout. For instance, Devonish (2017) expounded that individuals who experience effort-reward imbalance would have a higher propensity of undergoing job burnout. Bakker *et al.* (2000) further argue that effort-reward imbalance only affected two of the three dimensions of job burnout which are emotional exhaustion and depersonalisation, and not reduced personal accomplishments. It means that even as one does not receive the reward that he or she perceives as equitable, it does not reduce one's sense of self-confidence. These findings corroborated with another study by Fortunatti and Palmeiro-Silva (2017) where their study on nurses found that reduced personal accomplishments were not correlated with effort-reward imbalance. On this, Bakker *et al.* (2000) offers the explanation that reduced personal accomplishments gravitates towards a lack of resources to complete the work, while the remaining two dimensions were affectionately and emotionally driven. That is to say, equity between effort and reward fulfils one's affectionate and emotional need, rather than one sense of confidence in the work.

2.5.4.4 Relationship

The fourth predictor of job burnout is relationship. It is suggested that cordial relationship with peers, supervisors, and subordinates are instrumental in enhancing employee engagement, thereby reducing the propensity of experiencing burnout (Maslach and Leiter, 2016). This argument is supported by different scholars demonstrating that supportive peer relationship, positive work environment, and cohesive workgroup could lead to lower burnout levels (Leiter and Maslach, 1988, Elloy *et al.*, 2001, Riolli and Savicki, 2003). From the social workers' perspective, the domain of the community plays exceptional importance. With the growing popularity of inter-professional collaborative care, it is not uncommon to see multidisciplinary teams from different fields, such as doctors, nurses, physicians, social workers, therapists, counsellors and psychologists coming together to diagnose and recommend suitable interventions for clients (Bamford, 2011, Ambrose-Miller and Ashcroft, 2016). It is on these premise that Nowakowska *et al.* (2016) conducted an in-depth study on 405 registered nurses, examining which aspects of the work environment has the strongest predictive power towards reducing job burnout. Their results showed that ability for them to participate in decision making had the strongest correlation in reducing job burnout, followed by work organisation and lastly, performing tasks in teams (Nowakowska *et al.*, 2016).

2.5.4.5 Equity

Also known as fairness and organisational justice, individuals use their own yardstick to determine if the decision-making process is being seen as fair, equitable and with no biases involved (Maslach and Leiter, 2016). Cynicism, anger and hostility would appear if individuals perceive that during the process of making the decision, it contravened any of the barometers that they set in place (Maslach and Leiter, 2016). This aligns with the explanation put forth by Colquitt *et al.* (2001) where organisational justice serves as a lens for individuals to assess fairness in the workplace, which has the potential of influencing their attitudes and behaviours at work. Organisational justice is described in three forms of distributive justice, procedural justice and interactional justice (Capone and Petrillo, 2016, Bauwens *et al.*, 2017).

Distributive justice is the perception of one's reward relative to the effort one invested in during work (Colquitt *et al.*, 2001). Therefore, when one perceives that his or her outcomes did not commensurate with efforts put in, or the outcome received is deemed to be less equitable when compared to peers, it results in frustrations, possibly leading to job burnout (Bauwens *et al.*, 2017).

Explained by Thibaut and Walker (1975), procedural justice is the perception of the fairness and transparency of the process being used in arriving at a decision. Bauwens *et al.* (2017) argue that the presence of procedures meant that individual is well aware on the process and would be in the autonomy of directing efforts to achieve the outcomes. Procedural justice is commonly applied during performance appraisal process (Campbell *et al.*, 2013, Greenberg, 2013, Ko and Hur, 2014). It is found that employees perceived their performance evaluation are fairer when they are aware on the yardsticks and are involved in the process of evaluation (Dipboye and Pontbriand, 1981, Rousseau *et al.*, 2009, Ko and Hur, 2014). Therefore, the absence of procedures signifies that individuals are less in control of outcomes, which as a result, added onto one sense of insecurity that fostered psychological stress in the long run (Rousseau *et al.*, 2009).

Finally, interactional justice is the perception of the relationship between the individual and their supervisors when procedures are implemented (Dai and Xie, 2016). The focus of interactional justice is in the treatment and communication between the individual and their supervisors while executing the decision (Campbell *et al.*, 2013). As further described by Greenberg (1990), interactional justice could be grouped into two parts of interpersonal justice and informative justice. Interpersonal justice is whether the supervisor displays politeness and respect to the individual when executing the procedures and delivering the results, while informative justice refers to whether the supervisor offers any form of explanation on the process and rationale in making the decision (Greenberg, 1990, Dai and Xie, 2016).

2.5.4.6 Value

The final antecedent to job burnout is value. Values form one's belief which results from upbringing, cultural norms, society norms, education and religion (Altun, 2002, Jambrak *et al.*, 2014). It serves as a guide on how one would approach and handle daily

matters including relationships, work, conflicts, disappointments and successes (Froese and Xiao, 2012). It is suggested through empirical study that organisational outcomes such as commitment and job satisfaction are influenced by the values that one upheld (Altun, 2002, Jambrak *et al.*, 2014). Therefore, when one is faced with a conflict of values on the job, they would need to make a trade-off. Such dilemmas lead to frustrations, internal conflicts and eventually burnout (Jambrak *et al.*, 2014). This is validated in Tartakovsky's (2016) study on social workers where personal values of social workers explained a significant portion of variances in all three dimensions of burnout. His study further expounded that social workers generally faces less burnout if their personal values were congruent with that of profession deliverables (Tartakovsky, 2016).

2.5.5 Outcomes of Job Burnout

Regarding outcome, burnout is associated with various forms of organisational and person-related outcomes. Job burnout is found to have a negative relationship with various organisational-level variables such as turnover intention (Lindqvist *et al.*, 2015, Cheng *et al.*, 2016, Liu and Lo, 2018); work engagement (Travis *et al.*, 2016, Van Bogaert *et al.*, 2017); customer orientation (Wu and Shie, 2017) and job satisfaction (Roncalli and Byrne, 2016). Bakker *et al.* (2005b) showed that people experiencing job burnout could negatively influence its stakeholders by disrupting work tasks and affect the organisation's consistency in delivering of services. A study by Gascon *et al.* (2012) showed that healthcare workers who suffered from burnout would display signs of aggression that affect the working relationship which further affect their productivity.

On personal-related outcomes, it is found that individuals are experiencing lesser job burnout resulted in psychological, physiological and behavioural well-being. For instance, studies found that those who did not experience job burnout had better relationships with peers (Roncalli and Byrne, 2016) and experienced better physical, psychological and mental health (Huang *et al.*, 2012). In another study by Cieslak *et al.* (2008b) on prison officers, it is found out that personal resources such as temperamental endurance were able to moderate the effect of job burnout. These

findings align with the point made by Ang *et al.* (2016) where personality traits could potentially act as a resource to buffer the effect of job burnout.

2.5.6 Growing Importance of Job Burnout

For many years, burnout has been considered an occupational hazard for people-oriented professions. A common characteristic among these occupational groups that are susceptible to job burnout generally involves ongoing contact with recipients that require an intense level of personal and emotional investment (Lizano and Mor Barak, 2015, Wang *et al.*, 2017). Often, these relationships require individuals to put needs before oneself and to offer support to clients by going the extra mile (Maslach and Leiter, 2016). Though these professions are rewarding, it could be hazardous as it could get stressful where individuals run the risk of facing burnout, which one of it is social workers. Other than the undesirable outcomes that job burnout would bring about, there are other reasons on why more social service NPOs are paying attention towards addressing job burnout in social workers.

First, there is a growing trend of social workers experiencing job burnout. In a survey performed by Queen University that involved 1,359 social workers from England, it showed that almost 91% of the respondents indicated that they experienced different degrees of emotional exhaustion, followed by 61% experiencing depersonalisation (McFadden, 2015). Interestingly, 91% reported experiencing high levels of competence, despite earlier reports of being emotionally exhausted and feeling depersonalised (McFadden, 2015). This was also confirmed in a news article that a key reason for social workers in Singapore leaving the social services sector was due to emotional burnout (Tai, 2017b).

Second, job burnout could happen to social workers regardless of their socio-demographic factors. For example, a study by Angerer (2003) showed that social workers working in urban and rural settings faced the same propensity of experiencing job burnout. In the same vein, different literature expounded that individual factors such as gender, age, and length of experience had minimal effect in experiencing job burnout (Schaufeli and Peeters, 2000, You *et al.*, 2015, McFadden, 2015). These views are further supported by the survey conducted by Queen University where it showed

emotional exhaustion appeared across all different level of caseloads ranging from as little as lesser than 20 cases to as much as more than 80 cases (McFadden, 2015).

The third reason involves the direct cost and indirect cost that burnout would cause to an organisation. Organisations have the ethical and moral responsibility to provide medical and social support to affected individuals such that they could recover and resume their employment. It was reported that it cost an estimated of \$125 billion to \$190 billion a year in healthcare spending in the United States managing psychological and physical outcomes resulting from job burnout (Garton, 2017). While there are limited data on the cost involved for social workers replacement as a result of job burnout, these examples, nonetheless, provide a glimpse on the exorbitant cost that might have involved for social workers.

The final reason is the complex nature of job burnout. Empirically, it is demonstrated in different studies that the dimensions do not necessarily depend on one another. For example, Maslach *et al.* (1996) pointed out that personal accomplishment is not the opposite of emotional exhaustion and depersonalisation as it is independent of these two constructs. Furthermore, studies by Bakker *et al.* (2000) and Roncalli and Byrne (2016) demonstrated that the effect of job burnout did not affect all the dimensions. This is also supported by industry survey results where social workers indicated that they suffered from depersonalisation and emotional exhaustion yet feeling accomplished and proud of their accomplishments (McFadden, 2015). This showed that there is a need to consider adopting differentiated interventions to effectively managed job burnout.

2.5.7 Analysis of Literature Gap

Despite the plethora of studies on job burnout, one gap stood out. Many scholars highlighted that job burnout should be treated as a multidimensional construct, rather than a unidimensional construct (Brenninkmeijer and VanYperen, 2003, Maslach and Leiter, 2016, Bianchi *et al.*, 2017). Research practices of combining individual scores of each dimension into a single score in determining job burnout have been questioned because “they imply that individuals who suffer only from emotional exhaustion, only from depersonalisation, or only from reduced personal accomplishment will be

considered as suffering from the same condition of burnout” (Bianchi *et al.*, 2017, p. 3).

Moreover, it is confirmed in different studies that the same intervention showed different effects on the dimensions of job burnout. For example, Roncalli and Byrne (2016) drew finer distinctions and found that rapport with co-workers have an inverse relationship with two burnout dimensions of emotional exhaustion and depersonalisation, and not with reduced personal accomplishments. Similar observations were observed in a study on Turkey healthcare professionals that though significant correlations have been found on three different dimensions of job burnout, emotional exhaustion and depersonalisation were significantly higher for a younger group of healthcare professionals (Alacacioglu *et al.*, 2009). Such results imply that there is no one size fit all interventions in addressing job burnout.

Industry survey results corroborated with these empirical findings elucidating that social workers could experience depersonalisation and emotional exhaustion yet feeling accomplished and proud of their accomplishments (McFadden, 2015). This showed that there is a need to consider adopting differentiated interventions to effectively manage job burnout. In other words, interventions to job burnout must be tailored carefully to address the unique characteristics of each dimension. Given the limited empirical literature from this perspective, exploring the effect of meaningful work and PsyCap has on job burnout as a multi-dimensional construct further the body of knowledge on their effectiveness as a job resource and a personal resource respectively.

2.5.8 Summary

In sum, job burnout affects everyone, regardless of industry or occupation. Furthermore, changing demographic landscape and new working models further exacerbate the propensity of social workers experiencing job burnout. For example, the growing popularity of collaborative care models exposed additional pressures on social service NPOs to develop the necessary systems and policies to accommodate such interprofessional teams (Ambrose-Miller and Ashcroft, 2016). Besides, studies have shown that the same predictor could have different effects on job burnout dimensions (Alacacioglu *et al.*, 2009, Roncalli and Byrne, 2016). Meaningful work is

a key consideration in attracting and retaining social workers (Kelly Services, 2009, Kelly Services, 2014). Despite that, studies showed that many of the social workers experienced job burnout (Schwartz *et al.*, 2007, Vassos *et al.*, 2013, McFadden, 2015). Yet, there are no empirical evidences, to date, elucidating the relationship between meaningful work and job burnout. Putting these together, this study postulates that there could be a possibility meaningful work, as a job resource, has limited effect on job burnout, which examining it against the different dimensions of job burnout would unravel more empirical evidence that furthers our understanding of JD-R theory and COR theory.

2.6 Hypotheses Development

2.6.1 Meaningful Work and Psychological Capital

Demonstrated by several literature, meaningful work resulted in different positive outcomes at both personal and organisational level, such as better physical and psychological well-being (Jung and Yoon, 2016), higher organisational commitment (Cartwright and Holmes, 2006, Janik and Rothman, 2015, Fremeaux and Michelson, 2017, Lepisto and Pratt, 2017) increased in work motivation (Lips-Wiersma *et al.*, 2016), reduced absenteeism (Steger *et al.*, 2012) and better performance at work (Kahn and Fellows, 2013). Putting these together, this shows that experiencing psychological meaningfulness in work provides a motivational potential that impacts one's intrinsic enthusiasm towards success. From the perspective of JD-R theory, it meets the criteria of being a job resource as it plays the function of "achieve work goals, reduce job demands, reduce associated physiological and psychological costs, and/or stimulating personal growth, learning and development" (Bakker and Demerouti, 2007, p. 312). In other words, this study argued that experiencing meaningfulness in work is a job resource as it supports individuals in managing job demands and reducing the propensity of experiencing burnout and enhancing engagement.

From the plethora of studies available, it demonstrated that PsyCap plays a key role in supporting individuals in managing the various job demands (Avey *et al.*, 2011). For instance, employees with the high PsyCap improved organisation's performance as well as enhancing its competitiveness (Luthans *et al.*, 2004, Roche *et al.*, 2014, Yoon and Jung, 2015, Milosevic *et al.*, 2017). Like meaningful work, PsyCap displays

evidences that it resulted in similar effects, such as a positive disposition, better engaged workforce, lower burnout, lower turnover intention and higher productivity (Wang *et al.*, 2012, Youssef and Luthans, 2012, Karatepe and Karadas, 2015, Paek *et al.*, 2015, Boamah and Laschinger, 2016, Cenciotti *et al.*, 2017, Luthans and Youssef-Morgan, 2017). This demonstrates that PsyCap, as a personal resource, inures an ability within individuals in influencing job demands, resources and the outcomes associated with it. This aligns with one of the key tenets within JD-R theory that personal resource can function as a job resource in mitigating against job demands.

However, three gaps warrant additional examination. First, there are limited studies exploring relationship and interactions between job resource and personal resource within one model, much lesser from the context of meaningful work and PsyCap. As such, this study can only infer the relationship based on currently available literature. A study by Albrecht (2013) showed that meaningful work strengthened the relationship of positive psychology, of which PsyCap is a branch of it. Moreover, it is mentioned that personality traits, such as PsyCap could explain for the motivational potential that meaningful work manifest. The role of meaningful work and PsyCap are endorsed in studies which Luthans (2002), Xanthopoulou *et al.* (2007) and Clausen and Borg (2011) suggested that both variables meet the criteria of being considered as resources within the JD-R theory. From these explanations, one can infer, based on the commonality in the functions and outcomes from both meaningful work and PsyCap, that there might be a positive relationship between meaningful work and PsyCap.

Second, a meta-analysis by Avey (2014, p. 141) highlights that there are “very few studies that measured anything about the formation of PsyCap”. Knowledge on the antecedents of PsyCap would facilitate organisations to design systems, processes and structures that foster and develop employees’ PsyCap. While Avey (2014) revealed four main categories of antecedents, they acknowledge there could be a category of the antecedent that is unique powerful in predicting PsyCap not covered in their study. Besides, none of the four categories of individual differences, supervision, job characteristics and demographics that Avey (2014) identified are exhaustive. Among them, job characteristics, such as tasks complexity, would be closest to meaningful work, but it was not a holistic representation as meaningful work involved individual’s motivation as well (see Section 2.2.1.4). Taking this together, this study responded to

the Avey's (2014) call of identifying if meaningful work is an effective predictor to PsyCap.

Thirdly, meaningful work is an area of growing interest among practitioners and researchers (Bailey and Madden, 2017). Meaningful work is a topic of importance in core domains of human resource. It has come to the fore through its association with outcomes such as employee engagement, motivation, and personal development. However, there is little consensus on the antecedents and outcomes associated with meaningfulness. In fact, Thory (2016) indicates a significant gap in understanding the implications meaningful work has on human resource development. This is an imperative gap as human resource development plays a key role in fostering a working culture and conditions that promotes work meaningfulness (Chalofsky, 2010). Given the centrality of meaningfulness to important debates such as these within the human resource development, there is a pressing need to discover more evidence for meaningful work. Considering that PsyCap possesses the malleable characteristics that can be trained or enhanced using interventions, putting these constructs together unravel fresh perspectives on how meaningful work can be leverage as a tool to train and develop social workers' PsyCap.

Supported by the broaden and build (B&B) theory, this study argues that the presence of meaningful work, as a job resource, will generate one's PsyCap. The key proposition within B&B theory lies in the fostering of positive emotions that broaden people's momentary thought-action repertoires and build their enduring personal resources. It may be argued that the mutual generation of resource between meaningful work and PsyCap is a result of positive emotions that one experiences when being involve in a work that aligns to one's values. It broadens one's behaviour that generates an accurate reflection of what is beneficial or detrimental in a specific environment, contributing to the building of personal resources that helps individuals in managing with job demands better (Simbula and Guglielmi, 2013). In sum, this is the first few studies examining the interplay between meaningful work and PsyCap by testing the following hypothesis:

H1: Meaningful work positively influences PsyCap.

2.6.2 Meaningful Work and Employee Engagement

Employee engagement is an optimal condition that every working employee should be in when performing a job (Thompson *et al.*, 2015). Studies showed that engaged employees harnessed the necessary job resources to combat job demands, allowing them to be more immersed in their roles physically, cognitively and emotionally, and as a result, displaying a positive outlook of their circumstances, producing work of better quality and reducing voluntary turnover (Kahn, 1990, Kahn and Fellows, 2013, Lee and Ok, 2015).

There are three reasons why meaningful work should be associated with employee engagement. Firstly, it aligns with early motivational theorists such as Maslow (1943), where he espoused that individuals were continually looking out for work that fulfilled their higher-order needs. Following TPB, providing a job environment that one could relate to influence employee's belief and intention, translating into employers' desired actions and behaviours (Ajzen, 2011). One positive change could be the increase in the level of engagement, reflecting their readiness in deploying additional resources to work. As a result, they would be more emotionally, cognitively and physically involved in the work (Chalofsky, 2003). These views are supported by different scholars where they espoused that employees are more engaged in work if the work is personally meaningful (Cartwright and Holmes, 2006, Michaelson, 2011, Lips-Wiersma *et al.*, 2016).

Secondly, Kahn and Fellows (2013) highlighted that meaningful work is a key condition for engagement to occur. He clarified that while hygiene factors are crucial, they are not sustainable. Engagement goes beyond by just being physically present. It requires individuals to be psychologically involved and made available personal resources to be engaged (Kahn and Fellows, 2013). For engagement to be sustainable, it only happened when one is keenly aware of the meaning of work that bears on that individual (Kahn and Fellows, 2013).

Thirdly, Kahn (1990) argue that many employees when engaged, manifested their preferred self in the workplace. "Preferred self" refers to the ability of one finding his or her identity given the space and time that he or she is operating in (Kahn, 1990). Regarding this, Kolodinsky *et al.* (2017) posited that work could take a form of

meaning if it represents a calling that facilitates in finding his or her identity as well as the charting the moral direction. When that happens, the individual performs the tasks, not because of the financial returns, but the value inherent in performing the work itself. Simply, one who describe work as a calling displays a higher sense of engagement and be intrinsically motivated in performing the work (Duffy and Dik, 2013, Kolodinsky *et al.*, 2017).

Empirical research on employee engagement supports the establishment of a relationship with meaningful work. For instance, Hall and Chandler (2005) espoused that individuals who perform a job out of a sense of calling enjoy psychological success including higher satisfaction in life and career satisfaction. An interesting finding from Hoole and Bonnema (2015) was that the relationship between engagement and meaningful work is observed across three generations of workers, albeit at different engagement levels. In other words, search for meaningful work applies to different age groups of employees. Lips-Wiersma *et al.* (2016) extended the study showing that meaningful work transcended the profile of professions as well. Despite these advancements, this study argued that the understanding of the relationship between meaningful work and employee engagement is incomplete for the following reasons:

Firstly, Bailey *et al.* (2017a) revealed that inconsistent results were observed among the different studies on the relationship between meaningful work and employee engagement. For example, Mendes and Stander (2011) indicated that meaningful work was associated with higher levels of employee engagement, but Van den Heuvel *et al.* (2009) showed otherwise. These corroborated with Albrecht (2013), where he mentioned that additional research would be required for meaningful work and employee engagement.

Secondly, the lack of a rigorous instrument in meaningful work obscured a holistic and accurate assessment of the relationship between meaningful work and employee engagement (Steger *et al.*, 2012, Bailey and Madden, 2017). Steger *et al.* (2012, p. 325) criticised that most of the “measurement of meaningful work before the instrument of work and meaning inventory (WAMI) did not undergo a rigorous psychometric examination”. From this perspective, this study is the first few studies using WAMI

developed by Steger *et al.* (2012) to examine the relationship between meaningful work and employee engagement.

Lastly, there is a lack of studies drawing associations of these two variables in the context of social workers. Social work is an occupation fuelled by one's passion and love for humanity (Morley and Ife, 2002). However, occupation hazards and inadequate hygiene factors often left social workers high and dry, resulting them being disillusioned and facing burnout (Vasoo, 2013, Wagaman *et al.*, 2015). With studies such as Sherwood (2013) showing that employee engagement is the driving factor in healthcare quality and financial returns, social service NPOs should invest resources to raise employee engagement. Besides, Johnson and Jiang (2017) espoused that highly engaged employees were able to orchestrate resource gain which improves their positivity towards job demands.

Putting these together, ability to draw associations between these two variables allow employers to identify, if meaningful work, as a form of job resource, can be leveraged on to create stronger engagement between the social worker and the organisation. Given the above and alignment with the COR theory and the JD-R theory, this study provides a comprehensive review of how meaningful work influence employee engagement, with the following hypothesis:

H2: Meaningful work positively influences employee engagement.

2.6.3 Meaningful Work and Dimensions of Job Burnout

Job burnout, as defined in one of the most agreed upon definition across different studies, is a prolonged process of emotional and interpersonal stressors on the job (Schaufeli and Peeters, 2000). Individuals suffering from job burnout experience one or more forms of the syndrome, namely emotional exhaustion, depersonalisation and reduced personal accomplishments (Hallsten, 1993, Maslach, 2003). As highlighted in earlier sections, there are two forms of conceptualisation of burnout. One as a "state" with individuals experiencing any one of the three conditions at a given period (Brill, 1984, Schaufeli and Greenglass, 2001). Two, as a form of "process" where the different syndromes are on a continuum that escalates gradually (Van Dierendonck *et al.*, 2001, Swider and Zimmerman, 2010).

Burnout has been linked to turnover, absenteeism and poor job performance (Schaufeli and Buunk, 1996, Lindqvist *et al.*, 2015, Rumschlag, 2017). For example, Kim and Lee (2009) showed that burnout had a positive significant relationship with turnover intention. Burnout was also shown to be a risk factor to personal well-being that would lead to chronic illnesses such as mental issues, psychosomatic illnesses and physical illnesses (Riulli and Savicki, 2003, Riulli and Savicki, 2006, Bianchi *et al.*, 2015, Bianchi and Schonfeld, 2016, Bauwens *et al.*, 2017).

Social workers who experience burnout bring about several broad implications outside of themselves. For the organisation, it would be plagued with a poor reputation for inefficiency, constant staff turnover and not provide adequate care for the clients (Welander *et al.*, 2016). For the remaining social workers, it would mean transferring existing cases to them, which in the process, adding onto their psychological distress. (Yang *et al.*, 2015). For the clients, there could be a possibility that the client might not receive consistency in support compared to the previous social worker, making the client to lose trust in the system of care (Tartakovsky, 2016). Given that the worker-client relationship is not transactional, but one that is based on trust, empathy, and openness, such a situation of inconsistencies compromised the quality of the relationship, making the client losing confidence in the system of care (Schaufeli *et al.*, 2009).

Taken together, this demonstrated that social workers who are less stress and not facing burnout could provide a better quality of care and connect better with the clients (Schaufeli and Peeters, 2000, Maslach, 2003, Chiang and Liu, 2017). Hence, it would be to social service NPO's advantage to implement interventions in reducing the propensity of social workers in experiencing job burnout. Considering that job burnout would impact their personal well-being, social workers themselves would have a vested interest to take steps in reducing job burnout too (Maslach, 2003).

Maslach *et al.* (2001) indicated that organisational-related factors played a more significant role in reducing burnout as it helped individuals to address workplace stressors in a more effective way than individual interventions. For example, rather than introducing an intervention of teaching individuals how to cope with work overload, a more effective way would be to introduce organisational strategies to

enhance work meaningfulness as individuals would tolerate greater workload if they find value in work (Li *et al.*, 2014). This aligns with an article in Harvard Business Review where Garton (2017) mentioned that job burnout is an organisational challenge, rather than a personal issue.

Notably, the top three reasons for causing burnout among employees are excessive collaboration, weak time management disciplines and a tendency to overloading of work on most capable employees (Garton, 2017). These would require management to address the problem at an organisational level, using organisational measures. In this regard, a study by Dunn *et al.* (2007) showed that meaningful work could reduce employees' burnout. Similarly, a qualitative study by Isaksen (2000) suggest that employees who are able to construct meaning out of repetitive works would experience decreased work stress. Lease *et al.* (2017, p. 10) took this discussion further highlighting that meaningful work was an effective moderator between stress and health outcome variables, such that, individuals with "higher levels of work meaning identified fewer depressive symptoms on emotional and physical health outcomes". Notwithstanding this, some trends necessitated additional research on the relationship between meaningful work and job burnout.

Firstly, it is said that poor execution of management strategies to foster meaningful work when management did not believe in it would add onto one's emotional exhaustion (Bailey *et al.*, 2017b). Employees are not the pure recipient of services and executor of strategies, but they are actively scanning the work environment assessing employer's sincerity and authenticity in implementing these changes (Cartwright and Holmes, 2006, Lips-Wiersma and Morris, 2009). When employees assess a disparity between rhetoric and actual situation, the trust they have in the organisation would reduce (Cartwright and Holmes, 2006). Some might voice out their opinions, but for some, would withhold their views and present a false front by behaving and responding according to what they think is expected from them (Bailey *et al.*, 2017b). It is at this juncture where one feels additional emotional exhaustion. Involving in various forms of "acting" at work to put up an appearance conforming to normality and expectations require intense emotional energy, leaving them to be less satisfied with work and eventually facing burnout (Bailey and Madden, 2017). This implies that the presence

of meaningful work policies alone is insufficient in addressing job burnout. Inconsistent and non-authentic implementation of policies do more harm than good.

Secondly, many social workers are still experiencing job burnout. This is evident from reports that job burnout among social workers is not a localised issue in Singapore, but also from Ireland (Murray, 2017), Canada (The Chronicle Herald, 2017), and the United States (Torpey, 2018). This showed that meaningful work, as a job resource, could have limited effect in alleviating job burnout among social workers. This hypothesis is supported by many studies where it is empirically proven that the same predictor has different effects on the respective dimensions of job burnout. For example, Roncalli and Byrne (2016) performed a study and found that rapport with co-workers had an inverse relationship with two burnout dimensions of emotional exhaustion and depersonalisation, and not with reduced personal accomplishments. Another example, a study by Bakker *et al.* (2000) found that having effort-reward imbalance affect only emotional exhaustion and depersonalisation, but not reduced personal accomplishments. Therefore, interventions to job burnout must be calibrated carefully to ensure all dimensions have been addressed. Where necessary, different resources could be introduced to complement the effectiveness of one another. With this as the premise, exploring the effect of meaningful work on job burnout as a multidimensional construct enhances the body of knowledge on this subject matter. Yang *et al.* (2015) encourage future researchers to explore “other factors, such as individual coping styles, workload, and environmental support to gain a more comprehensive understanding of the factors contributing to stress and burnout among mental healthcare professionals in Singapore” (p. 19). Bianchi *et al.* (2017) highlighted that while most studies reported job burnout as a single score, it is recommended that the three dimensions should be assessed separately.

Leveraging SET, this study contests the claim of existing studies such as Fairlie (2011) that meaningful work could alleviate job burnout effectively. This study, therefore, critically examine this relationship by further clarifying the role of meaningful work, as a job resource, has on the respective dimensions of job burnout. Thus, the following hypotheses regarding the nature of these relationships are expected.

H3a: Meaningful work negatively influences depersonalisation.

H3b: Meaningful work negatively influences emotional exhaustion.

H3c: Meaningful work negatively influences reduced personal accomplishments.

2.6.4 Psychological Capital and Employee Engagement

Employee engagement is a condition where employees perform work of high quality, are more committed to the organisation, and going the additional mile to fulfil his or her responsibilities (Kumar and Sia, 2012, Thompson *et al.*, 2015). From an organisation's perspective, having an engaged employee means having a more productive workforce, who display lesser propensity of leaving an organisation and developing a better quality relationship with stakeholders (Thompson *et al.*, 2015). This is especially crucial to social workers as the crux of their work lies in the quality of the worker-client relationship.

Based on SET and TPB, the conditions for engagement to manifest are when individuals are intrinsically motivated, individuals are satisfied with the work environment and systems recognise the value of one's work (Paek *et al.*, 2015). However, being engaged alone is insufficient as social workers need to maintain a positive mental outlook and disposition in all situations. Furthermore, they need to be tenacious when facing rejections as well as be hopeful to develop diverse solutions in helping their clients (Sheppard and Charles, 2017). As indicated by Sheppard and Charles (2017), the social worker is considered an important and key feature in social work. The personality of a social worker is essential in the practice of social work. Studies showed that poor disposition and unacceptable attitudes of social workers impacted on client's recovery and also affect one's commitment towards the job (Krumm *et al.*, 2014).

Align with the above, this study argued that social workers must display high PsyCap for engagement to occur. Supported by the COR theory and the JD-R theory, PsyCap is described as the personal resource that has a positive influence on various organisational outcomes and had negative associations with job demands such as emotional and physical stress (Xanthopoulou *et al.*, 2007, Clausen and Borg, 2011). When employees display high PsyCap, they mobilise the necessary personal resources to achieve success. In turn, they would be more motivated, enthusiastic, more satisfied

and more engaged in the work they are undertaking (Cheung *et al.*, 2011) Prior studies validated this assertion. For instance, Paek *et al.* (2015) showed that there is a positive relationship between PsyCap and work engagement. The effect of PsyCap on engagement is further confirmed by Xu *et al.* (2017) where they found that PsyCap of a leader is able to positively influence employees' engagement, especially in teams of an individualistic culture. Gupta and Shaheen (2017, p. 129) argue that PsyCap is the predictor of employee engagement and is a “fundamental resource that develops fulfilling and productive lives at work”. Though several studies drew relationships between PsyCap and employee engagement, more research is required based on the following grounds.

Firstly, there is a paucity of studies exploring the effect of PsyCap on employee engagement for social workers. This is especially important considering that social workers are key individuals in supporting clients to develop their self-esteem, confidence and hope, such that the clients can be independent and alleviate from their own situation (Jessen, 2010, Ambrose-Miller and Ashcroft, 2016).

Secondly, there is evidence showing inconsistent results on the effects of personal resources on employee engagement. For example, Ouweneel *et al.* (2013) study found that personal resources only have a positive effect on those with low engagement scores. Other studies showed no effects at all (Chen *et al.*, 2009, Vuori *et al.*, 2012). The inconsistencies in results showed that PsyCap as a personal resource might have different impacts on employee engagement in different organisational context. Examining the relationship in this context furthers understanding on the effect of PsyCap as a personal resource in the social service sector. In the same vein, this study addresses the call made by Newman *et al.* (2014) where he and his colleagues mentioned the need to continually assess PsyCap as a human resource that can contribute to workplace outcomes.

Taken together, the literature corroborates with a conceptual model developed by Sweetman and Luthans (2010) demonstrating the relationship between PsyCap and employee engagement. In their work, they described PsyCap as having a direct significant relationship with employee engagement that was state-like and non-fleeting in nature, unlike emotions such as anger or joy. At the same time, the literature

uncovered multiple antecedents to employee engagement, which can be categorised mainly into personal and job resources. For instance, organisation interventions, such as training and developments, counselling and guidance sessions, dialogue and discussion forums as well as team-building initiatives are examples of job resources that Bailey *et al.* (2017a) identified with higher levels of engagement. Motivated by the body of research to explore antecedents to employee engagement in the social service sector, this study posited that PsyCap is an important predictor of employee engagement, with the following hypothesis:

H4: PsyCap positively influences employee engagement.

2.6.5 Psychological Capital and Dimensions of Job Burnout

The changes in the social and population landscape in Singapore has resulted social work to undergo a subtle yet profound shift, from focusing on the individual to examining broader social structures as determinants of service user outcomes (Beckett, 2017). In other words, social workers are not just the bridge between the community and the poor. They are expected to be voices of the community and the vehicles of change towards systemic issues that caused polarisation of the community. It is these growing responsibilities and evolving changes that added complexities to their role, making social workers even more susceptible to experience job burnout. Given the shortage of social workers and increase demand for social services, it is timely to investigate further how personality variables influence their propensity on experience job burnout.

