

**Development of a Web-based Wellbeing Program to Improve Psychological Adjustment for
Highly Skilled Expatriate Employees: A Job Demands-Resources Perspective**

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Abstract

Background and aims: Information and communication technology (ICT) is one of the largest sectors of multinational corporates (MNCs). The information and communication technology sector employs highly skilled expatriates. For instance, 50% of the workforce in the USA and 53% in the Organisation for Economic Co-operation and Development (OECD) countries is represented by these skilled expatriates. Information and communication technology represents a Gross Domestic Product (GDP) of 6.6% per year in Australia (DIGI, 2019), and about USD 11.5 trillion globally (Henry-Nickle et al., 2019), becoming an essential driver of productivity and innovation in the knowledge economies. In this knowledge-based economy, skilled expatriate employees are becoming an expensive commodity in a highly competitive environment, where financial gain has become particularly important and employee wellbeing is not necessarily a prerogative.

The fast-paced, aggressive nature of the ICT industry often does not provide employees with the necessary resources and support which is highly costly and detrimental to their success upon arrival in the host country. Recent evidence indicates that significant challenges faced by highly skilled expatriates are related to occupational stress and strain, and this leads to adjustment difficulties in the host nation, which is the primary reason for expatriate failure. Besides sociocultural adjustment issues, i.e., the capacity to ‘fit in,’ recent research indicates that expatriates are increasingly experiencing low psychological adjustment, resulting in mental health issues. Examining psychological adjustment among expatriates is particularly important due to the unique challenges that they experience in the host country. Therefore, advancing our understanding of the role that psychological adjustment plays in expatriate success is crucial.

Thus, in this thesis I examine the role of job characteristics on psychological strain and how these in turn affect work and behavioural outcomes via the job demand-resources model.

Method/Design

As research is still discussing the best practices to explain expatriate adjustment, failure, and success, scholarly attention has turned to calls for investigating theoretical models to evaluate expatriate effectiveness. To address this gap in literature, this thesis considered two groups of research questions: 1) what type of cross-cultural adjustment dimension is measured in MNC literature? Is psychological adjustment unique to this group of expatriates? How does psychological adjustment impact outcomes variables? and 2) what kind of help/support is available to expatriate employees experiencing stress in the host country? What programs should organisations and managers have to best assist their expatriate employees? Are expatriate employees receiving adequate support in the host country? Can technological advances be used to support employees to combat unprecedented levels of burnout? To answer these research questions and achieve the core objectives of this thesis, three studies were conducted. The systematic literature review (Study One) revealed two significant gaps in literature and directly informed Studies Two and Three. Finally, this thesis considers job demands, job resources, personal resources, and outcomes as key variables informed by the job demand-resources theoretical framework and tests this model in the two empirical studies.

Study One

The first study was a systematic review of the relevant academic literature. The results revealed: 1) the prevalence and significance of examining the psychological adjustment dimension among multinational corporation expatriate workers, 2) the role of cross-cultural training/interventions (particularly in the post-arrival phase) and their effectiveness on expatriation success, and 3) the

empirical research and theoretical trends to explain expatriation success. This study revealed that only seven published studies have examined the psychological adjustment dimension from an occupational stress and coping perspective. Only five studies evaluated cross-cultural training/interventions from a psychological dimension. The effectiveness of intervention programs was also strongly associated with the content and method of training; however, they were scarce within the literature. In this review, only nine studies were found to have theoretical bases. Study One revealed two significant gaps in the literature: 1) that psychological adjustment of expatriates from an occupational stress perspective is notably under-researched for this group of professionals (Study Two); and 2) that a more integrated and sustainable process for providing ongoing support (i.e., individual resource; cross-cultural training/program) to improve expatriates' competencies while adjusting to their host country is required (Study Three).

Study Two

The aim of study two was to investigate the application of the job demand-resources (JD-R) model in analysing and understanding psychological adjustment in the expatriate's work context and its impact on key work outcomes. This thesis aimed to test the full JD-R model (Study Two; Chapter 6) by examining the relation and impact of key job characteristics (challenge job demands, basic psychological need satisfaction and mobility self-efficacy) on employee wellbeing and performance outcomes (i.e., strain, work engagement and turnover intentions). In addition, the thesis assessed the moderating role of resources (basic psychological needs satisfaction and mobility self-efficacy) on the relationships between key job characteristics (i.e., challenge job demands and resources) and employee wellbeing outcomes. The study was an tracked two-wave longitudinal self-report survey study ($N = 139$). Quantitative data were collected via self-report through a self-administered, web-based survey platform. The structural

equation modelling analysis results demonstrated that within the strain process, there was an ambivalent role of challenge job demands. Challenge job demands were positively and negatively associated with psychological strain and turnover intentions, respectively, cross-sectionally and over time. However, there was minimal evidence for the motivational process hypothesis of the JD-R model within the longitudinal analyses.

Study Three

Ineffective workplace support strategies limit the potential to improve expatriate performance outcomes, leading to expatriate failure. Thereby to maximize productivity and sustain a global competitive advantage, it is vital for multinational companies and expatriates to effectively adapt to their host country. Recent cross-cultural literature highlights the need for more sustainable programs to alleviate occupational stress and strain among expatriate employees, especially since adjustment is now considered as an on-going process. To address this gap, this research designed and implemented a web-based wellbeing program to promote psychological wellbeing by mitigating/reducing strain among expatriates living and working in a host country. Specifically, this study examined the effects of a web-based wellbeing program (as a personal resource - individual level) on expatriate employees who reported high strain while living and working in their host country. This study also sought to contribute to the body of literature on web-based wellbeing programs as a moderator within the JD-R model. The multivariate analysis of variance revealed significant differences between the intervention and control groups on the psychological strain at T2. These findings indicate that the web-based wellbeing program was influential in reducing psychological strain and increasing mobility self-efficacy among expatriate employees. Furthermore the significant interaction terms between mobility self-efficacy and wellbeing program on psychological strain.

Conclusions: Overall the findings of this thesis make several important contributions to the occupational stress and expatriate literature, suggesting a need for future investigations of empirical models to be reproducible. From both theoretical and practitioner perspectives, the thesis provides a deeper insight into how key work and non-work characteristics impact psychological strain and key work outcomes, enabling researchers and practitioners to adopt these factors to foster congenial work environments for expatriate employees in the host country. This thesis presents specific theoretical and practical implications to create best strategies to manage and improve expatriate psychological wellbeing and work and behavioural outcomes. Finally, the findings of this thesis provide a valuable starting point for researchers interested in refining the expatriate literature, considering the current limitations of cross-cultural research.

Keywords: multinational corporate, expatriate employee, stress, psychological adjustment, wellbeing programs, cross-cultural adjustment

Declaration and Statement of Originality

I, declare that to the best of my knowledge and belief, this thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

It is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

A solid black rectangular box used to redact the signature of the author.

Date: 14/7/2022

Signature

Sheetal Gai

Contributions to the Thesis

Contribution to this thesis consists of:

- Conception and design of the research project consisting of three studies.
- Collection, analysis, and interpretation of all research data.
- Manuscript preparations (including introduction, method, results, and discussion) for

the three studies.

- Preparation of the five introductory chapters, general discussion chapter, and overall literature review.



Date: 14/7/2022

Signature

Sheetal Gai

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Dedicated

This PhD journey is dedicated to my father Late Sr R G Gai. Appa, it was always your dream to see me where I am today. I am here today living your dream, but you are not with us. Your thoughts and memories were always reinforcing me throughout this journey. Miss you fondly.

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Section 9.1 of the Griffith University Code for the Responsible Conduct of Research (“Criteria for Authorship”), in accordance with Section 5 of the Australian Code for the Responsible Conduct of Research, states:

To be named as an author, a researcher must have made a substantial scholarly contribution to the creative or scholarly work that constitutes the research output and be able to take public responsibility for at least that part of the work they contributed. Attribution of authorship depends on the discipline and publisher policies, but in all cases, authorship must be based on substantial contributions in a combination of one or more of:

- conception and design of the research project
- analysis and interpretation of research data
- drafting or making significant parts of the creative or scholarly work or critically revising it to contribute significantly to the final output.

Section 9.3 of the Griffith University Code (“Responsibilities of Researchers”), in accordance with Section 5 of the Australian Code, states:

Researchers are expected to:

- Offer authorship to all people, including research trainees, who meet the criteria for authorship listed above, but only those people.
- accept or decline offers of authorship promptly in writing.
- Include in the list of authors only those who have accepted authorship
- Appoint one author to be the executive author to record authorship and manage correspondence about the work with the publisher and other interested parties.
- Acknowledge all those who have contributed to the research, facilities, or materials but who do not qualify as authors, such as research assistants, technical staff, and advisors on cultural or community knowledge. Obtain written consent to name individuals.

Included in this thesis are papers in *Chapters 2, 6, and 8* which are co-authored with other researchers. My contribution to each co-authored paper is outlined at the front of the relevant chapter. The bibliographic details (if published or accepted for publication)/status (if prepared or submitted for publication) for these papers including all authors, are:

Chapter 2: Gai, S., Brough, P., & Gardiner, E. (2021). Psychological adjustment and post-arrival cross-cultural training for better expatriation. In P. Brough, E. & Gardiner, K. Daniels (Eds.). *Handbook on management and employment practices. Handbook series in*

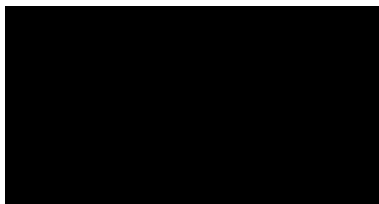
occupational health sciences (pp: 827-853). Springer, Cham. https://doi.org/10.1007/978-3-030-24936-6_39-1

Chapter 6: Gai, S., & Brough, P. (revised and to be submitted). Psychological Strain, Work Engagement, and Turnover Intentions Among Highly Skilled Expatriate Employees — the JD-R Model Perspective. Aims to be submitted to *Stress & Health* by end of October 2022

Chapter 8: Gai, S., Brough P & Chan, Xi Wen (revised and to be submitted). Development and validation of a Web-based Wellbeing Program for Expatriate Employees to *Stress & Health* by end of October 2022.

The publications from this thesis, which are listed above, are the results of three distinct studies conducted in the period from 2019 to 2022.

Signature



Date: 14/7/2022

Sheetal Gai

Countersigned



Date: 23/6/2022

Supervisor: Professor Paula Brough

Chapter 1: Stress and Psychological Adjustment Trends Within the Information and Communication Technology sector

Introduction

This chapter provides the academic background to the research problem by presenting an overview of current multinational corporates (MNCs) expatriate employees stress and psychological adjustment (wellbeing) aspects within the cross-cultural and occupational stress literature. In addition, the research objectives and summary content of each chapter are outlined.

Relevance of the Information and Communication Technology Sector

According to the World Economic Forum's 2018 Global Competitive Index, innovation is a trademark, and countries that generate advanced technologies can leverage strategic competitive advantage in the digital era (Henry-Nickle et al., 2019). The digital economy, which accounts for a Gross Domestic Product Domestic Product (GDP) of USD 11.5 trillion dollars globally, has a profound influence on societal wellbeing. The information and communications technology (ICT) industry underpins the digital economy. Niebel (2018) confirmed that ICT contributes to economic growth among developed, developing, and emerging countries.

The ICT sector is a growth powerhouse, and the industry has obtained remarkable gains, powering real economic growth and employment. Crucial to the sustained growth of the ICT sector is the employment of a highly skilled workforce consisting of expatriate workers (Manyika, 2017). In this study, expatriate workers are defined as individuals who move to another country, whose place of residence changes, and who have a specific work goal in the new host country (Andresen et al., 2014). Thus, expatriation is the voluntary movement (self-initiated process) of workers who decide to leave their native land to perform work in another country (Grelecka, 2016). The human capital, defined as the stock of

competencies, technical and knowledge, social and personality attributes, and skills that individual acquire through education, training, and different types of experiences (offshore/on-site model) enable expatriates and companies to maintain their respective competitive advantage (Kossai et al., 2021).