Accordingly, it is found that even though individuals faced burnout, their effect differed from one to the other, depending on their individual personalities. For example, Ang *et al.* (2016) did a study on 1,830 nurses and adopted the “Big Five” personality traits to analyse how it impacted the different dimensions of job burnout. They found that neuroticism was significantly related to the three dimensions of job burnout when other traits within the “Big Five” did not show similar results (Ang *et al.*, 2016). Another study performed on university teachers found that teachers with high PsyCap were able to manage workload more effectively, thereby buffering against the effects of job burnout. A study on bank employees espoused that PsyCap acted as a positive resource to mitigate the effects of stress and burnout that bank employees faced (Li *et*

al., 2015). However, a meta-analysis conducted by Alarcon *et al.* (2009) revealed that even though personality variables expressed significant, negative relationship with dimensions of job burnout, the magnitude of relationship differed from one another. Given these inconsistencies in findings, additional research is needed to determine the effect of personality variables on burnout (Alarcon *et al.*, 2009).

The study of PsyCap on job burnout is deployed across many contexts and literature. To the best of this study's knowledge, it focused on nurses (Karatepe and Avci, 2017, Zhou *et al.*, 2017), bank employees (Li *et al.*, 2015), teachers (Rehman *et al.*, 2017), entrepreneurs (Umukoro and Okurame, 2017), frontline employees in hotels (Karatepe and Karadas, 2015, Paek *et al.*, 2015, Yoon and Jung, 2015, B. Kim *et al.*, 2017) and students (Ortega-Maldonado and Salanova, 2017). There is a paucity of literature available that examines the relationship between PsyCap and job burnout for social workers. This gap is a surprise considering that social workers are the key vehicle for delivering effective services to clients. The ability of them delivering services relied on the quality of relationship they have with the clients, which may compromise under the condition of burnout (Travis *et al.*, 2016). This aligns with calls made by other scholars such as Collins (2007) to examine the effect of individual differences have on social workers. Taken together, examining the relationship between PsyCap and job burnout would help in reinforce the body of knowledge. Based on the JD-R theory and the COR theory, this study posits that there is a direct inverse relationship between PsyCap and dimensions of job burnout, as follows:

H5a: PsyCap negatively influences depersonalisation.

H5b: PsyCap negatively influences emotional exhaustion

H5c: PsyCap negatively influences reduced personal accomplishment.

2.6.6 Psychological Capital as a Mediator

Mediational designs are common in social sciences research (Memon *et al.*, 2017b). As mentioned by Baron and Kenny (1986) and Hayes (2009), mediation analysis identifies and explains the underlying process that forms the relationship between an independent and dependent variable through a third hypothetical variable. As a motivational construct, it is proposed that personal resources could function either as

moderators or as mediators in the relationship between environmental factors and organisational outcomes, or they may even determine the way people comprehend the environment, formulate it, and react to it (Xanthopoulou *et al.*, 2007).

For this study, PsyCap is positioned as a possible mediator in the relationship between meaningful work and employee engagement as well as the dimensions of job burnout. This study argued that social workers who are exposed to meaningful work feel more efficacious, are hopeful, resilient and optimistic, and in turn, stay engaged as well as reduce the propensity of experiencing job burnout. This aligns with Sweetman and Luthans (2010) where PsyCap functions as a personal resource that draws direct associations with behavioural outcomes, such as employee engagement. Following the COR theory and the JD-R theory, meaningful work has been positioned as a form of job resource that enables individuals to manage and cope with the various job demands effectively (Bakker and Demerouti, 2007). As a result of providing meaningful work, TPB and SET posit that employees' perception, attitude and behaviour towards work would change, and as such, reciprocate and display positive outcomes in the forms of higher employee engagement and lowering job demands (Cropanzano and Mitchell, 2005).

PsyCap has been deployed as a mediator in different studies. For instance, Wang *et al.* (2017) showed that PsyCap mediated the relationship between the three dimensions of job stress and well-being. At the same time, it is deployed as a mediator on relationships of other constructs, such as between occupational stress and job burnout (Li *et al.*, 2015), human resource management practices and creativity (Gupta, 2014, Ugwu, 2016), leadership and creativity (Gupta and Singh, 2014) as well as work-family conflict and depressive symptoms (Hao *et al.*, 2015).

As far as this study is aware, the construct between meaningful work and dimensions job burnout, as well as employee engagement with PsyCap as the mediator has not been examined. The closest resemblance is Ugwu (2016) where his study espoused that human resource management practices, leveraging on the ability, motivation and opportunity framework, displayed a significant indirect relationship with work engagement through PsyCap. However, this is not a complete representation of meaningful work which has been emphasised earlier on. Besides, it is also mentioned

that there is a possibility that meaningful work displayed limited effect on job burnout and engagement, which means there is a possible presence of an intervening variable. From this perspective, this study posited that the presence of PsyCap as a personal resource may act as a mechanism to catalyse the effect of meaningful work, such that it results in higher employee engagement and reduces job burnout.

Finally, there are calls for researchers to understand the underlying constructs on how PsyCap influences workplaces outcomes (Newman *et al.*, 2014). A study by Luthans *et al.* (2006) showed that individual's PsyCap could be developed due to the prolonged exposure to job resources, such as human resource interventions, which in turn be reflected in their individual workplace outcome (to expand). This aligns with the malleable characteristics of PsyCap which means it is open for development and this, in turn, will influence desirable attitudes, behaviours and performance (Luthans, 2012). Align with the above, the following hypotheses are proposed:

H6: PsyCap has a mediating effect in the relationship between meaningful work and employee engagement.

H7a: PsyCap has a mediating effect in the relationship between meaningful work and depersonalisation

H7b: PsyCap has a mediating effect in the relationship between meaningful work and emotional exhaustion.

H7c: PsyCap has a mediating effect in the relationship between meaningful work and reduced personal accomplishments.

2.6.7 Psychological Capital as a Moderator

A moderator, as explained by Baron and Kenny (1986) is a variable that is capable of affecting the direction and/or the strength of the relationship between the independent and the dependent variable. Following the principle of the COR theory and the JD-R theory, it is suggested that for one to experience positive outcomes or to mitigate adverse outcomes, employees must acquire, maintain and to invest in resources (Hobfoll, 1989). PsyCap is adopted as a moderator in this study as several authors described, that as a personal resource, it could be used to enhance job-related outcomes,

and to mitigate the undesirable ones (Youssef and Luthans, 2012, Thompson *et al.*, 2015, Yoon and Jung, 2015).

Empirically, PsyCap is found to be a moderator to several relationships. For example, a study by Gupta (2014) found that PsyCap on a heterogeneous pool of employees working in India (for at least one year) moderated against the relationship of work engagement and turnover intention. Another study by Zheng *et al.* (2016) saw PsyCap being a moderator between ostracism and affective commitment as well as intention to leave. This means that PsyCap acts as a variable to buffer the adverse effect of workplace ostracism and individuals with higher PsyCap were better in managing workplace ostracism (Zheng *et al.*, 2016). In a similar vein, this study would expect social workers who display high PsyCap to have greater mastery in managing against demanding work conditions, thereby enjoying better physical, physiological and psychological well-being.

Having said the above, there were inconsistencies in the findings when PsyCap is deployed as a moderator. For instance, Cheung *et al.* (2011) did a study on Chinese teachers showing that PsyCap did not support all the hypothesis of moderation. Another example of the inconsistency in the findings was in Roberts *et al.* (2011) and Setar *et al.* (2015). Both studies adopted similar constructs of examining the moderating effect of PsyCap on job stress and incivility. Interestingly, Roberts *et al.* (2011)'s study showed that PsyCap moderated the effect of job stress on incivility, but Setar *et al.* (2015)'s study showed that PsyCap did not moderate the relationship between job stress and incivility.

While there could be reasons explaining differences in findings, these inconsistencies raised the question “as to whether PsyCap influences how we respond to the world, as opposed to deriving from the influences of the world” (Newman *et al.*, 2014, p. 128). With the above and in alignment with the JD-R theory and the COR theory, this study would attempt to improve on the previous moderation results with the following hypotheses:

H8: PsyCap has a moderating effect in the relationship between meaningful work and employee engagement.

H9a: PsyCap has a moderating effect in the relationship between meaningful work and depersonalisation

H9b: PsyCap has a moderating effect in the relationship between meaningful work and emotional exhaustion.

H9c: PsyCap has a moderating effect in the relationship between meaningful work and reduced personal accomplishments.

2.7 Summary of Chapter 2

This chapter analysed the relevant literature revolving around meaningful work, PsyCap, employee engagement and job burnout. This chapter started discussions on the different theories that this study anchored on. This was followed by detailed discussions on its origins and the developments of each variable in the context of the social services industry. Thereafter, the subsequent section explained the relationships and highlighting the research gaps. The next chapter introduces the research philosophies, the research designs and the analytical techniques used in this study.

CHAPTER 3: METHODOLOGY

3.1 Positivism, Pragmatism, and Constructivism

Essentially, a research philosophy serves as an underlying basis for a study. As highlighted by Crossan (2003), a research philosophy elucidates how the overall study is conducted in terms of its data collection and data analysis. The awareness of philosophy also facilitates the selection of appropriate methodologies with respect to the purpose of study, which prevents inappropriate use or unnecessary research work. Regarding this, Saunders *et al.* (2012) further explain by citing an example—a researcher who examines manufacturing process would have a different research perspective on how the study should be conducted, the expected findings, and the required resources, compared to another researcher who examines the attitude and feelings of employees of a manufacturing industry.

As pointed out by Saunders *et al.* (2012), the philosophy of positivism refers to the collection of data for a phenomenon of interest in the identification of patterns and underlying relationships. Hypotheses for testing are developed based on existing theories, which are to be tested and confirmed or refuted, in whole or in parts; thus, enhancing one's understanding of the theory or the phenomenon of interest (Saunders *et al.*, 2012, Creswell, 2014).

Unlike positivism, the philosophy of pragmatism, as described by Strang (2015a), is between pure deductive method of positivism and pure inductive method of interpretivism. As described by Creswell (2014), pragmatism suggests that the research problems are appropriately addressed using available approaches and methods to gain in-depth understanding of the issues and to develop solutions for the issues under study. It is often adopted for studies that employ mixed-methods or pluralistic approaches to derive knowledge from the solution (Saunders *et al.*, 2012, Strang, 2015a). In other words, there is more than one way to collect and analyse the data for pragmatic studies (Creswell, 2014). Therefore, a pragmatic researcher tends to advocate the use of both methods by leveraging the strengths of each method for enhanced understanding of the phenomenon of interest (Onwuegbuzie and Leech, 2005).

As for constructivism, its philosophy differs from others in a way that it would be the “community or participants that determine the meaning of data and the process, with or without the influence of the researcher” (Strang, 2015c, p. 25). As explained by Creswell (2014), it is believed that individuals develop meanings towards certain objects or things, and these interpretations differ across individuals according to one’s background, cultural settings, value system, upbringing, religion, and education level. Such complexities are recognised and leveraged to infer meanings and draw interpretations, rather than focusing only on a few aspects (Creswell, 2014).

In view of the above, this study was primarily guided by the philosophy of positivism as the study involved the testing of hypotheses based on existing theories. The appropriate data analysis was conducted to determine the underlying relationships among multiple constructs in this study. Significant relationships among the variables of meaningful work, employee engagement, and job burnout were demonstrated in prior studies (Schaufeli *et al.*, 2002, Hoole and Bonnema, 2015, Fouche *et al.*, 2017, Allan *et al.*, 2018), which were further assessed in this study, specifically on whether the postulations made by TPB, SET, COR theory, and JD-R theory still hold true for the effect of meaningful work on employee engagement and the dimensions of job burnout, with PsyCap as the mediator and moderator.

3.2 Deductive and Inductive Reasoning

Deductive reasoning works from the general aspects to the specific aspects, which means, starting from broad reasoning or theories to narrowing them down to the specific phenomena under study (Saunders *et al.*, 2012). It generally involves the setting up of hypotheses, data collection using instruments, the analysis of data, and finally, the decision of whether to support or reject the proposed hypotheses based on the obtained results (Saunders *et al.*, 2012). Inductive reasoning, on the other hand, operates in an opposite manner where the researcher synthesises and classifies the gathered qualitative information into broad common themes before comparing these identified themes with the existing literature (Creswell, 2014). This also explains why the deductive approach is also known as the theory testing as it seeks to explore if the propositions within a known theory is still valid given a set of circumstances, while

the inductive approach is viewed as theory building as it generates new theory from the given set of data (Saunders *et al.*, 2012).

Accordingly, this study adopted the deductive reasoning approach based on the following justifications. Firstly, this study focused on testing and extending the applicability of theories, specifically TPB, SET, COR theory, and JD-R theory, based on the proposed hypotheses (see Section 2.6). Secondly, this study involved data collection, data analysis, and the testing of hypotheses. Hence, these aspects of the study fulfilled the requirements of the deductive reasoning approach.

3.3 Qualitative Method and Quantitative Method

Fundamentally, the main difference between quantitative method and qualitative method is in the purpose of study. The key strength of a quantitative method is the quantification of variables into numbers that facilitates the testing of the relationship between variables through the deployment of different statistical techniques (Onwuegbuzie and Leech, 2005). A qualitative method, on the other hand, gathers views and opinions from individuals to construct themes and meanings surround the phenomenon of interest based on these responses (Creswell, 2014). In other words, a qualitative method is more appropriate for studies that are of exploratory nature and involve theory generation and case studies, such as ethnographic studies (Strang, 2015b).

This study was expected to enhance our understanding of the relationship of meaningful work, employee engagement, and the dimensions of job burnout, with PsyCap as the mediator and moderator. The outcome of this study would provide social service NPOs with insights on how to leverage meaningful work and PsyCap in enhancing engagement and reducing the propensity of experiencing job burnout. According to Creswell (2014), the quantitative method is more suitable for studies that aim to identify factors influencing the outcome or the utility of an intervention that potentially shapes an outcome. With that, a quantitative method was deemed appropriate for this study given the nature of it.

3.4 Research Design

3.4.1 Unit of Analysis

According to Matusov (2007), the unit of analysis plays an important role in articulating and addressing methodological issues. Inappropriate unit of analysis influence the outcomes of statistical analysis, such as sampling, independence, and other related aspects of the study (Kenny, 2016). Considering the objectives of this study, the social workers were considered as the unit of analysis for this study. This study noted that works of similar nature had adopted individuals for their unit of analysis (e.g. Vuori *et al.*, 2012)

3.4.2 Time Horizon

Essentially, there are two types of time horizon in research, namely cross-sectional and longitudinal. A cross-sectional study captures a snap-shot of the relationships between the variables at a certain point of time (MacCallum and Austin, 2000). As explained by Caruana *et al.* (2015, p. 537), a longitudinal study “employs continuous or repeated measures to follow particular individuals over prolonged periods of time”. Compared to a longitudinal study, the main advantage of a cross-sectional study is that its implementation is generally easier, quicker, and less costly, but it does not provide sufficient evidence to establish a causal relationship among the variables (MacCallum and Austin, 2000). On the other hand, the implementation of a longitudinal study is costlier and more time-consuming, but is able to draw cause and effect relationships between the variables are acquired (Caruana *et al.*, 2015). With that, this study adopted a cross-sectional design to examine the extent of correlation between meaningful work, employee engagement, PsyCap, and dimensions of job burnout.

3.4.3 Population

In a research, a population is the “total number of possible units of elements that are included in the study” (Gray, 2004, p. 82). This study focused on social workers in Singapore as the targeted population. Social workers are trained individuals who mobilise resources with the goals of empowering different pockets of community in making positive changes to their life, and at the same time, be an advocate in promoting social causes that could positively change policies, procedures, and frameworks. As

highlighted by Zikmund *et al.* (2009), it is important to identify the population that is pertinent to the study.

In order to ensure that only social workers of the right qualifications and working experience participated in data collection, this study opted to work with Singapore Association of Social Workers (SASW). One of the roles of SASW is to provide accreditation to social workers in Singapore. The applicant must provide evidence of relevant education and work experience as well as demonstrating a record of continuing employment training in the relevant field in order to be accredited as a social worker with the association (SASW, 2018). As of 31 December 2017, there are 1,879 accredited social workers (see Table 8) who are categorised as follows: (1) registered social worker-provisional; (2) registered social worker; (3) registered social service practitioner (SASW, 2017).

Table 8. Number of accredited social workers as at 31 December 2017

Category	Criteria	Number
Registered social worker-provisional	Possess at least a recognised qualification and have less than 1 year of post-qualification full-time practice in a social work position in Singapore.	275
Registered social worker	Other than possessing recognised qualification, a registered social worker must have at least 1 year of post-qualification full-time practice in a social work position in Singapore. He or she must have at least of 80 hours of relevant in-employment training and 1,000 hours of supervised practice.	1432
Registered social service practitioner	Professionals and practitioners who do not have a degree or graduate diploma in social work but have years of experience in the field.	172
Total		1,879

3.4.4 Sampling Method

Sampling allows the researcher to generalise information of the population of interest without going through every single individual within the population group. Saunders *et al.* (2012) indicate that having a representative sample reduces time, cost, and workload without compromising the quality of the information obtained from the selected respondents. Probability sampling method was not appropriate for this study since the complete list of social workers accredited with the SASW was not provided for reasons of confidentiality. In addition, the participation in this survey was on a voluntary basis and the respondents were free to complete the survey at their own convenience. With that, this study adopted a non-probability convenience sampling method.

Convenience sampling method is widely practised in studies of similar areas of research. For example, Fortunatti and Palmeiro-Silva (2017) conducted a study on job burnout, which involved 82 conveniently sampled respondents. Likewise, Saeidi *et al.* (2015) performed a study that explored the relationship between job stress and job burnout using similar sampling method. Fairlie (2011) whose study was on the impact of meaningful work also adopted convenience sampling. In addition, similar sampling method was adopted for studies that involved social workers as well (e.g. Barak *et al.*, 2001, Wermeling, 2013, Webb *et al.*, 2016).

This study acknowledged the disadvantages of convenience sampling method. Firstly, the obtained sample is not representative of the population (Etikan, 2016). Secondly, given the high self-selection probability in a non-random sampling method, the obtained sample is susceptible to common method bias (Podsakoff *et al.*, 2003). Nevertheless, this ensured that procedural remedies and statistical tool that minimise and detect common method bias were performed, which are further described in Section 4.1.4.3.

3.4.5 Sample Size

According to Bartlett *et al.* (2001), the confidence interval at 95% and a margin of error at 0.05 in the determination of sample size is a common practice across studies. Similar criteria were adopted in various studies of different fields, such as Barzoki and

Ghujali (2013). Using Cochran sample size formula, which was also adopted in other studies, such as Gunlu *et al.* (2010), the calculated sample size at 95% confidence level with a margin of error at 0.05 for this study was 320. Considering that 30% is the estimated response rate for a web-based survey (Shih and Fan, 2009), 1,066 survey forms would be distributed to obtain the minimum recommended sample size of 320. Following the discussion with SASW, it was agreed that the survey forms were distributed to all 1,879 accredited social workers in the population.

Notwithstanding the above, Sekaran (2003, p. 295) provides more insights indicating that on the general rule of thumb in determining the minimum sample size for a multivariate study where the sample should be “several times (preferably 10 times or more) as large as the number of variables in the study”. Ramayah *et al.* (2018, p. 43) also noted similar points where the minimum sample size of PLS-SEM should be either “10 times the largest number of formative indicators used to measure one construct or 10 times the largest number of structural paths directed at a latent construct in the structural model”. Rather than ritualistically adopting the 10-times rule, Hair *et al.* (2017a, p. 25) cautioned that the recommended ratio of 1:10 serves only as a guide and the “background model and the data characteristics” should be considered. Besides, a seminal work by Kock and Hadaya (2018, p. 232) found out, through Monte Carlo simulation method, that the 10 times rule method could lead to a “grossly inaccurate estimations of minimum required sample size”. In this regard, Marcoulides *et al.* (2009) highlights that the effect size for each regression and power analysis should be taken into consideration in the determination of the sample size. Hair *et al.* (2017a, p. 23) added that the minimum sample size is required to “safeguard that the results of a statistical method such as PLS-SEM having adequate statistical power”. In other words, the number of predictors, effect sizes and power analysis must be considered in the determination of minimum sample size.

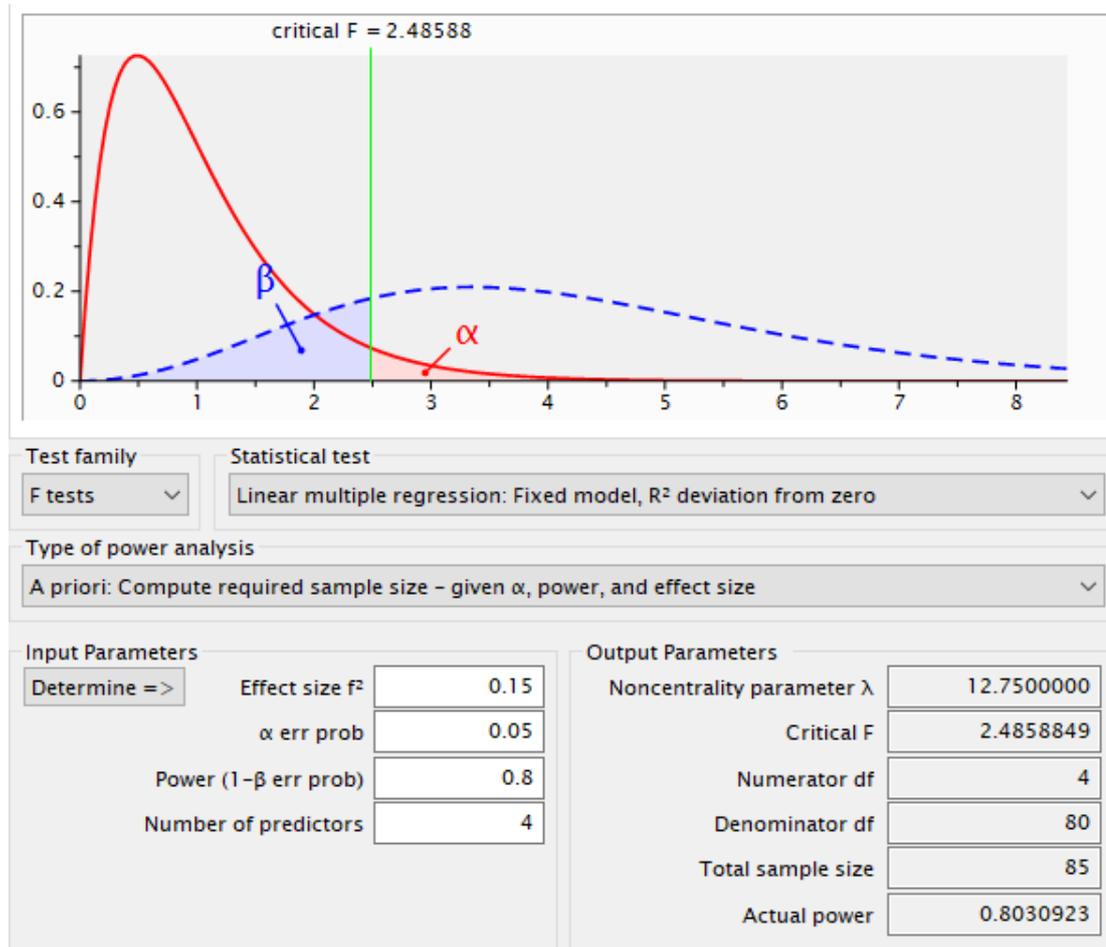
Power is often described as the estimate “for a particular coefficient of association and sample size, for samples drawn from a population, at a given significance level, which usually $P < 0.05$ ” (Kock and Hadaya, 2018, p. 230). It is being used to correctly reject a false null hypothesis. That is to say, not having sufficient power results in a Type II error where the null hypothesis is accepted when it is actually false (Cohen, 1992; 1988).

Effect size, as defined by Cohen (1992) measures the magnitude of the effect that an exogenous variable has on the endogenous variable. By convention, Cohen (1992) classified effect sizes of 0.02, 0.15 and 0.35 as small, medium and large respectively. Among the three, using the effect size of 0.15 and power of 80% in determining sample sizes is the most commonly used parameters in determining minimum sample sizes (Kock and Hadaya, 2018).

Taking into considerations the power and effect size, there are generally two ways to determine the minimum sample size. One, referring to the power charts provided by Cohen (1992) or two, using the G*Power software. For the latter, G*Power is a “stand-alone power analysis programme for statistical tests commonly used in social and behavioural research” (Faul *et al.*, 2007, p. 175). For this study, the G*Power software was adopted in computing the calculation of minimum sample sizes. A key reason was G*Power software allows exact and precise computational of power analysis with minimal errors (Faul *et al.*, 2007). From a computational point of view, there is no reason to use approximate method as opposed to exact methods of calculation.

Putting these into the context of this study, the largest number of predictors for this study was four. Meaningful work and PsyCap were both predictors to the endogenous variables of employee engagement, depersonalisation, reduced personal accomplishment, and emotional exhaustion. At the same time, the proposed model involved PsyCap as a moderator and a mediator to the endogenous variables, which means two additional predictors, making it a total of four predictors. Using the G*Power software, the minimum number of sample size required to achieve a statistical power of 80% for the detection of value of at least 0.15 effect size (with 5% as the probability of error) and with largest number of four predictors was 85 (see Figure 4). In other words, a minimum sample size of 85 respondents is needed to proceed with the data analysis using PLS-SEM.

Figure 4. Output from G*Power



Source: G*Power

3.4.6 Data Collection Method

There are several methods to collect primary data. Table 9 lists three most commonly used techniques for a quantitative study and the corresponding advantages and disadvantages (Buttner and Muller, 2011).

Table 9. Primary data collection methods.

Methods	Advantages	Disadvantages	References
Interviews	Take multiple forms such as group interview, personal interview, telephone interview and in-depth interview.	Time-consuming in setting up and the conduct of the interview.	Gill <i>et al.</i> (2008) Qu and Dumay (2011)

	<p>Better response rates.</p> <p>Observe other cues such as facial expressions and intonation when replying</p> <p>Allows probing questions to pursue areas of interest.</p> <p>Allows clarifications from interviewees and interviewers to prevent misunderstanding of questions.</p> <p>With permission, one can record every word spoken verbatim.</p>	<p>Interviewees have to set-aside time to attend the interview.</p> <p>Can be costly for personal or group interview if it involves geographically dispersed interviewees.</p> <p>Potential for respondent bias as replies are tailored to please interviewer and to avoid possible embarrassment to the interviewee.</p>	<p>Castillo-Montoya (2016)</p>
Observations	<p>Take multiple forms where the observer can act as a participant or a non-participant.</p> <p>Access to situations and people where surveys or interviews do not allow or are inappropriate to use.</p> <p>Capture intricate details such as non-verbal behaviour within the group as well as with external stakeholders.</p> <p>Observes changes in verbal and non-verbal behaviour in different situations and over time.</p> <p>Allows for simulated settings to observe social behaviour of participants.</p> <p>Allows audio and video recording for future analysis that may have gone</p>	<p>Can be viewed as subjective</p> <p>Time-consuming in setting up and conducting one.</p> <p>Overt presence of the observer can cause alteration of behaviours.</p>	<p>Griffie (2005a), Griffie (2005b) Walshe <i>et al.</i> (2012)</p>

	unnoticed during observation.		
Surveys	Quantifying variables for further analysis using statistical software.	The phrasing of statements and questions must be understood by all respondents.	Evans and Mathur (2018) Couper (2000) Kiernan <i>et al.</i> (2005)
	Minimal costs involved and mostly consumables related such as postage fees. For the web-based survey, the cost is negligible.	Need to pay attention to design especially if it involves multiple instruments.	Van Gelder <i>et al.</i> (2010)
	The efficient way to reach a large group of audience that is geographically dispersed.	Does not allow for clarifications from respondents.	
	The anonymity of respondents is generally assured.	Does not allow for probing questions.	
		Higher chances of incompleteness as respondents can choose to skip questions.	
		Poorer response rates as compared to other methods unless participation is compulsory.	
		Potential for respondent bias as replies are tailored to please the interviewer	

This study adopted survey as the primary method for the following reasons. Firstly, the relationship between social workers and their clients is built on trust. Observation method of data collection is deemed inappropriate, as the method requires the researcher to follow social workers on their jobs, which may inadvertently infringe the social workers' code of conduct to maintain the privacy of clients' details and background. Secondly, this study aimed to establish empirical relationships of meaningful work, employee engagement, and dimensions of job burnout, with PsyCap

as the mediator and moderator. Therefore, the responses should be quantified into measurable variables for further analysis, which explains why interviews would not be suitable for this study as well. Hence, the most appropriate method for this study would be using survey as the data collection method for it met the requirements and allowed further analysis.

Between paper-based survey and web-based survey, this study opted the latter as the main vehicle for data collection. Social workers spend most of their time working with clients and have little time to complete a paper-based survey, let alone an interview (Murray, 2015). Therefore, a web-based survey would allow the social workers to complete the survey in their own time, thus, resulting in an “increased response accuracy because respondents directly enter their own information” (Durrant and Dorius, 2007, p. 39) without the fear of divulging their identity. Furthermore, a web-based survey reduced administrative work, as it would support rapid deployment of data into statistical software.

The primary data were collected from social workers who work in Singapore. With the assistance provided by SASW, the web-based survey form was sent to all 1,879 social workers registered with the association through e-mail. The e-mail served as an invite to the recipients to participate in the study. As part of the process, all participants accessed the web-based survey through a uniform resource locator (URL) link, which was provided in the e-mail. Apart from the questions to acquire demographic information of respondents, the respondents are required to provide their responses based on a Likert-scale of five, six, or seven points. The items for the instrument were adopted directly from established studies in these domains of knowledge. More detail on the instruments are discussed in Section 3.5.1.

On this note, this study acknowledges the constraints of a web-based survey compared to other forms of survey, such as poor response rate (Kiernan *et al.*, 2005, Durrant and Dorius, 2007, Van Mol, 2017, Xiao Chi Zhang *et al.*, 2017). Addressing that, two timely reminders were sent out to the social workers; this strategy was demonstrated to positively affect the responses rate (Shih and Fan, 2009, Sánchez-Fernández *et al.*, 2012, Van Mol, 2017). Following the recommendations by Couper (2000), Greenlaw and Brown-Welty (2009) and Anseel *et al.* (2010), careful considerations were put in

place in the design of the layout of the web based-survey. Section 4.1.1 discusses the different interventions that were introduced to improve the response rate for this study in detail.

3.5 Development of Instrument

3.5.1 Development of Survey Items

The instrument incorporated key constructs of meaningful work, employee engagement, PsyCap, and job burnout. The web-based survey incorporated four measures with a total of 65 items (see Table 10). The items were used in prior studies due to their good psychometric properties. The Psychological Capital Questionnaire (PCQ) had the greatest number of items while Utrecht Works Engagement Scale (UWES) had the least number of items which subsequent sections would elucidate in detail.

Table 10. Measuring instruments.

Name of instrument	Number of items	Reference
Work and Meaning Inventory (WAMI)	10 items	Steger <i>et al.</i> (2012)
Utrecht Works Engagement Scale (UWES)	9 items	Schaufeli <i>et al.</i> (2006)
Psychological Capital Questionnaire (PCQ)	24 items	Luthans <i>et al.</i> (2007)
Maslach Burnout Inventory (MBI)	22 items	Maslach and Jackson (1981)

3.5.1.1 Work and Meaning Inventory

Meaningful work is a subjective experience based on one's social, cultural, and historical background; that every employer collaborates with the employee to provide the necessary conditions that enhance one's intrinsic motivation towards work and enrich one's sense of belonging to the larger ecosystem.

With the growing affluence of meaningful work, several instruments were developed to assess employees' perception of meaningful work. For example, the Job Diagnostic Survey developed by Hackman and Oldham (1975) included indicators of meaningful

work. Another instrument was developed by May *et al.* (2004) where a 6-item meaningfulness scale was developed to measure one's level of meaningful work. Following in 2012, Lips-Wiersma and Wright (2012) developed the Comprehensive Meaningful Work Scale, while Steger *et al.* (2012) developed WAMI. Besides that, Bendassolli *et al.* (2015) developed the Meaningful Work Scale that was primarily tailored for professionals within the creative industries.

The study adopted WAMI that was developed by Steger *et al.* (2012), involving 10 items according to a five-point Likert scale with the endpoints of “strongly disagree” and “strongly agree”. WAMI classified meaningful work into three dimensions: (1) Positive meaning in work - a subjective experience that one derived from his or her activity; (2) Meaning making through work - connect meaning derived from work to one's value in life; (3) Greater good motivations - one sees his or her own work affects a larger work environment. This instrument was chosen based on the following rationalisations.

Firstly, social workers are individuals who believe in supporting the disadvantaged pockets of the community. They are driven by the strong belief that they can make a difference in somebody's life (Ang, 2009, Sheppard and Charles, 2017). Many are motivated to join this career as they see the objectives and aims of a social worker as being congruent with the values imbued in them and are attracted to the altruistic mission of the organisation. This is evident from a survey by the national Social Work Task Force, revealing that 65% of the respondents took pride and were proud of their job (Wolverhampton People Directorate, 2017). This phenomenon resembles positive meaning in work where social workers experience meaningfulness through the work activity that they are performing.

Secondly, a recent article in the Harvard Business Review revealed three things employees yearn for in a workplace—a career, community, and cause (Goler *et al.*, 2018). In other words, employees today look for a job that offers them not only career progression, but also gives them an identity in the environment that he or she operates in “community” and allows them to do good by making positive contribution towards their immediate environment (“cause”). The same report by Goler *et al.* (2018) reflected the sentiments of many other seminal works on meaningful work—there is a

change of expectations from job seekers where one demands more than just a job that offers security (Ghaswalla, 2017). Putting into perspectives, the constant search for community and cause resemble WAMI dimensions of meaning-making through work and greater good motivations.