Given the growth trajectory of ICT employment, researchers claim that this workforce is at the forefront of the 21st century and will witness human capital challenges, including skill mismatches, skilled worker shortages, and problems in attracting and retaining highly skilled workers in tight labour markets (World Economic Forum, 2018). ICT is a new industry and is an important driver of productivity and innovation in knowledge economies. Between 2005 and 2018, the ICT sector GDP (Gross Domestic Product) was among the fastest-growing sectors, with an employment growth rate of 42% in the Organisation for Economic Co-operation and Development OECD (Organisation for Economic Cooperation and Development) countries and 69% in the United States (US; International Migration Outlook, 2020). ICT workers can be found in a range of industries across the economy, including property and business services, communication services, government administration and defence. ICT is often referred to as the “fourth industrial revolution,” impacting the way societies live, work, and interact (Eurostat, July 2021).

Stress, Mental Health, and the Expatriate Population - General Perspective

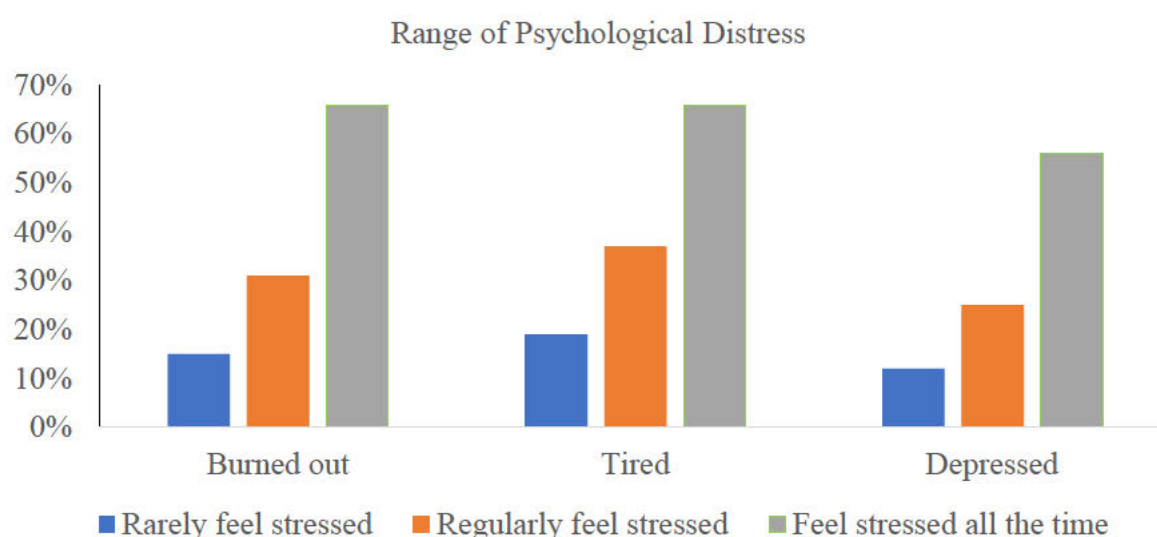
Unfortunately, although the growth of the ICT expatriate workforce has resulted in positive economic outcomes for large organisations, the outcomes of expatriation for workers is more varied. MetLife’s 18th Annual US Employee Benefit Trends Study (2020), the expatriate workforce experiences higher burnout (40%), isolation and stress (41%) compared to their domestic colleagues (30% and 33%, respectively). Although worked-related stress was rated as the top determinant of strain by 61% of expatriate employees prior to the COVID-19 pandemic; the post-COVID 19 era has significantly reshaped and transformed

both the home and work lives of expatriate employees, while also negatively impacting their levels of wellbeing. These stresses and challenges negatively affect expatriate employees' success during expatriation (e.g., 33% of expatriates experience depression, compared to 15% of their domestic colleagues) and impact their satisfaction levels and commitment to their employer's goals.

The MetLife (2020) report also revealed that 72% of employers felt that their organisation was struggling with work-life balance issues; 77% of the organisations felt that their employees struggled to navigate the demands of work and everyday life and 80% indicated that their company's key goal was to reduce employee stress. Figure 1.1 presents the percentage trends in mental wellbeing among expatriate employees and shows that 66% of the expatriate population experience burnout, are fatigued and experience high levels of stress

Figure 1.1

Trends in Mental Wellbeing Among Expatriate Employees



Note. Retrieved from MetLife 18th Annual US Employee Benefits Trends Study (2020).

Gaps in the Literature

Stress and Mental Health among Expatriate Workers in the ICT Sector

The ubiquitous presence of technology is transforming the core nature of work and life across knowledge economies. According to the Global Mobility report (May 4, 2020), 67% of digital industry workers are willing to work abroad. This figure is higher than the world worker average of 57%. ICT is a key economic sector and is considered the digital economy's backbone across all industries (International Labour Organisation, July 11, 2019). In this knowledge-based economy, labour relies on intellectual capabilities over physical resources, where work is more mobile and flexible (D'Andrea & Gray, 2013). Due to the limited availability of local skilled labour, MNCs hire highly skilled expatriate workers. As a result, expatriates have become an essential feature of MNCs (Doki et al., 2018). This research defines MNCs as companies that operate globally (Okpara & Kabongo, 2011).

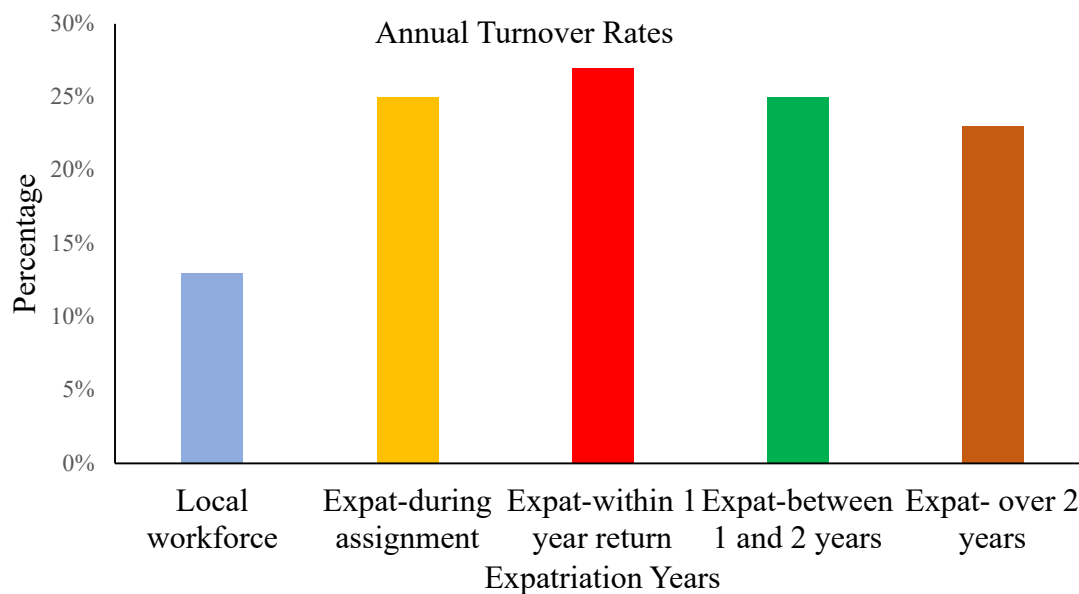
Expatriates are hired to fulfil several roles, including filling temporary positions due to local skill gaps, conducting projects with specific technical skills, functioning as representatives of their firms in the host country, and building interpersonal relationships in the new host country. Effective adaptation to the host country plays a vital role in the expatriation process. Cross-cultural adjustment (CCA) is defined as the process of adaptation to living and working in a foreign culture (Okpara & Kabongo, 2011). Adjustment is considered successful if expatriates effectively navigate the demands of living and working in a new host country. Adjustment difficulties in the host nation are the primary reason for expatriate failure (Harvey & Moeller, 2009). Attrition, premature return, or dropout among the corporate expatriate population remain high. The average annual turnover among local employees is approximately 13%; however, this figure doubles among expatriates to 23–27% (D'Andrea & Gray, 2013). For these reasons, international assignments must be carefully considered and justified due to the excessive costs and risks for both the organisation and the expatriates. Figure 1.2 presents the annual turnover rates among MNC (Multinational Companies) expatriates sourced from D'Andrea and Gray (2013) and shows that expatriates

employees experience maximum turnover intentions in the first years of international assignment.

Given the multifaceted nature of adjustment, the extant literature has examined the antecedents of adjustment and its outcomes from a sociocultural perspective, such as the length of the assignment, age of the expatriate, and prior international experience. Most expatriate research, to date, has excluded psychological strain factors that influence adjustment (Doki et al., 2018). Researchers have identified numerous sources of stress in the workplace caused by growing globalization and technological advances (Czaika & Haas, 2014).

Figure 1.2

Annual Turnover Rates Among MNC Expatriates

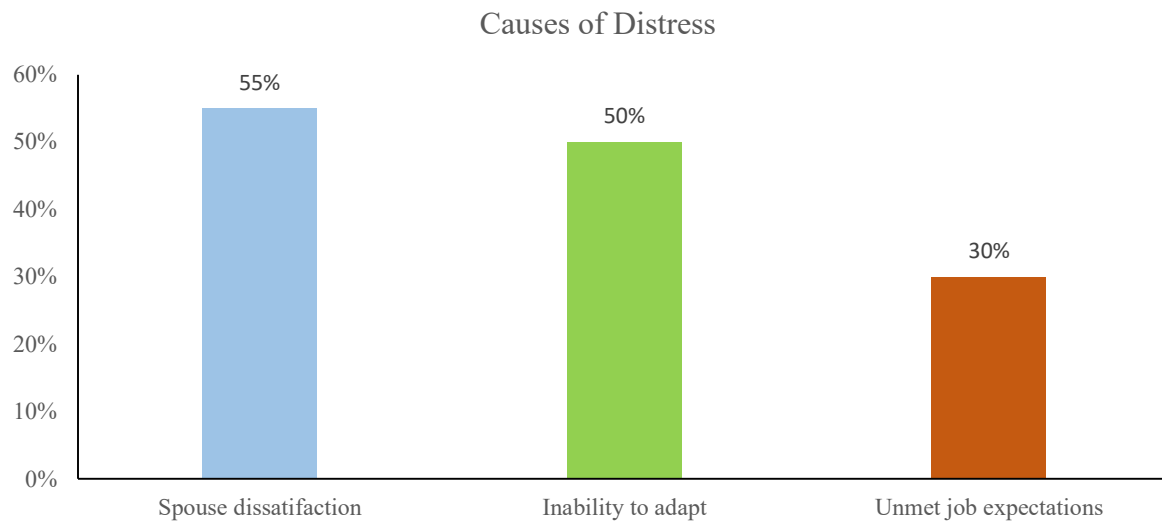


Note: Data retrieved from D'Andrea and Gray (2013).

Expatriates are typically required to adapt to unfamiliar work and non-work contexts. The primary expatriate stressors include unrealistic project deadlines, a constant work cycle, extended multi-geographical locations, operating hours, social network interactions, frustration from a lack of information about the host country, few social activities, loss of

resources, spouse-related issues, concerns about health, security, and personal relationships (Vijayakumar & Cunningham, 2019). Such challenging situations result in a wide range of psychological discomforts, including high levels of uncertainty and anxiety (He et al., 2019; Upadhya & Vasavi, 2006).

In addition, due to their overseas transfer, expatriates experience pressures which negatively impact their psychological wellbeing (e.g., depression, anxiety, cognitive difficulties, inability to concentrate, issues with reasoning; Baruch et al., 2016; Doki et al., 2018; Truman et al., 2011). Further, it is reported that these difficulties lead to many negative outcomes for expatriates, such as reduced self-esteem and increased burnout,) as well as damage to the enterprise's reputation and loss of business opportunities (high financial costs; He et al., 2019). Moreover, because of the 'high risk and high demand' of the ICT work environment, expatriates are increasingly reporting mental health issues (Czaika & Haas, 2014; Gai et al., 2011; Upadhyay & Vasavi, 2006; Vijayakumar & Cunningham, 2019). Mental health in this thesis is defined as a condition of low psychological and emotional wellbeing. Research reports that 83% of MNCs' expatriate employees experience stress, while 27% of these employees take leave from work to recover from the strain and are less effective in their work (Gai et al., 2011; Vijayakumar & Cunningham, 2019). Figure 1.3 presents the top three causes of failure among expatriate MNC employees and shows that the inability to adapt in the host country is a leading cause.

Figure 1.3*Top Three Causes of Failure Among Expatriate MNC Employees*

Note: Data retrieved from D'Andrea and Gray (2013).

The cross-cultural literature acknowledges that major concerns for working expatriates are related to their values, beliefs, and behavioural aspects. Psychological adjustment relates to a person's psychological wellbeing or happiness in the host country (Noman et al., 2020), which differs from sociocultural adjustment—the capacity to ‘fit in’. To date, empirical studies have primarily examined expatriate employees’ adjustment from a sociocultural perspective, such as the impact of cultural distance, length of assignment and age on adjustment dimensions. Despite these concerns, the psychological adjustment of expatriates from a stress perspective is notably under-researched (Davis et al., 2018; He et al., 2019). Aspects of psychological strain among ICT expatriates are rarely addressed in the literature (Shah & Barker, 2017; Vijayakumar & Cunningham, 2019).

Recently, several researchers have begun to assess the process of psychological adjustment among expatriates in more detail (Chen, 2019; Sterle et al., 2018). Researchers have reiterated the need for a more comprehensive view of adjustment dimensions, emphasising the importance of affective, behavioural, and cognitive facets (Davis et al., 2018; Haslberger et al., 2013).

Adjustment is significant for both employers and expatriates in their new settings. There has been recent increased academic and practical interest in understanding the impact of psychological dimensions and their implications for expatriate employees' wellbeing and performance while adapting to the host country (Davis et al., 2018). Research has shown that expatriates with high emotional intelligence manage and adjust better to their host country (Singh et al., 2019).

The current work enlists the JD-R model (Demerouti et al., 2001) to examine how key job characteristics (cognitive job demands), psychological needs satisfaction (job resources) and self-efficacy (personal resources) impact psychological strain, turnover intentions, and work engagement. This model will shed some light on the above-described research gap and investigate the roles of psychological mechanisms among this understudied group of expatriate employees who experience unique stresses and demands when adapting to their host country. A clear understanding of the impact of psychological dimensions will help organisations to better assist expatriate employees to manage crises and to improve their productivity and engagement by reducing strain; this, in turn, will facilitate expatriate success.

Training and Intervention Initiatives

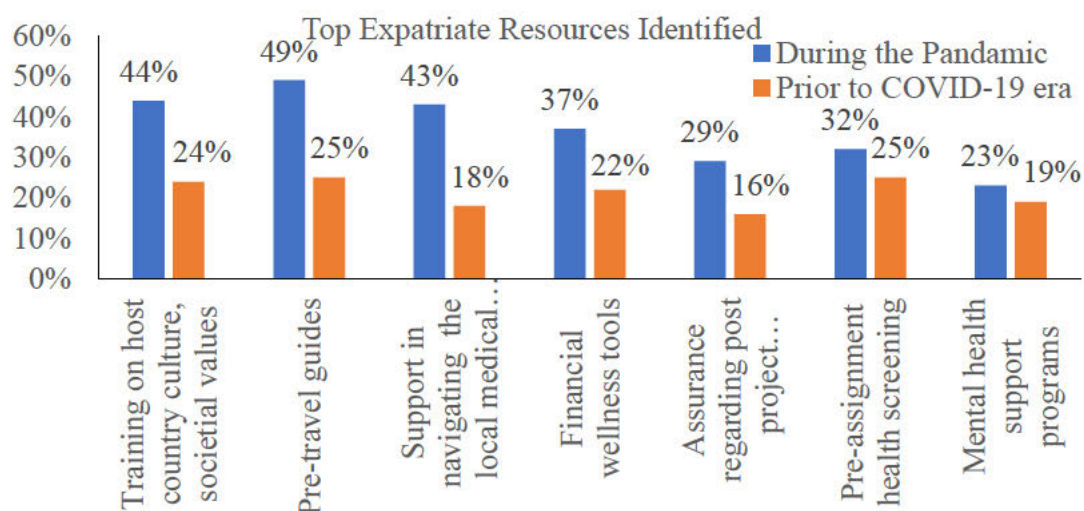
A growing body of evidence identifies that expatriate failure is a complicated issue (Wang & Varma, 2019) and requires the identification of effective ways to combat the contributing factors (Al Mahrouqi, 2018). Providing awareness of the challenges associated with adjustment may enable expatriates to be better prepared. In the context of expatriate employees' adjustment, cross-cultural training (CCT) is a popular method that aims to help employees feel comfortable living and working in a host country, thus enhancing their CCA and strengthening their ability to understand and appreciate multiple cultural perspectives. However, CCT offered by many MNCs has not led to optimal outcomes

concerning expatriate success; as a result, expatriate failure is a persistent problem even to this date (Al Mahrouqi, 2018).

Reports reveal that expatriate employees struggle with holistic wellbeing, and only 47% of expatriate employees have confidence in their mental health status (MetLife 18th Annual study, 2020). It is, therefore, important for organisations that hire expatriate employees to help these employees manage any crises and improve their productivity and engagement by reducing their experiences of stress and burnout. Figure 1.4 presents the most popular training/support available for expatriate employees prior to COVID-19 era and after the start of the pandemic. Most support/training options offered to expatriate's address their understanding of the host country's culture and values (44%), medical systems (43%) and financial support services (37%). However, there is a dearth of mental health support programs (only 23%) available to help expatriates achieve holistic wellbeing.

Figure 1.4

Training/Support Available for Expatriate Employees



Note. Data retrieved from MetLife's 18th Annual U.S (United States) (United States).

Employee Benefit Trends Study (2020).

Discussions within the cross-cultural literature increasingly recognise that adjustment is a long-term process and that effective intervention programs should include a process approach (Gai et al., 2021). Given that many of the problems experienced by expatriates upon their arrival in a host country are stress-related, the dynamics of adjustment and training can also differ depending on the individual's psychological receptivity to the new culture (Bennet et al., 2000). With increasing globalization, adjustment is recognized as a continuous process and researchers are interested in the provision of ongoing support to improve expatriates' competencies while adjusting to their host country (Morris et al., 2014).

Continuous changes and stress adaptability demands have highlighted the need for more integrated and sustainable interventions (Chen & Chang, 2015; Wang & Tran, 2012). Previous research has demonstrated that the development of an appropriate process based CCT/intervention for expatriate adjustment is crucial for expatriate success (Wilczewski et al., 2019). The future of interventions suggests that scientific theories (rise of testable models) are the best means of doing this, in that theory provides an intellectual architecture (e.g., well defined terms, standardized expected construct relationships) and informed by the cumulative knowledge of previous research, upon which the intervention study can be based and (Burgess et al., 2020). However, due to a lack of empirical evidence regarding the implementation and effectiveness of process-based interventions within the expatriate literature, the uptake of such programs is lacking.

The challenges associated with the development of effective CCT interventions are now attracting scholarly attention. It is increasingly recognised that the development of effective training comprising multiple strategic and tailored programs is crucial to meet the psychosocial adjustment needs of MNC expatriates in their host environment (Waxin & Panaccio, 2005). Host-country, real-time training is a new area emerging in the expatriate literature, suggesting support for ongoing adjustment challenges. Post-arrival, in-country

CCT are novel approaches to understanding and improving expatriate adjustment. The ability to respond to the specific needs and concerns of expatriates based on their own individual experiences suggests that in-country programs may be a more effective strategy. Thus, facilitate the whole change process upon arrival and give expatriates a platform to motivate change, develop new attitudes and behaviours based on new information, and promote cognitive redefinition (Selmer, 2002). Context-specific training helps expatriates to reshape their mental maps and enables them to adapt specific behaviours to intercultural situations during expatriation (Wang & Tran, 2012).

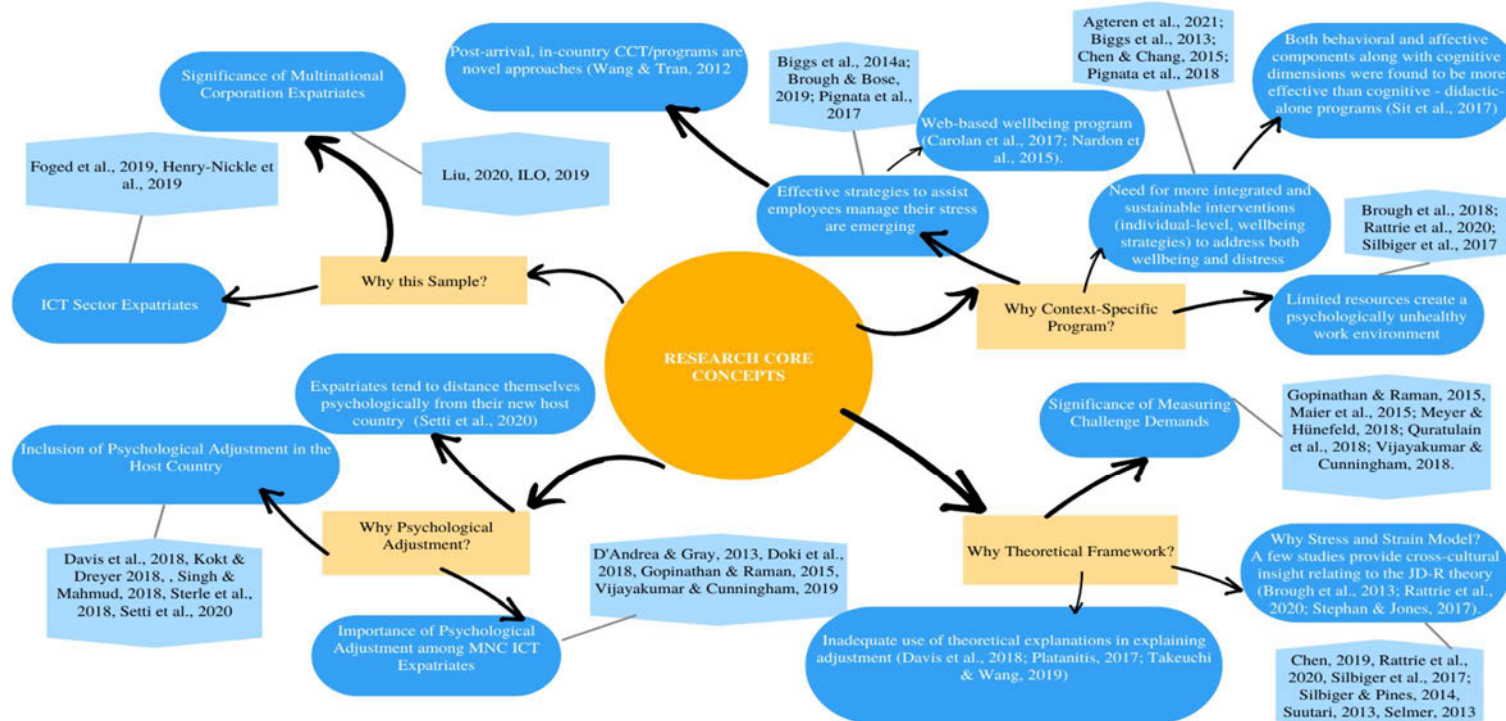
As MNC ICT-working expatriates are recognised as a highly stressed group with unique stressors and demands, interventions addressing coping with stress under different situations are strongly suggested to assist these employees to work in a dynamic, multi-cultural project environment (Chen, 2019; Xie, 2020). However, there is a lack of in-country programs/CCT that focus on stress, coping and performance, particularly in the MNC expatriate literature. Richardson and Rothstein (2008) noted that stress management interventions consisting of cognitive-behavioural techniques are the most effective methods for managing occupational stress (e.g., use of cognitive restructuring increased levels of work engagement; Brough & Bose, 2019). The implementation of a wellbeing programs as a personal resource within the occupational stress process aims to reduce ill-health by enhancing employees' capacity to cope with stressors or rehabilitating strained individuals (e.g., Biggs et al., 2014). Despite the wide variety of stress-related initiatives to improve employee wellbeing and performance in the literature, there is little empirical evaluative research of wellbeing programs within the MNC expatriate literature.