Finally, WAMI is widely adopted and deployed across different contexts. This included studies on the relationship between meaningful work and one's propensity of accepting lower salaries (Hu and Hirsh, 2017); positive disposition (Steger *et al.*, 2013); work stress (Allan *et al.*, 2016a); work engagement (Steger *et al.*, 2013); meaning in life (Allan *et al.*, 2016a); affective commitment (Jiang and Johnson, 2017); and mental health (Allan *et al.*, 2018). Besides that, Steger *et al.* (2012) reported that WAMI recorded a high-reliability score of between 0.82 to 0.89. Following the recommendations by Steger *et al.* (2012), the scores of each dimension are summated to obtain the overall score of meaningful work. Hence, meaningful work is conceptualised as a two-level construct with the first-order level as reflective and the second-order level as formative.

3.5.1.2 Utrecht Works Engagement Scale

It is earlier argued that the concept of employee engagement encompasses more than just being physically involved. It involves a sense of self-responsibility where the individual makes effort by putting in emotional, psychological, and cognitive resources to connect to the work and the environment. For one to do so, the management has the responsibility to create a working environment that fosters engagement among employees by instituting holistic management policies and practices. This means providing the necessary job resources required for one to manage the job demands. In line with TPB, SET, COR theory, and JD-R theory, the provisioning of a supportive work environment would result in reciprocal behaviour from employees, such as extending one's membership with the organisation.

Besides that, it is observed that there are different instruments being developed to measure employee engagement. Schaufeli *et al.* (2006) developed an instrument of three subscales with items that represented vigour, dedication, and absorption. Another instrument is developed by May *et al.* (2004) where it measured one's cognitive engagement, emotional engagement and physical engagement. Meanwhile, Saks (2006)

developed an instrument that reflected job engagement and organisation engagement. Among the different available instruments, this study adopted Schaufeli *et al.* (2006) Utrecht Works Engagement Scale (UWES) for the following reasons.

Firstly, Mackay *et al.* (2017, p. 116) highlighted that the UWES represents a robust way in assessing employee engagement which makes “addition of other job attitude measures unnecessary”. In addition, UWES is deployed across different occupational contexts, such as hospitality (Slatten *et al.*, 2011, Lee and Ok, 2015, Paek *et al.*, 2015); healthcare (Bailey *et al.*, 2015); education (Zhang *et al.*, 2007); and financial services (Hoole and Bonnema, 2015).

Secondly, UWES is regarded as a reliable and valid instrument to measure employee engagement. (Schaufeli *et al.*, 2006) conducted a study across 10 countries using UWES and the instrument recorded Cronbach’s alpha coefficients of between 0.85 and 0.92. Bailey *et al.* (2017a, p. 35) corroborated the reliability and validity of UWES where the reduced item instrument was found to be have more “robust construct validity across occupational groups and greater time-invariance”.

Thirdly, UWES is the most popular instrument measuring employee engagement. Bailey *et al.* (2017a) found that 86% of the works were dominated by UWES. Similar views were received from Shuck (2011) and Knight *et al.* (2017). Majority of the existing studies combined the three dimensions into one higher-order construct. For example, Sonnentag's (2003) study reported engagement as a single score. Likewise, studies by Zhang *et al.* (2007), Chughtai and Buckley (2011) and Hoole and Bonnema (2015) adopted a similar approach as well. With that, this study adopted the nine-item instrument to measure the engagement level of social workers and conceptualised employee engagement as a two-level construct with the first-order level as reflective and the second-order level as formative.

3.5.1.3 Psychological Capital Questionnaire

With respect to the JD-R theory, PsyCap is the personal resource that positively influences several organisational outcomes and is negatively associated with job demands, such as emotional and physical stress (Xanthopoulou *et al.*, 2007, Clausen and Borg, 2011). It is described that when employees display high PsyCap, they

mobilise the necessary personal resources to achieve success. In turn, they are more motivated, enthusiastic, more satisfied, and more engaged in the work they are doing (Cheung *et al.*, 2011).

PsyCap was assessed using the Psychological Capital Questionnaire (PCQ), which is a 24-item instrument with six items for each dimension (four dimensions in total). The four dimensions are resilience, hope, optimism, and self-efficacy. The instrument employed a 6-point Likert scale with the endpoints of “strongly disagree” (1) and “strongly agree” (6). Unlike prior constructs of meaningful work and employee engagement, instruments that measure PsyCap remain limited. To date, the next best alternate instrument to measure PsyCap is the Implicit-Psychological Capital Questionnaire (I-PCQ) (Harms and Luthans, 2012).

Nevertheless, this study adopted PCQ based on the following reasons. Firstly, PCQ is employed in almost all studies on PsyCap (Avey *et al.*, 2011). Secondly, PCQ is developed based on established studies on the dimensions of hope (Snyder, 2002), efficacy (Parker, 1998), resilience (Wagnild and Young, 1993), and optimism (Scheier and Carver, 1985). Lastly, PCQ was previously used beyond the context of employment, including mental health (Krasikova *et al.*, 2015), group effectiveness among students (Vanno *et al.*, 2015), academic life (Ortega-Maldonado and Salanova, 2017), and neurosciences (Peterson *et al.*, 2008).

With respect to the aim of this study, it is deemed practical to treat PsyCap as a higher-order construct as it offers the advantage of simplifying the results for interpretation (Brenninkmeijer and VanYperen (2003). Furthermore, it is noted that many of the existing studies on PsyCap described the construct based on an overall score, rather than the score of its respective dimensions (Gupta, 2014, Sharma and Sharma, 2015, Moyer *et al.*, 2017, Grover *et al.*, 2018). Besides, PsyCap as a construct that includes all dimensions was found to have a better predictive ability over outcomes such as performance and satisfaction, vis-à-vis at their individual dimensions (Luthans *et al.*, 2007). Hence, this study operationalised PsyCap with the first-order level as reflective and the second-order level as formative.

3.5.1.4 Maslach Burnout Index

Job burnout is said to occur either as a “state” or “process”. By “state”, it means that one experiences either dimension of burnout at any point of time, given one’s situation (Brill, 1984, Maslach, 1993, Maslach and Schaufeli, 1993, Schaufeli and Greenglass, 2001). On the other hand, job burnout is a “process” where the dimensions are on a spectrum of severity, and one experiences them in phases sequentially (Burke, 1989, Van Dierendonck *et al.*, 2001, Lewin and Sager, 2007). With that, this study defined job burnout as a syndrome that affects anyone, regardless of the job, and involves stressors of different forms that potentially affect one’s intention, attitude, and behaviour in work and in life.

Similar to earlier constructs of meaningful work and employee engagement, multiple instruments have been developed for the measurement of job burnout. Other than the Maslach Burnout Inventory (MBI) developed by Maslach and Jackson (1981), there are also other instruments, such as the Oldenburg Inventory (Demerouti and Bakker, 2007), Copenhagen Burnout Inventory (Kristensen *et al.*, 2005), the Burnout Measure (Pines and Aronson, 1981), and the Athletic Training Burnout Inventory (Clapper and Harris, 2008). Accordingly, this study adopted MBI for the following reasons.

Firstly, MBI, as one of the most widely used instrument in measuring burnout, is considered reliable and valid (Hastings *et al.*, 2004, Alacacioglu *et al.*, 2009, Li *et al.*, 2015, Larsen *et al.*, 2017, Pu *et al.*, 2017). It is reported that the Cronbach’s alpha score for MBI ranged between 0.71 and 0.90 across different dimensions (Payne, 2001). Secondly, Maslach and Leiter (2016, p. 104) espoused that MBI is “designed to assess the three dimensions of the burnout experience” and is considered as the “standard tool for research in this field and has been translated and validated in many languages”. Owing to the reliability and validity of MBI, MBI is further developed to cater different occupational groups, such as medical personnel, human services, educators, and students (Maslach, 2003). This customisation, which is not seen in other instruments, allows more precise measurement of burnout (Koesk and Koesk, 1989). This study adopted MBI to cater human, specifically for professionals who have a high level of interaction with clients (Maslach *et al.*, 1996).

The findings on the classification of job burnout as a multidimensional or unidimensional construct were inconclusive. Section 3.8.3 describes detailed arguments by different scholars on the subject. While a unidimensional construct provided a parsimonious explanation on the effect of meaningful work on job burnout, studies had showed that interventions contributed dissimilar effects on the dimension of job burnout (Bakker *et al.*, 2000, Roncalli and Byrne, 2016). Considering that the purpose of the study is to examine the effect of meaningful work and PsyCap on the different dimensions of job burnout (see Section 2.6.3 and Section 2.6.5), it is natural that job burnout is classified as a multidimensional construct in this study with a reflective measurement perspective between its indicators and their respective dimensions.

3.5.2 Pre-Testing of Instrument

The study pre-tested the instrument prior to the actual data collection to ensure that the instrument was designed to accurately reflect the intended meaning and avoiding any misinterpretation among the respondents (Memon *et al.*, 2017b). Common problems that occur without pre-testing the instrument include confusion on the meaning of questions, misunderstanding on the intent of specific questions, and unclear on the definitions of technical jargons. A pre-test provides essential feedback on the format of the instrument, including information, such as the clarity of instruction, consistency in numbering and usage of terms, and the user-friendliness of the instrument (Memon *et al.*, 2017b). In view of the above, the pre-testing of instrument removes ambiguity and ensures that respondents fully understand the intent and purpose of the questions (Sekaran, 2003). There are no clear guidelines on the number of respondents to be invited for the pre-testing of instrument; the number of respondents may be as low as five individuals or up to 50 individuals (Memon *et al.*, 2017b). Memon *et al.* (2017b) added that the key to determine the number of respondents for the pre-testing of instrument lies in the length and complexity of the survey. In order to have a non-bias feedback, actual respondents should be invited for the pre-testing of instrument.

This study involved five social workers for the pre-testing of instrument at different face-to-face meetings set up by the researcher. A face-to-face meeting allowed the researcher to share the intent of the survey and to explore future areas of collaboration.

During the session, the researcher also informed that the participants should recuse themselves from participating in the actual survey if they receive any subsequent invites. Besides, the presence of the researcher allowed the participants to have an immediate response in the case of any queries and clarifications required. The pre-test did not reveal any issues with the face validity of the instrument. The participants revealed that they understood the items of the instrument, at the same time, agreed on the clarity and non-ambiguity of the instruction provided. The length and format of the instrument was also deemed reasonable where all five participants completed the survey between 15 to 20 minutes.

3.5.3 Format and Administration of Final Instrument

The final instrument comprised four sections (see Appendix 1). The first section was the cover page of the instrument. It provided an overview of the instrument, especially on the purpose of the study. This section also described the rules of confidentiality and assured the respondents that all responses were kept anonymous. In addition, this section also indicated that individuals who were not comfortable in completing the survey for various reasons may exit at any point in time and their incomplete responses were not considered for further analysis.

The second section included items that were adopted from WAMI and PCQ. Following Steger *et al.* (2012), this study adopted 10-item WAMI. The respondents were required to indicate their views according to a five-point Likert scale. Examples of item included “I have a good sense of what makes my job meaningful”, “My work helps me make sense of the world around me”, and “The work I do serves a great purpose”.

Meanwhile, this study adopted 24-item PCQ for the measurement of PsyCap. The respondents were required to provide their responses according to a six-point Likert scale with the endpoints of “strongly disagree” (1) and “strongly agree” (6). Some of the adopted items included “I feel confident analysing a long-term problem to find a solution”, “I feel confident helping to set targets/goals in my work area”, and “I usually take stressful things at work in stride”.

In the subsequent section, the respondents were required to provide their personal demographic information, such as age, their highest academic qualification, and years

of practice. Although this study did not explore the influence of demographic attributes, such information were expected to add new perspectives and opportunities for potential future analysis.

The next section focused on one's propensity for job burnout and level of engagement. Job burnout was assessed based on the 22-item MBI according to a seven-point Likert scale with the endpoints of "never" (0) and "every day" (6). Examples of item included "I feel emotionally drained from my work", "I feel used up at the end of the workday", and "Working with people all day is really a strain for me".

Employee engagement was the final section and was measured using UWES, which comprised nine items according to a six-point Likert scale. Examples of the items include "When I get up in the morning, I feel like going to work", "I am immersed in my work", and "My job inspires me".

This study used the online survey platform, SoGoSurvey, in the creation of the web-survey. This platform was chosen because the provider supported academic research efforts by offering a one-year complimentary upgrade to a professional licence. Furthermore, SoGoSurvey was awarded the "most popular, most affordable, and most user-friendly" online survey tool (Pittsburgh Post-Gazette, 2018). Making use of the settings of SoGoSurvey, all questions were set as compulsory where respondents were required to answer. Notwithstanding that, the system was configured to allow the respondents to exit the web-survey if they do not wish to continue. This was indicated clearly on the invitation email and on the cover page of the instrument.

In addition, the deliberate arrangement of different measurement scales and the positioning of the demographic-related questions were made in reference to the recommendations by Podsakoff *et al.* (2003). This created a temporal separation between predictor and criterion was introduced to reduce the occurrence of common method bias. The details on these strategies are discussed in Section 4.1.4.3.

3.6 Data Analysis Technique

The following sections introduce the data analysis that were deployed in this study as well as the justifications for the selection.

3.6.1 Multivariate Analysis

The advent of more advanced analytical techniques coupled with technological improvements allow sophisticated testing of relationships among variables, such as multivariate analysis. Multivariate analysis denotes simultaneous analysis of multiple variables (Hair *et al.*, 2017b). Referring to Table 11, multivariate analysis can be classified into first-generation techniques and second-generation techniques.

Table 11. First-generation and second-generation techniques

	Primarily Exploratory	Primarily Confirmatory
First-Generation Techniques	Cluster Analysis Exploratory Factor Analysis Multidimensional Scaling	Analysis of variance Logistics regression Multiple regression Confirmatory factor analysis
Second-Generation Techniques	Partial least squares structural equation modelling (PLS-SEM)	Covariance-based structured equation modelling (CB-SEM)

Source: Hair *et al.* (2017a)

First-generation techniques are widely criticised for its limitations. For example, Kline (2015) highlights that the first-generation techniques did not clearly distinguish confirmatory and exploratory analysis. Furthermore, the first-generation techniques, such as analysis of variance, has been described with a limitation of only able to analyse one layer of linkages between its variables at a time (Gefen *et al.*, 2000). Therefore, the second-generation techniques such as structural equation modelling are developed (Hair *et al.*, 2017a).

Structural equation modelling (SEM), as explained by Chin (1998) and Ramayah *et al.* (2018), is a technique that allows path modelling, multiple regression, and factor analysis. The main difference between the first-generation and second-generation techniques is the “ability to test multiple regression models or equation simultaneously” (Ramayah *et al.*, 2018, p. 3). As an illustration, the first-generation techniques require scores to be represented for latent variables, using either the mean approach or the summation approach. The second-generation techniques, on the other hand, permit the

inclusion of both latent and observed variables in the analysis; thereby, facilitating the extraction of more information (such as factor loadings and weights of variables) from the variables (Ramayah *et al.*, 2018). As explained by Chin (1998), SEM has a distinct advantage over the first-generation techniques as it provides more flexibility, such as allowing for multiple predictors and criterion variables, constructing latent variables, and more robust statistical test between theory and data. Furthermore, SEM provides a more detailed approach in assessing models. SEM assesses both measurement and structural model, which examine, not only the relationship with the constructs but also the loadings of observed indicators on their respective latent variables (Gefen *et al.*, 2000, Chin, 2010). Besides, the usage of SEM as a statistical analytical tool provides higher levels of predictions than multiple regressions (Hair *et al.*, 2017b). Taken together, this study opted SEM as the primary data analysis method. There are two different variations of SEM, namely partial least squares structural equation modelling (PLS-SEM) and covariance-based structural equation modelling (CB-SEM).

3.6.2 Overview of Structural Equation Modelling

The CB-SEM is used primarily to confirm or to reject theories, while PLS-SEM is used to develop theories in exploratory research (Hair *et al.*, 2017b, Hair *et al.*, 2017a). As highlighted by Chin and Newsted (1999), PLS-SEM and CB-SEM are different in terms of their objectives, assumptions, parameter estimates, distribution requirements, sample size requisites, implications, and the epistemic relationship between the latent variables and their indicators.

Specifically, CB-SEM, which adopts a parametric assumption of a normal distribution, is often preferred when the study focuses on theory testing, theory validation, or comparison of alternate theories (Hair *et al.*, 2017a, Memon *et al.*, 2017b). As explained by Ramayah *et al.* (2018, p. 5), CB-SEM aims to reproduce the “theoretical covariance matrix without focusing on the explained variable”. The focus is to achieve fit indices between the theoretical matrix and empirical covariance matrix. On the other hand, PLS-SEM focuses on estimating all model parameters such that the residual value among the dependent variable, latent variables and indicators are minimised (Hair *et al.*, 2012a; 2014). As a non-parametric method, the focus of PLS-

SEM approach is to provide the best prediction of latent variables, instead of just obtaining a good fit to the data (Gefen *et al.*, 2000).

However, both methods receive criticisms as well. For one, PLS-SEM is criticised for being less rigorous in examining the relationship between latent variables, primarily due to its more relaxed criteria on data normality and sample size restrictions (Hair *et al.*, 2017a). Having said that, PLS-SEM has gained growing attention across different fields, such as strategic management, marketing, and management information system (Sarstedt *et al.*, 2014, Ringle *et al.*, 2018). CB-SEM, on the other hand, has been criticised as inflexible and rigid due to its parametric assumptions that it undertook (Sarstedt *et al.*, 2014). As a result of its rigidity and in the process of achieving the fit indices, Hair *et al.* (2017b) and Memon *et al.* (2017b) spotlight that numerous studies would re-specify the original model. Such re-modifications, according to Hair *et al.* (2017b, p. 16), mean that while studies may have arrived at a model that meets the fit indices, it may not be reflective of the reality. In other words, they “do not correspond well with the true models and tend to be overly simplistic”.

Despite the criticisms, this study considered that both approaches are complementary, rather than competitive. After all, researchers must understand the applications of each approach and deploy the most appropriate method that meets the research objectives, data characteristics, and model setup (Memon *et al.*, 2017a). Thus, this study took reference from Table 12 in determining the appropriateness of PLS-SEM or CB-SEM.

Table 12. Guidelines for selecting PLS-SEM and CB-SEM

Types of analysis	Recommended Method		
	PLS-SEM	CB-SEM	Both
Objective = prediction	x		
Objective = exploratory research or theory development	x		
Objective = explanation only		x	
Objective = explanation and prediction	x		
Measurement philosophy = total variance (composite-based)	x		

Measurement philosophy = common variance only (factor-based)		x
Reflective measurement model specification		x
Formative measurement model specification	x	
Metric data		x
Non-metric data = ordinal and nominal	x	
Smaller sample sizes – $N \leq 100$	x	
Larger sample sizes – $N \geq 100$		x
Binary moderators		x
Continuous moderators	x	
Normally distributed data		x
Non-normally distributed data	x	
Secondary (archival) data	x	
Higher order constructs = two first-order constructs	x	
Higher order constructs = three or more first-order constructs		x
Latent variable scores needed for subsequent analysis	x	

Source: Hair *et al.* (2017b)

3.6.3 Rationale for Adopting PLS-SEM

Following the guidelines in Table 12, PLS-SEM is more applicable for this study based on a number of reasons.

3.6.3.1 Predictive Ability of PLS-SEM

The predictive ability of PLS-SEM was deemed fitting with respect to the objectives of this study. Understanding the relationship between the variables helps in identifying the role of meaningful work and PsyCap as key drivers. The outcomes of this study were expected to extend one's understanding whether the postulations made by TPB, SET, COR theory, and JD-R theory still hold in this context of the study.

3.6.3.2 Formative Measurement Constructs

This study involved constructs of formative measurement perspective. Table 13 listed down the key criteria in determining the measurement perspectives of the constructs. Broadly speaking, a construct would have a formative perspective if the relationships that progress from indicators to the constructs do not correlate with one another.

Using the latent construct of perceive user resources as an illustration, Cenfetelli and Bassellier (2009, p. 690) explained that the observable indicators for this construct are on a Likert scale items measuring perceived time, documentation, among others, and “these indicators are proposed to form the perceived user resources latent construct”. Hence, when these indicators to the latent construct of perceive user resources increase in magnitude, the perceived user resources construct also increases in magnitude. However, an increase in the construct of perceived user resources does not necessarily result in an increase to perceived time or documentation, as would be the case if the measures were reflective (Cenfetelli and Bassellier, 2009).

From that basis, one can also note that an increase in the magnitude of vigour (as one of the dimensions to employee engagement) would increase the magnitude of employee engagement, but an increase in employee engagement does not necessarily result in an increase in vigour, absorption, or dedication, as in the case of reflective construct. The same principle applies to meaningful work and PsyCap.

The constructs of meaningful work, employee engagement and PsyCap has a formative measurement because the first order constructs, that is the respective dimensions, are defining characteristics of the second order constructs. For instance, PsyCap is made up of the dimensions of hope, efficacy, resilience and optimism. Employee engagement is formed by vigour, dedication and absorption. In other words, the dimensions leading to the second order constructs are not interchangeable and dropping any of them would potentially alter the conceptual domain of the second order construct.

Moreover, meaningful work in this study is form up by having a summation score of the three dimensions of positive meaning in work, meaning-making through work, and greater good motivations (Steger *et al.*, 2012). Likewise, PsyCap is regarded as a

higher-order construct, which comprise of four dimensions of hope, efficacy, resilience, and optimism (Luthans *et al.*, 2004). Finally, employee engagement comprises vigour, absorption, and dedication (Schaufeli *et al.*, 2006). Such practices of forming a composite score for meaningful work, PsyCap, and employee engagement were adopted in other numerous studies (e.g. Roberts *et al.*, 2011, Wang *et al.*, 2012, Paek *et al.*, 2015, Fouche *et al.*, 2017). Multicollinearity tests were conducted using variance inflation factors, which reveal that the results were within the threshold, indicating that multicollinearity was not the problem in the analysis (see Section 3.12.1). In other words, the dimensions contributed uniquely to the construct, which was a key characteristic of a formative measurement perspective (Ramayah *et al.*, 2018).

Taken together, this study opined that the dimensionality between the respective dimensions to the constructs of meaningful work, employee engagement, and PsyCap adopted a formative measurement perspective.

3.6.3.3 Reflective-Formative Higher-Order Constructs Model

This study utilised a reflective-formative higher-order constructs model for the constructs of meaningful work, employee engagement, and PsyCap (see Section 3.8.2). The creation of reflective-formative higher-order constructs model is rather common. It was widely adopted across different psychological-related domains, such as in the Big Five personality structure (DeYoung *et al.*, 2002), psychological well-being (Van Dierendonck, 2004), job burnout (Van Dierendonck *et al.*, 2001), and meaning in life (Martela and Steger, 2016).

As part of reflective-formative higher-order constructs model, the existence of the second-order constructs depends on the presence of the first-order constructs, and the indicators measuring the first-order-constructs are the outcomes arising from the dimensions. For example, the latent variable of employee engagement (second-order construct) is formed by three dimensions of vigour, dedication, and absorption (first-order construct). In turn, each dimension of vigour, dedication and absorption, is measured by three indicators, which reflected the effect of the dimensions. The same principles applied to other variables of PsyCap and meaningful work in this study.

3.6.3.4 Latent Variable Scores for Subsequent Analysis

This study used latent variable scores in the analysis. PLS-SEM is designed to develop scores for latent variables. Latent variables, as explained by Hair *et al.* (2018) are not directly observed, but inferred mathematically from observed variables. This is in line with the existing recommendations by different scholars where the latent variable score of the first-order construct are obtained for analysis in the second-order construct (Luthans *et al.*, 2007, Shuck, 2011, Steger *et al.*, 2012, Bailey *et al.*, 2017a, Mackay *et al.*, 2017).

3.6.3.5 Non-normally Distributed Data

At the same time, descriptive analysis (see Section 4.1.4.2) demonstrated that the obtained data were not normally distributed, which justified the selection of PLS-SEM for the analysis. PLS-SEM is a non-parametric method that does not assume that the data are distributed in any particular way. It is widely acknowledged by scholars that the obtained data in social sciences studies would not follow a multivariate normal distribution (Sarstedt *et al.*, 2014, Hair *et al.*, 2017b, Ramayah *et al.*, 2018). This flexibility helps researchers to derive robust results in the presence of outliers (Aguinis *et al.*, 2013). Moreover, the structural model is developed via bootstrapping, which estimates the parameters of a model and their standard errors from the sample without the reference to a theoretical sampling distribution (Ramayah *et al.*, 2018).

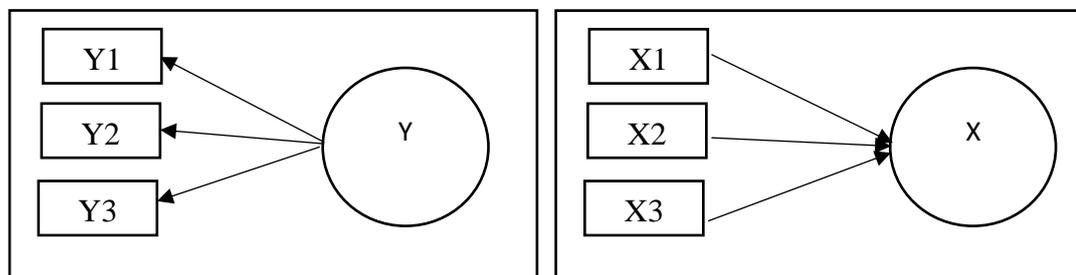
To summarise, PLS-SEM maximises the explained variances of all dependent variables and thus supports predicted-oriented goals (Henseler *et al.*, 2009). This explains why PLS-SEM models are not evaluated by how well the model fits the data, but rather, the models are evaluated by a number of validity benchmarks and statistical procedures (Hair *et al.*, 2017a). Despite the statistical difference, many scholars, including Henseler *et al.* (2009) and Hair *et al.* (2017a), argue that, when the assumptions of CB-SEM, such as distributional requirements, model complexities, and sample size limitations, are violated, PLS-SEM is a reasonable alternative for theory testing (Henseler *et al.*, 2009).

3.7 First-Order Constructs

3.7.1 Overview of Measurement Perspectives

A key distinguishing characteristic of PLS-SEM is the ability to conduct analysis for both reflective and formative constructs (Hair *et al.*, 2017a). As explained by Ramayah *et al.* (2018), the choice of a construct being reflective or formative depends on the nature of the indicators, and it is the key to determine the perspective at the onset. The prerequisite of conducting any form of test on either the measurement model or the structural model is the establishment of the measurement perspective, which essentially determines the causality of the indicators to their latent variables and to the structural model (Memon *et al.*, 2017b). Referring to Figure 4, a reflective construct is where the arrow points from the construct to the indicator; thus, implying that the indicators are the effect of the construct (Ramayah *et al.*, 2018). A formative construct is where the indicators form construct where the direction of the arrow points from the indicators to the construct (Ringle *et al.*, 2018).

Figure 5. Reflective construct and formative construct



Source: Ramayah *et al.* (2018)

Ringle *et al.* (2018, p. 19) propound that although reflective constructs are a norm in the adoption of PLS-SEM for the field of HRM, “formative constructs have become increasingly important in social science research and are well-aligned with certain configurational approaches in HRM research”. It should be noted that any misspecification of measurement model may potentially lead to erroneous inferences even though the model may appear to be adequately fit with data (Jarvis *et al.*, 2003). It is with the above considerations that scholars over the years have developed the following guidelines (see Table 13) in the determination of the measurement perspectives.

Table 13. Guidelines for selecting measurement perspectives

	Reflective Measurement Perspective	Formative Measurement Perspective
Theoretical Considerations	The latent construct is existing	The latent construct is formed.
	Causality is from constructs to indicators.	Causality is from indicators to constructs
	Indicators are consequences of the construct. They are interchangeable, share a common theme and dropping an indicator does not alter the meaning of the construct.	Indicators form the construct. They are non-interchangeable and distinctly different from one another. As such, removing an indicator may have the potential to alter the meaning of the construct.
Empirical Considerations	Indicators have high correlations as they are all dependent and share the same latent variable.	Measures will have positive, negative or no correlation with one another.
	Measures have similar sign and significance of the relationship with antecedents or consequences of the construct	Measures may not have similar signs and significance with antecedents or consequences of the construct.
	Taking measurement error into account at the measured level and error term can be identified.	Taking measurement error into account at the construct level and error term may not be able to estimate.

Source: Borsboom *et al.* (2004), Borsboom *et al.* (2003), Jarvis *et al.* (2003), Coltman *et al.* (2008), Hair *et al.* (2017b)

3.7.2 Rationale for Reflective Measurement Perspectives

In view of the above, this study viewed that a reflective measurement perspective existed between the indicators to the dimensions of meaningful work, dimensions of employee engagement, the dimensions of PsyCap, and the various dimensions of job burnout. From the theoretical perspective, the indicators reflected the effects to the respective dimensions of meaningful work, employee engagement, PsyCap, and job burnout. Table 14 shows several indicators that demonstrated their dimensionality. The detailed instrument with the full complete list of indicators is provided in Appendix 1. The indicators within each construct were revealed to share similar theme

with one another, which suggests their interchangeability, and thus, the removal of any item does not substantially change the meaning of the construct (Jarvis *et al.*, 2003, Coltman *et al.*, 2008).

In addition, the obtained empirical results (see Section 4.3) demonstrated that the indicators measured similar latent variable with high level of internal consistency from both perspectives. Firstly, the obtained results on the composite reliability of the indicators exceeded the threshold value of 0.60, which indicate high level of internal consistency within the latent variable. In addition, the average variances extracted (AVE) scores for the constructs exceeded the threshold of 0.5; thus, indicating that the respective construct captured more than half of the variance in their associated indicators, which again, demonstrating high level of internal consistency. These results were further supported by prior literature, which demonstrated that the indicators shared similar sign and significance as with the different antecedents and consequences. For instance, Chalofsky and Krishna (2009), Hoole and Bonnema (2015), Allan *et al.* (2016a), Allan *et al.* (2016), and Johnson and Jiang (2017) espoused the positive influence of meaningful work in the relationship between enhancing work engagement and reducing work stress. Similarly, a study by Joo *et al.* (2016) on the Korean workforce concluded that employees with higher PsyCap are more engaged in their work compared to those of lower PsyCap.

With that, the obtained empirical results gravitated towards a reflective measurement perspective. Firstly, the indicators are the consequences of the dimensions to the constructs of meaningful work, PsyCap, employee engagement, and job burnout in this study. Secondly, the indicators that are grouped under the same dimension (latent variable) shared a high level of internal consistency, which implies that they shared a common theme and are interchangeable. Thus, the removal of any indicator would not alter the meaning of the construct. Thirdly, past studies demonstrated that the indicators shared similar sign and significance where reflective measurement perspective was adopted for the constructs (e.g. Spector, 1992, Bearden and Netemeyer, 1999, Netemeyer *et al.*, 2003).

Table 14. Extracted sample indicators for respective constructs

Constructs	Dimensions	Description of Indicators
Meaningful work	Positive meaning in work	I have found a meaningful career. I understand how my work contributes to my life meaning. I have a good sense of what makes my job meaningful.
Psychological Capital	Efficacy	I feel confident analysing a long-term problem to find a solution. I feel confident helping to set targets/goals in my work area. I feel confident presenting information to a group of colleagues.
Employee Engagement	Vigour	At my work, I feel bursting with energy. At my job, I feel strong and vigorous. When I get up in the morning, I feel like going to work.
Job Burnout	Emotional Exhaustion	I feel emotionally drained from my work. Working with people all day is really a strain on me. I feel frustrated by my job.

Source: Maslach *et al.* (1996), Schaufeli *et al.* (2006), Luthans *et al.* (2007), Steger *et al.* (2012)

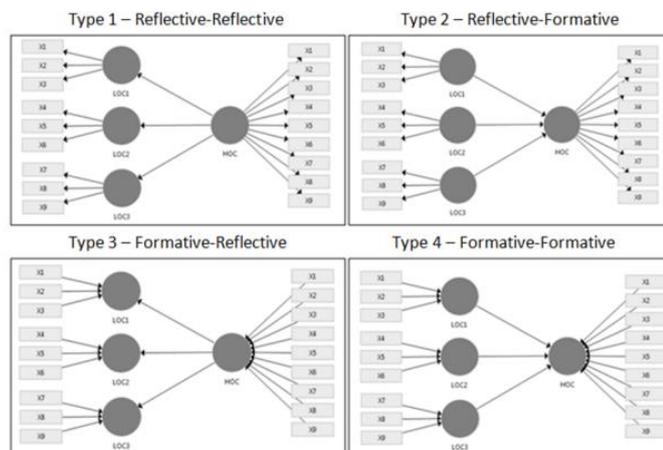
3.8 Second-Order Constructs

Hierarchical components models (HCMs) are introduced for complex research constructs (Hair *et al.*, 2017a). Generally, most HCMs have two level of constructs, which are known as a lower or first-order construct and a higher or second-order construct (Becker *et al.*, 2012). For this study, the constructs of meaningful work, employee engagement, and PsyCap were modelled as first-order construct and second-order construct, respectively. Hair *et al.* (2018) identified that the crux of the issue between the first-order construct and the second-order construct is identifying the

relationship it has with one another, especially when the second-order construct is a general concept that is either represented (i.e. reflective) or constituted (i.e. formative) by its dimensions or first-order constructs. In other words, the second-order constructs are not directly related to any indicators. Rather, they are connected to the first-order constructs and are measured by the indicators of the first-order constructs.