Thus, to maximize productivity, sustain global competitive advantage, and promote expatriates' adaptation to their host country, the second aim of this research is to consider an evidence-based, integrated, and sustainable process for improving expatriates' competencies

while adjusting to their host country. Specifically, this research involved the design and implementation of a web-based program to promote psychological wellbeing by mitigating strain and improving outcomes when living and working in the host country. Given the current changing world with COVID, and in conjunction with the nature of the ICT expatriate population (fast-paced, hustle culture; Pardes, 2020) introducing a web-based wellbeing program was apt for this research. The aim of the web-based wellbeing program was to assist expatriates to deal more effectively with demanding situations, or to modify their appraisal of specific work-related stressors to reduce the perception of threat and its associated aversive emotional responses (Pignata et al., 2017). Based on the JD-R theory, this study aimed to examine the effectiveness of a post-arrival CCT (wellbeing program) as a personal resource. To our knowledge, this study is the first to evaluate a wellbeing program implemented as a post-arrival training program in the expatriation research field. Overall, the goal of the research in this thesis was to advance the research field towards a more integrated and holistic understanding of cross-cultural research. Figure 1.5 shows the core concepts of this thesis.

Figure 1.5

Mind Mapping of Core Concepts



Note: Dark Blue indicates the core elements that were integrated in this research. Light Blue highlights related references. Yellow box indicates the 4 main concepts of this thesis.

The following sections present the main research objective of this thesis, a list of definitions, and the structure of this thesis.

Research Purpose and Methodological Contributions to the Literature

Expatriate research in high-stress contexts has recently increased (McNulty et al., 2019). Numerous reports have highlighted a growing concern among multinational firms over the wellbeing of expatriates, particularly in the aftermath of COVID-19 (Koveshnikov et al., 2022). Despite these rising concerns, the majority of cross-cultural literature has relied on the socio-cultural adjustment theoretical framework to provide a foundation for understanding the mechanism by which expatriates adjust socio-culturally in a host country (Mumtaz & Nadeem, 2022). While the psychological adjustment of expatriates has been acknowledged as playing a crucial role in international assignments, the topic remains an unexplored area from a stress perspective (Truman et al., 2012). In order to gain a thorough understanding of expatriates' adjustment, it is critical to recognise that when expatriates relocate to a new foreign nation, they face numerous emotional, mental, and physical challenges (Firth et al., 2014; Maertz et al., 2016). However, little is known about how various psychological factors impede or support expatriates at different phases of adjustment and contribute to their adjustment in a host nation (He et al., 2019; Mumtaz & Nadeem, 2022).

Given the fact that the available literature on psychological adjustment focuses primarily on immigrants or international students and rarely on working MNC expatriates (He et al., 2019). Recent research has emphasised that failure to manage change during a stressful situation may jeopardise expatriate transition, resulting in worsening mental health and wellbeing (Mumtaz & Nadeem, 2022), and ultimately leading to work engagement and performance issues (Firth et al., 2014; He et al., 2019). This research, therefore, investigates the influence of psychological mechanisms through the lens of the JD-R model, a prominent

employee wellbeing model, to address significant gap in literature (Wang, 2019) and enhance methodological transparency (Aguinis et al., 2018).

A growing number of studies have provided evidence highlighting the difficulties for expatriates in the host country (Caligiuri & Bonache, 2016), the causes and implications of stressors (Vijayakumar & Cunningham, 2019), and the consequences of a lack of available resources and support for expatriates (Silbiger et al., 2017). It is important to note that while expatriates face stress during their international assignments (Baruch et al., 2016), previous research has shown that support is crucial for expatriates (e.g., Tahir, 2018). Resources or support in the host country act as a buffer for their emotions, aiding in psychological adjustment and relieving expatriates of stress (He et al., 2019). As a result, it is critical to shape individuals' perceptions to anchor long-term behavioural change (Chan et al., 2019). To facilitate expatriate adjustment, a more comprehensive and specific participatory experimental training programme in which expatriates experience simulated real-life, hands-on situations in their new environment is required. As a result, this thesis designed and implemented a web-based wellbeing programme for this specific sample (characterised by having enormous work hours under pressure and the stigma associated with mental health).

Furthermore, low methodological transparency (Aguinis et al., 2018) is a well-recognized barrier to reproducibility in cross-cultural research (Beins, 2019; Halder et al., 2017). As a result of current methodological issues in literature, this thesis focused on improving methodological transparency in accordance with Aguinis et al. (2018)'s best practises recommendations. For instance, since the majority of psychological adjustment studies used quantitative methods, understanding of the adjustment process has been limited (He et al., 2019). While there is an active and ongoing debate about the incompatibility of quantitative (quantitative approaches point to their superficiality and lack of depth) and qualitative (their presumed unreliability and subjectivity) research methods, this thesis

contends that, in addition to quantitative data, detailed qualitative investigations into what and how expatriates experience stress that impacts psychological adjustment will aid in gaining deeper insights and understanding of complex phenomena (Mumtaz & Nadeem, 2022). Furthermore, this thesis's emphasis on selecting appropriate psychometric measures to be used (e.g., reliability, construct validity) and advanced statistical testing (such as Structured Equation Modelling) helps enhance methodological transparency, which is a significant limitation in cross-cultural literature (see chapter 5 for more details on methodological rigor adopted in this thesis).

Overall, the technology industry has long been chastised for putting its employees' mental health at risk. Burnout is all too common in the sector, and the pandemic has compounded issues such as isolation and a lack of work-life balance. According to recent findings, mental health issues go ignored in the IT culture (Pils1, 2022). The Open Sourcing Mental Health (OSMH) in Technology Survey 2021 reported that almost 64.7% of respondents indicated a mental health issue had hampered their productivity, and 57% of tech industry employees cited burnout. The industry is recognised for its tremendous stress: late nights, odd hours, and tight deadlines, all while being always available, "says Medidata Solutions' Chief People Officer, Naveen Bhateja. According to AppDynamics, 8 out of 10 tech experts said their jobs had become more challenging since the outbreak. According to the same report, 89% of tech professionals report feeling enormous pressure at work, and 84% have difficulty shutting off from work (Mentortribes, 2022). These recent concerns have made it evident that it is necessary for the tech industry to prioritise mental health (Benhoff, 2022), a worry that is most significant to industries, and casting light on these critical issues is of practical importance (Wang, 2019).

To achieve this aim, the current research first aimed to investigate expatriate employees' stress/strain and coping from a JD-R perspective to address current gaps in the

stress and expatriate literature. Specifically, this research investigated psychological dimensions by examining the relationships between job characteristics (job demands, basic psychological needs satisfaction and mobility self-efficacy), psychological strain, turnover intentions, and work engagement among highly skilled expatriate employees. Second, to increase productivity, maintain a global competitive edge, and ensure effective expatriation (better adjustment/adaptation) of individuals in host countries, this research developed and implemented a more integrated and sustainable web-based wellbeing program to promote psychological adjustment by mitigating/reducing strain among expatriates living and working in a host country. The second aim of this latter study was to evaluate the effectiveness of this web-based wellbeing program for this unique group of expatriate employees and to explain expatriate success.

Definitions of Terms

The following definitions are relevant to this research study.

Expatriate Employees

Expatriate employees are defined as individuals who move to another country, whose place of residence changes, and who have a specific work goal in the new host country (Andresen et al., 2014), or assignees who work across a range of assignment types involving international relocation either permanently or temporarily on visas (McNulty, 2015). In this context, expatriation is the voluntary movement of people (self-initiated expatriates) who decide to leave their native land to perform work in another country (Grelecka, 2016).

Multinational Corporations (MNCs)

MNCs are corporations that operate globally (Okpara & Kabongo, 2011).

ICT Sector Workforce

While ICT professionals are becoming more critical in the day-to-day operations of all businesses, the specifics of their work are highly dependent on the employee's industry.

This study considered ICT expatriate professionals working across various sectors, including information, media and telecommunications, financial and insurance services, manufacturing, and retail. These employees position themselves in foreign lands either independently or are sent by MNCs to work in branch offices or subsidiaries. ICT professional expatriates are skilled employees with unique abilities, technical skills, and knowledge (Suutari & Brewster, 2000).

Cross-cultural Adjustment (CCA)

CCA is a phenomenon whereby an individual achieves psychological comfort and ease when encountering cross-culture shock in a different setting, further reducing feelings of conflict and stress at work or outside of work (Chen, 2019). Abdullah et al. (2015) defined CCA as the process of adjusting to a new culture by accommodating to and assimilating with various aspects of the changing environment. Further, Chen (2019) highlighted that due to the cross-cultural experience, an individual needs to acquire competencies to enable perception changes and mental changes.

Psychological Adjustment in the Host Country

Noman et al. (2020) describe adjustment as adaptation to the host country's needs by changing personal views and belief systems to meet the new environment's demands.

Psychological adjustment relates to a person's subjective assessment of their own psychological wellbeing or happiness in the host country.

Cross-cultural Training (CCT)/Program.

CCT/programs are initiatives that help employees feel comfortable living and working in their host country, further enhancing their CCA and strengthening their ability to understand and appreciate multiple cultural perspectives.

Mental Health

An individuals perceived psychological and emotional wellbeing.

Thesis Structure

This thesis comprises of several chapters, with each chapter building on the next to address the primary research questions. The current chapter is an introductory chapter, providing background to the program of research, including a summary of the nature of the exponential growth of expatriate population in ICT MNC sector, the rising stress, and psychological challenges among employees of this sector. This chapter also illustrates the goals of the research and its contribution to literature.

Given the plethora of occupational stress and cross-cultural literature, Chapter 2 (Study One) of this research aimed to synthesis evidence for a comprehensive understanding of MNC expatriate employees cross-cultural adjustment and available cross-cultural training from an occupational stress and strain perspective. The systematic literature review had three specific aims: 1) identify the different types of adjustment difficulties experienced by MNC expatriate employees, 2) identify the different forms of CCT/programs available for MNC expatriation employees, and 3) evaluate the empirical evidence and theoretical trends to explain expatriation success. Chapter 2 delivers a clear and comprehensive overview of the MNC expatriate literature with a particular focus on psychological adjustment cross-cultural adjustment, and cross-cultural programs from the stress perspective. The research gaps identified in the systematic review (Gai, Brough & Gardiner, 2021) informed the design and implementation of the empirical studies in this thesis (Studies 2 and 3)

Chapter 3 provides an overview of cross-cultural adjustment and discusses the importance of recognising psychological adjustment as a separate element when examining expatriate success. This chapter provides a comprehensive review of the literature distinguishing psychological adjustment from socio-cultural perspective

Chapter 4 describes the theoretical frameworks within the cross-cultural literature and provides an overview of the applicability of a stress-strain model. Job demands-resources (JD-R) theory has emerged as an influential framework for interpreting and explaining factors affecting employees' wellbeing in the workplace. This chapter provides a broad overview of JD-R theory and discusses how the theory can be harnessed to further understand the factors influencing expatriate employees' wellbeing. By reviewing prior research that employed JD-R theory, this study explored the challenge job demands and resources (basic psychological need satisfaction and mobility self-efficacy) that influence strain, work engagement and turnover intentions.

Chapter 5 describes the research methodologies employed in this research, including the procedures employed to test the aims of this thesis, the sample recruited, the constructs measured, and the intervention design.

Chapter 6 presents the first empirical study of this thesis. This study aimed to test the full JD-R model. This study (Study 2) investigated the relationships of work and non-work characteristics on strain, work engagement and turnover intentions among highly skilled expatriate employees. This study addresses an identified knowledge gap (validation of the model) by testing the full JD-R model with a sample of highly skilled expatriate employees living and working in a host country (Brough et al., 2018; Schneider et al., 2017). To the best of the author's knowledge, this study is the first to contribute to the theoretical extensions of the model, such as the inclusion of psychological resources (i.e., basic needs satisfaction, mobility self-efficacy and wellbeing program) and extend knowledge of how expatriate employee's wellbeing can be promoted at both individual and organisation levels. To explain expatriate success, this study firstly investigated the relationships between work and non-work characteristics and its relationships with outcomes such as strain, work engagement, and

turnover intentions. Secondly, this chapter considered how JD-R theory can guide training programs (personal resources) that support individual expatriate employees to maximise their wellbeing and performance outcomes (discussed in detail in Chapters 7 and 8).

The role of personal resources, which can be important determinants of adaptation to new environments, have largely been neglected in the international work context. Having introduced JD-R theory and summarised a range of studies applying the theory among working populations, an important question as to how JD-R theory can be harnessed to shape intervention programs targeting expatriate employees is considered. The latter section of this thesis considers how the propositions espoused in JD-R theory can be translated into strategies to promote expatriate employee's wellbeing in real-time. To address this question, Chapters 7 and 8 informed by Chapter 2, provides a comprehensive overview of traditional versus contemporary approaches and methods in training programs and highlights the need for a context-specific experiential intervention. Based on the evidence provided in previous chapters, it is understood that JD-R theory provides an overarching framework through which interventions to promote wellbeing can be designed. Given that psychological strain has become an occupational health concern, there are a wide variety of stress-related initiatives to improve employee wellbeing and performance in the occupational stress literature, but little empirical research has evaluated the impacts of stress interventions in the MNC expatriate population (Pignata et al., 2017).

Chapter 8 (Study 3), the second empirical study within this thesis, designed and implemented a web-based wellbeing program to promote wellbeing and improve performance outcomes among highly strain expatriate employees for better expatriation experience. Applying the rationale of the JD-R model, Study 3 presents a bottom-up intervention as a personal resource framework and describes a web-based wellbeing program

focused on improving wellbeing to reduce strain and improve wellbeing among expatriate employees who were identified to have higher psychological strain. Given that many of the problems experienced by expatriates are stress-related experiences encountered upon arrival (Platanitis, 2017), this study implemented a real-time wellbeing program for expatriate employees living and working in a host country. To date, and to the best of the author's knowledge, no previous studies have delivered a web-based wellbeing program and evaluated its effectiveness at increasing employee psychological wellbeing (by targeting a reduction in psychological strain) among multinational corporations' expatriate employees.

Finally, Chapter 9 concludes the thesis by providing a detailed discussion of the key findings, the practical implications of the research findings, the strengths and limitations of the current research, future research directions, and concluding remarks.

Conclusion

Having identified a unique research problem and acknowledging the gaps in the literature, this thesis next describes a systematic literature review, which is a published book chapter. This review synthesised the knowledge around various aspects of interest to this thesis. The next chapter describes the systematic review findings in detail.

Chapter 2: Psychological Adjustment and Post-Arrival Cross-Cultural Training for Better Expatriation: A Systematic Review

Introductory Comments

The purpose of this Chapter (Study One) is to integrate the dynamic and complex MNC expatriate literature with a focus on cross-cultural psychological adjustment and training/interventions available for expatriate employees from a stress/strain perspective. Specifically, Study One presents a review of the available empirical research and draws conclusions about the current state and future directions of this steadily growing MNC expatriate population. This study investigated three main research questions:

- 1) How often is psychological adjustment assessed within the cross-cultural literature for MNC expatriates?
- 2) What types of CCT programs are available, and how effective are they in MNCs?
- 3) Which theories are commonly utilised to best explain CCA and training within the MNC cross-cultural literature?

This chapter consists of the review written and published as a co-authored book chapter. The review is the first to provide a clear and comprehensive review of the MNC expatriate literature and highlights the need to consider psychological adjustment dimensions and a process/evidence-based cross-cultural training programs to explain expatriate success, specifically in the context of expatriates living and working in their host country. This review directly informed the research design, methodology and implementation of Studies 2 and 3 of this thesis, presented in Chapters 6 and 8.

Statement of Contribution to Co-authored Published Book Chapter

This chapter consists of a co-authored book chapter. The bibliographic details of the published chapter are:

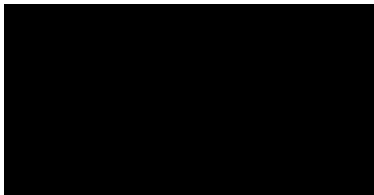
Gai, S., Brough, P., & Gardiner, E. (2021). Psychological adjustment and post-arrival cross-cultural training for better expatriation. In P. Brough, E. & Gardiner, K. Daniels (Eds.). *Handbook on management and employment practices. Handbook series in occupational health sciences* (pp: 827-853). Springer, Cham. https://doi.org/10.1007/978-3-030-24936-6_39-1

Contributions to Manuscript

The PhD Candidate's contribution to the book chapter involved conceptualizing and designing the study, conducting the systematic review process, writing the manuscript, and revising the manuscript in the publication process. The PhD Candidate's supervisory team provided supervision and advice at all stages and provided comments on the manuscript drafts.

Signature

Sheetal Gai



Date: 14/7/2022

Signature

Professor Paula Brough



Date: 24/6/2022

**Psychological Adjustment and Post-Arrival Cross-Cultural Training for Better
Expatriation: A Systematic Review**

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Abstract

Globalization has produced increasingly multicultural workplaces, resulting in a proliferation of cross-cultural difficulties for expatriate employees and their work organizations. Expatriate workers often experience high levels of stress and because of this, the rate of mental ill-health among expatriates is increasing. The review argues that examining psychological adjustment can advance our understanding of the role of mental health in expatriate success. Thus, this review first examines the prevalence and significance of measuring the psychological adjustment dimension among multinational corporations (MNCs) expatriate workers in the cross-cultural literature. Second, this review examines the role of cross-cultural training (pre-departure and post-arrival) and its effectiveness on expatriation success. This review analyzed 22 empirical studies published between 1994 and 2020 that examined either or both: 1) cross-cultural adjustment, emphasising the psychological adjustment component, and 2) cross-cultural training, emphasising the effectiveness and impact of pre-departure and post-arrival cross-cultural training on long-term expatriation success among MNC expatriate workers. This review was conducted with a specific goal of increasing our understanding of the role of psychological adjustment and how appropriate cross-cultural training may increase expatriate success.

Keywords: expatriate employees, stress, cross-cultural adjustment, cross-cultural training, information, and communication technology

Psychological Adjustment and Post-Arrival Cross-Cultural Training for Better Expatriation: A Systematic Review

In the digitalization era, global assignments have become increasingly important for multinational corporate (MNCs). To achieve this objective, MNCs continue to increase international employment opportunities worldwide (Liu, 2020, July 30; ILO, 2019). MNCs primarily depend on expatriates for growth and advantage (Singh & Mahmud, 2018). Research traditionally considered “expatriate” as people who were sent to work in another unit of the same company located in a foreign country, referred to as organizational expats (Cerdin & Jelmer, 2013). However, new trends in the international job market are making way for “independent internationally mobile professionals” expatriates, commonly referred to as “self-initiated expatriates”- a highly skilled worker with unique expertise, technical, and knowledge skills (Cerdin & Jelmer, 2013; Doherty et al, 2013). With increasing globalization, the expatriate workers will consist of 87.5 million employees in 2021.

Expatriate workers are key contributors to the rapidly expanding information and communication technology sector (ICT; Foged et al., 2019). Indeed, the ICT sector is one of the largest sectors for employing highly skilled expatriates, followed by the hospitality sector (OECD, 2020). ICT expatriates are employed within many products and services industries, including information technology, education, digital, media, telecommunication, financial, insurance, construction, manufacturing, retail, and other services. Overall, the ICT MNCs have become culturally diverse entities, with highly skilled employees migrating temporarily and permanently to numerous host countries. Since 2016, the ICT industry has produced considerable gains and economic growth worth US\$ 11.5 trillion globally, equivalent to 15.5% of global GDP (Henry-Nickle et al., 2019, March 29).

According to an OECD (2020) report, numbers of expatriate workers have increased exponentially since 2005. Foreign-born workers in OECD countries now amount to

approximately 14% of national employees, compared to 9% in 2005. Correspondingly in the United States, this population has increased to 18% from 16%, and in Australia, an increase of 30% from 26%. It is further illustrated in the report that the ICT sector is one of the largest sectors for employing highly skilled expatriates (50% the USA and 53% OECD countries), followed by the hospitality sector (27%). For instance, in the United States, the percentage of recent migrant expatriates working in this sector accounted for a total of 7% in 2018, from only 2% in 2005. Similarly, in European countries, there are almost 4% of expatriates work in the ICT sector.

Working abroad requires an adjustment to the host country. Expatriates experience a transition period where they prepare to leave their home country, then arrive, adapt, and work in the host country (Sussman, 2011). This transition includes several emotionally demanding challenges (Haslberger et al., 2013), especially when significant cultural differences exist between the home and host countries. A recent review of MNC expatriate employees revealed that 83% reported experiencing psychological stress due to the cultural gap between their home and host countries, primarily caused by the new environment, family routine changes, and daily interactions with society (Chen, 2019). MNC expatriate workers also commonly experience occupational stress due to heavy workloads, long working hours, working across multi-geographical locations, and pressure from their managers and clients (Upadhya & Vasavi, 2006).

One of the costliest elements of expatriate management is expatriate failure, commonly experienced in terms of inadequate job performance, adjustment problems, and an early return to the home country (Sterle et al., 2018). When expatriates do not adjust well to their host country, they may experience high levels of psychological distress, resulting in burnout, social withdrawal, poor work performance, low job satisfaction, and turnover (Harari et al., 2018; Sterle et al., 2018). Expatriate failure estimates are as high as 40% and

these failures cost MNCs an average of US\$ 2 billion a year (Burgess, 2016). Expatriate failures are primarily attributed to inadequate assessments of expatriate's adaptability skills, with an average of 20% of expatriates experiencing notable difficulties in adjusting to the new host country (Singh & Mahmud, 2018).

It is, therefore, in the interests of multinational organizations to improve the long-term success rate of expatriate employees. An emerging school of thought suggests a direct approach in examining levels of psychological strain experienced by expatriate employees and how this strain and other challenges impacts the adjustment of these expatriate workers within their new host environments (Davis et al., 2018; Platanitis, 2017). Clearly, the need for continuous adaptation and transition support is fundamental to ensure the successful adjustment and retention of expatriate employees (Podsiadlowski et al., 2013). Cross-cultural training (CCT) is one such method designed to enhance expatriate workers' successful adjustment and retention.