As highlighted by Chen *et al.* (2005) and Tehseen *et al.* (2017), there are several advantages of having a second-order construct. Firstly, it puts a structure within the model that allows a more parsimonious way of reporting the relationships among the constructs (Diamantopoulos and Siguaaw, 2006). Furthermore, the second-order construct simplifies the interpretation of complex measurement structures (Tehseen *et al.*, 2017). The practice of having a second-order construct was widely adopted across different psychological-related domains, such as the Big Five personality structure (DeYoung *et al.*, 2002), psychological well-being (Van Dierendonck, 2004), job burnout (Van Dierendonck *et al.*, 2001), and meaning in life (Martela and Steger, 2016). Chen *et al.* (2005, p. 471) also added that the second-order construct “represents the hypothesis that these seemingly distinct, but related constructs can be accounted for by one or more common underlying higher order constructs”. In other words, the second-order constructs can be deployed when (a) the lower-order constructs display correlation with one another and (b) there is a higher order factor that can be postulated to represent the relationship with the lower-order constructs (Chen *et al.*, 2005). There are four types of HCMs (see Figure 5).

Figure 6. Types of HCMs



Source: Ramayah *et al.* (2018)

3.8.1 Types of Hierarchical Components Models

Firstly, the reflective-reflective perspective posits a series of first-order latent factors with reflective indicators, and at the same time, these first-order latent variables are reflective of the second-order construct themselves (Jarvis *et al.*, 2003). However, this form of construct has received criticism. Lee and Cadogan (2013) opined that a reflective-reflective perspective does not exist as it could be unidimensional since the first-order constructs and the corresponding indicators are all interchangeable. As such, Becker *et al.* (2012, p. 364) indicated that it was not necessary “to model the lower-order constructs as separate constructs because they should be identical according to a reflective logic” (p. 364).

The second form of construct is the reflective-formative perspective. As explained by Hair *et al.* (2018), the first-order constructs form the second-order constructs, but they might not necessarily share a common cause. In other words, while the first-order constructs may have their own respective discriminant validity, they might form a general concept that fully mediates the influence on subsequent endogenous variables (Becker *et al.*, 2012).

Thirdly, the formative-reflective perspective explains that the first-order constructs are built on a set of different indicators, and the second-order constructs represent “part of the different first-order constructs” (Hair *et al.*, 2018, p. 46). Having such perspective allows certain studies to acquire a broader coverage of the domain, which may have been insufficient by having a stand-alone first-order construct to address (Becker *et al.*, 2012). Additionally, using such perspective in empirical studies can be rather rare (Jarvis *et al.*, 2003).

Lastly, the formative-formative perspective reflects that it is “useful to structure a complex formative construct with many indicators into several sub-constructs” (Hair *et al.*, 2018, p. 46). Unlike others, a formative-formative perspective reflects dimensions that represent different facets of the overall domain, but they do not necessarily correlate (Jarvis *et al.*, 2003). Hair *et al.* (2018) cited an example that this form of HCM is suitable for firm performance as a higher-order construct with different aspects of performance by different business units as their first-order constructs.

3.8.2 Rationale for Reflective-Formative Perspective

In view of the above, this study adopted a reflective-formative perspective for meaningful work, PsyCap, and employee engagement based on the following reasons. Firstly, the first-order constructs between the indicators and the dimensions of the constructs are reflective in nature as the indicators reflect the outcomes of the various dimensions (see Section 3.7.2).

Secondly, considering the second-order constructs between the latent variable and the various dimensions of meaningful work, PsyCap and employee engagement, a formative perspective was adopted as the first-order construct were summed to form a composite score (Steger *et al.*, 2012, Bailey *et al.*, 2015, Luthans and Youssef-Morgan, 2017). In other words, the existence of the second-order constructs was determined based on the first-order constructs. Without the first-order constructs, there is no basis to establish the second-order construct. For example, meaningful work was obtained through the summation of the scores from the first-order constructs of meaning-making through work, positive meaning in work, and greater good motivations (Steger *et al.*, 2012). Without either one, there would be no basis to obtain the overall score of meaningful work. Such practices of forming a composite score for meaningful work, PsyCap, and employee engagement had been adopted in several studies (e.g. Roberts *et al.*, 2011, Wang *et al.*, 2012, Paek *et al.*, 2015, Fouche *et al.*, 2017). Additional justifications are provided in Section 3.6.3.2 on the rationale of adopting formative measurement perspective.

Hence, this study adopted the positioning that meaningful work, employee engagement, and PsyCap were involved in the first-order and second-order constructs. With the indicators to the first-order constructs as reflective and the relationship between the first-order constructs to the second-order constructs as formative, this study employed a “reflective-formative” approach for meaningful work, employee engagement, and PsyCap.

3.8.3 Job Burnout as a Multidimensional Construct

There are diverse views on whether job burnout should be treated as a unidimensional or a multidimensional construct (see Section 2.5.3). Job burnout is akin to other forms

of psychology domains where it is common to see them being treated as unidimensional despite having several dimensions (Brenninkmeijer and VanYperen, 2003). A unidimensional approach simplifies the results and analysis, especially when the focus of the study is not to understand the complex effects of specific dimensions of job burnout, but more to explore the effect of job burnout as a whole (Brenninkmeijer and VanYperen, 2003).

However, Koesk and Koesk (1989), Maslach (1993), and Van Dierendonck *et al.* (2001) disagree on treating job burnout as a unidimensional construct as this could result in serious loss of information, especially when the effect of each job burnout possibly represents separate phase of the process. This point is further supported by Maslach *et al.* (2001) where they mentioned that each dimension of job burnout is unique to one another and it is a process that one would go through when experiencing job burnout.

Empirically, it is proven that interventions to alleviate job burnout did not have a universal effect on all the dimensions (e.g. Roncalli and Byrne, 2016, Bakker *et al.*, 2000). Although Fairlie (2011) showed that the presence of meaningful work alleviated job burnout, it did not provide additional insights on how meaningful work interacted with the dimensions of job burnout or how PsyCap moderated or mediated the relationship. In light of the above, it provided reasonable grounds for this study to explore in greater depth on the influence of meaningful work on the respective dimensions of job burnout. Hence, job burnout in this study was treated as a multidimensional construct where the measurement perspective between the construct (of depersonalisation, emotional exhaustion, and reduced personal accomplishment) and the indicators would be reflective.

3.9 Process of Evaluating Second-Order Constructs

As highlighted by Hair *et al.* (2013), there are limited studies on the treatment, adoption, and reporting of HCM. However, Becker *et al.* (2012) provided guidelines on analysing and reporting of HCM using PLS-SEM. After deciding on the measurement perspective, the subsequent step should be to decide on the approach to

evaluate the hierarchical latent variables. Three approaches have been proposed, namely repeated indicators approach, the two-stage approach, and the hybrid approach.

3.9.1 Repeated Indicators Approach

In the repeated indicators approach, all indicators are to be used twice. In other words, the same set of indicators for the first-order constructs are repeated on the second-order constructs (Hair *et al.*, 2018). For example, if the second-order construct is made up of two first-order constructs, with three indicators each, all six indicators from the first-order constructs are reflected as indicators for the second-order construct. As indicated by Becker *et al.* (2012, p. 365), the key advantage of this approach lies in its ability to “estimate all constructs simultaneously instead of estimating lower-order and higher-order dimensions separately”. While this approach is a more popular approach in performing HCM analysis, repeated indicators approach may not be as effective (Hair *et al.*, 2018).

Firstly, the relationships between the first-order construct and second-order constructs could be biased if there are different number of indicators assigned for the various first-order constructs (Becker *et al.*, 2012). Hair *et al.* (2018) cited an illustration of two first-order constructs with one having eight indicators and the other one with two indicators. Under this approach, all 10 indicators would be repeated on the second-order construct. However, due to the non-even distribution of indicators, a stronger relationship between the second-order construct and the first-order construct that have eight indicators is demonstrated. In order to reduce such model-induced bias, it is recommended to have equal or at least comparable indicators across the first-order constructs (Hair *et al.*, 2018).

Secondly, the use of reflective-formative construct may render this approach as non-effective, as the second-order construct would have antecedent latent variable(s), other than the first-order constructs (Hair *et al.*, 2018). As explained by Ringle *et al.* (2012), almost all the variances of a second-order construct would be explained by its first-order constructs, and therefore, any additional path coefficients (other than the first-order constructs) to the second-order construct would have a small variance and be insignificant. This leads to accepting a false null hypothesis (Hair *et al.*, 2018). Nevertheless, this flaw can be addressed using the two-stage approach.

3.9.2 Two-Stage Approach

Under the two-stage approach, the variable scores for the first-order construct and the second-order construct are determined separately. The first stage of the two-stage approach commences with the assessment on the appropriateness of the measurement model for the first-order constructs. It would then use these first-order construct scores as manifest variables for the second-order constructs in the second-stage analysis where the measurement model of the formative measurement perspectives would be conducted. Tests, such as collinearity and significance, and relevance of indicator weights are performed at this point, followed by the assessment of the structural model of the formative second-order construct where collinearity, significance, and relevance of path coefficients and predictive relevance are assessed.

3.9.3 Hybrid Approach

Similar to the repeated indicator approach, the hybrid approach uses the indicators of the first-order construct in the analysis where the indicators are only used once (Becker *et al.*, 2012). This approach would address the constraint of the repeated indicators approach for causing artificially correlated residuals. In order to achieve that, the hybrid approach operates in such a way that half of the indicators are randomly used to estimate the first-order construct with the other half estimating the second-order constructs (Becker *et al.*, 2012). However, this leads to “reduced reliability of measures having only half the number of indicators” (Becker *et al.*, 2012, p. 366).

3.9.4 Rationale for Two-Stage Approach

Essentially, it is pertinent to carefully consider the choice of approach to avoid erroneous modelling that possibly leads to bias (Becker *et al.*, 2012). Considering the above, this study adopted the two-stage approach as it fitted the operationalisation of the constructs. The perspective of the proposed model in this study reflected reflective-formative constructs, in which Ringle *et al.* (2012) suggested the use of the two-stage approach to overcome the limitations of repeated indicators approach. Besides that, the two-stage approach served to estimate a more parsimonious model on the higher-level analysis without needing the lower-order constructs (Becker *et al.*, 2012). Therefore, the scores obtained for the first-order constructs served as indicators

for the second-order constructs in the second-stage analysis (Becker *et al.*, 2012). As such, the technique of having a two-stage approach prevented the case of multicollinearity among indicators (Van Riel *et al.*, 2017).

3.10 Assessment of Reflective Measurement Model

This section introduces the key tests and the acceptable ranges of the different tests for the measurement model and structural model, under the reflective measurement perspective.

3.10.1 Internal Consistency

The first criterion to be evaluated in this study was the internal consistency reliability. Traditionally, Cronbach's alpha has been adopted as the benchmark test for internal consistency (Hair *et al.*, 2017a). The recommended threshold by Nunnally (1978) is 0.70. However, Cronbach's alpha of 0.6 is also considered satisfactory (Churchill, 1979, Nunnally and Bernstein, 1994) and was widely reported in numerous studies across different fields, such as medical (Licker *et al.*, 2017), information technology (Ahmad and Tahir, 2017), consumer behaviour (Sharma and Sharma, 2017), organisation behaviour (Ahmad *et al.*, 2017, Alonso-Almeida *et al.*, 2017), and supply chain management (Su *et al.*, 2008). However, this approach received several criticisms. Firstly, the Cronbach's alpha assumes that all factors have an equal loading, which is inappropriate for SEM (Ramayah *et al.*, 2018). Secondly, the Cronbach's alpha is influenced by the number of items where it tends to underestimate the internal consistency reliability (Ramayah *et al.*, 2018).

Due to these criticisms, the approach of using composite reliability values has been highly recommended (Hair *et al.*, 2011). Unlike Cronbach's alpha, composite reliability considers the loadings of indicators (Hair *et al.*, 2011). The composite reliability value varies between 0 and 1, with higher value indicates a higher level of reliability. Composite reliability value of between 0.60 to 0.70 is deemed acceptable in exploratory research, while in more advanced stages of research, a value between 0.70 and 0.90 is regarded satisfactory (Hair *et al.*, 2012b). In view of the above, this study opted to report the results of composite reliability with a cut-off point of 0.70 which is advocated by Ringle *et al.* (2018).

3.10.2 Convergent Validity

Essentially, convergent validity is the assessment of correlation among the measures within the same construct (Hair *et al.*, 2017a). In determining the convergent validity of the construct, the internal consistency, the indicator reliability, and the AVE were analysed in this study.

3.10.2.1 Indicator Reliability

The objective of conducting the indicator reliability assessment is to ensure that each indicator within the construct is consistent on what it intends to measure (Ramayah *et al.*, 2018). The general rule of thumb is that the obtained value should be higher than the nominal threshold of 0.708, which means that the individual construct can explain at least 50% of the variance in each indicator (Hair *et al.*, 2017a). However, as for social sciences studies, there may be occurrences where the researchers obtain indicator loadings of lesser than 0.708 (Hulland, 1999). For such cases, items with an indicator loading of less than 0.40 should be removed as it offers little explanation to the model and increases the risk of bias (Nunnally and Bernstein, 1994, Hulland, 1999). Indicators with loadings of between 0.40 and 0.708 should be treated with consideration. It can be accepted in the path model if the composite reliability and AVE of the associated construct are higher than the nominal threshold of 0.70 and 0.50, respectively (Hair *et al.*, 2011, Hair *et al.*, 2017b). In other words, indicators with loadings of between 0.40 to 0.70 should only be deleted if the removal helps to improve the composite reliability and AVE above the threshold (Hair, Ringle and Sarstedt, 2011).

3.10.2.2 Average Variance Extracted

Average variance extracted (AVE) is the “grand mean value of the squared loadings of the indicators associated with the construct” (Hair *et al.*, 2017a, p. 113). In other words, it is the extent of a latent construct being accounted by the variance of its indicators (Ramayah *et al.*, 2018). Mathematically, AVE can be expressed as the sum of the squared loadings divided by the number of indicators (Hair *et al.*, 2017a), and it should represent at least 50% of the variance of its indicators (Hair *et al.*, 2011). With that, the threshold of $AVE \geq 0.5$ was adopted in this study.

3.10.3 Discriminant Validity

The next step in assessing the measurement model was testing the discriminant validity. Discriminant validity is a test at the construct level to examine if the constructs are distinctively unique from each other and addresses the phenomena that are not represented by other constructs (Hair *et al.*, 2017a). Discriminant validity can be tested via cross-loading test, the Fornell-Larcker criterion test, or the heterotrait-monotrait criterion test (HTMT).

According to Hair *et al.* (2017a), discriminatory validity of the constructs can be assessed at a higher-order provided the measurement theory supports this step (e.g. Kocyigit and Ringle, 2011). On this note, prior research on the literature provided adequate theoretical support regarding these indicators' relevance in holistically capturing employee engagement, PsyCap, and meaningful work (Schaufeli *et al.*, 2006, Luthans, 2012, Steger *et al.*, 2012) at a higher-order. It is on this basis that this study has conceptualised employee engagement, PsyCap and meaningful work of having first and second order constructs. Moreover, this conceptualisation aligns with the focus of this thesis of assessing if meaningful work has a significant on enhancing social workers' engagement level, with PsyCap as the mediator and moderator. It is for the above reasons that discriminant validity conducted on second order constructs are reported instead.

3.10.3.1 Cross-Loading Criterion

The cross-loadings reflect the discriminant validity of the indicators. The litmus test is where an indicator's outer loading on the associated construct should be greater than any of its cross-loadings on other constructs (Ramayah *et al.*, 2018). In other words, it should correlate weakly to the rest of the constructs other than the one it is associated with (Gefen and Straub, 2005, Hair *et al.*, 2017a). By that, Ramayah *et al.* (2018) clarified that the difference of loadings across the latent variables should be 0.1 and more.

3.10.3.2 Fornell-Larcker Criterion

The second test for discriminant validity is the Fornell–Larcker criterion, which claims that a latent construct should display higher variances with the associated indicators,

rather than with indicators of other latent constructs (Ringle *et al.*, 2018). Mathematically, the square root of AVE for one construct should not be lesser than other latent constructs (Hair *et al.*, 2011).

3.10.3.3 Heterotrait-Monotrait Ratio of Correlations (HTMT)

While the cross-loadings and the Fornell–Larcker criterion are common tests for discriminant validity, both tests may not be reliable in detecting discriminant validity issues (Henseler *et al.*, 2015, Hair *et al.*, 2017a). Henseler *et al.* (2015) reported that, despite the popularity of cross-loadings and Fornell-Larcker criterion, the simulation tests “confirmed that both the Fornell-Larcker criterion and the assessment of the cross-loadings are insufficiently sensitive to detect discriminant validity problems” (p. 120). As such, the HTMT is proposed as the alternative. A Monte Carlo simulation revealed that the HTMT has higher specificity and sensitivity rate of between 97% and 99% in assessing discriminant validity, as compared to cross-loading (0%) and Fornell-Larcker criterion (20.82%) (Henseler *et al.*, 2015, Hair *et al.*, 2017a, Ramayah *et al.*, 2018).

In view of the HTMT’s superiority in being a discriminant criterion to ensure the distinctiveness of every construct, “one should rely on this criterion especially in light of the limitations of cross-loadings and Fornell-Larcker criterion” (Hair *et al.*, 2017a, p. 120). Furthermore, Voorhees *et al.* (2015, p. 120) added that “HTMT (with a cut-off value of 0.85) technique is recommended for detecting discriminant validity violations, and the HTMT_{0.85} technique performed best overall”.

Based on these reasons, the approach of using cross-loadings or Fornell-Larcker criterion is not applied in recent studies, as these studies opted for HTMT ratio of correlations instead as the sole assessment for discriminant validity (e.g. Matthews, 2017, Ramayah *et al.*, 2017, Andrei *et al.*, 2017, Ogbeibu *et al.*, 2018, Lee and Hallak, 2018, Yap *et al.*, 2018).

There are two approaches of HTMT. The first approach is to assess the HTMT criterion for “all pairs of constructs in a matrix format” (Hair *et al.*, 2017a, p. 119). The acceptable threshold of HTMT criterion is set at either 0.85 (Hair *et al.*, 2017a) or 0.90 (Henseler *et al.*, 2015, Gold *et al.*, 2015), depending on the degree of similarity among the constructs. The second approach of using HTMT is by adopting a statistical

test that involves the construction of confidence interval via the bootstrapping method (Henseler *et al.*, 2015). As described by Hair *et al.* (2017a), bootstrapping means randomly drawing of subsamples from the original set of data to derive a bootstrap confidence interval where the true HTMT population will fall (Hair *et al.*, 2017a). Any confidence interval of the construct that contains the value of one renders a lack of discriminant validity (Ramayah *et al.*, 2018).

In view of the above, this study adopted HTMT as the sole criterion to assess discriminatory validity of the second-order constructs with the threshold at the more conservative value of 0.85, as well as adopting the bootstrapping confidence interval method to further ascertain the discriminant validity of the constructs.

3.11 Assessment of Formative Measurement Model

Formative measurement model assumes that the construct is formed by means of a linear combination (Hair *et al.*, 2017a). Multiple literature expounded that composite indicators, which are combined in a linear way to form a variate, fulfill the definition of having a formative perspective (Bollen and Bauldry, 2011, Bollen, 2011). After all, composite indicators in social sciences are often being used as a proxy measurement for a theoretical concept (Rigdon, 2014). From this standpoint, the current model where the outcome of the measurement for the constructs of meaningful work, PsyCap, and employee engagement is derived from its various dimensions, which meet the definition of having a formative measurement perspective between its first-order construct and the second-order constructs.

In Hair *et al.*, (2017a), the first test for formative measurement construct is to perform convergent analysis. However, what was presented in Hair *et al.* (2017) is applicable for first-order construct (Ringle, 2017). In a reply to a question on the performance of convergent analysis for constructs having reflective-formative measurement perspective, Ringle (2017) mentioned that since second order constructs usually are multidimensional, convergent validity is not required as it will not work on formative second order constructs. This could be seen in some of the works such as Duarte and Amaro (2018) and Ting *et al.* (2015) where the authors did not report convergent validity for formative second order constructs. In fact, Hair *et al.*, (2017a) emphasised that researchers should focus on establishing content validity before empirically

evaluating formatively measured constructs. This would ensure that the formative indicators capture all (or at least major) facets of the construct. Therefore, researchers should address the requirement for content specification by clearly specify the domain of the content the indicators are intended to measure. Failure to consider all major aspects of the construct entails an exclusion of important parts of the construct itself. In this context, experts assessment helps safeguard that proper sets of indicators that have been used. In addition to that, researchers should conduct a thorough literature review and ensure a reasonable theoretical grounding when developing measures. On this note, this study has adopted well-established instruments that have been widely used and validated in numerous literatures (see Section 3.5.1). In addition, the set of indicators have been pre-tested by a group of social workers prior to the actual data collection to ensure that the instrument was designed to accurately reflect the intended meaning and avoiding any misinterpretation among the respondents (see Section 3.5.2).

Subsequent to this and following the recommendations by Hair *et al.* (2017a), this study conducted two tests for formative constructs, namely identification of collinearity issues, and assessing weight significance.

3.11.1 Identification of Collinearity Issues

The step for assessing formative measurement model in this study is the assessment of collinearity issue for each item. Also known as outer variance inflation factor (VIF), the presence of multicollinearity within the formative constructs could be problematic as it causes false interpretation of results and make misleading conclusions (Hair *et al.*, 2017a). For PLS-SEM, constructs having high collinearity can be problematic on two fronts. As elaborated by Hair *et al.* (2017a), high collinearity “reduces the ability to demonstrate that the weights are significantly different from zero” (p. 142). This is important in the assessment of the significance and relevance of formative indicators. Secondly, high collinearity may result in incorrect estimation of weights and reversal in their signs.

The acceptable threshold of not displaying collinearity issue is to have VIF of less than five (Hair *et al.*, 2011). Any presence of multicollinearity can be addressed by removing the indicators (provided the content of the construct is not compromised from a theoretical perspective), constructing higher-order constructs by combining

indicators, or if all else fail, disregard the entire formative measurement construct (Hair *et al.*, 2014).

3.11.2 Significance and Relevance of Outer Weights

The last assessment for formative measurement model for this study was determining the significance and relevance of outer weights. As described in Hair *et al.* (2010), the outer weight is the result of multiple regressions, which expresses its relative contribution or importance in forming the construct. In order to determine the contribution, one has to test if the outer weights are significantly different from zero by using a bootstrapping method (Hair *et al.*, 2017a).

The next question is the treatment given to a non-significant formative indicator. Hair *et al.* (2017a) cautioned that one should refer to the indicator's outer loading and its theoretical relevance when deciding on whether to retain or to remove the indicators with non-significant weights. In other words, even when an indicator has an outer weight that is not significant, it should be retained if the outer loading of the said indicator exceeds 0.5 and there is a theoretical rationale to retain the indicator. On the other hand, if the outer loading is lower than 0.10 and not significant, it can be removed as it does not provide any empirical justification to retain it within the model (Cenfetelli and Bassellier, 2009).

3.12 Assessment of Formative Structural Model

The PLS-SEM assessment of structural model involves assessing the predicting ability of the model on its dependent variable. In order to assess a formative structural model, it assesses multicollinearity, followed by the significance and relevance of the relationship within the structural model as well as the analysis of the coefficients of determination (R^2 value), the f^2 sizes, and the predictive relevance (Q^2).

3.12.1 Collinearity Issues

Similarly, the collinearity issues must be addressed in the assessment of formative structural model in terms of vertical collinearity and lateral collinearity (Kock and Lynn, 2012). The earlier assessment of collinearity at the measurement model (see Section 3.11.2) targeted at identifying vertical collinearity (Ramayah *et al.*, 2018). As

mentioned earlier, collinearity is usually assessed in models with multiple variables as a possible predictor-predictor redundancy phenomenon. This is what is referred to as a vertical, or “classic”, collinearity (Kock and Lynn, 2012). However, when there is a hypothesised relationship between two latent variables, lateral collinearity must be examined. Lateral collinearity would manifest when two hypothesised related variables are measuring the same construct. In a causal model, the two variables would be shown as being linked by an arrow, with one pointing at the other. Lateral collinearity can result in a bias results in a “stealth” manner, as it can be “hidden” by the appearance of a strong causal effect in the model (Kock and Lynn, 2012). Considering that researchers often pay more attention to such causal effects, as it provides a definitive support to the phenomenon that they are investigating, the presence of lateral collinearity, which is “masked” in the model would potentially mislead the results as well as the conclusions drawn (Kock and Lynn, 2012). It is on this note that each set of predictors must be assessed for collinearity, with the same cut-off value of VIF of five and below (Hair *et al.*, 2011).

3.12.2 Significance and Relevance of Relationship

Given that PLS-SEM is a non-parametric analysis that does not take into consideration data distribution, bootstrapping technique is used in analysing the significance and relevance of relationship of the structural model (Ramayah *et al.*, 2018). Streukens and Leroi-Werelds (2016, p. 619) explain that bootstrapping offers three main advantages to researchers. Firstly, it is “transparent and requires little knowledge of mathematics or probability theory” (p. 619). Secondly, the statistical assumptions for bootstrapping technique are generally non-restrictive. Thirdly, bootstrapping technique is “widely accepted and would offer a solution to situations where conventional methods might not be able to provide one” (Streukens and Leroi-Werelds, 2016, p. 619).

Based on the bootstrapping results, one would get access to path coefficients that range between -1 and +1, with a negative coefficient signifies a strong, negative relationship and a positive coefficient signifies a strong, positive relationship (Ramayah *et al.*, 2018). According to Hair *et al.* (2017a), there are three ways in assessing the significance of relationship. Firstly, using *t*-value where the relationship is concluded as significant if the *t*-value exceeds the pre-determined critical value. Secondly, using

p-value in which Hair *et al.* (2017a, p. 196) described it as the probability of “erroneously rejecting a true null hypothesis”. In other words, *p*-value justifies whether to reject or to accept the null hypothesis. Thirdly, the bootstrap confidence interval, in which Hair *et al.* (2017a) described that a relationship would be interpreted as significant if the confidence interval does not include the value of zero or vice versa.

Many agreed that *t*-value and *p*-value are the more common ones being reported on the testing of the relationship among latent variables (Hair *et al.*, 2017a). Nevertheless, the bootstrap confidence interval has also gained growing popularity as a reporting tool. As Streukens and Leroi-Werelds (2016) mentioned, it has a reduced chance of misinterpretations given the way it is being constructed. As explained by Hair *et al.* (2017a, p. 155), the bootstrap confidence interval is derived from standard errors that provide a range in which the “true population would fall within it at a certain level of confidence”. The bootstrap confidence interval provides a glimpse on the stability of the estimate. The shorter the range of confidence interval, the more stable the coefficient estimate, and vice versa. In view of the above, this study reported the results of *t*-value, *p*-value, and bootstrap confidence interval in assessing the significance of the relationship.

3.12.3 Coefficients of Determination (R² value)

The next test of a structural model for this study is the evaluation of the coefficient of determination (R²), which is the measurement of the model’s predictive power that ranges between 0 and 1 (Hair *et al.*, 2017a). It could also be described as the “combined effect of exogenous variables on endogenous variables” (Ramayah *et al.*, 2018, p. 145). In other words, it could be explained that R² effect size is the amount of variances that exogenous constructs are accounted for in the endogenous constructs (Ramayah *et al.*, 2018). Table 15 shows the different rules of thumbs in assessing R².

Table 15. Determination of R² effect sizes

Source	Description of Effect Sizes
Cohen (1988)	Substantial (0.26); Moderate (0.13); Weak (0.02)
Chin (1998)	Substantial (0.67); Moderate (0.33); Weak (0.19)

As highlighted by Ramayah *et al.* (2018), the decision on adopting which guidelines in assessing R^2 depends on the discipline or field of study. Ringle *et al.* (2018) recommended researchers to adopt the guidelines by Hair *et al.* (2017a) for research on HRM. It is observed that much of the current works, such as Tehseen *et al.* (2017), adopted similar rule of thumbs with regards to an acceptable R^2 . With that, this study adopted the guidelines by Hair *et al.* (2017a) on the acceptable range where R^2 of 0.75 implies substantial effect; R^2 of 0.50 implies moderate effect; R^2 of 0.25 implies weak effect.

3.12.4 f^2 Effect Size

Also known as the Cohen's f^2 , it is used to evaluate the effect size of a predictor construct (Hair *et al.*, 2017a). It is derived by comparing the R^2 changes when a specific exogenous construct is removed from the model. In other words, it explains how the impact of an exogenous construct on endogenous construct in terms of R^2 (Hair *et al.*, 2017a). The interpretation would be based on the following threshold values of 0.02 (small effect), 0.15 (medium effect), and 0.35 (large effect) (Hair *et al.*, 2017a).

3.12.5 Stone-Geisser's Q^2 Value

Stone-Geisser's Q^2 value is an additional measurement to assess the predictive ability of a construct (Hair *et al.*, 2017a). Using the blindfolding technique, Q^2 omits data from the model at every n th data point in the dependent variable indicators and predicts the parameters with the remaining data (Ramayah *et al.*, 2018). This procedure applies to endogenous variables with a reflective measurement perspective or endogenous variables with a single item construct. The original values are compared with the predicted values, and the model can be described as having a high predictive accuracy if the prediction is close to the original value (Ramayah *et al.*, 2018). The benchmark for Q^2 value is to be larger than zero for a specific dependent variable, which indicates that the predictive ability of the model is relevant for that endogenous construct (Hair *et al.*, 2017a).

3.12.6 q^2 Effect Size

The final assessment for the structural model is assessing the q^2 effect size. It is a technique that compares the comparative predictive significance of a predictor variable on a dependent variable. Unlike the Stone-Geisser's Q^2 value, which estimates the “the predictive significance of the SEM model for every endogenous construct” (Rajput and Talan, 2017), q^2 effect size measures the predictive significance of certain exogenous variable on an endogenous variable (Hair *et al.*, 2017a; Rajput and Talan, 2017). As SmartPLS software does not provide the scores, q^2 effect size can only be obtained through a manual computation based on the following equation:

$$q^2 = \frac{Q_{\text{incl}}^2 - Q_{\text{excl}}^2}{1 - Q_{\text{incl}}^2}$$

where one refers to Q^2 score that includes a specific predecessor, as denoted by “incl” in its subscript and the other as one that does not has a specific predecessor as denoted by “excl” in its subscript (Hair *et al.*, 2017a).

3.13 Mediation Analysis

Mediation is a process in which the presence of a mediating variable would become accountable to a certain extent for the relationship between the exogenous and endogenous variables (Preacher and Hayes, 2004). Therefore, this section provides an overview on the different perspectives and mediation approaches that have appeared and evolved over the years.

The most common and widely recognised approach for mediation is Baron and Kenny (1986) approach that achieves more than 70,000 scholarly citations (Memon *et al.*, 2018). However, it is also heavily criticised for several limitations, such as having low statistical power (Fritz and Mackinnon (2007), as well as failure to quantify the mediation effect and doubts regarding the need for the testing of a direct effect between the independent (X) and dependent (Y) variable without conceptual justifications (Aguinis *et al.*, 2017).

As the presence of mediation is essentially inferred from a direct relationship, Holmbeck (2002) pointed out the possibility of observing a change in direction on the $X \rightarrow Y$ path via an introduction of a mediator. This would influence the researcher's conclusion and consequently lead to Type I or Type II error. Besides, such requirement could prove to be problematic in complex SEMs as different types of mediation could occur within one model. Hence, it is possible that the direct effect on $X \rightarrow Y$ path is not significant even if mediation does exist, therefore indicating misleading direction as a prerequisite for mediation analysis (Nitzl *et al.*, 2016). This premise underlined scholarly views from Rungtusanatham *et al.* (2014) and Nitzl *et al.* (2016) regarding performing mediation using Baron and Kenny (1986) approach that might potentially cause bias in the results.

In contrast, the Sobel test is criticised from two perspectives. First, its deployment hinged upon the establishment of mediation using Baron and Kenny (1986) approach (Hayes, 2009), serving as a supplement rather than an independent analysis. Therefore, it works under the assumption of a normal distribution for the indirect effect (Hayes, 2009). However, most of the distribution, especially for social sciences studies, are often non-symmetrical with skewness and being kurtotic in nature (Ringle *et al.*, 2018). Hence, Hayes (2009) cautioned against using “tests that assumed the normality of the sampling distribution when competing tests were available that did not make this assumption and were known to be more powerful than the Sobel test” (p. 411).

Such differences in opinions resulted in the development of the Preacher and Hayes (2008) and Preacher and Hayes (2004) approach so as to address the gaps found in the earlier approaches. The approach analyse the indirect effect through bootstrapping method, yielding a bias-corrected confidence interval (Hayes, 2009). This approach was particularly advantageous due to the bootstrapping method being a non-parametric resampling procedure that address the shortfalls of the Sobel test (Hayes, 2009). Secondly, Memon *et al.* (2018) also highlights the bias-corrected confidence interval method as a “powerful tool in testing for mediation” (p. vi).

Extending the discussions further, PLS-SEM builds onto Zhao *et al.*, (2010) mediation types , where mediation results can be further characterized into two non-mediation types and three mediation types. These are (1) direct-only nonmediation where the direct effect is significant, but not the insignificant effect; (2) no-effect nonmediation

where both direct and indirect effect are insignificant; (3) complementary mediation where both indirect and direct relationships are significant and in the same direction; (4) competitive mediation which is similar to complementary mediation except that it points in opposite direction; and (5) indirect-only mediation where the indirect effect is significant but not the direct effect. Given the advances in mediation theory and that PLS-SEM is the methodology deployed, this study naturally adopted Zhao *et al.*, (2010) in analysing the mediation results.

3.14 Moderation Analysis

A moderator could be typically described as a third variable possessing the capacity to influence the strength and direction of a relationship between the independent and dependent variable (Holmbeck, 2002). As per Baron and Kenny (1986), the primary interest in any moderation analysis is specifically to identify the significance of the interaction term on the dependent variable, whereby a bootstrapping procedure would provide the assessment.