The cross-cultural training market is expected to grow by US\$1.22 billion by 2024 (Maida, 2020). This growth is primarily driven by the need to offer improved expatriate adjustment experiences in order to retain staff (Arcari, 2019; Javvadi et al., 2016). However, given the continuing quantity and costs of expatriate failures, this improved CCT support is clearly not successful (Schickel, 2018). To enunciate the common deficiencies in cross-cultural adjustment and training and the subsequent economic consequences for employers, a systematic review of the pertinent issues related to expatriate worker adjustment is required. The current study reviews the evidence concerning MNC expatriate worker adjustment, the availability of cross-cultural training programs for these workers, and the effectiveness of such programs. This review aims to highlight the training advances required to ensure expatriate workers' successful long-term employment, especially those employed within the MNCs ICT sector.

Purpose of this review

The current paper has three aims. First, to assesses the cross-cultural adjustment (CCA) challenges that MNCs ICT expatriate workers commonly experience. Second, to assesses the available forms of cross-cultural training and analyze its effectiveness in terms of better expatriation success. Third, since methodological issues have long been acknowledged in the literature, this review evaluates the evidence of empirical research and theoretical trends and provides recommendations for advancing knowledge in this field to improve and explain expatriation success.

Cross-cultural Adjustment

Cross-cultural adjustment is defined as the process of adaptation to living and working in a foreign culture (Okpara & Kabongo, 2011). Adjustment is considered successful if expatriates effectively navigate the demands of living and working in a new host country. Nevertheless, given the multifaceted nature of adjustment, the extant literature has examined antecedents of adjustment and its outcomes, from a socio-cultural perspective, such as length of assignments, age of expatriate, and prior international experience. Most expatriate research, to date, excludes psychological strain factors that influence adjustment (Doki et al, 2018).

Psychological Adjustment

Cross-cultural psychological adjustment is a psychological contact process emphasizing stress and mental wellbeing factors that impact cross-cultural adaptation for expatriate workers while in their new host country (Haslberger et al., 2013). Psychological adjustment refers to the general emotional and affective state of wellbeing and life satisfaction, focusing on an individual's beliefs, perceptions, values, ideologies, and attitudes (Gebregergis et al., 2019). Psychological factors play an important role in influencing adjustment during expatriation (Shin et al., 2003). Working abroad is typically a difficult

experience; adapting to heightened stress contributes to the development of mental health disorders among MNC expatriate workers (Doki et al., 2018; Valk, 2003). For example, Truman et al. (2011) reported that expatriate workers experienced a 50% higher risk for mental health problems, such as internalizing problems (stress, suicide, anxiety, loneliness, and depression), externalizing problems (attention deficit, hyperactivity, conduct and impulse control), and substance misuse disorders, compared to native workers. Expatriate workers may also experience challenges with cognition such as difficulties with understanding relationships, misunderstandings caused by cultural differences, frustration, insomnia, fear of isolation, the uncertainty of the future, concerns over health and security, and decreased wellbeing (Chen, 2019; Doki et al., 2018; Gai et al., 2011; Vijayakumar & Cunningham, 2019).

Ward and colleagues (2001) reported that successful cross-cultural adjustment is the culmination of enhanced emotional resilience, effective cognitive restructuring, and the display of appropriate behavioral and social skills. Thus, achieving a holistic approach that features learning and exhibiting new behaviors and cognitive changes in the host culture is crucial for a successful adjustment (Zhang, 2013). Therefore, it is necessary to clearly understand the psychological adjustment that expatriate workers experience within their new host country (Sussman, 2011). The current review investigates evidence of psychological adjustment within MNCs. Informed by this work, our first research question therefore is:

Research Question 1: How often is psychological adjustment assessed within the cross-cultural literature for MNC expatriates?

Cross-Cultural Training (CCT)

Evidence of CCT Effectiveness

CCT aims to improve an individual's intercultural learning skills by developing the cognitive, affective, and behavioral competencies necessary for successful interactions across

dissimilar cultures (Ko & Yang, 2011). Most CCT programs primarily provide advanced cultural information such as social and behavioral etiquette, advice on housing, shopping, medical care; courses on residential briefing (housing, school); and environmental briefing (climate, geography) via pre-departure training. The majority of current CCT programs rarely focus on helping MNC expatriate employees develop their coping strategies or consider the expatriate employees' challenging situations when residing in the host country (Persson & Segerud, 2017).

Evidence indicates that while cross-cultural training commonly has a positive effect on adjustment dimensions, CCT (especially pre-departure training) is often perceived as problematic, particularly because of the conflicting results regarding the tangible benefits of this training for the expatriate workers (Abdullah & Jin, 2015; Mnengisa, 2017). Most pre-departure CCT programs are aimed at generic cultural changes and have standard structures suitable for all expatriates, including standard goals such as establishing familiarity with the host country, language training, general etiquette; living standards; and basic cultural norms (Pruetipibultham, 2012). As a result, most existing CCT for MNC expatriate workers is unsuccessful in reducing expatriate failure costs, and the long-term expatriation benefit is intermittent.

There are several reasons for current CCT failure that exhibits minimal effectiveness. First, the short CCT programs; one day of training does not enable expatriates to fully understand the changes they will likely experience upon arrival. Second, expatriate management is currently adopted as a one-size-fits-all function; when a more tailored, situation-specific approach would be more effective. Third, the simplistic implementation of CCT is problematic and commonly includes: the lack of effective designs, a wide range of included models, different types of training, and the complexity of the subject (Joshua-Gojer, 2012). For training programs to be effective, they need to consider whom an intervention

works, why, how, and what circumstances it is crucial (Biggs & Brough, 2015). Continuous cultural adaption requires expatriates to develop new skills. Recent research is advocating CCT to be integrated with the individual's psychological needs while in their host country; that is the receipt of CCT training *post-arrival* (Chen & Chang, 2015). Informed by this research, our second research question, therefore, is:

Research Question 2. What types of cross-cultural training programs are available, and how effective are they in MNCs?

The challenges of developing effective CCT programs has attracted recent scholarly attention, highlighting the need for tailored programs to better meet MNC expatriates' adjustment needs within their host environment (Robert & Goemans, 2014; Tahir & Ertek, 2018). For these training programs to be effective, they require a firm grounding in both theory and empirical evidence (Brough & Hawkes, 2019). The extent to which the CCT adjustment programs reported in the literature adopt this evidence-based foundation is currently not clear.

Theoretical Perspectives. Theoretical development is important for all applied research fields; however, within the cross-cultural literature, clear theoretical explanations of expatriate adjustment are scarce (Davis et al., 2018). Existing reviews indicate CCT programs are rarely informative, primarily because the development and design of these programs are not firmly associated with theory (Lenartowicz et al., 2014). Recent observations noted that the inadequate use of theoretical explanations contributes to the difficulty in measuring improvements in expatriate adjustment (Takeuchi & Wang, 2019). The common theoretical models cited within the MNC's cross-cultural literature, including Black et al.'s theory (Cheema, 2012), social learning theory (O'Sullivan et al., 2002), and the theory of cultural shock (Wurtz, 2014), are predominately approached from a sociocultural aspect. In sum, the increasing dynamic of the adjustment paradigm now requires a more comprehensive

framework to provide a clear theoretical explanation of long-term expatriate adjustment. This review's final research question, therefore, is:

Research Question 3: Which theories are commonly utilized to best explain cross-cultural adjustment and training within the MNC cross-cultural literature?

Method

Design

This systematic review adopts the 15-step framework devised by Pickering and Byrne (2014) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Statement – PRISMA (Moher et al., 2009). The process included focusing on research questions, explicating search, selection protocols, and specifying inclusion and exclusion criteria. Inclusion criteria included: empirical, original research. Thus, facilitating the reproducible and replicable design and accommodates diverse combinations of heterogeneous variables (Maxwell et al., 2020). Articles within this review were searched and categorized through a structured search process using relevant keywords. The identified literature was examined against a series of inclusion standards that represented the current research topic (Pickering & Byrne, 2014). Only studies that informed psychological adjustment issues and/or evaluated the effectiveness and impact of pre-post cross cultural training were considered for this review. Included studies were those with MNCs expatriate workers (not student samples) as research participants. Meta-analyses, theoretical or conceptual papers were excluded as part of this review (Chen & Gardiner, 2019; Sit et al., 2017).

Search Strategies

Keyword searches across four electronic literature databases were conducted in June 2020: ProQuest (yielding 7,166 returned items, of which 6,591 were extracted); Scopus (yielding 2,772 returned items, of which 2,074 were extracted); PsycINFO (yielding 1,294 returned items, of which 103 were extracted); and Web of Science (yielding 179 returned

items, of which 27 were extracted). The search terms (Table 1) were consistent across all databases. In addition, the results were restricted to academic empirical articles published on or before June 30th, 2020. Table 2.1 summarizes the search terms and inclusion/exclusion criteria employed by the current review.

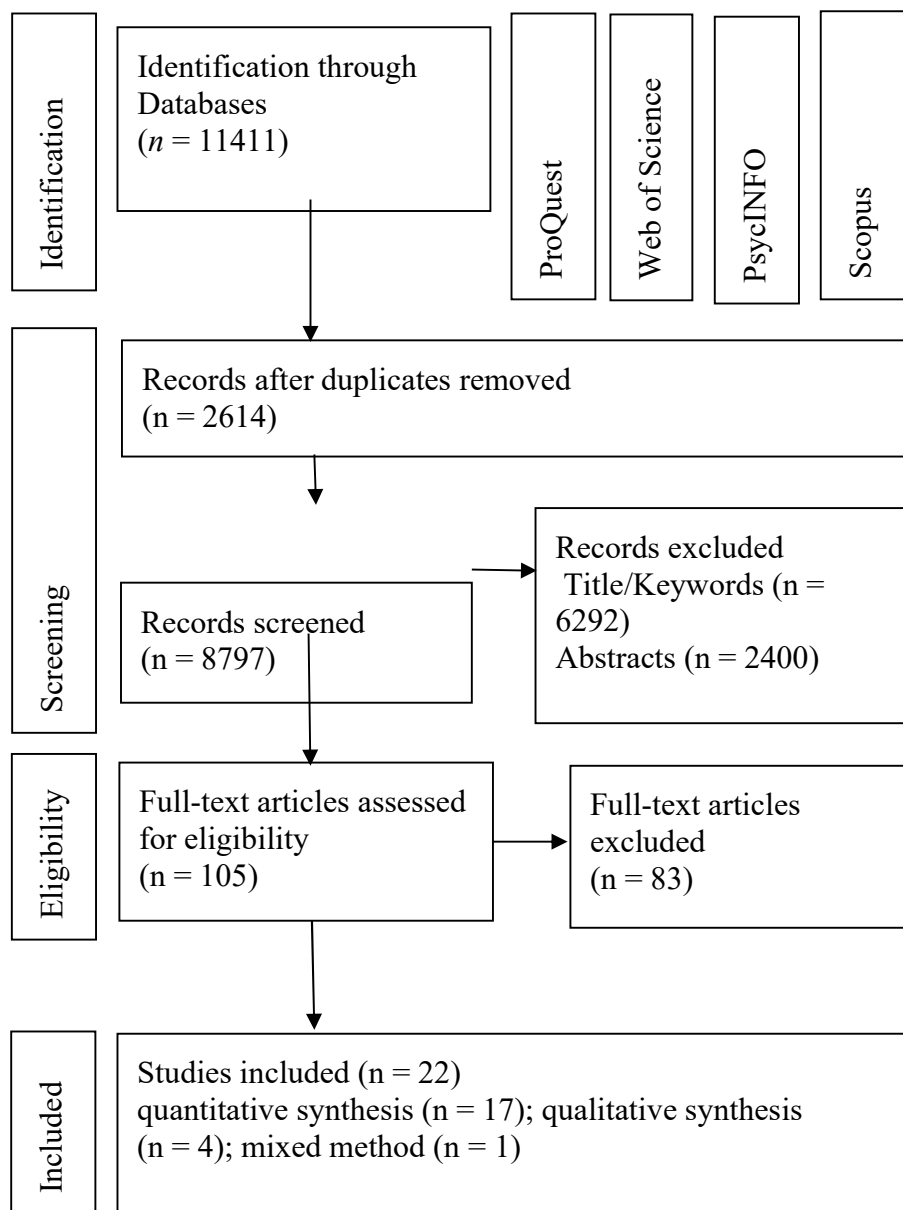
Table 2.1*Inclusion-Exclusion Criteria and Search terms*

Inclusion	Exclusion	Search terms
Psychological adjustment Cross-cultural adjustment Effectiveness and impact of cross-cultural training (pre- post)	Literature reviews, meta- analyses, theoretical or conceptual papers student population articles	expatriate employees* OR " working abroad" OR "IT employee*" OR "highly skilled IT worker*" OR “skilled technology employee*” OR “skilled visa*”AND acculturation* OR adjust* OR stress* OR well-being OR "wellbeing” AND intervention* OR “stress management*” OR “expatriate employees management*” OR “Cross-cultural training*” OR “intercultural training”
Working expatriate employees in technology industry/sectors English language empirical peer-reviewed articles Grey Literature	Non-technology sectors Non- English articles Studies published after June 2020	

Note. Wildcard ‘*’ was used to assure that all the possible combinations of the lexeme of research keywords were obtained. This was done keeping in mind the diverse nature of this research and to ensure that all research terms and concepts were well covered. “IT” / “technology” sector is referred as multinational corporations in the most review studies.

Data Extraction

The screening process for identifying the eligible articles is summarized using the modified PRISMA statement flow chart in Figure 2.1. First, articles from each database were merged in an EndNote reference library, and the stated extraction process was followed. A total of 11,411 articles were identified, and duplicates were removed ($n = 2,614$). Of the remaining 8,797 articles, a total of 6,292 (titles and keywords) and 2,400 (abstract reading) articles were removed because they did not meet the inclusion criteria. Second, a total of 105 articles was selected for a full review. Third, 54 articles were excluded because they did not meet the review criteria after the full-text screening, and 29 articles were further removed because they were only conceptual or theoretical. Finally, a total of 22 relevant articles met all the eligibility criteria for synthesis. The data were entered into an electronic database by the first author (SG). Methodological rigor was achieved where all 22 articles were evaluated by the third author (EG). The interrater reliability of 100% was established using Cohen's coefficient, indicating a strong agreement between the two coders.

Figure 2.1*Modified PRISMA Statement*

Note. Criteria for exclusion of articles were Literature reviews, meta-analyses, theoretical or conceptual papers, non-English articles and studies published after June 2020.

Data Analysis

Research Question 1. For the first research question, codes were developed based on the existing framework of the recognized categories of adjustment dimensions (e.g., Black & Mendenhall, 1991). The dimensions' classification drew upon the three-dimension model of CCA: general adjustment; and work and interactive adjustment (Black & Mendenhall, 1991). The analysis assessed evidence for psychological adjustment in this MNC expatriate literature.

Research Question 2. For the second research question, codes were developed to identify the different types of training and the training effectiveness described within the selected articles. Codes were also developed to identify the types of training offered before arrival (pre-departure training) or in the host country (post-arrival training). Additionally, evaluations of CCT programs' effectiveness were categorized via two codes: "validated via survey" and "validated via implementing". The "validated via survey" category represented articles that evaluated CCT effectiveness by using survey methods and/or interviews with expatriate trainees. The "validated via implementing" category included articles that administered a CCT program and studied the program's effectiveness. The impact of training methods as an influencing factor in determining the effectiveness of programs was also assessed.

Research Question 3. For the third question, codes were developed to identify the theories cited in the reviewed articles. Specifically, literature that included at least one theory that guided the research hypotheses and/or the training within a study was coded as "theory-based". Studies that alluded to theories within the introduction and/or discussion sections but that did not directly inform the hypotheses and/or the training, were coded as "partially theory-based". Articles that did not refer to any theory were coded as "non-theoretical" (Burgess et al., 2020).

Results

Descriptive

A total of 22 empirical studies published between 1994 and 2020 were included in the review. As shown in Figure 2.2, one to two articles on this topic have been published annually. Surprisingly, the data indicated that empirically-based studies in this field are relatively scarce, for example, no research was published in many years in this period (specifically in years 1995–2000, 2004, 2007, 2010, and 2013).

Figure 2.2

Frequency of Publications Between 1994 and 2020

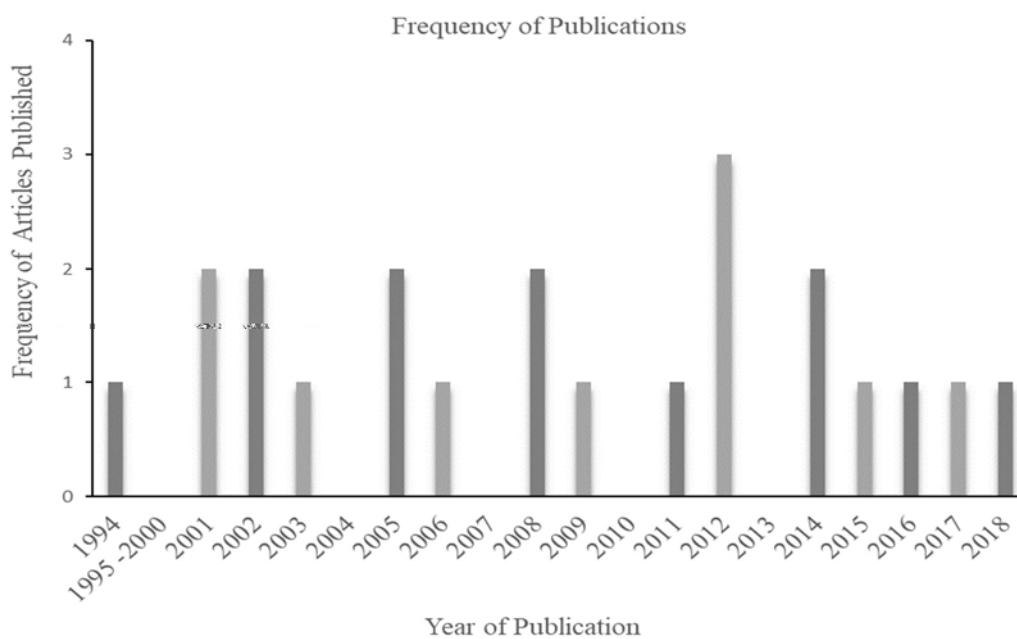


Table 2.2 summarizes the demographic details and the research methods of the included studies. Most studies adopted a quantitative research design ($n = 17$; 77%), four studies (18%) included a qualitative research design, and one study employed a mixed method design (4.5%). Nineteen articles were published in peer-reviewed journals, one article was a full conference paper, and two entries were postgraduate dissertations. The data indicated that expatriate movement is higher from developed to developing economies ($n = 11$; 50%; e.g., USA to India), followed by developed-to-developed economies ($n = 10$; 45%; e.g., UK to USA). A smaller proportion of studies represent expatriate employees moving from developing to developed economies ($n = 3$; 13%; e.g., India to Australia) and developing to developing economies ($n = 3$; 13%; e.g., India to Malaysia). Thus, the results clearly demonstrate a focus on the Western (developed) expatriate perspectives ($n = 16$; 72%) within this literature.

Participants described within the research studies were predominately male ($n = 3,267$; 75%; female, $n = 766$; 25%), and employed in the information technology telecommunications, banking/financial services, and engineering sectors. Over half ($n = 2,298$; 57%) of the respondents held undergraduate degrees and approximately 35% ($n = 1,411$) held a master's degree.

Table 2.2*Demographic Details of Included Studies*

<i>Articles #</i>	<i>Author/s</i>	<i>Year</i>	<i>Geographical Mapping of Expatriation</i>	<i>N</i>	<i>Study Design</i>	<i>Education</i>	<i>Total Average Expatriation Experience</i>
1	Caligiuri et al.	2001	A	73	Quantitative	N/A	10.6 month
2	Shah & Barker	2017	C	47	Qualitative	N/A	N/A
3	Reichard et al.	2014	A	219	Quantitative	82% undergraduate degree and 18% master's degree	N/A
4	Wang	2012	B, D	228	Quantitative	N/A	12 months
5	Cheema	2012	A, B	15	Quantitative	N/A	84 months
6	Puck et al.	2008	A, C	339	Mixed Method	N/A	22 months
7	Okpara & Kabongo	2011	B	226	Quantitative	more than 50% masters and PhD	24 months
8	Chien	2012	A	90	Quantitative	N/A	12 months
9	Selmer	2010	B	651	Quantitative	undergraduate 42.4% and higher 36.97%	60 months
10	Hutchings	2003	B	22	Qualitative	N/A	N/A
11	Fish	2005	A	244	Quantitative	N/A	N/A
12	Brewster & Pickard	1994	A	251	Quantitative	53% had university degree	N/A
13	Waxin & Panaccio	2005	B, D	224	Quantitative	N/A	20 months
14	Okpara	2016	B	120	Quantitative	66% undergraduate degree, 32%tmasers	N/A

15	Selmer	2002	B	343	Quantitative	N/A	48
16	Fish & Bhanugopan	2008	B	244	Quantitative	N/A	N/A
17	Chen & Shaffer	2018	A, C	191	Quantitative	undergraduate and higher	N/A
18	Li-Yueh Lee,	2006	D	197	Quantitative	97% were graduate or above	0-60 months
19	Abdullah & Jin	2015		4	Qualitative	25% undergraduate and 75% masters	156 months
20	Selmer	2001	B	95	Quantitative	N/A	48 months
21	Wurtz,	2014	A, B	206	Quantitative	N/A	N/A
22	O'Sullivan et al.	2002	A	4	Qualitative	N/A	N/A

Note. MNCs = broad representation of different sectors in the high-tech industry, comprising of Information, Insurance, Media,

Banking/Financial services industry. Expatriation of participants from Developed-to-Developed countries = A; Developed to Developing

countries = B; Developing to Developed = C and Developing to Developing = D. N/A indicates that the relevant information was not available.

Data Analyses

Research Question 1. The analysis revealed that 18 studies (81%) investigated general adjustment, 16 studies (72%) investigated work adjustment only, and interaction adjustment was reported in 15 studies (68%). Seven studies (31%) investigated psychological adjustment as a single dimension. Psychological adjustment refers to a person's subjective wellbeing and satisfaction within the new host country whereas the sociocultural adjustment refers to the individual's ability to fit into the new culture (Selmer, 2002). Psychological adjustment is best interpreted with the stress and coping framework, emphasizing the negative consequences of cross-cultural interactions that produce mental health issues such as anxiety, depression, loneliness, and stress (Ersoy, 2020; Okpara & Kabongo, 2011). Expatriation without psychological comfort within the new culture, makes it difficult for expatriates to develop appropriate skills to adjust (Wang & Tran, 2012). To summarize, although the literature suggests that adjustment to psychological challenges is central to successful adaptation, the specific psychological adjustment process undertaken by expatriate workers is rarely assessed. How expatriates' experience psychological adjustment while living and working in the host country remains an under-explored area.

Research Question 2. Table 2.3 presents evidence of how the reviewed studies evaluated and measured the effectiveness of CCT on the adjustment dimensions. The results revealed five studies (22%) which focused on pre-departure training aspects, with two of these studies (9%) validating their effectiveness via a training program, and the remaining three studies (13%) validating their effectiveness with self-report surveys. Nine studies (40%) evaluated the effectiveness of both pre-departure and post-arrival training with a survey, for the three dimensions of adjustment (i.e., general, work, and interaction adjustment). While five studies (22%) evaluated the effectiveness of pre and post CCT for psychological adjustment.