Generally, three approaches could be utilised in conducting a moderator analysis, namely the (1) product-indicator approach, (2) two-stage approach and the (3) orthogonalisation approaches. The product indicator approach involves the creation of an interaction term, which is essentially the process of multiplying indicators of the predictor variable with the indicators of the moderator variable (Chin *et al.*, 2003). Meanwhile, the two-stage approach is designed for formative constructs, which entailed the creation of latent variable scores before using them to calculate the product indicator during the second stage (Fassott *et al.*, 2016). Finally, the third approach of the orthogonalisation approach is described by Henseler and Chin (2010) as an extension to the product-indicator approach, requiring the regression of all possible products of the indicators for the latent predictor and latent moderator variables.

In this study, the two-stage approach was utilised due to the involvement of formative variables that the approach is specifically designed for. Chin *et al.* (2003) explained further that the nature of such indicators implied that the product indicators between them would not necessarily tap into the same underlying interaction as they were independent of each other. Furthermore, results obtained using the approach would

yield higher statistical power compared to the other approaches (Henseler and Chin, 2010).

3.15 Ethical Considerations

As this study involved human participants, all practices are aligned with the National Statement on Ethical Conduct in Research 2007. The required training on Curtin Research Integrity Professional Development programme was completed. The ethical approval was obtained from Curtin University on 1 May 2017 (Appendix 2). This study adhered to the ethical guidelines listed in the Human Research Ethics Office throughout the data collection process. As part of ethical compliance, the invitation e-mail clearly indicated the purpose of the survey and the anonymity of the responses provided. In addition, the participation of respondents in the survey was on a voluntary basis. The participants were informed that as and when they perceived any of the questions being discriminatory or offensive to their beliefs and culture, they were allowed to withdraw from the survey at any point and their inputted data would not be considered as part of the study.

3.16 Chapter Summary

This chapter discussed the methodology used in this study. This chapter discussed the philosophical assumption of study. The chapter also provided details on the data collection technique, the development of instrument, and the data analysis technique in this study. The next chapter described results obtained from the analysis.

CHAPTER 4: RESULTS

4.1 Data Preparation

The data preparation process unfolded with data coding and entry, alongside locating for any missing or incomplete responses. Using the functions offered by SoGoSurvey, the responses that were inputted into the web-survey were subsequently exported into Microsoft Excel in preparation of loading them onto SPSS.

4.1.1 Response Rate

The period of data collection encompassed the five months from May until September 2017. In order to improve the response rate required for this study, several interventions were introduced, including the dissemination of the web-survey by SASW. It was accompanied by a poster summarising the intent, potential contributions and promise of anonymity, as well as confidentiality clauses. This was per Fan and Yan (2010) study showing that surveys supported by official bodies would generally result in a higher response rate.

Rather than dispatching a generic mail to every respondent, SASW sent the invite incorporating content customised for the respective respondents. Several scholars highlighted the positive effect of personalised invitation e-mails in improving the response rate, as the participants would perceive such personalisation as a form of reward and their opinions as highly regarded (Couper, 2000, Greenlaw and Brown-Welty, 2009, Anseel *et al.*, 2010, Sánchez-Fernández *et al.*, 2012). However, conflicting results were also evident, whereby such customisation was found to pose an insignificant effect on the response rate for web-survey (Van Mol, 2017).

During the data collection period, two reminders were sent at regular intervals to the respondents. Van Mol (2017, p. 324) underlined the usefulness of sending such reminders in improving response rates among “populations that had been over-surveyed”. Their contents were tailored to reflect the status of response rate at that particular point of time, at the same time, prompting respondents regarding the timeline. Moreover, both reminder emails reiterated the importance for their participation in the survey, specifically the manner in which their inputs would aid in understanding the profile of social workers in Singapore. Provision of such

information would create a sense of importance among the respondents, who would in turn prioritise their involvement in the web-survey (Sánchez-Fernández *et al.*, 2012).

Despite these efforts, 223 responses were received. All responses were ascertained to be completed, representing 11.8% of the social worker population accredited by SASW, which was recognised in this study as a low percentage. Nevertheless, this value aligned with a recent paper by Evans and Mathur (2018, p. 859) that enumerated an average response rate of “11% for online surveys, and that the 95 % confidence interval was between 6-15 %”. This occurrence may be attributable to possible survey fatigue among the respondents. As a small city-state with a population of approximately 5.5 million (United Nations, 2017), scholars such as Menkhoff and Chay (2012, p. 117) acknowledged that “survey fatigue in Singapore was a real issue”. Therefore, it inevitably resulted in a lower response rate from the participants (Van Mol, 2017). Institute of Policy Studies (2014) supported this view and noted that increased market surveys and commercial campaigns conducted in Singapore contributed another layer of complexity as researchers must manage survey fatigue among the public.

With a less than favourable response, the next step this study undertook was to determine if 223 responses were sufficient to maintain the required power and effect size such that analysis could be proceeded. To do so, this study used the G*power analysis, which is a highly recommended method, in calculating the minimum sample size needed given a pre-determined set of power, effect size and number of predictors (Ramayah *et al.*, 2018). The first step was to determine the largest number of predictors for this model. Regarding this, this study enumerated four as the largest number of predictors. Meaningful work and PsyCap were both predictors for the endogenous variables of employee engagement, depersonalisation, reduced personal accomplishment, and emotional exhaustion. Moreover, the model also utilised PsyCap as a moderator and mediator, resulting in two additional predictors, making it a total of four predictors. With a power of 80% and a medium effect size of 0.15, the minimum sample size required was 85 responses. That is to say, the collection of 223 responses was translated into a power of 99.9%, thereby allowing PLS-SEM to be performed with the current sample size as it exceeded the minimum requirement.

4.1.2 Descriptive Statistics of Respondents

Table 16 below displays the information obtained regarding the respondent profiles. A majority of the participants were female at 82.1%, whereas the remaining 17.9% was of the male gender. With regard to their age range, the majority of 34.5% were of the age group ranging from 25 to 34 years old, followed by 31.8% of respondents aged between 35 to 44 years old. Next, 57.8% were reported to have a bachelor's degree, followed by a master's degree at 31.4%. Meanwhile, the duration of experience as a social worker was dominated by those who had more than 10 years of experience (41.3%), followed by those who had between four to seven years of experience (22.4%).

Table 16. Profile of respondents (n = 223)

Description	Number	Percentage
Gender		
Male	40	17.9
Female	183	82.1
Age		
18 - 24 years old	3	1.3
25 - 34 years old	77	34.5
35 - 44 years old	71	31.8
45 - 54 years old	46	20.6
55 - 64 years old	23	10.3
65 - 74 years old	3	1.3
Highest level of qualification		
Doctoral Degree	2	0.9
Master's Degree	70	31.4
Bachelor's Degree	129	57.8
Diploma	11	4.9
Others	11	4.9
Years of experience as a social worker (in total)		
Less than 1 year	10	4.5
1 year to 3 years	37	16.6
4 years to 7 years	50	22.4
8 years to 10 years	34	15.2
More than 10 years	92	41.3

4.1.3 Descriptive Statistics of Instrument

SPSS was utilised to assess the mean, standard deviation, minimum value and maximum value for each indicator. Table 17 outlines the descriptive statistics for all indicators accordingly as follows.

Table 17. Descriptive statistics

Construct	Indicator	Min	Max	Mean	Standard Deviation
Greater good motivation	GG1	1	5	4.14	0.87
	GG2	1	5	4.11	0.66
	GG3	1	5	4.14	0.74
Meaning-making through work	MM1	1	5	4.31	0.71
	MM2	1	5	4.18	0.73
	MM3	1	5	3.90	0.86
Positive meaning in work	PM1	1	5	4.36	0.66
	PM2	1	5	4.06	0.65
	PM3	1	5	4.22	0.60
	PM4	1	5	4.13	0.64
Hope	HO1	2	6	4.62	0.89
	HO2	1	6	4.39	1.06
	HO3	2	6	4.78	0.92
	HO4	1	6	4.39	0.94
	HO5	2	6	4.31	0.90
	HO6	1	6	4.27	1.03
Efficacy	EFF1	2	6	4.58	0.97
	EFF2	1	6	4.63	1.05
	EFF3	1	6	4.29	1.08
	EFF4	2	6	4.66	0.99
	EFF5	1	6	4.82	1.05
	EFF6	2	6	4.91	0.83
Resilience	RE1	1	6	4.20	1.12
	RE2	1	6	4.63	0.74
	RE3	1	6	4.89	0.97
	RE4	1	6	4.33	0.96
	RE5	2	6	4.75	0.90
	RE6	1	6	4.53	1.03
Optimistic	OP1	1	6	3.83	1.03
	OP2	2	6	4.23	1.09
	OP3	1	6	4.32	0.95
	OP4	1	6	4.29	1.01

	OP5	1	6	4.33	1.17
	OP6	1	6	4.21	0.98
Absorption	AB1	0	6	4.32	1.52
	AB2	1	6	4.87	1.20
	AB3	0	6	4.30	1.53
Dedication	DE1	0	6	4.42	1.44
	DE2	0	6	4.38	1.41
	DE3	1	6	4.89	1.30
Vigour	VI1	0	6	3.87	1.46
	VI2	0	6	3.92	1.43
	VI3	0	6	4.06	1.66
Depersonalisation	DP1	0	5	1.13	1.39
	DP2	0	6	1.61	1.68
	DP3	0	6	1.74	1.75
	DP4	0	5	0.82	1.13
	DP5	0	6	1.68	1.67
Emotional exhaustion	EX1	0	6	3.19	1.61
	EX2	0	6	3.59	1.67
	EX3	0	6	2.92	1.75
	EX4	0	6	2.08	1.56
	EX5	0	6	2.20	1.67
	EX6	0	6	2.65	1.62
	EX7	0	6	3.09	1.72
	EX8	0	6	1.61	1.43
	EX9	0	6	1.34	1.16
Reduced personal accomplishment	PA1	0	6	1.12	1.16
	PA2	0	6	1.53	1.30
	PA3	0	5	1.59	1.36
	PA4	0	6	2.53	1.61
	PA5	0	5	1.31	1.14
	PA6	0	6	2.11	1.50
	PA7	0	6	1.74	1.39
	PA8	0	6	1.36	1.21

4.1.4 Verifying Data Characteristics

This section is dedicated for the discourse regarding different analyses techniques carried out to verify the collected data. Data verification is known as a critical step to ensure that the collected data is clean and usable for the analysis process. Therefore, the discussion revolved mainly regarding any missing data, data normality, and common method variance.

4.1.4.1 Missing Data

Missing data is described as responses that respondents failed to enter into one or more of the survey items (Newman, 2014). Several reasons attributed to explain its occurrence, such as respondent's deliberate decision to skip the items due to sensitive contents, or an unintentional act of forgetting to complete the items (Rogelberg *et al.*, 2003). Furthermore, this could be caused by technical faults due to the online survey platform like non-responsive webpages or hardware failure. Despite missing data being a natural process in data collection, especially for one that incorporated a survey, different approaches may be taken to prevent it. For the purpose of this study, the recommendations provided by Couper (2000) and Fan and Yan (2010) were collectively adopted to reduce occurrences of missing data.

Firstly, the questions designed utilised terms that the respondents would understand to prevent any misinterpretation or confusion. This step was ascertained during the pre-testing phase of the instrument (see Section 3.5.2).

Secondly, the instrument was presented in "bite-size chunks" using a screen-by-screen design instead of displaying the whole instrument in one screen that required the respondents to scroll down in completing the web-survey. Findings had indicated that the screen-by-screen design positively impacts the completion rate as it portrayed the impression that the survey was not excessively long (Toepoel *et al.*, 2009). Furthermore, the design was also established to result in a lower item non-response rate compared to the one-page design (Manfreda *et al.*, 2006, Toepoel *et al.*, 2009).

Thirdly, a progress bar was displayed at the end of every page and allowed respondents to keep track of their progress. It played a key role in informing the participants an estimated duration they would utilise to complete the survey, as Crawford *et al.* (2001) demonstrated that its presence resulted in a marginally improved participatory experience.

Lastly, relevant instructions were displayed at the start of every page, with bolded keywords in a different coloured font. Contact details of the researcher were listed at the end of every page where respondents can contact in placed case of any clarification required. As a result, this study noted that there were no missing data from all 223

respondents. The Little's Missing Completely at Random Test was conducted and subsequently revealed that all data was complete, and no missing data was present.

4.1.4.2 Data Normality

Data normality is acknowledged to play an important role in many statistical procedures. According to Yap and Sim (2011), researchers could determine the distribution of the collected data using graphical exploration and a variety of formal tests. Apart from a visual inspection of normality, other recommended procedures included an examination of the skewness and kurtosis, as well as applying the formal normality test. As recommended by Hair *et al.* (2014), absolute skewness and/or kurtosis values of greater than -1 and +1 indicates levels of non-normality. In addition, this study tested the multivariate skewness and kurtosis. Therefore, instead of just "making comparison of the distribution of one variable against a univariate normal distribution, this study compared the joint distribution of several variables against a multivariate normal distribution" (Cain *et al.*, 2017, p. 1719).

By utilising the www.webpower.psychstat.org/models/kurtosis/ page highlighted by Cain *et al.* (2017), the results subsequently showed that both the univariate and multivariate data respectively violated the normality rule. Univariate skewness ranged from -1.235 to 1.041, whereas the univariate kurtosis ranged from -0.378 to 7.165. Moreover, Mardia's multivariate skewness null hypothesis of normality was rejected where it was significant at $\beta = 30.5637$, $p < 0.001$. Likewise, Mardia's multivariate kurtosis null hypothesis of normality was also rejected at $\beta = 233.750$, $p < 0.001$. Thus, these tests collectively displayed a violation of the data normality distribution assumption, providing additional justifications to use PLS-SEM. (Hair *et al.*, 2014, Ting *et al.*, 2019)

4.1.4.3 Common Method Variance

The data obtained was primarily based on self-reports, which rendered it to be subjected to the common method variance (Datu *et al.*, 2018). Podsakoff *et al.* (2003) consequently attributed it to the measurement model rather than the constructs itself, while Avey *et al.* (2011) noted that its presence would either inflate or deflate the correlations between predictors and its outcome variables. Therefore, common method

variance was capable to influence the strength of the relationship and the directions of its effects both, leading to Type I and Type II errors accordingly. Hence, putting the remedies in place was of immense importance to minimise such problems, whereby they may be in the form of procedural or statistical remedies accordingly.

Remedies proposed by Podsakoff *et al.* (2003) could be classified into four categories: (1) using different sources of information in constructing the key measures; (2) adopting series of procedural remedies during research design and administration; (3) reducing the likelihood of common method variance via complicated regression models (e.g. partial correlation procedure); and (4) using statistical tools to detect and control common method variance. The work also went further by developing a set of guidelines to help scholars in deciding the appropriate course of actions (Podsakoff *et al.*, 2003). It listed out different courses of action for various research settings, whereby this study implemented the guideline accordingly by applying four procedural remedies and a statistical tool appropriately.

First, a temporal separation between the measurements of the criterion and predictor variables was created. The web-survey adopted a screen-by-screen layout, rendering the measurements of the criterion and predictor variables to be designed to appear on different pages instead of all placed on one page. The respondents were asked to answer various demographic questions in between pages before they could continue to the next set of measuring instrument. Podsakoff *et al.* (2003) argue that such temporal separation reduced the potential for bias as the respondents would be less likely to use their previous answers as they were already not readily available and less relevant.

Secondly, the assurance of anonymity and confidentiality was constantly emphasised at several different points of data collection. It was first highlighted in the invitation email and subsequently reiterated in the reminder emails and the actual web-survey itself. These procedures successfully reduced respondent's apprehension and the chances for them to provide socially-desirable responses rather than their actual opinion.

Thirdly, the scales of the predictor and criterion variables differed from one another, thus generating a methodological separation among the dissimilar variables. This

resulted in “reduced method biases caused by commonalities in scale endpoints and anchoring effects” (Podsakoff *et al.*, 2003, p. 888).

Lastly, selected respondents were sought for feedback during the pre-testing phase for possibly ambiguous terms, unclear questions, and vague concepts. Additionally, Harman’s single-factor test was also conducted alongside the procedural remedies to determine whether the majority of the variance was explained by one factor. It was conducted on all 65 items and revealed that the largest factor explained only 26.78% of the variance, which was less than 50% (Podsakoff *et al.*, 2003). Thus, the procedures and results collectively highlighted that common method bias was not a serious threat in this study and would unlikely to complicate the result interpretation process.

4.2 Correlation Matrix

Table 18 below displays the correlation matrix between all latent variables, whereby every association across the different variables are in their expected direction. Meaningful work was positively associated with employee engagement and PsyCap, respectively, whereas meaningful work, PsyCap and employee engagement were negatively related to the three dimensions of job burnout (i.e. depersonalisation, emotional exhaustion, and reduced personal accomplishments). The table also indicated that most of the latent variables were significantly correlated at $p < 0.01$, except for employee engagement to depersonalisation, which was significantly correlated at $p < 0.05$.

Table 18. Correlation Matrix between Latent Variables

	1	2	3	4	5	6
1 Depersonalisation	-					
2 Emotional exhaustion	0.517***	-				
3 Employee engagement	-0.189**	-0.371***	-			
4 Meaningful work	-0.250***	-0.290***	0.452***	-		
5 Psychological capital	-0.354***	-0.524***	0.616***	0.537***	-	
6 Reduced personal accomplishments	0.285***	0.232***	-0.667***	-0.449***	-0.568***	-

Note: * $p < 0.1$ ** $p < 0.05$, *** $p < 0.01$, NS - Not significant

4.3 Analysis of Reflective Measurement Model

In this study, the respective dimensions of meaningful work (i.e. greater good motivation, meaning making through work, and positive meaning in work), PsyCap (i.e. hope, efficacy, resilience, and optimism), and employee engagement (i.e. absorption, dedication, and vigour), as well as depersonalisation, emotional exhaustion and reduced personal accomplishments were established as a reflective first order construct in the model. Then, assessing the reflective measurement model was undertaken using the three main criteria, namely internal consistency, convergent validity, and discriminant validity. Table 19 below succinctly summarises the indicators of the first-order constructs accordingly.

Table 19. Indicators of the first order constructs

Constructs	Indicators of Constructs	Number of Indicators
Greater good motivation	GG1 to GG3	3
Meaning making through work	MM1 to MM3	3
Positive meaning in work	PM1 to PM4	4

Hope	HO1 to HO6	6
Efficacy	EFF1 to EFF6	6
Resilience	RE1 to RE6	6
Optimism	OP1 to OP6	6
Absorption	AB1 to AB3	3
Depersonalisation	DE1 to DE3	3
Vigour	VI1 to VI3	3
Depersonalisation	DP1 to DP5	5
Emotional exhaustion	EX 1 to EX9	9
Reduced personal accomplishment	PA1 to PA8	8
	Total	65

4.3.1 Internal Consistency and Convergent Validity of Meaningful Work

In Table 20 displays the outer loadings for indicators belonging to meaningful work. A majority of them exceeded the threshold of 0.70, except for GG1 and MM3 that showed the values of 0.644 and 0.699, respectively. The table also reveals that the composite reliability and AVE of greater good motivation, meaning making through work and positive meaning in work surpassed their threshold values of 0.70 and 0.50, respectively (Gefen and Straub, 2005). Therefore, rather than adopting the ritualistic treatment of removing MM3 and GG1, loadings of 0.40-0.70 should be considered for removal only if their deletion would increase the composite reliability and AVE above the suggested threshold value (Hulland, 1999). Given that the composite reliability and AVE of the indicators successfully met the threshold value, the indicators MM3 and GG1 were both retained in this construct.

Table 20. Internal consistency and convergent validity of meaningful work

Construct	Item	Loadings	CR	AVE
Meaning making through work	MM 1	0.856	0.848	0.652
	MM 2	0.859		
	MM 3	0.699		
Positive meaning in work	PM 1	0.756	0.859	0.604
	PM 2	0.749		

	PM 3	0.798		
	PM 4	0.804		
Greater good motivation	GG1	0.644	0.798	0.573
	GG2	0.869		
	GG3	0.745		

4.3.2 Internal Consistency and Convergent Validity of Employee Engagement

The construct of employee engagement comprised of the three first-order constructs of vigour, dedication and absorption. Therefore, it encompassed a total of nine indicators, whereby each dimension consisted of three indicators, respectively. Table 21 below shows the indicator loadings, composite reliability and AVE for the first order construct of employee engagement that met the threshold requirement. Consequently, no items were deleted as it displayed good internal consistency and convergent validity.

Table 21. Internal consistency and convergent validity of employee engagement

Construct	Item	Loadings	CR	AVE
Absorption	AB1	0.828	0.834	0.628
	AB2	0.837		
	AB3	0.712		
Dedication	DE1	0.938	0.935	0.827
	DE2	0.920		
	DE3	0.869		
Vigour	VI1	0.921	0.914	0.781
	VI2	0.938		
	VI3	0.785		

4.3.3 Internal Consistency and Convergent Validity of Psychological Capital

PsyCap was characterised using the four first-order constructs of hope, efficacy, resilience and optimism, whereby each were assigned six indicators and thus totalled to 24 indicators. As per Table 22, several indicators fell short the acceptable threshold value of 0.70. The AVE for optimism and resilience was also below the threshold value

of 0.50, respectively. Accordingly, Ringle *et al.* (2018) recommended for indicators with loadings less than 0.70 to be deleted to improve the construct's composite reliability and AVE.

In the context of optimism, the initial removal of OP5 subsequently improved the AVE from 0.422 to 0.481 and increased its composite reliability from 0.808 to 0.817 concomitantly. As the AVE remained to be below the threshold, another round of adjustment was needed, whereby the second round of removal consisted of OP2 with an outer loading of 0.481 to be deleted. Thus, Table 22 consequently reflects the improved values of AVE and composite reliability for optimism of 0.575 and 0.842, respectively. Both successfully achieved the threshold value, thus requiring no further adjustments.

The next adjustment made was for resilience where the AVE failed to meet the threshold value of 0.50. Two indicators out of its six indicators did not meet the loading requirements of 0.70, resulting in RE1 being eliminated first due to its loading being the lowest. This improved the AVE from 0.483 to 0.547, while the composite reliability increased from 0.846 to 0.857. Therefore, no further adjustment was necessary as both composite reliability and AVE had met the required threshold. In brief, one may conclude that PsyCap had achieved the necessary internal consistency and convergent validity required for further analysis.

Table 22. Internal consistency and convergent validity of psychological capital

First Order Construct	Item	Loadings	CR	AVE
Efficacy	EF1	0.710	0.894	0.586
	EF2	0.844		
	EF3	0.794		
	EF4	0.863		
	EF5	0.691		
	EF6	0.667		
Hope	HO1	0.741	0.915	0.644
	HO2	0.840		
	HO3	0.676		
	HO4	0.838		
	HO5	0.885		
	HO6	0.816		
Optimism	OP1	0.663	0.842	0.575
	OP2	Dropped		

	OP3	0.852		
	OP4	0.841		
	OP5	Dropped		
	OP6	0.654		
Resilience	RE1	Dropped	0.857	0.547
	RE2	0.738		
	RE3	0.674		
	RE4	0.726		
	RE5	0.761		

4.3.4 Internal Consistency and Convergent Validity of Dimensions of Job Burnout

In contrast to the constructs of meaningful work, employee engagement and PsyCap, job burnout was presented as a multidimensional construct with each of its dimension representing a single level of construct.

Table 23 below depicts that out of the three dimensions, depersonalisation and reduced personal accomplishment had not met the threshold value for AVE. Therefore, the succeeding step was to improve its value by removing the indicators of loadings below the threshold of 0.70. Meanwhile, depersonalisation revealed DP5 as the only indicator that failed to meet the threshold requirement of 0.70, whereby its removal improved the AVE to 0.547. Similarly, removing PA1 of reduced personal accomplishment resulted in an improved AVE of 0.502. Given that the AVE for both depersonalisation and reduced personal accomplishment had achieved the required threshold, no further adjustments were required (Hair *et al.*, 2017a). In other words, indicators such as DP2 and DP3 were retained despite not meeting the threshold requirement of 0.70.

Table 23. Internal consistency and convergent validity analysis for job burnout

Construct	Item	Loadings	CR	AVE
Depersonalisation	DP1	0.823	0.827	0.547
	DP2	0.673		
	DP3	0.646		
	DP4	0.800		
	DP5	Dropped		
Emotional exhaustion	EX1	0.792	0.918	0.555
	EX2	0.771		
	EX3	0.799		

	EX4	0.627		
	EX5	0.845		
	EX6	0.742		
	EX7	0.704		
	EX8	0.620		
	EX9	0.776		
Reduced personal accomplishment	PA1	Dropped	0.875	0.502
	PA2	0.770		
	PA3	0.788		
	PA4	0.658		
	PA5	0.706		
	PA6	0.582		
	PA7	0.801		
	PA8	0.626		

4.3.5 Discriminant Validity

In this study, the model was conceptualised as an HCM of the reflective-formative measurement perspective, rendering the latent variable scores for meaningful work, employee engagement, and PsyCap to be obtainable from their respective dimensions (see Section 3.8.2). Therefore, discriminant validity must be achieved among these constructs before one proceeds to examine the structural model. These constructs were meaningful work, employee engagement, PsyCap, and the respective dimensions of job burnout (i.e. depersonalisation, reduced personal accomplishments, emotional exhaustion). By establishing discriminant validity, it “implies that the construct is unique and captures phenomena not represented by other constructs in the model” (Hair *et al.*, 2017a, p. 115).

Typically, cross-loadings and Fornell-Larcker criterion were used in reporting the discriminant validity but they were criticised by leading scholars due to their insensitivity and lacking specificity in detecting the validity (Hair *et al.*, 2017a, Henseler *et al.*, 2015, Voorhees *et al.*, 2015). Therefore, the use of HTMT was advocated instead as it was tested and ascertained to be a “more stringent test in ensuring that every construct in the study is truly distinct from one another” (Ramayah *et al.*, 2018, p. 85).

Similarly, Ali *et al.* (2018, p. 521) highlighted in a recent article that “researchers should instead draw on the HTMT criterion, which is computed as the mean of all of

the correlations of the indicators measuring different constructs”. Hair *et al.* (2017a, p. 192) had prior to that indicated that “an alternative, more reliable criterion, HTMT, should be applied” (p. 192).

With regards to this, various journals had accepted and published articles in which HTMT was deployed as the sole criterion in assessing discriminant validity across different fields. They encompassed the fields of marketing (Andrei *et al.*, 2017), hospitality (Lee and Hallak, 2018), organisational behaviour (Ogbeibu *et al.*, 2018), social media (Ramayah *et al.*, 2017), project management (Yap *et al.*, 2018), entrepreneurship (Hernández-Perlines *et al.*, 2017), firm performance (Aledo Ruíz *et al.*, 2017), education (Lee and Hallak, 2018), technology adoption (Bazelais *et al.*, 2017) and leadership (Li *et al.*, 2018). Therefore, this positioned the current study’ adoption of the recent advances in methodology by deploying HTMT as the sole criterion in establishing the discriminant validity of the model.

Two main criteria have been set as the benchmark for discriminant validity using HTMT. As earlier explained in Section 3.10.3.3, HTMT is accessed using either (1) setting the threshold value of 0.85 (Hair *et al.*, 2017a) or 0.90 (Henseler *et al.*, 2015, Gold *et al.*, 2015); or (2) calculating the confidence interval (using bootstrapping method) where it should not contain the value of one (Ramayah *et al.*, 2018). In view of the above, this study assessed discriminant validity of the second-order constructs by setting the threshold at the more conservative value of 0.85, as well as adopting the bootstrapping confidence interval method to further ascertain the discriminant validity of the constructs.

At the same time, this study reported discriminant validity at the second-order construct of meaningful work, employee engagement, PsyCap. According to Hair *et al.* (2017a), discriminatory validity of the constructs can be assessed at a higher-order provided the measurement theory supports this step (e.g. Kocyigit and Ringle, 2011). On this note, prior research on the literature provided adequate theoretical support regarding these indicators’ relevance in holistically capturing employee engagement, PsyCap, and meaningful work (Schaufeli *et al.*, 2006, Luthans, 2012, Steger *et al.*, 2012) at a higher-order. Moreover, this study has conceptualised employee engagement PsyCap and meaningful work of having first and second order constructs.

It is for the above reasons that discriminant validity conducted on second order constructs are reported instead.

Table 24 demonstrates the discriminant validity for this model, which was established at the criterion of $HTMT_{0.85}$. This was per Henseler *et al.* (2015) that deemed it to be a threshold that was more stringent and conservative for discriminant validity testing. Besides, the bootstrapping results also showed that the confidence interval was significantly different from one and further confirmed that the constructs were truly distinct from one another. Thus, the above tests allowed the conclusion that the measurement model successfully achieved the reliability and validity tests necessary. Due to its reflective-formative measurement perspective, the next step was to establish the measurement and structural model of the formative constructs.

Table 24. Discriminant validity test

	1	2	3	4	5	6
1. Depersonalisation						
2. Employee engagement	0.189 CI _{0.85} (0.079, 0.291)					
3. Emotional exhaustion	0.517 CI _{0.85} (0.421, 0.584)	0.371 CI _{0.85} (0.288, 0.461)				
4. Meaningful work	0.250 CI _{0.85} (0.105, 0.367)	0.452 CI _{0.85} (0.366, 0.526)	0.290 CI _{0.85} (0.174, 0.414)			
5. Psychological capital	0.354 CI _{0.85} (0.269, 0.437)	0.616 CI _{0.85} (0.537, 0.679)	0.524 CI _{0.85} (0.430, 0.598)	0.537 CI _{0.85} (0.424, 0.637)		
6. Reduced personal accomplishment	0.285 CI _{0.85} (0.079, 0.291)	0.667 CI _{0.85} (0.079, 0.291)	0.232 CI _{0.85} (0.079, 0.291)	0.449 CI _{0.85} (0.079, 0.291)	0.568 CI _{0.85} (0.079, 0.291)	

Note: Discriminant validity established at HTMT_{0.85}

4.4 Analysis of Formative Measurement Model

This section commenced the assessment of the formative measurement model designed in this study. To recapitulate, the first-order constructs of PsyCap, employee engagement and meaningful work were conceptualised as reflective and second-order constructs as formative.

4.4.1 Multicollinearity Issues

In a formative measurement model, the indicators were typically assumed to completely address the content of the construct, as one of the key characteristics of formative indicators was that they were not interchangeable. Therefore, any presence of multicollinearity among two formative indicators implied that they did not uniquely capture the distinct aspect of the phenomena, which potentially result in statistical analysis bias. Multicollinearity could be measured by calculating the variance inflation factor (VIF), whereby Hair *et al.* (2013) indicated an acceptable threshold of less than five for this tool. Table 25 below subsequently shows that there were no multicollinearity issues as the VIF scores were appropriately less than five.

Table 25. Collinearity Assessment

Second-order construct	First-order constructs	VIF
Meaningful work	Meaning making through work	1.698
	Greater good motivation	1.928
	Positive meaning in work	1.903
Employee engagement	Absorption	2.714
	Vigour	3.433
	Dedication	4.030
Psychological capital	Hope	2.841
	Efficacy	2.309
	Resilience	1.830
	Optimism	1.571

4.4.2 Significance and Relevance of Outer Weights

The formative indicator's contribution towards a construct may also be assessed using another criterion of its outer weight. Hair *et al.* (2011) described the outer weight as the result between the construct (as the dependent variable) and the indicators (as the independent variable). In fact, its estimated values expressed the relative contribution of the indicator to the construct, which could also be translated to its relative importance to the construct (Hair *et al.*, 2017a). Therefore, Hair *et al.* (2017a) recommended for bootstrapping to be performed, whereby this study abided by performing bootstrapping of 5,000 re-sampling. As a rule, the number of bootstrapping samples should be at least equivalent to the number of valid observations (Ramayah *et al.*, 2018).

Table 26 below shows the results obtained, where all formative indicators were significant at $p < 0.05$ except for absorption, efficacy and meaning-making through work. Hair *et al.* (2017a) were of the opinion that an indicator that resulted in an insignificant outer weight should be retained rather than deleted, provided its corresponding outer loading was at least 0.50, or statistically significant. Following this, Table 27 displays the outer loadings for absorption, efficacy and meaning-making through work to exceed 0.50 and fulfil the first criterion for retention. In addition, the table also indicates that they are significant at $p < 0.001$.

Lastly, prior research on the literature successfully provided adequate theoretical support regarding these indicators' relevance in holistically capturing employee engagement, PsyCap, and meaningful work (Schaufeli *et al.*, 2006, Luthans, 2012, Steger *et al.*, 2012). Aligned with recommendations from Hair *et al.* (2017a), these three indicators would be retained in the formative constructs, despite their outer weights being insignificant.

Table 26. Path assessment

Relationship	Outer Weight	Standard error	<i>t</i> -value	<i>p</i> -value	95% Confidence Interval
Absorption -> Employee engagement	-0.036	0.148	0.244 ^(NS)	0.807	[-0.329; 0.260]
Dedication -> Employee engagement	0.552	0.188	2.933**	0.003	[0.178; 0.909]
Efficacy -> PsyCap	0.070	0.085	0.815 ^(NS)	0.415	[-0.106; 0.229]
Greater good motivation -> Meaningful work	0.354	0.161	2.202*	0.028	[0.062; 0.700]
Hope -> PsyCap	0.497	0.088	5.626***	0.000	[0.316; 0.668]
Meaning making through work -> Meaningful work	-0.030	0.141	0.210 ^(NS)	0.833	[-0.351; 0.208]
Optimism -> PsyCap	0.401	0.080	5.044***	0.000	[0.245; 0.550]
Positive meaning in work -> Meaningful work	0.755	0.131	5.752***	0.000	[0.457; 0.978]
Resilience -> PsyCap	0.215	0.076	2.838**	0.005	[0.071; 0.367]
Vigour -> Employee engagement	0.523	0.170	3.069**	0.002	[0.176; 0.843]

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, NS – Not significant

Table 27. Path assessment for absorption, efficacy and meaning making through work

Relationship	Outer Loading	Standard error	<i>t</i> -value	<i>p</i> -value	95% Confidence Interval
Absorption -> Employee engagement	0.778	0.061	12.736***	0.000	[0.641; 0.882]
Efficacy -> PsyCap	0.730	0.048	15.240***	0.000	[0.629; 0.815]
Meaning-Making through work -> Meaningful work	0.613	0.093	6.584***	0.000	[0.423; 0.779]

Note: *** $p < 0.001$

4.5 Analysis of the Structural Model

Generally, PLS-SEM assessment of a structural model involved an evaluation of its predictive ability on its dependent variable. After conducting the reliability and validity tests, the next suite of tests to be implemented consisted of the coefficients of determination (R^2 value), the sizes and significance of the path coefficients, the f^2 sizes, the predictive relevance (Q^2), and the q^2 effect sizes, whereby each score provided additional insights regarding PLS path model estimators.

4.5.1 Assessment of Multicollinearity

The preliminary step undertaken comprised of investigating for multicollinearity within the model. The earlier assessment of collinearity at the measurement model (see Section 4.4.1) had focused on primarily identifying vertical collinearity (Ramayah *et al.*, 2018). According to Kock and Lynn (2012), a relationship that was being hypothesised between two latent variables would result in the presence of lateral collinearity, which may potentially mislead the outcomes. Therefore, each set of predictors was required to be assessed for collinearity subject to the same rule of thumb for VIF of not exceeding five (Hair *et al.*, 2011). From Table 28, the VIF for all endogenous constructs and their corresponding exogenous constructs to be within the required threshold of five and represented by the column and rows, respectively. Thus, it can be concluded that there were no multicollinearity issues within the structural model.

Table 28. Multicollinearity assessment

	Depersonalisation	Emotional exhaustion	Employee engagement	Reduced personal accomplishment	PsyCap
Meaningful work	1.405	1.405	1.405	1.405	1.000
PsyCap	1.405	1.405	1.405	1.405	

4.5.2 Hypotheses Testing

The next step of the investigation involved conducting a path analysis for the different hypotheses formulated in this work. This was achieved by utilising bootstrapping for 5,000 re-samples to test the significance of the regression coefficients. This study hypothesised that meaningful work posed a positive effect on employee engagement and PsyCap respectively, whereas it displayed negative associations with the dimensions of job burnout (i.e. depersonalisation, emotional exhaustion, and reduced personal accomplishment). Figure 6 and Table 29 both display the results of the hypotheses testing processes accordingly.

This study generated nine hypotheses, whereby the results were in support of H1 and H2 and showed positive significant relationships between meaningful work and PsyCap (H1, $\beta = 0.537$, $p < 0.001$) and employee engagement (H2, $\beta = 0.170$, $p < 0.01$), respectively. In contrast, it posed no statistical significance with depersonalisation (H3a, $\beta = -0.084$, $p = 0.317$) and emotional exhaustion (H3b, $\beta = -0.012$, $p = 0.874$). Hence, H3a and H3b were rejected. Despite this, it displayed a negative significant relationship with reduced personal accomplishments (H3c, $\beta = -0.202$, $p < 0.001$).

Meanwhile, outcomes involving PsyCap showed that it had negative significant relationship with depersonalisation (H5a, $\beta = -0.309$, $p < 0.001$), emotional exhaustion (H5b, $\beta = -0.517$, $p < 0.001$) and reduced personal accomplishments (H5c, $\beta = -0.460$, $p < 0.001$). In contrast, it posed a positive significant relationship with employee engagement (H4, $\beta = 0.525$, $p < 0.001$). Thus, H4 to H5c were all supported.

In addition, the confidence interval also provided supplementary evidence to either support or reject a hypothesis. Hair *et al.* (2017a) noted for a hypothesis to be significant in case of the confidence interval being significantly different from zero. Thus, the confidence interval for hypotheses H1, H2, H3c, H4, H5a, H5b and H5c did not include zero respectively, indicating that these relationships were significant. Meanwhile, H3a and H3b were rejected as their respective confidence intervals were not significantly different from zero.

4.5.3 Coefficient of Determination (R^2)

The structural model formulated in this study was evaluated using the key criteria of the coefficient of determination (R^2), among others. R^2 measured the model predictive power, allowing its interpretation as the extent to which variances of a dependent variable could be accounted for by an independent variable (Hair *et al.*, 2011). Therefore, larger R^2 scores were translated as better predictive ability for the model. Different benchmarks could be utilised to classify the strength of R^2 , but this study adopted the yardstick frequently used in marketing-related studies and recommended for human resource management-related studies (Ringle *et al.*, 2018). It involved interpreting the R^2 values of 0.75, 0.50 and 0.25 for endogenous latent variables as substantial, moderate, or weak, respectively (Hair *et al.*, 2011).

In Figure 6, meaningful work and PsyCap explained 13.0%, 35.2% and 27.4% of the variance in depersonalisation, reduced personal accomplishments and emotional exhaustion, respectively. Meanwhile, meaningful work was concomitantly accountable for 28.8% of the variance in the PsyCap, whereas PsyCap and meaningful work explained 40.0% of the variance in employee engagement. Following the guideline, classification of these R^2 values accordingly assigned reduced personal accomplishments (0.352) and employee engagement (0.400), emotional exhaustion (0.274) and PsyCap (0.288) as moderate, while depersonalisation (0.130) as weak.

4.5.4 Stone-Geisser's Q^2 value

An assessment of the sample predictive ability of a structural model entailed the identification of the Stone-Geisser's Q^2 value. Geisser (1974) and Stone (1974) both advocated for the Q^2 value to be obtained using a blind-folding technique, defined as a "sample reuse technique that omitted every n^{th} data point part and used the resulting estimates to predict the omitted part" (Hair *et al.*, 2011, p. 147).

Therefore, a PLS path model described to be having predictive relevance implied its capacity to accurately predict data that was omitted from the estimation model (Hair *et al.*, 2017a). Hence, Table 29 summarises the results accordingly, whereby the endogenous latent variables achieved Q^2 scores larger than zero respectively, ranging from 0.096 to 0.300. This was indicative of the model's clear predictive relevance provided for by the different dependent variables.

4.5.5 Effect Sizes

This study adopted two techniques to measure effect sizes, namely the f^2 effect size and the q^2 effect size. The first technique of f^2 effect size measured the resulting impact on the endogenous constructs when a specific exogenous construct was omitted from the model (Hair *et al.*, 2017a). These effect sizes were classified as small (for values of 0.02), medium (for values of 0.15) and large (for values of 0.35), respectively (Cohen, 1988). In contrast, any values lesser than 0.02 could be described as having no effect (Cohen, 1988). Unlike the f^2 effect size, the q^2 effect size “assessed an exogenous construct’s contribution to an endogenous latent variable’s Q^2 value” (Hair *et al.*, 2017a, p. 208). These scholars further noted that the categorisation of the q^2 effect size would be identical as the f^2 effect size.

Table 29 below reveals that meaningful work posed a weak f^2 effect size of 0.034 and 0.045 on employee engagement and reduced personal accomplishment, respectively. However, it displayed a substantial effect of 0.405 on PsyCap, whereas its effect of depersonalisation and emotional exhaustion was negligible as the f^2 effect size was less than 0.02, explaining its insignificance. In contrast, PsyCap displayed a medium effect on emotional exhaustion ($f^2 = 0.262$), employee engagement ($f^2 = 0.326$) and reduced personal accomplishments ($f^2 = 0.232$), while showing a weak effect ($f^2 = 0.078$) on depersonalisation.

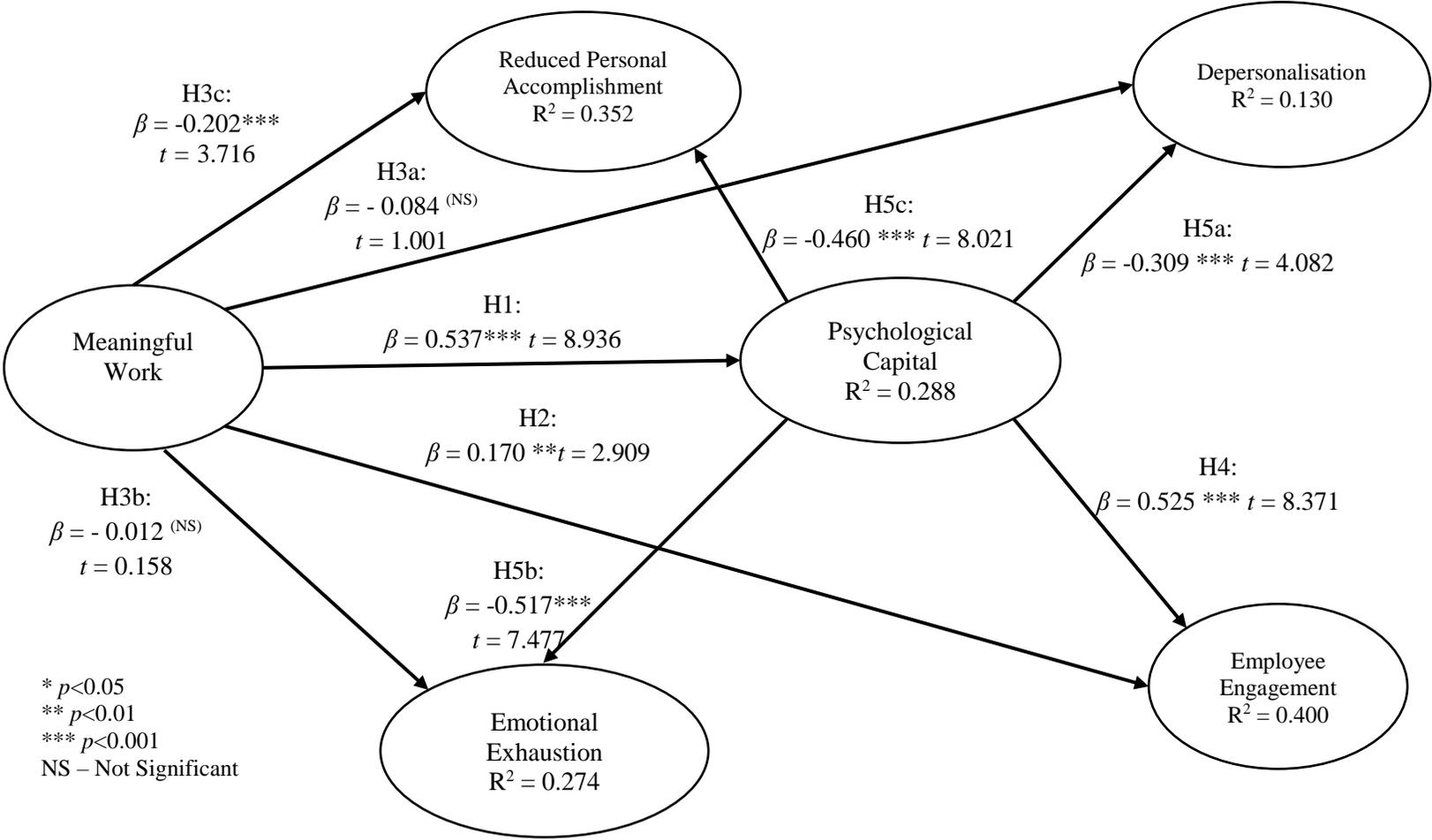
With regards to the q^2 effect size, Table 29 also shows that meaningful work posed a weak q^2 effect on employee engagement ($q^2 = 0.020$) and reduced personal accomplishments ($q^2 = 0.034$). At $q^2 = 0.152$, meaningful work had a moderate effect on PsyCap but underlined no effect on emotional exhaustion and depersonalisation. Meanwhile, PsyCap had a q^2 effect on the different constructs that ranged from 0.048 to 0.197. The structural model output from SmartPLS is attached at Appendix 3.

Table 29. Results of hypotheses testing

		Path Coefficient	Std Error	<i>t</i> -value	<i>p</i> -value	95% CI	Decision	VIF	R ²	Q ²	<i>f</i> ²	<i>q</i> ²
H1	Meaningful work -> PsyCap	0.537	0.060	8.936***	0.000	[0.412; 0.645]	Supported	1.000	0.288	0.132	0.405	0.152
H2	Meaningful work -> Employee engagement	0.170	0.058	2.909**	0.004	[0.048; 0.284]	Supported	1.405	0.400	0.210	0.034	0.020
H3a	Meaningful work -> Depersonalisation	-0.084	0.084	1.001 ^(NS)	0.317	[-0.248; 0.076]	Not Supported	1.405	0.130	0.096	0.006	-0.009
H3b	Meaningful work -> Emotional exhaustion	-0.012	0.076	0.158 ^(NS)	0.874	[-0.168; 0.124]	Not Supported	1.405	0.274	0.225	0.000	-0.009
H3c	Meaningful work -> Reduced personal accomplishments	-0.202	0.054	3.716***	0.000	[-0.299; -0.085]	Supported	1.405	0.352	0.300	0.045	0.034
H4	PsyCap -> Employee engagement	0.525	0.063	8.371***	0.000	[0.381; 0.631]	Supported	1.405			0.326	0.180
H5a	PsyCap -> Depersonalisation	-0.309	0.076	4.082***	0.000	[-0.456; -0.161]	Supported	1.405			0.078	0.048
H5b	PsyCap -> Emotional exhaustion	-0.517	0.069	7.477***	0.000	[-0.640; -0.371]	Supported	1.405			0.262	0.197
H5c	PsyCap -> Reduced personal accomplishments	-0.460	0.057	8.021***	0.000	[-0.572; -0.349]	Supported	1.405			0.232	0.189

Note: * $p < 0.05$ ** $p < 0.01$, *** $p < 0.001$, NS - Not significant

Figure 7. Results of hypotheses testing



4.6 Mediation Analysis

With regard to Hypotheses 6 to 7c, the mediation test was carried out to investigate the effect of PsyCap in the relationship between meaningful work and employee engagement as well as the different dimensions of job burnout. Using the bootstrapping method of 5,000 re-sampling sizes, mediation was executed to test its effect on employee engagement, depersonalisation, emotional exhaustion, and reduced personal accomplishments respectively. From Table 30, the results clearly indicated the mediatory effect of PsyCap between the relationship of meaningful work and employee engagement (H6, $\beta = 0.231$, $p < 0.001$), depersonalisation (H7a, $\beta = -0.166$, $p < 0.001$), emotional exhaustion (H7b, $\beta = -0.278$, $p < 0.001$) and reduced personal accomplishments (H7c, $\beta = -0.247$, $p < 0.001$), respectively. Additionally, the confidence interval for the four hypotheses did not contain the value of zero, thus rendering H6 to H7c as supported. Following Zhao *et al.*, (2010) we can conclude that this belongs to indirect-only mediation (or full mediation) as the results of this study shows that there is a significant indirect effect via the mediator variable, against a non-significant direct effect.

4.7 Moderation Analysis

This study proceeded to examine the moderation effect of PsyCap upon the relationship between meaningful work and employee engagement, depersonalisation, emotional exhaustion and personal accomplishments, respectively. Using the two-stage approach, the interpretation and summary of the results were presented accordingly in Table 31. The results showed that PsyCap did not moderate the relationships between meaningful work and employee engagement (H8, $\beta = -0.054$, $p = 0.354$), depersonalisation (H9a, $\beta = 0.041$, $p = 0.504$), emotional exhaustion (H9b, $\beta = -0.066$, $p = 0.248$) and reduced personal accomplishment (H9c, $\beta = 0.013$, $p = 0.772$), respectively. Additionally, the confidence interval was found to contain the value of zero, thereby rendering H8 to H9c not supported.

Table 30. Mediation results

		Indirect effect	Std Error	<i>t</i> -value	<i>p</i> -value	95% Confidence Interval	Decision
H6	Meaningful Work -> PsyCap -> Employee Engagement	0.231	0.043	6.535***	0.000	[0.201; 0.365]	Supported
H7a	Meaningful Work -> PsyCap -> Depersonalisation	-0.166	0.043	3.904***	0.000	[-0.257; -0.090]	Supported
H7b	Meaningful Work -> PsyCap -> Emotional Exhaustion	-0.278	0.044	5.733***	0.000	[-0.372; -0.199]	Supported
H7c	Meaningful Work -> PsyCap -> Reduced Personal Accomplishments	-0.247	0.044	5.576***	0.000	[-0.006; -0.337]	Supported

Note: * $p < 0.05$ ** $p < 0.01$, *** $p < 0.001$, NS - Not significant

Table 31. Moderation results

		Path Coefficient	Std Error	<i>t</i> -value	<i>p</i> -value	95% Confidence Interval	Decision
H8	Meaningful work*PsyCap -> Employee engagement	-0.054	0.059	0.926 ^(NS)	0.354	[-0.176; 0.065]	Not supported
H9a	Meaningful work*PsyCap -> Depersonalisation	0.041	0.061	0.669 ^(NS)	0.504	[-0.079; 0.153]	Not supported
H9b	Meaningful work*PsyCap -> Emotional exhaustion	-0.066	0.057	1.155 ^(NS)	0.248	[-0.184; 0.037]	Not supported
H9c	Meaningful work*PsyCap -> Reduced personal accomplishments	0.013	0.046	0.289 ^(NS)	0.772	[-0.076; 0.103]	Not supported

Note: * $p < 0.05$ ** $p < 0.01$, *** $p < 0.001$, NS - Not significant

4.8 Summary of Chapter 4

SPSS and SmartPLS 3.0 were programmes employed to perform an analysis regarding the influence of meaningful work and PsyCap on employee engagement and the various dimensions of job burnout (i.e. depersonalisation, emotional exhaustion, and reduced personal accomplishments). This section summarises the salient points obtained from the analysis.

First, the measurement model showed satisfactory validity and reliability by meeting the required threshold of different assessment tests. All constructs resulted in a composite reliability score exceeding 0.70, as well as achieving AVE of at least 0.50. Meanwhile, indicators with loadings lesser than 0.40 were eliminated, whereas those with outer loadings ranging from 0.40 to 0.70 were treated cautiously. Their removal was contingent upon whether such step improved the composite reliability and AVE to an acceptable threshold while retaining the constructs' content validity during the process. Moreover, discriminant validity testing using the HTMT criteria test showed that the constructs were distinctively unique from one another.

Second, the validation test conducted on the formative measurement model yielded acceptable results. No multicollinearity issues were detected as the variance inflation factors for the formative indicators were less than 5.0. Besides, the outer weights were measured from two perspectives for significance and relevance accordingly. The indicators' outer weights were tested for significance, whereby those that achieved significance were retained in the measurement model. In contrast, those found to be not significant were subjected to further tests, whereby the decision for their removal hinged upon their outer loadings score, the significance of their outer loadings score and the indicators' theoretical relevance to the model.

Third, the validation of the structural model yielded results displaying R^2 that showed weak to moderate strength. Collectively with mediation and moderation, 11 out of 17 hypotheses were supported, with the path coefficient that exceeded 0.10 and were significant at 0.05 at least. Moreover, the predictive relevance (Q^2) and effect sizes (f^2 and q^2) calculation were also conducted, whereby the blindfolding technique revealed that the model provided clear predictive relevance. This was justified by the endogenous latent variables that achieved a Q^2 score larger than zero, ranging from

0.096 to 0.300. Meanwhile, the effect sizes calculation also showed that different endogenous variables posed dissimilar impact on one another, which ranged from no effect to medium effect.

This consequently concluded Chapter 4 of this study accordingly. The following chapter provides a detailed discussion regarding the findings obtained and their associated theoretical, empirical, and managerial implications, respectively.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Recapitulation of Objectives, Motivations and Findings

This particular section of the chapter would specifically recap the background, objectives, motivations and hypothesis outcomes of the study that were obtained and elucidated in the earlier chapters.

5.1.1 Role of Social Worker

Like any other countries within the Southeast Asia region, social work movement in Singapore is initiated with the missions of fostering cohesion among the heterogeneous community, deepening the sense of harmony, and building a common set of ethos among the citizens (Maliki *et al.*, 2015). Over the years, social work has made key contributions towards nation building efforts, such as playing the role in advocating and voicing out issues that may potentially inhibit social mobility among the population (Othman, 2016). Its demographic trend of ageing population that is primarily a result of lower birth-rate and mortality rate has ultimately driven and exacerbate the demands for healthcare and social care service (Vasoo, 2013, Toh, 2017).

Social work is both a rewarding and stressful profession concomitantly. It is highlighted in several studies that social workers choose to remain in the field predominantly due to their belief in the altruistic organisational mission and their capacity to generate positive changes in their clients' lives (Kim and Lee, 2009, Jessen, 2010, Hombrados-Mendieta and Cosano-Rivas, 2013, Smith and Shields, 2013, Healy *et al.*, 2015). The sense of fulfilment rooted from such meaningful work is undoubtedly fundamental in retaining social workers within the profession (SASW, 2005).

As a service-focused profession, the key to this profession laid specifically in the worker-client relationship (Lloyd *et al.*, 2002). It relies on competent and engaged social workers to deliver its mission accordingly to the best of their ability. An engaged employee brings about desirable behavioural traits like positive employee-organisation relationships (Walden *et al.*, 2017); reduced turnover intentions (Lu *et al.*, 2016); improved organisational commitment (Gokce *et al.*, 2014); improved job

satisfaction (Lee and Ok, 2015); and improved employee performance (Anitha, 2014). Yet, a survey from Gallup revealed that regardless of profession, Singapore's reported engagement level stood at 9%, which is lower than the average global engagement rate of 13% (Sweetman and Luthans, 2010, Gallup, 2013). Honing on this focus thus, allows the study to examine and provide practical recommendations to leverage meaningful work so as to enhance social workers' employee engagement.

Social workers would typically develop a deep relationship with their client, running the risk of experiencing PTSD. This disorder would in turn affect these individual's personal and mental well-being, resulting in occupational burnout that translates into poor organisational performance (Choi, 2011b, Galek *et al.*, 2011, Bercier and Maynard, 2015, Wagaman *et al.*, 2015). Several studies also attributed it to the constant exposure that rendered the work emotionally draining and demanding (Brewer and Shapard, 2004, Lin *et al.*, 2016, Welander *et al.*, 2016). Despite the lack of an official statistics regarding the prevalence of job burnout rate among social workers in Singapore, a survey revealed it to be one of the top three reasons other than workload and compensation, resulting in them leaving the profession (SASW, 2005). Similar findings on social workers experiencing burnout were also found in the USA (Torpey, 2018), Canada (The Chronicle Herald, 2017), United Kingdom (McFadden, 2015), Hong Kong (Su, 2018), and Ireland (Murray, 2017). Therefore, this collectively elucidated that job burnout among social workers is an issue that extended beyond Singapore and is a wide-spread phenomenon that needs more attention.

Job burnout receives much scholarly attention as it impacted clients and the organisation alike (Kim and Stoner, 2008, Schwartz *et al.*, 2007). Furthermore, organisations are also morally obligated to aid their burnout employees to ensure that they could recover and resume work. Approximately USD \$125 billion annually is spent on healthcare in the USA itself, specifically to support employees facing burnout (Garton, 2017). Though there is limited amount of data available regarding the costs of social worker support and replacement, these examples nonetheless provided a glimpse of the exorbitant amount that could possibly involve.

This subsequently serves as the premise for this study in examining whether personality traits in the form of PsyCap are capable of influencing social worker's level of engagement and reducing the propensity for job burnout. Isaksen (2000) previously

mentioned that PsyCap had the capacity to influence one's construction and deconstruction regarding the meaning of work. Thus, this study would contribute towards understanding PsyCap as a mediator and moderator, as well as its involvement in meaningful work towards employee engagement and job burnout, an area requiring further research (Avey *et al.*, 2011, Albrecht, 2013, Both-Nwabuwe *et al.*, 2017, Kolodinsky *et al.*, 2017). Besides, its malleable characteristic would be examined in this study to further expound and observe whether a meaningful work environment is a good platform to foster the development of an employee's PsyCap.

5.1.2 Meaningful Work

Meaningful work is operationalised as a subjective experience based on one's social, cultural and historical background that required employee-employer collaboration. This provides the necessary conditions enhancing their intrinsic motivation towards work and aligning the work with their value system, as well as enriching their sense of belonging to the larger ecosystem. For instance, a garbage collector takes pride in his work of keeping the environment clean for the community and future generations. Similarly, an academician manifests similar sentiments in the manner on how his or her efforts played a role in nurturing students. Likewise, social workers' work carries special meaning, especially when they successfully supported the clients in alleviating them out of their life circumstances and improving their social well-being.

The last decade displayed the traction that meaningful work gained among employees, which are attributable to two reasons: (1) the changing profile of the workforce, and (2) the positive outcomes associated with it. The first reason is apparent in the way that today's employees are better educated, more vocal and increasingly questioning the nature and purpose of their work (Gursoy *et al.*, 2013). This is evident from a study showing that employees placed higher importance on non-monetary rewards over monetary ones (Hu and Hirsh, 2017). Such findings corroborated with Kahn and Fellows (2013) highlighting that sustainable engagement happened only when one finds meaning in the work. Therefore, it inevitably takes more than purely hygiene factors for sustainable engagement to manifest.

Meanwhile, the second reason for the growing popularity of meaningful work is attributable to the positive outcomes associated with it. These included improvement to working attitude resulting in better employee engagement (Cartwright and Holmes, 2006), improved sense of self-esteem (Walumbwa *et al.*, 2013), higher organisational commitment (Geldenhuis *et al.*, 2014), self-efficacy (Yeoman, 2014, Allan *et al.*, 2018, Allan *et al.*, 2016a), and reduction in burnout (Lips-Wiersma *et al.*, 2016).

Moreover, its growing importance is further supported by practitioner's surveys. A survey conducted by McKinsey (2014) revealed almost half of the respondents agreed that meaningful work is a key driver for employee engagement and connection. Meanwhile, 20% of them were prepared to compromise with lower salary in exchange for meaningful work (McKinsey, 2014). Similarly, another survey involving 23,000 respondents worldwide showed that 73% of them indicated that the ability to find purpose in work helped them in achieving job satisfaction (Linkedin, 2016). Thus, these findings justified that the pursuit for meaningful work is not an exclusive right to certain group of individuals or to be restricted to any profession, career life stages or demographic profiles (Lips-Wiersma *et al.*, 2016, Lopez and Ramos, 2016, Bailey and Madden, 2017, Lepisto and Pratt, 2017).

Despite the increasing number of studies performed on meaningful work, many scholars maintained the view that the current understanding of the topic is still at its infancy stage (Rosso *et al.*, 2010, Bailey *et al.*, 2015, Bailey and Madden, 2017). This was observed in the manner, in which existing literature did not examine the role of PsyCap in meaningful work. Besides, there is limited literature that studied the effect of meaningful work on the respective dimensions of job burnout, and many of the existing ones focused on for-profit organisations. Therefore, this warrants additional research to be done in examining the effect of meaningful work on the respective dimensions of job burnout. In sum, this study serves to establish whether meaningful work is the ideal environment for enhancing PsyCap, fostering engagement, and managing job burnout, hence providing social service NPOs with the motivation and reasons in imbuing meaningfulness in social workers' day-to-day work.

5.1.3 Job Burnout

This study operationalised job burnout as a syndrome that affected everyone regardless of their profession and involved stressors of different forms, which may potentially impact one's responses. The corollaries of experiencing job burnout are reduction in their pride in their own accomplishments, losing their personality and becoming emotionally exhausted.

Social workers pursue the profession with the passion to helping the invalids and the disadvantaged, improving societal well-being, advocating social justice, and ultimately to change the world. Throughout the journey, there are times when they felt discouraged, angered, or disillusioned, but the sense of purpose and passion never extinguished. They value every individual and recognise the positive impact that their work result in not only on one person, but also the community as a whole. However, social workers are working in an emotionally charged profession, which is "considered as a high risk for job stress and burnout" (Travis *et al.*, 2016, p. 1077).

This setting underlines the crucial need to examine the effect of meaningful work towards reducing the propensity of experiencing job burnout. However, it has come to the attention of this study that many of the existing literature examined job burnout as a unidimensional construct (e.g. Fairlie, 2011, Ben-Itzhak *et al.*, 2015). Many scholars had argued that the construct should be perceived as multidimensional given that individuals within different situations may experience different aspects of the effects of job burnout (Maslach, 1993). Besides, theorists like Van Dierendonck *et al.* (2001) and Lewin and Sager (2007) also highlighted that job burnout could occur in a process, where the dimensions are placed on a continuum of severity and progress from one state to the next.

Furthermore, social work is acknowledged as a multifaceted profession wherein social workers assumed varying roles at different point in time (Ang, 2009, Beckett, 2017, Rode, 2017). To the client, a social worker is a friend who lent a shoulder and provided direction and support when they were in need. To the organisation, they are a case-worker, a coordinator, and a multi-tasker, who are expected to fulfil organisational demands while meeting clients' needs concomitantly. Similarly, a social worker to the government is a policy shaper, an advocator and the vehicle of change. Thus, the

sources of burnout to a social worker could appear in multiple forms and would require different resources in addressing them. In connection to this point, studies have shown that the same resource posed differentiated outcomes on job demands (Rasmussen *et al.*, 2016, He *et al.*, 2017). This demonstrated that determining whether a stimulus as a resource would vary across individuals, depending on their cultural and personal values. It implies that the difference in valence placed on a stimulus would influence the magnitude of the impact across individuals.

As most of the earlier findings on the effectiveness of meaningful work were mostly in the context of for-profit organisations (e.g. Bunderson and Thompson, 2009, Dimitrov, 2012, Raub and Blunschi, 2013, Ben-Itzhak *et al.*, 2015), it does not augment well with the fact that social workers are attracted to their job due to its altruistic mission. In other words, this posed the possibility that the sources of motivation could be different between social workers and other professions. Hence, direct application of the findings obtained from previous works would yield limited effect. Similarly, it is possible that meaningful work might not be as effective as one assumed it to be in alleviating job burnout among social workers. As supported by the JD-R theory, the outcomes of this study would undeniably extend the current understanding regarding the effectiveness of job resources on multifaceted professions, such as social work.

5.1.4 Employee Engagement

Social workers are known to play an important role in Singapore, and their significance would continue to grow as the nation's population unceasingly aged (Kamil, 2017). Despite efforts undertaken by the government to improve hygienic factors within the social work community, it resulted in merely moderate growth in attracting and retaining those in the profession (Tai, 2016b, Tai, 2017a). This was corroborated by a meta-analysis revealing that work involving less mechanical task would find it counter-productive if pay increments were introduced (Judge *et al.*, 2010).

Social work is described as a highly skilled profession requiring in-depth understanding of the humanities and social sciences (MacFarlene, 2017). Thus, social service NPOs should explore other out-of-the-box solutions in engaging social workers. Hence, this study argued that meaningful work could be a possible factor in

enhancing social workers' engagement as the work carry special significance to them. At this juncture, it is of interest to recapitulate employee engagement's definition as a positive fulfilling work-related state of mind characterised by vigour, dedication, and absorption (Schaufeli *et al.*, 2006).

In view of meaningful work being a possible lever for engagement, this study noted from a systemic review by Bailey *et al.* (2017a) that there is a lack of literature exploring the constructs of meaningful work, employee engagement, PsyCap and job burnout within one model. A handful of studies that tested part of the models provided mixed results, evidenced by Mendes and Stander (2011) who indicated that meaningful work is associated with higher levels of employee engagement, but a study by Van den Heuvel *et al.* (2009) showed otherwise. Furthermore, two studies that involved PsyCap by Nigah *et al.* (2012) and Spence Laschinger *et al.* (2012) showed that PsyCap had a positive significant relationship with employee engagement. In fact, Nigah *et al.* (2012) asked if "those more engaged at work also be more likely to report higher levels of PsyCap?" (p. 902) or those with higher PsyCap results in higher engagement. As such, a detailed examination of the effect of meaningful work on employee engagement furthers one's understanding of the relationship between these variables.

5.1.5 Psychological Capital

This study is also tasked with exploring the role that PsyCap as an independent variable, a mediator and moderator. Multiple studies showed PsyCap as a good predictor of individual and work-related outcomes (Setar *et al.*, 2015, Wang *et al.*, 2017, Rani, 2015, Vogelgesang *et al.*, 2014). More organisations also paid increased attention to employees' PsyCap due to its potential as a motivational construct towards achieving organisational mission and vision. The complexity of the profession rendered social work to be widely acknowledged across multiple studies that having the right personality traits are key requirements for one to maintain their membership (Sheppard and Charles, 2017, Chiller and Crisp, 2012b, Bowyer and Roe, 2015, Collins, 2007, Daniel, 2013). Furthermore, it was noted that organisations that focused on enhancing PsyCap could potentially see a 33% reduction in presenteeism, absenteeism and employee's compensation claims (PricewaterhouseCoopers, 2015).

Nonetheless, current literature indicated the much-needed importance of discovering PsyCap as a personal resource due to inconsistencies observed among different studies. Wang *et al.* (2017) showed that it mediated the relationship between the three dimensions of job stress and well-being, whereas Li *et al.* (2015) revealed its mediating impact on two out of the three dimensions of job burnout. Similar inconsistencies were also observed when PsyCap was deployed as a moderator (Zheng *et al.*, 2016, Cheung *et al.*, 2011). Taken together, one could see that there were instances where PsyCap acts as a moderator to buffer effects between job resources and workplace outcomes, while other works suggested that the constant exposure to job resources influenced PsyCap which eventually impacts workplace outcomes.

These reasons justified Newman *et al.*'s (2014) call for future studies to understand the underlying constructs regarding the manner in which PsyCap influenced workplaces outcomes. Additionally, they also spurred further exploration regarding whether it “influences how we respond to the world, as opposed to deriving from the influences of the world” (p. 128). In response to these calls and aligning with the JD-R theory and COR theory, this study furthers the literature by examining the effectiveness of PsyCap as a moderator and mediator awithin the same construct.

5.2 Hypotheses and Research Aims

This study consequently examines the interplay between meaningful work, employee engagement and the dimensions of job burnout, encompassing emotional exhaustion, depersonalisation, and reduced personal accomplishments, and using PsyCap as the mediator and moderator. The research objectives are designed to examine the effect of:

- (a) Meaningful work on PsyCap, employee engagement and dimensions of job burnout.
- (b) PsyCap on employee engagement and dimensions of job burnout.
- (c) PsyCap as a mediator and moderator alike in the relationship between meaningful work, employee engagement, and dimensions of job burnout, specifically emotional exhaustion, depersonalisation, and losing personal accomplishments.

This was achieved using the four instruments of WAMI, PCQ, MBI and UWES, whereby data was collected from 223 social workers working in Singapore. It was then analysed using the two-stage approach in PLS-SEM, whereby the study had outlined a total of 17 hypotheses as stated and analysed in Chapter 4. A summary of the hypotheses and their respective results are presented accordingly in Table 32 below.

Table 32. Summary of hypotheses

Hypotheses	Results
H1 Meaningful work positively influences PsyCap	Supported
H2 Meaningful work positively influences employee engagement.	Supported
H3a Meaningful work negatively influences depersonalisation.	Not supported
H3b Meaningful work negatively influences emotional exhaustion.	Not supported
H3c Meaningful work negatively influences reduced personal accomplishments.	Supported
H4 PsyCap positively influences employee engagement.	Supported
H5a PsyCap negatively influences depersonalisation.	Supported
H5b PsyCap negatively influences emotional exhaustion	Supported
H5c PsyCap negatively influences reduced personal accomplishments.	Supported
H6 PsyCap has a mediating effect on the relationship between meaningful work and employee engagement.	Supported
H7a PsyCap has a mediating effect on the relationship between meaningful work and depersonalisation	Supported
H7b PsyCap has a mediating effect on the relationship between meaningful work and emotional exhaustion.	Supported
H7c PsyCap has a mediating effect on the relationship between meaningful work and reduced personal accomplishments.	Supported

H8	PsyCap has a moderating effect on the relationship between meaningful work and employee engagement.	Not supported
H9a	PsyCap has a moderating effect on the relationship between meaningful work and depersonalisation	Not supported
H9b	PsyCap has a moderating effect on the relationship between meaningful work and emotional exhaustion.	Not supported
H9c	PsyCap has a moderating effect on the relationship between meaningful work and reduced personal accomplishments.	Not supported

5.3 Discussions

The outcomes of different research objectives and hypotheses are outlined in a further discourse in this particular section accordingly.

5.3.1 Research Objective 1: Effect of Meaningful Work on Psychological Capital, Employee Engagement and Dimensions of Job Burnout

5.3.1.1 Meaningful Work and Psychological Capital

The results for Hypothesis 1 revealed the anticipated positive relationship between meaningful work and PsyCap. It showed that the presence of meaningful work played an important role in shaping social workers' PsyCap. Therefore, social workers who perceive their work as meaningful would find that their hope, efficacy, resilience, and optimism improved accordingly.

Such result is explainable using the SET. It is built on the premise that when one's exposure to a set of stimuli perceived as valuable, it creates an obligation for them to reciprocate with something in return that was mutually acceptable (Gouldner, 1960, Cropanzano and Mitchell, 2005, Mearns *et al.*, 2010). However, Ko and Hur (2014) opine that such reciprocation is not necessarily be in the form of monetary elements. Instead, it could be in the form of an increase in organisation commitment, or desire to maintain longer membership with the affiliated organisation.

On this basis, the results demonstrated that when social workers experience work meaningfulness, it creates a sense of obligation for them to reciprocate. This

encompassed mustering up more hope, increasing their sense of efficacy and resilience, and being more optimistic towards their work. Concurrently, these results align with the concept of upward spiral postulated by Fredrickson and Joiner (2002), whereby positive emotions “initiate a cascade of psychological processes that carry an enduring impact on people’s subsequent emotional well-being” (Fredrickson and Joiner, 2018, p. 194).

Moreover, the malleable characteristics of PsyCap are reaffirmed by the outcomes, confirming that meaningful work is instrumental in developing PsyCap. This was especially evident due to the substantial effect size from meaningful work to PsyCap at $f^2 = 0.405$. This result drew an empirical relationship between the construct of job resource and personal resource in the forms of meaningful work and PsyCap, respectively. It extends the understanding regarding the concept of resource caravan within the COR theory demonstrating that resources do not exist in isolation, but instead possess the capacity to generate more resources.

5.3.1.2 Meaningful Work and Employee Engagement

The second hypothesis examined the relationship between meaningful work and employee engagement, whereby a positive relationship was postulated. The results unsurprisingly revealed that the hypothesis was supported. These results showed that similar to for-profit organisations, social workers who perceive their work to be meaningful are more engaged in their work and translate in the form of vigour, dedication, and absorption. This aligns with Kahn (1990) that one’s experience of meaningfulness in work is one of the prerequisites for employee engagement. These results also align across multiple literature (e.g. Kahn and Fellows, 2013, Geldenhuys *et al.*, 2014, Hoole and Bonnema, 2015, Ahmed *et al.*, 2016, Demirtas *et al.*, 2017, Johnson and Jiang, 2017).

Such phenomenon is explainable using the TPB and JD-R theory respectively. TPB firstly expounded intention to be the sum product of attitude, subjective norms and perceived behavioural control (Ajzen, 1991). Thus, the presence of meaningful work changes social worker’s attitude and intention towards work, and in turn, resulting in them being more engaged. In the context of the JD-R theory, meaningful work could be classified as a job resource in many of the existing works (Fairlie, 2011, Cartwright

and Holmes, 2006). Therefore, the presence of job resource would buffer against job demands, thereby resulting in desirable work behaviour (Bakker and Demerouti, 2017). Hence, the results underline the observation that meaningful work positively influences one's engagement level, reaffirming further of its role as a job resource.

However, the effect size of meaningful work to employee engagement was revealed to be small at $f^2 = 0.034$, as well as a path coefficient of 0.170. This contradicted various existing studies that constantly describe meaningful work as a key predictor in enhancing employee engagement. For instance, Jung and Yoon (2016) previously performed a study participated by 352 hospitality employees and revealed meaningful work as a strong predictor with the path coefficient of 0.757. Likewise, Fairlie (2011) also noted that "meaningful work characteristics were the strongest unique predictor of engagement, accounting for 16% of the total variance in engagement scores" (p. 516).

Such differences to existing studies could be plausibly attributed to social workers' mentality and expectations when they first join the profession. Many are clearly aware on their motivations and what to expect by being in this profession. For instance, social workers are attracted by the altruistic mission of their organisation and outcomes delivered by their work (Park *et al.*, 2018). Moreover, they are mentally prepared with the notion of working within a social service NPO, such as being under-resourced, lower than average compensation, poor supervision, and the lack of formal support (Chiller and Crisp, 2012b). Thus, this explains why implementing initiatives to further imbue meaningful work in the job resulted in a small effect on improving their engagement. This is especially in consideration of the fact that they are already self-aware behind choosing the profession and knowing "what is it in for me" when they first joined.

5.3.1.3 Meaningful Work and Dimensions of Job Burnout

Hypotheses 3a, 3b, and 3c were poised to examine the relationship between meaningful work and the dimensions of job burnout, namely depersonalisation, emotional exhaustion and reduced personal accomplishments. Many of the earlier studies (e.g. Alarcon *et al.*, 2009, Altun, 2002, Bakker *et al.*, 2014) opted to adopt a composite score that underlined job burnout as a unidimensional construct. Therefore,

this could potentially mask the unique contribution of meaningful work towards the respective dimensions of job burnout. Hence, this study added value to the existing literature by examining whether meaningful work had a direct negative relationship with the dimensions of job burnout.

From the results, it appeared that meaningful work had a negative significant relationship with reduced personal accomplishments alone, but not with emotional exhaustion and depersonalisation. These results align with a practitioner survey conducted by McFadden (2015), which detailed that a majority of social workers from UK reported a high level of personal accomplishment but felt emotionally exhausted and experienced depersonalisation concomitantly.

From the results, it shows that those who perceive their work to be meaningful displayed a sense of self-efficacy, but it does not diminish their emotional exhaustion or cynicism towards stakeholders. These results consequently showed that meaningful work did not address job burnout entirely, elucidating why social workers experience job burnout despite finding meaningful work.

To the best of this study knowledge, discussions on meaningful work and the dimensions of job burnout are largely sparse and limited. There were only two studies that examined these constructs. The first being Rasmussen *et al.* (2016) that revealed meaningful work to significantly predict both emotional exhaustion and depersonalisation. Meanwhile, He *et al.* (2017) showed that meaningful work was associated with depersonalisation. The findings from these two studies clearly differed from this study, which could be attributed to several reasons:

- (a) Both Rasmussen *et al.* (2016) and He *et al.* (2017) opted to omit the burnout dimension of reduced personal accomplishments and proceeded with employee exhaustion and depersonalisation only. The methodology was justified by both studies citing Dyrbye *et al.* (2009) and Demerouti *et al.* (2000) highlighting that “reduced personal accomplishments is an independent construct, showing weak relationships with emotional exhaustion and depersonalisation” (He *et al.*, 2017, p. 1080).

However, upon a closer look at the referenced works of Dyrbye *et al.* (2009) and Demerouti *et al.* (2000), nowhere within these studies had suggested for

the removal of reduced personal accomplishments from MBI. On the contrary, Dyrbye *et al.* (2009, p. 440) advocated that “when evaluating the relationship between symptoms of burnout and other outcomes, the ideal approach is to use the individual domain scores as continuous data”, as adopted by this study.

Besides, multiple studies over the years established that individuals undergoing job burnout would experience symptoms of emotional exhaustion, depersonalisation, and reduced personal accomplishments. This is apparent, alongside with the debates on whether the symptoms were state-like or process-like as discussed at length in Section 2.5.2 (e.g. Burke, 1989, Lee and Ashforth, 1993a, Lee and Ashforth, 1993b, Golembiewski, 1999, Van Dierendonck *et al.*, 2001, Park *et al.*, 2014, Lizano and Mor Barak, 2015, Huang *et al.*, 2016, Travis *et al.*, 2016, Yeunhee Joyce Kim, 2017).

Moreover, studies evaluating the psychometric properties of MBI confirmed that the three dimensions of MBI exceeded the threshold for reliability scores. A meta-analysis by Wheeler *et al.* (2011) elucidated that the reliability estimates for emotional exhaustion averaged at 0.80, while depersonalisation and reduced personal accomplishments averaged at 0.70, respectively. Meanwhile, this study obtained composite reliability scores of 0.918 for emotional exhaustion, 0.827 for depersonalisation, and 0.875 for reduced personal accomplishments.

Thus, this study argued that the exclusion of reduced personal accomplishments from the MBI per Rasmussen *et al.* (2016) and He *et al.* (2017) have resulted in a considerable loss of information. This subsequently casted doubts regarding the conclusions and recommendations drawn from these studies. Therefore, this study addressed this gap by performing the analysis for meaningful work against all three dimensions of job burnout to obtain comprehensive and holistic findings. This could explain for the different findings and recommendations arising from this study compared to Rasmussen *et al.* (2016) and He *et al.* (2017)

- (b) The research participants for the study conducted by Rasmussen *et al.* (2016) comprised of psychosocial oncology clinicians, encompassing psychologists, social workers, psychiatrists, counsellors and allied health professionals. Meanwhile, He *et al.* (2017) focused on oncologists from China only, rendering the different findings obtained to be attributed to dissimilar study participants when compared to Rasmussen *et al.* (2016). Hence, the dissimilarity between participants of this study and the existing literature of both Rasmussen *et al.* (2016) and He *et al.* (2017) could also contribute to the difference in results yielded.

Evidently the job scope and workload of a social worker differed from an oncologist, alongside the fact that oncologists worked in hospitals or specialised medical centres that are characteristic of a for-profit organisation (Shanafelt and Dyrbye, 2012, Park *et al.*, 2018). In contrast, social workers generally operated in social service NPOs (Curtis *et al.*, 2009, Park *et al.*, 2018) which are not as well-resourced as compared to a hospital or specialised medical centres. Given the different job responsibilities and organisational setting, one would reasonably expect for the sources of motivation for employees in for-profit and social service NPOs and the stressors leading to burnout to differ, as well as the findings on the same variables (Park *et al.*, 2018).

Other than the above, this study also noted that among the three dimensions of job burnout, emotional exhaustion and depersonalisation are outcomes of job stressors, while “reduced personal accomplishments is more related to a lack of resources” (Bakker *et al.*, 2000, p. 889). This corroborated with a meta-analysis conducted by Alarcon (2011), whereby resources demonstrated a stronger relationship with reduced personal accomplishments in comparison with emotional exhaustion and depersonalisation. In contrast, the two latter dimensions are found to have higher associations with job demands, which are emotionally and affectionately driven (Alarcon, 2011). With the support of the literature and in consideration of meaningful work being classified as a form of job resource, meaningful work is expected to have

a stronger association with reduced personal accomplishments, which is subsequently demonstrated in this study.

The findings collectively shed more light regarding the effectiveness of meaningful work as a job resource towards the dimensions of burnout. Convolved organisational settings and job requirements resulted in individuals that would inevitably face stressors of multiple forms, depleting their resources and eventually experiencing job burnout (Bakker *et al.*, 2000). Although meaningful work is a form of job resource, the findings revealed that it displayed limited effect in alleviating job burnout and consequently resonated the concept of resource caravan within the COR theory. This reflected Hobfoll (2011; 2014) advocating for organisations to have multiple forms of resources to effectively manage job demands faced by their employees.

5.3.2 Research Objective 2: Effect of Psychological Capital on Employee Engagement and Dimensions of Job Burnout

5.3.2.1 Psychological Capital and Employee Engagement

Anchored against the COR theory, the results revealed a positive and significant relationship between PsyCap and employee engagement. It is consistent with other literature describing PsyCap as a key predictor of employee engagement (Paek *et al.*, 2015, Sharma and Sharma, 2015, Thompson *et al.*, 2015, Karatepe and Avci, 2017, Datu *et al.*, 2018).

This rendered the discussion on PsyCap for social workers to be entirely apt and relevant, considering the different stages involve within social work. Generally, the process starts off with developing a client-worker relationship, performing needs assessment, and collaborating with other professionals like counsellors and allied-health professionals to design and to implement the interventions. Unlike administering medication to a patient whereby the barometer of effectiveness is their recovery from an illness, assessing the effectiveness of interventions for the clients is a process of higher intricacy. This is especially when some of the reasons for recovery or deterioration alike are beyond a social worker's control or comprehension (Chokkanathan, 2013, Daniel, 2013). Interventions that fail to manifest the expected

effect would call for the development of new interventions, thus reinitiating the whole process again.

Therefore, social workers with a sense of hope, efficacy, resilience and optimism would be critical as they would maintain their enthusiasm towards their work no matter how long-drawn, challenging or stressful it is. Such enthusiasm in work would therefore be translated into engagement, displaying the attributes of vigour, absorption, and dedication.

Interestingly, when compared to the results obtained from hypothesis 2, the path coefficient from PsyCap to employee engagement was evidently stronger ($\beta = 0.525$) than the one from meaningful work to employee engagement ($\beta = 0.170$). Similarly, the effect size from meaningful work to employee engagement was small at $f^2 = 0.034$, whereas PsyCap to employee engagement revealed a substantial outcome of $f^2 = 0.326$.

Therefore, this elucidated the importance of PsyCap within the social work profession, demonstrating that sustaining engagement in the field extends beyond experiencing work meaningfulness. It requires one to be hopeful, resilient, optimistic and having self-efficacy, which is reflected in the essential need for these personality traits considering the multiple stressors social workers faced throughout the course of their career (Wagaman *et al.*, 2015).

5.3.2.2 Psychological Capital and Dimensions of Job Burnout

Hypothesis 5a, 5b, and 5c next examined the relationship present between PsyCap with each of the dimensions of job burnout, namely depersonalisation, emotional exhaustion and reduced personal accomplishments. The results consequently showed that PsyCap had a significant negative relationship with all three dimensions and supporting their respective hypotheses. This showed that social workers who possessed and displayed PsyCap have reduced propensity in experiencing job burnout.

Upon a comparison with the results obtained from hypotheses 3a, 3b, and 3c, two distinct observations could be underlined. Firstly, the path coefficient of PsyCap to reduced personal accomplishments was stronger ($\beta = -0.460$) in comparison with those of meaningful work to reduced personal accomplishments ($\beta = -0.202$). Secondly,

meaningful work had a small effect size ($f^2 = 0.045$) to reduced personal accomplishment as opposed to PsyCap's medium effect ($f^2 = 0.232$) to the same outcome. These results demonstrated that although meaningful work could address one dimension of job burnout, its effectiveness was much smaller compared to the effect size of PsyCap to reduced personal accomplishment. It also revealed that PsyCap had a significant negative relationship with all dimensions of job burnout, whereas meaningful work showed a significant negative relationship with only one out of the three dimensions.

Comparison with earlier studies, similar results are observed. Moyer *et al.* (2017) highlighted that PsyCap had a negative relationship with job burnout. Similarly, Li *et al.* (2015, p. 2996) concluded based on 1,239 bank employee participants that "PsyCap was significantly and negatively correlated with emotional exhaustion and depersonalisation, and significantly and positively correlated with personal accomplishment".

Such phenomenon is explainable using the COR theory. Social work by itself displays the tendency to be complex in nature (Tian *et al.*, 2016). Besides, many of the profession work in under-resourced organisations and allocated minimal supervisory support (Tian *et al.*, 2016). Coupled with mounting workloads and changing expectations, these factors would collectively translate to poor work culture and employee disengagement. Taken together, the lack of resources would inevitably result in burnout. Hence, these results showed that between job resources and personal resources, the psychological state (i.e. personal resources) of the social workers itself serves as a key factor in successfully managing these stressors.

In this regard, this study added value to the limited literature from two perspectives. Firstly, it enriches the understanding regarding the manner in which PsyCap influenced the dimensions of job burnout, especially in view of evidence depicting that the same form of resources may pose varied effects on these dimensions (e.g. Rasmussen *et al.*, 2016). Secondly, this study also drew associations between personal resource and job resources in the context of social workers working in social service NPOs. Being a multi-faceted profession, the stressors faced by these individuals would vastly differ from those of other fields (Daniel, 2013). Hence, direct application of

findings/recommendations obtained from existing studies that focused on for-profit organisations yield limited success (Park *et al.*, 2018). The results showed that PsyCap evidently plays a key role in managing one's propensity of experiencing job burnout.

5.3.3 Research Objective 3: PsyCap as a mediator and moderator alike in the relationship between meaningful work, employee engagement, and dimensions of job burnout, specifically emotional exhaustion, depersonalisation, and losing personal accomplishments.

5.3.3.1 Mediating Effect of Psychological Capital on Meaningful Work , Employee Engagement and Dimensions of Job Burnout.

This research objective poised to examine the role of PsyCap as a mediator, whereby four hypotheses were subsequently developed. Hypothesis 6 postulated that it mediated the relationship between meaningful work and employee engagement, whereas Hypotheses 7a, 7b, and 7c postulated that it mediated the relationship between meaningful work and depersonalisation, emotional exhaustion, and reduced personal accomplishments, respectively.

Hypothesis 6 showed that PsyCap demonstrated the indirect influence of meaningful work towards employee engagement through its mediating role. Similarly, the results also supported Hypotheses 7a, 7b, and 7c by suggesting meaningful work's indirect relationships with depersonalisation, emotional exhaustion and reduced personal accomplishments respectively via PsyCap. Upon comparison with the direct effects of meaningful work to dimensions of job burnout (H3a, 3b and 3c), meaningful work was noted in not having a significant direct relationship with depersonalisation and emotional exhaustion (H3a and 3c). However, there was a negative significant relationship with reduced personal accomplishments (H3c). Notwithstanding this, a comparison of the path coefficient from meaningful work to reduced personal accomplishments (H3c), and the indirect effect from meaningful work to reduced personal accomplishments via PsyCap (H7c) alike would underline the slightly stronger path coefficient for the latter at $\beta = -0.247$.

Thus, this implies that PsyCap is a more critical resource in the profession, vis-à-vis meaningful work. These results demonstrated that PsyCap is instrumental in

addressing all dimensions of job burnout as a personal resource. Upon perceiving their work as meaningful, social workers' PsyCap would be broadened and built on, consequently translating to the desirable organisational outcome. In the context of this work, it resulted in a reduction in the propensity of experiencing job burnout and enhancement of job engagement. Therefore, the results of these four hypotheses aligns with multiple studies that positioned PsyCap as a mediator (Wang *et al.*, 2012, Gupta and Singh, 2014, Li *et al.*, 2015, Taegoo Kim *et al.*, 2017, Wang *et al.*, 2017).

Such outcome could be explained using the JD-R theory, whereby the extent to which the effect of a job resource or job demand posed on outcomes is reliant upon the manner in which one appraise it. To illustrate, a study previously showed that job demands like time pressure was positively related to engagement (Schaufeli *et al.*, 2008), which clearly violated the assumption of the JD-R theory for job demands to inhibit engagement, rather than enhancing it (Bakker and Demerouti, 2007). However, it was considered as valid regardless, considering that "employees tend to perceive these demands as opportunities to learn, achieve, and demonstrate the type of competence that tends to get rewarded" (Crawford *et al.*, 2010, p. 836). Together with earlier hypotheses, this study collectively argued that PsyCap is appraised as a key resource among social workers as it displays ability in reducing job burnout and enhancing employee engagement.

This may be concurrently explained using the COR theory, which indicated that individuals would actively seek to acquire, maintain and conserve personal resources, such as PsyCap (Hobfoll, 1989). By acquiring personal resources, Xanthopoulou *et al.* (2007) indicated that other resources would consequently be generated and in turn lead to a resource caravan. The cornerstone of COR theory noted that resources develop in an aggregated manner rather than the piecemeal basis (Hobfoll, 2011). It is said that resources existed in the caravan, where "families, organisations and societies create and maintain circumstances that create and maintain resources" (Hobfoll, 2014, p. 22).

In the context of this study, PsyCap and meaningful work collectively address the different facets of organisation practices. It offers a marketplace of resources and passageways that could be tapped by social workers to support them in meeting organisational demands and fulfilling their mission and vision (Hobfoll, 2011). Without these caravan passageways, "employees became less productive or even

counterproductive” (Hobfoll, 2011, p. 118). Hence, the presence of these caravan passageways itself enable positive employee outcomes, including enhancing their engagement level with the organisation (Xanthopoulou *et al.*, 2007).

5.3.3.2 Psychological Capital as a Moderator on Meaningful Work and Employee Engagement and Dimensions of Job Burnout.

The final research objective for this study aimed to examine PsyCap as a form of moderator, yielding four hypotheses that postulated its moderating effect between meaningful work and employee engagement (H8), as well as on the dimensions of job burnout (H9a, H9b and H9c). The assumption made suggested that social workers with high PsyCap could potentially increase the positive effects of meaningful work on employee engagement, while reducing its negative effect on experiencing the different dimensions of job burnout. However, the results failed to substantiate the hypotheses. It showed that PsyCap did not moderate the relationship between meaningful work and employee engagement, as well as the relationship between meaningful work and dimensions of job burnout.

Therefore, these results contradicted some of the earlier findings highlighting PsyCap that acted as a moderator against the negative effect in workplace (e.g. Gupta, 2014, Zheng *et al.*, 2016). Likewise, similar results whereby PsyCap failed to show any moderating effect are also observed, such as Cheung *et al.* (2011) revealing its role in moderating the relationship between emotional labour and depersonalisation, but not for emotional exhaustion and lack of personal accomplishments.

The moderating results of this study could be attributable to the similar psychological profile possess by the sample population. Xanthopoulou *et al.* (2007) indicated that studies focusing on homogeneous sample population would inevitably result in range restrictions and possibly leading to results of no moderation. However, this could be “avoided with the examination of heterogeneous samples of the population” (Xanthopoulou *et al.*, 2007, p. 136). Such point was evident in several studies.

For instance, Zheng *et al.* (2016) found that PsyCap moderated the relationship between workplace ostracism and negative outcomes for a heterogeneous sample of respondents from three large companies in northern China but of different industries.

In contrast, Cheung *et al.* (2011) focused on full-time Chinese school teachers. The homogeneity of their sample population profile revealed that PsyCap did not moderate the relationship between emotional labour and emotional exhaustion, as well as the lack of personal accomplishments. Similarly, Setar *et al.* (2015) upon studying 104 call centre employees in South Africa concluded that it failed to moderate the relationship between job stress and invincibility.

In the context of this study, it focused on practicing social workers working in Singapore. A competent social worker is highlighted to be one having the right qualifications and possessing PsyCap. Collins (2007), in particular, highlights resilience, positive emotions and optimism to be helpful for them to cope more readily with the occupational demands. Hence, it could be inferred that the participants of this study possess high PsyCap individually as all of them are existing social workers. This was further evident according to the data characteristics (see Table 17) that showed most of the mean scores for PsyCap to be clustered around the higher end of the range with the standard deviation not exceeding one. Given the homogeneity of the participants' profile and in reference to the prior-mentioned literature, one can thus expect that moderation might not take place.

Another possible reason could be due to the nature of PsyCap. Similar reasonings were presented by scholars like Grover *et al.* (2018) and Xanthopoulou *et al.* (2007), who credited the non-moderating results to the nature of personal resources. Cheung *et al.* (2011) had suggested that such results of no moderation to be partly due to the mismatch between the nature of PsyCap as a cognitive resource against job burnout, which was an emotional strain. Besides, Welander *et al.* (2016, p. 68) suggested social work to be an emotionally intense profession, where “employees often feel a greater responsibility and commitment towards their clients and colleagues than they do towards their employer”. This is supported by other works that adopted similar point of views (e.g. Ulrich *et al.*, 2007, Galek *et al.*, 2011, Ng and Sim, 2012, Park, 2016). Based on these studies, this study therefore inferred that job burnout and the sense of engagement experienced by social workers tended to be more emotionally and affectively driven.

However, PsyCap is commonly described as a resource that is “stronger on cognitively related outcomes” (Cheung *et al.*, 2011, p. 366). Moderation results proposed that when the nature of the moderator matches with the nature of the strain, it would be more likely for moderation effect to be observed (Cheung *et al.*, 2011). With PsyCap being a different nature compared to job burnout, one could expect that moderation would not take place. Consequently, researchers should consider matching the nature of the moderator to its respective outcome when choosing moderators for future studies.

5.4 Contributions

The following sections highlights the key theoretical, empirical, methodological and managerial contributions made by this study accordingly.

5.4.1 Theoretical Contributions

5.4.1.1 Integration of Theories

Researchers of the social sciences field shared the common wish of making sense regarding the manner in which individuals behave in each situation. In view of the complexities behind human behaviour, this study integrated the COR, TPB, SET and JD-R theories to holistically explain the phenomena that this study observed.

The core of COR theory is embedded in its postulation regarding individuals being motivated to acquire and protect resources in managing their job demands, especially when the job demands itself deplete their resources (Halbesleben *et al.*, 2014). Resources as a whole could be loosely classified as items valued by individuals based on their life experiences, culture, value-system, and education (Hobfoll, 1989). Although the COR theory supports the concept of resources being in multiple different forms and not necessarily be associated with a monetary value (Halbesleben *et al.*, 2014), it does not provide a concrete categorisation of resources. From this perspective, the COR theory is complemented by the JD-R theory from two point of views. JD-R theory provides (1) a specific definition for job and personal resources; and (2) recognises that personal resources could play a motivational role similar to job resource to support individuals in mitigating the effects of job demands (Bakker and Demerouti, 2017).

In the context of this study, meaningful work and PsyCap succinctly fitted the definition of job resource and personal resource, respectively. Therefore, they reflected the concept of resource caravan, where social service NPOs could offer a basket of shared resources accessible to employees in managing their job demands (Hobfoll, 2014; 2011). More explanation on resource caravan could be found in Section 5.4.1.3. Moreover, it also reflected the opinions of Halbesleben *et al.* (2014, p. 1345) highlighting that the key to understanding the COR theory is underpinned to the concept of complementarities, where “resources will be enhanced only if they come after other resources are acquired”.

Furthermore, the results obtained demonstrated the upward spiral concept. It elucidated the manner in which positive emotions would trigger thought-action repertoires towards enhancing emotional wellbeing (Fredrickson and Joiner, 2002). Thus, the outcomes revealed that the presence of meaningful work manifested positive emotions among social workers, and consequently broaden and build their PsyCap. This in turn enhanced their engagement and lower the propensity of experiencing burnout.

TPB, on the other hand, provided explanation on why the presence of job and personal resources influence changes of intention, attitude, and behaviour. Such changes would eventually affect outcomes like motivation, work engagement, and the state of an individual’s mental and physical resources (Bakker *et al.*, 2005, Xanthopoulou *et al.*, 2007, Clausen and Borg, 2011). However, TPB did not elucidate on (1) the motivations spurring individuals to change their attitudes towards certain stimuli; (2) the form of reciprocation one could expect in presence of the stimuli; and (3) reasons on why different magnitude of reciprocation could be seen between individuals, despite exposure to the same set of conditions

The answer could be found within SET, whereby receiving certain forms of benefits or services resulted in individuals being obliged to reciprocate with something in return. It should be mutually acceptable, beneficial and gratifying, which does not necessarily be in a monetary form (Gouldner, 1960, Cropanzano and Mitchell, 2005, Mearns *et al.*, 2010). However, the magnitude of reciprocation depended largely on the valence that individual placed on the benefits or services, which would differ from one to

another, depending on the background and value system. Hence, this explained the reasons behind the dissimilar findings obtained in this study in comparison with past studies despite adopting the same set of condition, which is provisioning of a meaningful work environment.

Following Mayer and Sparrowe (2013), such integration of theories falls under the approach of leveraging on multiple theoretical perspectives to describe a single phenomenon. In precise terms, such integration of multiple theoretical perspectives would “lead to a more complete understanding of the complexity of the phenomena in question” (Mayer and Sparrowe, 2013, p. 919)

5.4.1.2 Effectiveness of Meaningful Work as a Job Resource

Job burnout among social workers has been highlighted as a global phenomenon, whereby improper or poor handling of the issue results in corollaries such as drop in services to clients (McFadden, 2015, The Chronicle Herald, 2017, Torpey, 2018). In tandem with industrial surveys highlighting the growing importance of meaningful work and the special significance of social worker’s work, the importance of examining whether meaningful work could be leveraged to complement an organisation’s recruitment and retention of talent is undeniable. Therefore, the second contribution of this study was rooted in the effect of meaningful work against the dimensions of job burnout and employee engagement.

This is arguably and seemingly the most significant contribution of this study due to the absence of literature examining the relationship between these variables. Consequently, meaningful work alone is not a silver bullet in alleviating job burnout and enhancing engagement within social workers, but instead requiring a complementary resource to completely address the issue. Concomitantly, it also shows that the variable’s effect on employee engagement was weak. Hence, this study successfully extended the literature revealing that the effect of meaningful work as a job resource to be dissimilar across varied organisational settings. Such understanding was the epitome of the study by Park *et al.* (2018, p. 6), underlining that “differences between organisational and employee matters of social service NPOs compared with for-profit organisations require a distinct approach” towards enhancing engagement and reducing job burnout.

5.4.1.3 Interplay of Job Resource and Personal Resource

This study concretely contributed to the existing body of knowledge by attempting to fill in the literature gap found regarding PsyCap. This was especially due to the “major omission in the theoretical development and empirical research on PsyCap as there are very few studies that measured anything pertaining to the formation of PsyCap, that is, the antecedents” (Avey *et al.*, 2011, p. 141). Despite the abundance of studies examining the role of PsyCap on specific outcomes (e.g. Moyer *et al.*, 2017, Rabenu *et al.*, 2017, Datu *et al.*, 2018, Pitichat *et al.*, 2018) placing meaningful work and PsyCap within the same model was a rare effort.

Furthermore, the understanding regarding the connection between personal resources to job demands remains unclear (Grover *et al.*, 2018). Personal resources are thought to behave like a job resource having the capacity to influence outcomes (Grover *et al.*, 2017), and acted like a mediator (Huang *et al.*, 2016) and moderator (Cheung *et al.*, 2011) alike. Leveraging on previous studies, it allows this study to contribute to a conceptual clarity regarding personal resources within the JD-R theory with an emphasis on PsyCap. Additionally, this work also contributed towards the exploration regarding the interplay of job resources and personal resources within the same model.

In view of this, the outcomes of this study elucidated that the complexity of job demands require multiple forms of resources in order to properly address the issue. It offers fresh perspectives regarding the manner in which personal and job resources leveraged on one another within the same ecosystem to maximise employee potential in the workplace. It further supports the notion of resource caravan where employees could tap into so as to manage their job demands while also meeting organisational mission concomitantly (Hobfoll, 2014, Hobfoll, 2011). The outcomes subsequently addressed Halbesleben *et al.* (2014) and their call for further examination on how resources combine to meet goals.

The findings describing meaningful work and PsyCap’s collaborated efforts to increase employee’s engagement and reducing burnout serve as the epitome of the concept of resource caravan. To recapitulate, a resource caravan is a “collective pool of resources available within that organisational ecology, and individuals’ and groups’ ability to access those resources” (Hobfoll, 2011, p. 118). A resource caravan would

undoubtedly address the requirements for homeostatic regulation, allowing social workers facing job demands to select a matching job resource in managing it.

Within the concept of resource caravan resides a key theoretical proposition of resource crossover, Hobfoll *et al.* (2018) describe it as a principle represented by the “dyadic inter-individual transmission of psychological states and experiences” (p. 108). This is also apparent in Neff *et al.* (2012) study on 102 working couples and espoused that self-esteem experience by one individual would cross over to the other. This is an important distinguishment for social workers as cross-over of resources would result in spirals gained among their colleagues, which increase their level of engagement and trigger a chain of crossover engagement process, leading to an engaged organisation (Hobfoll *et al.*, 2018). Hence, the crossover model indicates a series of mechanisms allowing transfer of resource gains in social settings from the dyad to the team and to the organisation, respectively.

Taken together, understanding the effect on the exchanges between meaningful work and PsyCap is undeniably fundamental towards creating a sustainable climate of engagement. It would be to social service NPOs’ advantage in developing interventions that trigger this process.

5.4.2 Methodological Contributions

5.4.2.1 Deployment of Two-Stage Approach in PLS-SEM

In the context of research methodology, this study is one of the pioneering literature in deploying the two-stage approach in PLS-SEM to analyse the constructs of PsyCap, employee engagement and job burnout. Many of the pre-existing studies had made use of CB-SEM, which did not factor in its dimensionality. Jarvis *et al.* (2003, p. 207) highlight that such model misspecifications may potentially “affect the conclusions about the theoretical relationships among the constructs that are drawn from the research”. This would in turn cast “doubts on the practical meaningfulness of the results and implications” (Ting *et al.*, 2015, p. 388).

In contrast, adopting PLS-SEM allow the study to conceptualise the construct of meaningful work, employee engagement and PsyCap as a hierarchical component using the reflective-formative measurement model. The earlier studies using CB-SEM

only allowed the reflective measurement perspective (Ting *et al.*, 2015). Therefore, the two-stage approach in PLS-SEM undertaken by this study value-added methodologically by “improving the results reporting, through the assessment of formative measurement models, which have become increasingly important in social science research” (Ringle *et al.*, 2018, p. 19). Besides, the methodology is also capable of handling complex models with numerous indicators and constructs. Similarly, it is limited by less restrictions regarding the sample size and normality, as well as in determining latent variable scores potentially utilised in subsequent analysis. Hence, PLS-SEM overcame several limitations of CB-SEM, “particularly in research settings characterized by complex research models and limited data” (Ringle *et al.*, 2018, p. 2)

5.4.3 Empirical Contributions

5.4.3.1 Mediating and Moderating Role of Psychological Capital

This study successfully made an important empirical contribution towards understanding the role of PsyCap as a mediator and moderator. Although past studies had conceptualised the element as a mediator and moderator, various inconsistencies in the results are observed (e.g. Cheung *et al.*, 2011, Wang *et al.*, 2017). Furthermore, there are limited literature that place the constructs of meaningful work, PsyCap, job burnout and employee engagement into one model. Therefore, this study has provided fresh perspectives for the current literature with regards to its role as a mediator and moderator.

In addition, the mediation analysis added to the body of knowledge by demonstrating PsyCap as a key construct that could impact meaningful work towards employee engagement, as well as to the respective dimensions of job burnout. Similar to earlier studies, job resources are seen as a form of mechanisms spurring individuals to complete tasks and keeping them motivated in the work (Schaufeli and Bakker, 2004). The differentiating point is where this study proceeded a step further by showing that these job resources are capable of activating personal resources in the form of PsyCap. This allowed the social workers to feel more self-confident, hopeful, optimistic and resilient towards their tasks. Hence, the work extended the understanding and showed that both job and personal resources are key components in an emotionally-charged profession, such as social work.

Interestingly, this study revealed that PsyCap did not perform its role as a moderator in affecting the direction and strength of the relationship between meaningful work and employee engagement, as well as the different dimensions of job burnout. By leveraging the concept of homeostatic regulation, these results enrich the COR theory and specifically spotlighting on the importance of providing social workers with “more, preferably matching, resources that could make emotional job demands less stressful, and even stimulating and challenging” (De Jonge *et al.*, 2008, p. 1461).

5.4.4 Managerial Contributions

5.4.4.1 Fostering a Meaningful Work Environment

As part of the human resource efforts to complement existing retention and attraction strategies, social service NPOs should continue to foster a meaningful work environment at the organisation, management and individual level. This is built on the findings showing that the perception of meaningful work is instrumental towards enhancing an individual’s PsyCap.

Social service NPOs could initiate a job crafting exercise at the organisation level to further imbue meaningfulness based on the premise that job characteristics shaped one’s perception of work (May *et al.*, 2004). Berg *et al.* (2013, p. 82) explain that “job crafting is a way to think about job design that puts employees in the driver’s seat in cultivating meaningfulness in their work”. It is also said that job crafting is a powerful tool that leverages on employees’ strength to enhance job satisfaction, engagement and employee wellness (Bakker, 2018) Unlike a typical job redesign exercise, job crafting is a bottom-up approach allowing employees to be empowered in initiating changes within their job boundaries. For example, a social worker interested in music could collaborate with music therapists to develop music-related interventions for clients. The underlying belief is that fixed job descriptions are a passé. The current dynamic and ever-changing landscape should provide employees the room to exercise creativity and demonstrate proactivity where they chart their own trajectory in developing their own career. It hinges on the belief that employees know better the job that they have been doing and how they want to change it such that it creates more meaningfulness (Berg *et al.*, 2013).

At the management level, leaders should display leadership styles that supported the fostering of work meaningfulness. Among the different leadership styles, transformational leadership is often associated with improvements to employee attitudes and behaviours, including work meaningfulness across different settings (Arnold *et al.*, 2007, Walumbwa *et al.*, 2013, Park, 2016). Transformation leadership goes beyond achieving tasks outcomes, it extends into the territory of “broadening follower aspirations, goals, and values and on providing followers with the confidence to perform beyond the expectations specified in the implicit or explicit exchange work agreement” (Walumbwa *et al.*, 2013, p. 198). From this definition, the cornerstone of transformation leadership emphasised on the concept of role modelling (idealised influence), motivating (inspirational motivation), developing (intellectual stimulation), and encouraging creativity (individualised consideration). Among these different dimensions, inspirational motivation in particular, contains an implicit consideration of encouraging and imbuing “meaning and purpose in the workplace, inspiring followers to willingly sacrifice their selfish interests for a higher cause” (Walumbwa *et al.*, 2013, p. 198).

At an individual level, social service NPOs could leverage various learning environments to shape social workers’ perception towards work. This could be undertaken using a reflection workshop allowing social workers to identify their purpose, values, and visions. Besides, social service NPOs should also integrate the regular activities of soliciting feedback from social workers in view of the emotionally-draining nature of the profession. Having feedback sessions provide social workers an avenue to voice their concerns, problems, and suggestions. These are crucial in shaping the organisation’s support towards fostering a meaningful work environment and fulfilling its altruistic mission. However, this study cautioned that social service NPOs must be sincere and authentic when developing initiatives to improve work meaningfulness. Any form of inconsistency between reality and rhetoric, or if the objective was tailored towards improving organisation’s performance more than the well-being of employees would be perceived as hypocrisy. This would result in counter-productive results and cause the employees to lose trust in the organisation (Bailey *et al.*, 2017b)

5.4.4.2 Development of Social Workers' Psychological Capital

Another key managerial implication of this study leveraged on the findings showing the importance of PsyCap towards social workers. As demonstrated from the results, boosting social worker's PsyCap would consequently improve their perception of work and general well-being. Besides, the wide-spread implications of job burnout also highlighted that interventions to manifest PsyCap is a "triple win" for social workers, organisation and clients alike.

For one, social service NPOs could leverage the malleability of PsyCap to develop appropriate interventions in building up social worker's sense of hope, efficacy resilience and optimism. Other than pre-designed PsyCap intervention training programmes, on-the-job training, positive feedback, group support, job enrichment and better quality of communication could facilitate one's development of PsyCap. In addition, social service NPOs could set up a learning environment that fosters its development the senior management team. It is shown that that senior management's PsyCap would improve employee's PsyCap, resulting in the desired organisational behaviour like organisational identification (Chen *et al.*, 2017). Beyond formal training or workshops, other forms of training like on-the-job training, experiential learning activities, stretch assignments and working in multi-disciplinary teams are other alternatives in developing a senior management officer's PsyCap. Such trainings were found to be useful as it "increases employees' psychological capacities by 1.5% to 3%" (Karatepe and Karadas, 2015, p. 1271).

5.4.4.3 Investment in Resource Caravan

One of the key findings of this study was social worker's requirement for a variety of resources to manage their job demands. These resources do not operate in isolation, as it is consistently shown that meaningful work alone posed limited effect on alleviating job burnout. However, its collaborative effect with PsyCap resulted in greater and enhanced employee engagement, as well as significant reduction of the propensity to experience job burnout. Hence, this illustrate the importance of investing in a resource caravan.

Such aim might be achieved via social service NPOs exploration in establishing and maintaining a supportive environment that allowed resources to flourish. It may occur

in various forms, one of which being the implementation of high-performance work practices (HPWP) to cultivate and nurture social workers' personal resources and organisation's job resources. HPWP is described as a "unique set of complementary human resource management practices aimed at empowering employees to contribute favourably towards organisational performance" (Chidiebee and Valizade, 2016, p. 2). There is a growing amount of evidence displayed that HPWP contributed favourably towards organisational performance and employee outcomes (e.g. Combs *et al.*, 2006, Karatepe, 2013, Obeidat *et al.*, 2016).

Moreover, resources could also be created by families and societies (Hobfoll, 2014), thus allowing the possibility for social service NPOs to implement stakeholder engagement initiatives to provide support for social workers. This could be in the form of an appreciation event or dialogue with the public in helping them to better understand the roles of social workers. Additionally, the concept of crossover could also prompt the social service NPOs to organise sessions and exchanges between engaged colleagues so as to promote engagement crossover among employees. It could be surmised that having a resource caravan is equivalent to setting up a resourceful work environment. It could remove blockages towards achieving organisational mission, bring about positive emotions in the social workers, and consequently enhance their PsyCap and boost their work engagement (Xanthopoulou *et al.*, 2012).

5.5 Limitations

Nevertheless, this study is not without limitations that one should take note of. First, the results of this study were obtained using self-report scales. Podsakoff *et al.* (2003) highlights the fact that soliciting responses from the same group of respondents regarding endogenous and exogenous variables would lead to consistency motif. This was due to their deliberate action to edit responses for consistency and acceptability. Although procedural remedies are introduced (see Section 4.1.4.3) and Harman's single-factor test showed that common method bias was not a serious threat in this study, the possibility of the respondents answering the questions in a socially desirable fashion could not be denied.

Secondly, the deployment of a cross-sectional design limited the ability to draw causality among the predictors and outcomes. Such design referred to one designed to

capture a snap-shot of the relationships between the variables at a certain point in time (MacCallum and Austin, 2000).

Third, although the number of respondents adequately fulfilled the minimum sample size needed to maintain the necessary power, this study garnered a low response rate regardless and the sampling method prevented its resulting generalisability across social worker population in Singapore and across the region.

Lastly, this study focused only on the relationship between PsyCap, meaningful work and dimensions of job burnout. In view of the multifaceted nature of social work, possibilities of other factors playing a role in supporting social work's engagement and alleviating job burnout remained to be rife.

5.6 Recommendations for Future Research

The limitations outlined in the previous section spurred on several recommendations to be proposed for future researchers. First, in view of the generalisability of the information and establishment of the causal relationship among the variables, future works could consider developing longitudinal studies and adopting probability-based sampling method instead. In addition, multi-wave data could also be collected from different respondents to reduce bias as a result of common data source, such as social worker's supervising officers. This would establish objective assessment regarding the social workers' level of engagement.

Second, researchers could opt for a triangulation approach by adopting mixed method as a component of data collection and subsequently matched against existing literature. Although the quantitative method had sufficed for this study, meaningful work revolved around the perception towards the work, which could be influenced by the ecosystem a social worker is exposed to. The same principle is applicable for PsyCap and other resources, as the valence placed on each element is dependent on an individual's life experiences. Thus, a mixed method of analysis would allow researchers to explore the perceptions held by social workers in detail. Quantitative analysis incorporated with qualitative methods would undeniably unravel in-depth information that could enrich the accuracy of the results and draw stronger inferences between the variables.

Third, researchers could explore the possibility of replicating this model on other allied health professionals like special education teachers, therapists, counsellors, nurses, doctors, and psychologists. This could generate better understanding regarding the interplay of meaningful work, PsyCap, employee engagement and the various dimensions of job burnout. This matter rang true particularly due to the importance of interprofessional collaboration in today's social work practice, which in turn expose these professionals to similar risks of PTSD. On this point, future researchers could also include the findings and discussion on the level of employee engagement, PsyCap, meaningful work and dimensions of job burnout by using the composite mean scores. This would elucidate the level of these variables among the social workers in Singapore which can later be used for comparative purpose.

Similarly, social work is a profession highly reliant on contexts as its climate in developed countries like Singapore, UK and New Zealand is vastly different from developing countries like Uganda and Tanzania. On this note, it would be good to include more literature (the last 5 years) that is specific to the Singaporean or at least the Asian context as the cultural background is different compared to the other parts of the world. Such differences in culture could be attributed to resources availability, dissimilar values, and variations in national policies and community beliefs among other aspects. Hence, social workers could typically face different job demands from one country to another, rendering it interesting for a comparative study regarding their perception of meaningful work and propensity of burnout across different countries.

Next, future studies could emphasise on clarifying whether other possible variables could influence the relationships between meaningful work, employee engagement, and the dimensions of job burnout. It was previously suggested that emotional intelligence training (Newton *et al.*, 2016, Thory, 2016), leadership styles (Arnold *et al.*, 2007, Cheng *et al.*, 2016) and cultural differences (Youssef and Luthans, 2014, Cameron, 2017) may potentially influence these relationships. Thus, exploring these relationships using new variables would result in further development of new insights and perspectives. Social service NPOs would benefit from the support in developing interventions to further enhance employee engagements, as well as reducing the propensity for burnout.

Lastly, this study recommends for further analysis regarding the manner in which PsyCap affected the outcomes. Although convergent and discriminant validity of self-efficacy, hope, optimism, and resilience are successfully determined, past studies failed to provide consistent results regarding the relative contribution of each of these four components on the effects of PsyCap (Avey *et al.*, 2011). Therefore, future researchers could opt to analyse the relative importance of every PsyCap dimension. It would be remarkably insightful to evaluate whether different combinations of PsyCap components would result in varying predictive ability in comparison with its overall construct. Hence, future studies should analyse and identify the factors that drive the relative importance of different combinations of PsyCap dimensions on work-related outcomes.

5.7 Conclusions

In conclusion, this study successfully synthesised meaningful work, PsyCap, employee engagement and the dimensions of job burnout within one model and answered the research questions outlined in Section 1.4 previously. First, this study demonstrated that meaningful work was not the silver bullet towards encouraging positive behaviour and reducing undesirable actions, especially in the context of job burnout. This study extended the understanding that meaningful work by itself had limited effects towards enhancing engagement or alleviating job burnout completely. Thus, the results obtained demonstrated that “what characterise meaningful work tasks differs according to work context” (Vidman and Strömberg, 2018, p. 117).

This study also answered the second research question by substantiating PsyCap as an essential construct, which enhanced social workers’ engagement and reduce their propensity for job burnout. In this particular profession, multiple sources of job stressors were abound rendering organisational outputs to be directly affected by human capital, social capital and PsyCap accordingly. From the results, evidently social workers with a high PsyCap enabled them to positively appraise their job demands, which was translated to higher levels of engagement and reduced propensity for job burnout.

Lastly, this study established that PsyCap was an effective mediator in explaining the relationship between the highlighted endogenous and exogenous variables. Other than

underlining PsyCap as an important explanatory variable in the relationship, the results also elucidated the integral nature of a resource caravan for professions of intricacy, such as social work. Following these results, the work conclusively presented several key recommendations, whereby the one of utmost significance called for social service NPOs to invest in the development of such resource caravan.

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APPENDICES

Appendix 1. Survey Instruments



* Required Information

page 1

What is the Project About?

I will like to invite you to participate in this study exploring how individual psychological profile affects the outlook of meaningful work and work-related outcomes such as engagement level and job burnout. Your response will allow us to understand social workers' profile better and will aid employers to develop recommendations that can help to shape working climate, culture and enhancing the workplace meaningfulness for social workers.

Who is doing the Research?

This research is conducted by Tan Kim Lim, a PhD candidate with Curtin University. The results of this research project will be used to obtain a Doctor of Philosophy at Curtin University. There will be no costs to you and you will not be paid for participating in this project.

Who will have access to my information?

The information collected in this research will be treated as confidential and used only in this project unless otherwise specified. The following people will have access to the information we collect in this research: the research team and the Curtin University Ethics Committee.

All electronic data will be password-protected and the information we collect in this study will be kept under secure conditions at Curtin University for 7 years after the research has ended and then it will be destroyed. The results of this study may be presented at conferences or published in professional journals. You will not be identified in any results that are published or presented.

Will you tell me the results of the research?

If the results of this study are presented at conferences or published in professional journals, you can obtain the full results by accessing the said platforms.

Do I have to take part in the research project?

Taking part in a research project is voluntary. It is your choice to take part or not. You do not have to agree if you do not want to. If you decide to take part and then change your mind, you can withdraw from the project. If you choose not to take part or start and then stop the study, it will not affect your relationship with the staff or colleagues. If you choose to leave the study, we will destroy and disregard any information we have collected from you.

What happens next and who can I contact about the research?

If you decide to take part in this research, we will ask you to check off a checkbox to indicate you have understood the information provided here in the information sheet, before the start of the questionnaire. By doing so, it is telling us that you understand what you have read and what has been discussed. It also indicates that you agree to be in the study and have your information collected and used as described. After which, You will be then presented with a set of questions. You should spend about 15 - 20 minutes to complete the survey form.

Please take your time and ask any questions you have before you decide what to do. For enquiries, you can contact Mr Tan Kim Lim at tan.kim.lim@postgrad.curtin.edu.my

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this research project have been approved by the Curtin University HREC. This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007). If you have any concerns and/or complaints about the project, the way it is being conducted or your rights as a research participant, and will like to speak to someone independent of the project, please contact: The Curtin University Ethics Committee by telephoning (61) 9266 2784 or by emailing hrec@curtin.edu.au

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*** 1. I have received information regarding this research and had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.**

(Select one option)

Yes, I agree.

Go to Page No. 3

No, I will like to withdraw from this study.

Stop, you have finished the survey

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2. Work can mean a lot of different things to different people. The following items ask about how you see the role of work in your own life. Please honestly indicate how true each statement is for you and your work.

	Absolutely untrue (1)	Mostly Untrue (2)	Neither True nor Untrue (3)	Mostly True (4)	Absolutely True (5)
* (a) I have found a meaningful career. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (b) I view my work as contributing to my personal growth. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (c) My work really makes no difference to the world. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (d) I understand how my work contributes to my life's meaning. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (e) I have a good sense of what makes my job meaningful. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (f) I know my work makes a positive difference in the world. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* (g) My work helps me better understand myself. (Select one option)	<input type="radio"/>				
* (h) I have discovered work that has a satisfying purpose. (Select one option)	<input type="radio"/>				
* (i) My work helps me make sense of the world around me. (Select one option)	<input type="radio"/>				
* (j) The work I do serves a greater purpose. (Select one option)	<input type="radio"/>				

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3. Below are statements that describe how you may think about yourself right now. Use the following scale to indicate your level of agreement or disagreement with each statement.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Somewhat Agree (4)	Agree (5)	Strongly Agree (6)
* (a) I feel confident analyzing a long-term problem to find a solution. (Select one option)	<input type="radio"/>					
* (b) I feel confident in representing my work area in meetings with management. (Select one option)	<input type="radio"/>					
* (c) I feel confident contributing to discussions about the organisation's strategy. (Select one option)	<input type="radio"/>					
* (d) I feel confident helping to set targets/goals in my work area. (Select one option)	<input type="radio"/>					
* (e) I feel confident contacting people outside of the organisation (e.g. suppliers, customers) to discuss problems. (Select one option)	<input type="radio"/>					
* (f) I feel confident in presenting information to a group of colleagues. (Select one option)	<input type="radio"/>					
* (g) If I should find myself in a jam at work, I could think of many ways to get out of it. (Select one option)	<input type="radio"/>					

* (h) At the present time, I am energetically pursuing my work goals. (Select one option)	<input type="radio"/>					
* (i) There are lots of ways around any problem. (Select one option)	<input type="radio"/>					
* (j) Right now, I see myself as being pretty successful at work. (Select one option)	<input type="radio"/>					
* (k) I can think of many ways to reach my current work goals. (Select one option)	<input type="radio"/>					
* (l) At this time, I am meeting the work goals I have set for myself. (Select one option)	<input type="radio"/>					
* (m) When I have a setback at work, I have trouble recovering from it, moving on. (Select one option)	<input type="radio"/>					
* (n) I usually manage difficulties one way or another at work. (Select one option)	<input type="radio"/>					
* (o) I can be "on my own" so to speak, at work, if I have to. (Select one option)	<input type="radio"/>					
* (p) I usually take stressful things at work in stride. (Select one option)	<input type="radio"/>					
* (q) I can get through difficult times at work because I experienced difficulty before. (Select one option)	<input type="radio"/>					
* (r) I feel I can handle many things at a time at this job. (Select one option)	<input type="radio"/>					
* (s) When things are uncertain for me at work, I usually expect the best. (Select one option)	<input type="radio"/>					
* (t) If something can go wrong for me work wise, it will. (Select one option)	<input type="radio"/>					
* (u) I always look on the bright side of things regarding job. (Select one option)	<input type="radio"/>					
* (v) I'm optimistic what will happen to me in the future as it pertains to work. (Select one option)	<input type="radio"/>					

* ^(w) In this job, things never work out the way I want them to. (Select one option)	<input type="radio"/>					
* ^(x) I approach this job as if "every cloud has a silver lining." (Select one option)	<input type="radio"/>					

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*** 4. Please indicate your gender. (Select one option)**

Male

Female

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*** 5. Please indicate the highest level of your education (Select one option)**

Doctorate Degree

Master Degree

Bachelor Degree

Diploma

Other (Please specify) _____

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*** 6. Please indicate your years of experience as a Social Worker in total. (Select one option)**

less than 1 year

1 year to 3 years

4 years to 7 years

8 years to 10 years

More than 10 years

For enquiries, you can contact Mr Tan Kim Lim at tan.kim.lim@postgrad.curtin.edu.my

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*** 7. Please indicate your age. (Select one option)**

- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65-74 years old
- 75 years or older

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8. The following items are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. Indicate how often you feel it by crossing the number that best describes how frequently you feel that way.

	Never (0)	A few times a year or less (1)	Once a month or less (2)	A few times a month (3)	Once a week (4)	A few times a week (5)	Everyday (6)
* (a) At my work, I feel bursting with energy (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (b) At my job, I feel strong and vigorous (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (c) I am enthusiastic about my job (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (d) My job inspires me (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (e) I feel happy when I am working intensely (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (f) I am proud on the work that I do (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (g) I am immersed in my work (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (h) I get carried away when I'm working (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (i) When I get up in the morning, I feel like going to work (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Following are 22 items of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job.

	Never (0)	A few times a year or less (1)	Once a month or less (2)	A few times a month (3)	Once a week (4)	A few times a week (5)	Everyday (6)
* (a) I feel emotionally drained from my work. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (b) I feel used up at the end of the workday. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (c) I feel fatigued when I get up in the morning and have to face another day on the job. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (d) I can easily understand how my recipients feel about things. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (e) I feel I treat some recipients as if they were impersonal objects. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (f) Working with people all day is really a strain for me. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (g) I deal very effectively with the problems of my recipients. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (h) I feel burned out from my work. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (i) I feel I'm positively influencing other people's lives through my work. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (j) I've become more callous toward people since I took this job. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (k) I worry that this job is hardening me emotionally. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (l) I feel very energetic (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (m) I feel frustrated by my job. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (n) I feel I'm working too hard on my job. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* (o) I don't really care what happens to some recipients. (Select one option)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* <i>(p)</i> Working with people directly puts too much stress on me. (Select one option)	<input type="radio"/>						
* <i>(q)</i> I can easily create a relaxed atmosphere with my recipients. (Select one option)	<input type="radio"/>						
* <i>(r)</i> I feel exhilarated after working closely with my recipients. (Select one option)	<input type="radio"/>						
* <i>(s)</i> I have accomplished many worthwhile things in this job. (Select one option)	<input type="radio"/>						
* <i>(t)</i> I feel like I'm at the end of my rope. (Select one option)	<input type="radio"/>						
* <i>(u)</i> In my work, I deal with emotional problems very calmly. (Select one option)	<input type="radio"/>						
* <i>(v)</i> I feel recipients blame me for some of their problems. (Select one option)	<input type="radio"/>						

For enquiries, you can contact Mr Tan Kim Lim at tan.kim.lim@postgrad.curtin.edu.my

Appendix 2. Ethics Approval



Office of Research and Development

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01-May-2017

Name: Ahmed Rageh
Department/School: CBS International
Email: Ahmed.Rageh@curtin.edu.au

Dear Ahmed Rageh

RE: Ethics approval
Approval number: HRE2017-0239

Thank you for submitting your application to the Human Research Ethics Office for the project **Effects of PsyCap on the Relationship between Meaningful Work, Job Burnout and Employee Engagement (SARAWAK)**.

Your application was reviewed through the Curtin University low risk ethics review process.

The review outcome is: **Approved**.

Your proposal meets the requirements described in National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research (2007)*.

Approval is granted for a period of one year from **01-May-2017** to **30-Apr-2018**. Continuation of approval will be granted on an annual basis following submission of an annual report.

Personnel authorised to work on this project:

Name	Role
Rageh, Ahmed	CI
Lew, Tek Yew	Supervisor
Sim, Khoon	Supervisor
Tan, Kim Lim	Student

Standard conditions of approval

1. Research must be conducted according to the approved proposal
2. Report in a timely manner anything that might warrant review of ethical approval of the project including:
 - proposed changes to the approved proposal or conduct of the study

Appendix 4. Results of Mediation from SmartPLS

Specific Indirect Effects

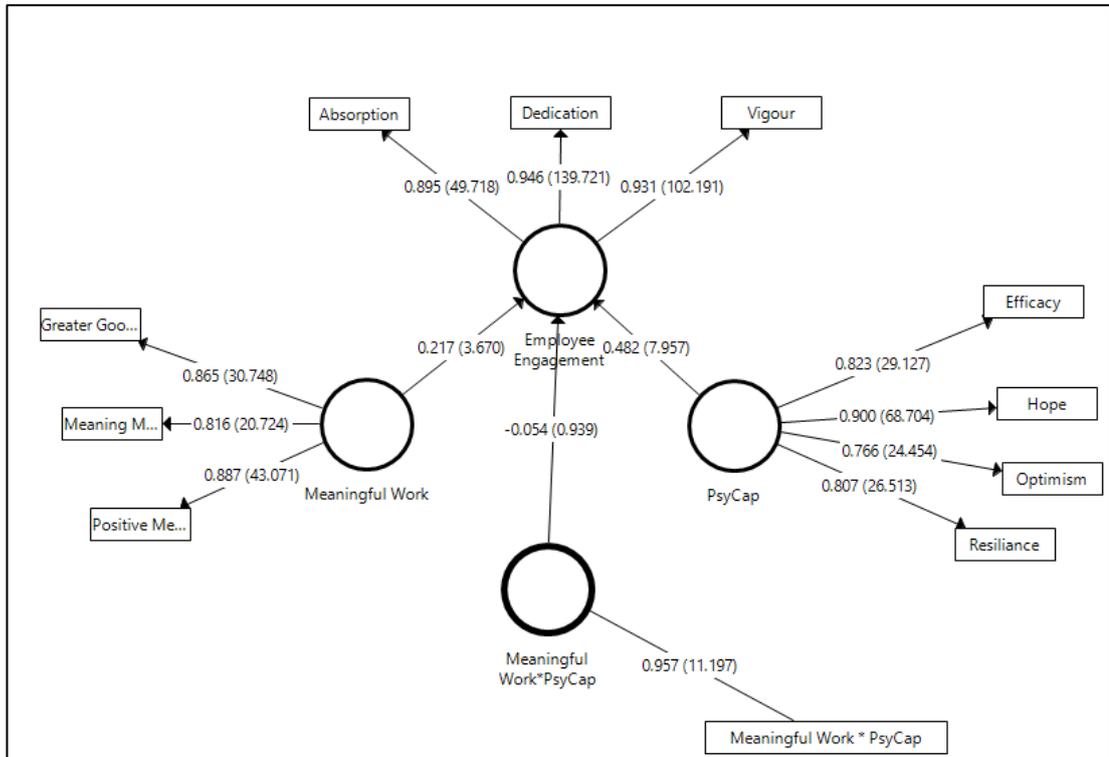
Mean, STDEV, T-Values, P-Values	Confidence Intervals	Confidence Intervals Bias Corrected	Samples					
				Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics (JO...	P Values
				-0.166	-0.167	0.042	3.911	0.000
				-0.278	-0.282	0.045	6.205	0.000
				0.282	0.289	0.042	6.643	0.000
				-0.247	-0.253	0.044	5.676	0.000

Specific Indirect Effects

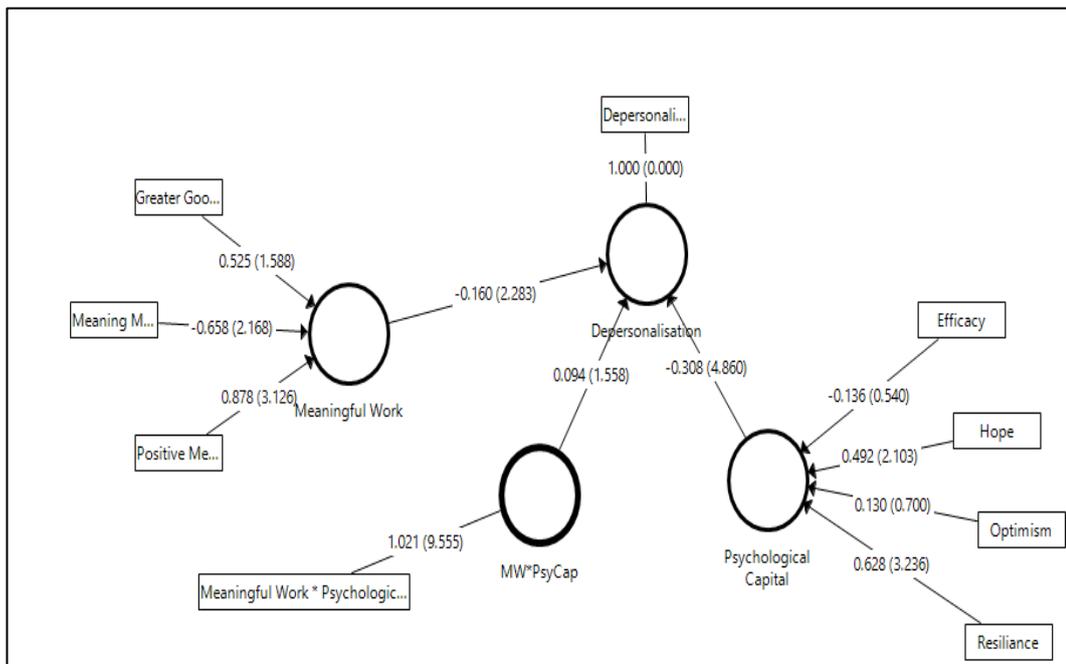
Mean, STDEV, T-Values, P-Values	Confidence Intervals	Confidence Intervals Bias Corrected	Samples					
				Original Sample (O)	Sample Mean (M)	Bias	5.0%	95.0%
				-0.166	-0.167	-0.001	-0.241	-0.102
				-0.278	-0.282	-0.005	-0.354	-0.208
				0.282	0.289	0.008	0.213	0.349
				-0.247	-0.253	-0.006	-0.321	-0.181

Appendix 5. Moderating Results Output from SmartPLS

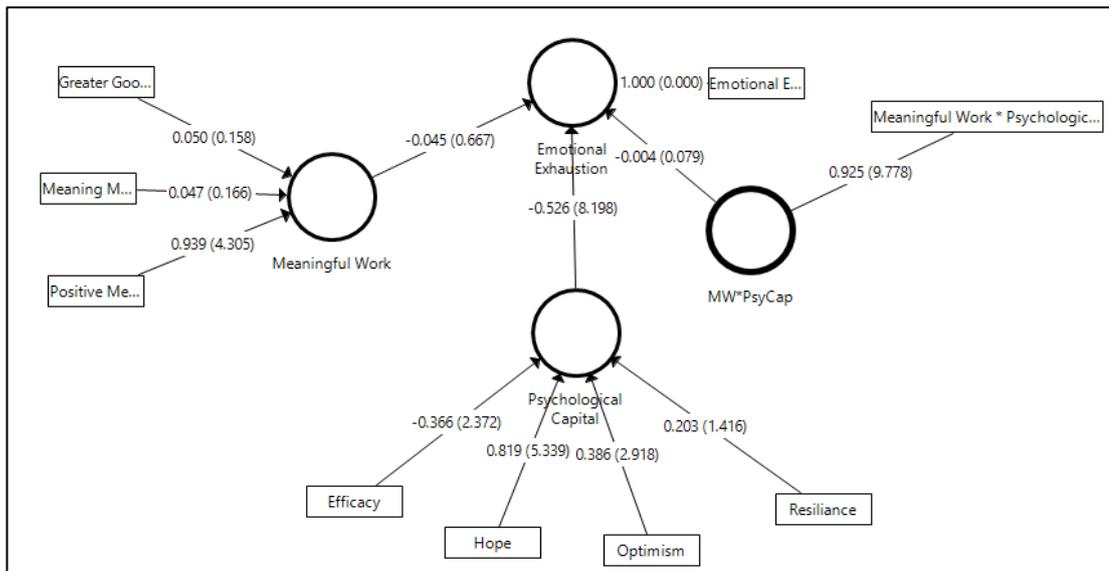
(a) Moderating Effect of PsyCap on Meaningful Work and Employee Engagement



(b) Moderating Effect of PsyCap on Meaningful Work and Depersonalisation



(c) Moderating Effect of PsyCap on Meaningful Work and Emotional Exhaustion



(d) Moderating Effect of PsyCap on Meaningful Work and Reduced Personal Achievement