Of these five studies, one study (4.5%) validated the effectiveness via implementing the pre-departure training on the psychological dimension (Reichard & Louw-Potgieter, 2014) and reported that a generic one-size-fits-all strategy is not scalable. Instead Reichard and Louw-Potgieter (2014) suggested the use of positive psychological capital (PsyCap, referring to an individual's positive psychological state of development) within the cross-cultural context. Their results revealed statistically significant increases in cultural intelligence ($F(1, 70) = 11.83, p < .001$), and positive emotions ($F(1, 63) = 38.24, p < .001$), and a significant decrease in ethnocentrism ($F(1, 70) = 16.64, p < .001$), after PsyCap training. Four other studies (18%) also validated the pre-departure and post-arrival training effectiveness on the psychological dimension via the survey (Cheema, 2012; Fish, 2005; Fish & Bhanugopan, 2008; Selmer, 2002).

Correlation analyses and statistical tests of significance for each of the quantitative studies ($n = 17$; 77%) revealed mixed findings, with some failing to find any relationship and others finding positive as well as negative associations between CCT programs and adjustment dimensions (e.g., Abdullah & Jin, 2015; Puck et al., 2008). For instance, Puck et al. (2008), found that neither participating in CCT, nor the length of pre-departure training, were predictive of work and interaction adjustment. However, the authors reported a small positive effect between training comprehensiveness and general adjustment. One study found that post-arrival training had the most positive influence on expatriate workers' adjustment and performance, compared to pre-departure training (Wang & Tran, 2012). The study also demonstrated a strong positive correlation between the work adjustment dimension and post-arrival training and predicted that post-arrival training is highly beneficial for effective expatriate adjustment. Four studies (18%) used qualitative semi-structured interviews to measure training aspects and to assess the need for post-arrival CCT. Thus, understanding the

potential adjustment dimensions is central to establishing what specific type of CCT is most likely to help expatriates best adjust to their new cultural settings.

Table 2.3*Theoretical Approach, Dimensions of Adjustment with focus in CCT and Method of Validity of Training*

<i>Article #</i>	<i>Key Theories</i>	<i>Theory Categorization</i>	<i>Type of CCT</i>	<i>Dimensions of Adjustment</i>	<i>Validity of Training Method - Discussed/ Demonstrated</i>
1	Met- expectation theory (Vroom, 1964)	Theory based	PDT	Cross-Cultural Adjustment - Three Dimensions	Validated via Implementing
2	Integration of multiple theoretical perspectives	Theory based	PAT	Work and Interaction Adjustment	Validated Via Survey/Interview Method
3	Cross-cultural PsyCap and broaden-and-build theory on positive emotions (Fredrickson, 1998).	Theory based	PDT	Cross-Cultural Adjustment - General and Psychological Orientation	Validated via Implementing
4	Cognitive adjustment	Partial theory based	PDT and PAT	Expatriate employees Adjustment- Generic, interactive, and work and Job (Psychological Orientation)	Validated Via Survey Method
5	Social learning (Bandura, 1977), cultural shock (Oberg, 1954) adult learning, sequential model theory (Knowles, 1970)	Partial theory based	PDT and PAT	Emotional adjustment, Spousal adjustment, Work adjustment and Interactive Adjustment	Validated Via Survey Method
6	Not Indicated	N/A	PDT	Cross-Cultural Adjustment - Three Dimensions	Validated Via Survey Method

7	International adjustment (Black et al., 1991)	Theory based	CCT Method	Cross-Cultural Adjustment - Three Dimensions and Teaching Method (Psychological Orientation)	Validated Via Survey Method
8	Social learning theory (Bandura, 1977)	Theory based	CCT Method	Cross-Cultural Adjustment - Three Dimensions and Teaching Methods	Validated Via Survey Method
9	Not Indicated	N/A	PDT and PAT	Cross-Cultural Adjustment - Three Dimensions	N/A
10	Not Indicated	N/A	PDT and PAT	Cross-Cultural Adjustment - Three Dimensions	Validated Via Survey Method
11	International adjustment (Black et al., 1991)	Partial theory based	PDT and PAT	Psych-socio cultural Adjustment (Psychological Orientation)	N/A
12	International adjustment theory (Black et al., 1991)	Partial theory based	PDT	Cross-Cultural Adjustment - Three Dimensions	N/A
13	Not Indicated	N/A	CCT Method	Cross-Cultural Adjustment - Three Dimensions and Teaching Methods	N/A
14	Intercultural adjustment model (Parker & McEvoy, 1993)	Theory based	CCT Method	Cross-Cultural Adjustment - Three	Validated Via Survey/Interview Method

	International adjustment (Black et al., 1991)			Dimensions and Teaching Methods	
15	The notion of anticipatory adjustment (International adjustment theory) - Black et al., 1991.	Theory based	CCT	Psychological, Socio-cultural and Anticipatory Adjustment	Validated Via Survey Method
16	International adjustment theory (Black et al., 1991)	Partial theory based	PDT and PAT	Psychological, Socio-cultural Adjustment	Validated Via Survey Method
17	Stress model (Lazarus and Folkman, 1984). Model of spouse adjustment (Shaffer and Harrison, 2001)	Theory based	CCT	Cross-Cultural Adjustment - Three Dimensions	Validated Via Survey Method
18	Contingency theory	Partial theory based	CCT	Cross-Cultural Adjustment - Three Dimensions	Validated Via Survey Method
19	Not Indicated	N/A	PDT	Cross-Cultural Adjustment - Three Dimensions	Validated Via Survey Method

20	Not Indicated	N/A	PDT	Effectiveness of Cross-Cultural training	Validated Via Survey Method
21	Social learning theory (Bandura, 1977)	Theory based	PDT and PAT	Effectiveness of Cross-Cultural training	Validated Via Survey Method
22	Integration of multiple theoretical perspectives	Partial theory based	PDT and PAT	Effectiveness of Cross-Cultural training	Validated Via Survey Method

Note. Table depicts only studies that presented *theory based* that guided the *hypothesis* and/or *interventions/training* and *partial* theory did not inform the *hypotheses* and/or *interventions*. N/A = indicative of *theory based* CCT not applied in studies. Abbreviations – Pre-Departure Training (PDT); Post-Arrival Training (PAT); Cross-cultural training (CCT).

The ‘method of training’ was also identified as an important component for promoting successful adjustment. Tables 2.4 and 2.5 summarize the CCT contents, duration of the training, and training method within the reviewed studies. Two-thirds ($n = 17$; 77%) of the reviewed studies mentioned the use of didactic sessions in their CCT. The sessions mostly comprised of lecture-driven group discussions on pre-determined cultural issues such as language, etiquette, understanding housing procedures, shopping, medical care, and recreational facilities. However, there was minimal indication that any evidence-based individual or group activities, roleplays, cognitive restructuring, or rehearsals of behavioral strategies were included in these group discussions. The most common training content covered during CCT was information/briefing sessions (a one-way communication of hard facts) of culture awareness, culture shock and dominant values of the host country, cultural orientation, cultural awareness, business protocol, language training, job-related training, and management training (Caligiuri et al., 2001; Lee & Croker, 2006; Selmer, 2010). Six studies (27%) reported the duration/length of the training duration from one hour to one week, with the average duration of CCT being one day.

Four studies (18%) explicitly concentrated on training methods and put forward a comprehensive training program that included specific experimental approaches. The studies demonstrated that tailored CCT is more beneficial in comparison with generic traditional CCT (Okpara & Kabongo, 2011; Waxin & Panaccio, 2005). For instance, Okpara and Kabongo (2011), noted that expatriate managers experiencing difficulty with psychological adjustment due to life changes, stress, and depression, did not benefit from the general conventional CCT to help them cope within the host country. Lee and Croker (2006) highlighted that identifying a perceived need for training has a significant impact on the effectiveness of the training. Further, some studies reported that an experiential training approach had positive benefits for expatriates while adapting to the new culture (Chien, 2012;

Lee & Croker, 2006; Waxin & Panaccio, 2005). Chien (2012) asserted that participatory learning methods such as role play, simulation, and real-time experiences were significantly higher in quality as compared to symbolic learning methods such as factual training via verbal-and-written language and observation. Overall, the results demonstrated that the experiential training method is a significant predictor of successful adjustment.

Table 2.4

Summary of contents covered, and duration of training exhibited in the inclusion studies

<i>Article #</i>	<i>Content Covered</i>	<i>Type of Training</i>	<i>Duration</i>
1	General aspects of the target culture were also covered: housing, shopping, medical facilities, recreational/entertainment facilities, social customs/etiquette, culture shock and dominant values in the host country. 14 dimensions -business issues: business protocol, work ethic, management style, how to motivate personnel, how to give feedback and problem solving	Pre-departure Training	1 day
3	Cross-Cultural PsyCap Training -four phases to increase efficacy, hope, optimism, and resilience targeted exercises focused on creating self-awareness, reframing past events, building broad cross-cultural interaction skills, and identifying multiple strategies for success in cross-cultural interactions	Pre-departure Training (Classroom)	2 hours per session
4	General CCT, Language training	Pre-departure Training, Post Arrival Training	Average Pre-departure training one day = 49.1%. Average post-arrival training one week to one month = 46.5%.

5	CCT- (a) cultural shock and transition; (b) professional and working life; (c) cultural awareness and understanding; (d) language and communication; (e) general cultural training; (f) living in China	Pre-departure Training and Post departure training	N/A
12	Residential Briefing Courses, Environmental briefing and cultural orientation and Information Giving	Pre-departure	1 week intensive

Table 2.5*Summary of Cross-cultural Training Method Results*

<i>Article #</i>	<i>Training Methods</i>	<i>Results</i>
7	General conventional training, Specific conventional training, General Experimental training, and Specific Experimental training.	Revealed specific experimental CCT was the most significant predictor of expatriate adjustment ($R^2 = 0.53$; $p < 0.001$). Specific experimental training and psychological adjustment. ($r = 0.45$, $p < 0.05$).
8	Symbolic learning and Participatory learning, Experiential learning	Participatory learning has a better impact on adjustment dimensions, especially work adjustment. Symbolic learning (Mean = 2.77; SD = 0.62) Participatory learning (Mean = 2.84; SD = 0.59).
13	Pre - Post Conventional and Experimental (General and in Host) – Training Methods Conventional (General and in host), Experimental (General and in Host)	Specific experimental training methods are most effective on all three dimensions- Work adjustment ($F = 6.93$, $p < 0.01$), Interactive adjustment (F test = 15:68) and General adjustment ($F = 8:57$, $p < 0.01$) especially if delivered in host country.
18	Experiential learning, Perceived need for training	Perceived need for expatriate employees training had significant impact on the effectiveness of training ($R^2 = 0.548$, $p < 0.000$). Experiential training method has significant influence on effectiveness of training and improves the three adjustment dimensions ($R^2 = 0.654$, $p < 0.000$)

Note. All four studies established strong positive correlation between specific *experimental* training methods and expatriate employees' adjustment dimensions.

Research Question 3 Table 2.3 also summarizes the theoretical approaches represented in this dataset. Only nine studies (40%) were classified as being theory-based. Seven studies (31%) were partially theory-based, because the theory was only included in the introduction or discussion sections and did not directly inform the method or results sections. The most frequently cited theories by 10 of the reviewed articles (45%) were Black et al.'s (1996) U-shaped theory and social learning theory (Wurtz, 2014). Cross-cultural theories, including adult learning (Cheema, 2012), sequential model theory (Okpara & Kango, 2011), and intercultural adjustment (Shah & Barker, 2017) were also cited, but to a lesser extent by two of the studies (9%). Six studies (27%) were non-theoretical and did not mention any theoretical perspectives at all. Four studies (18%) described theory-based training methodologies. Two studies (9%) adopted a partial theory-based approach to developing pre-department and/or post-arrival training programs from a psychological adjustment perspective.

Discussion

The cross-cultural literature identifies values, beliefs, and behavioral perspectives as major concerns for expatriate employees (Kuo, 2012). However, most empirical studies to date examine the adjustment of an MNC's expatriate employee's adjustment from a socio-cultural perspective: the impact of geographical distance, length of the assignment, and the employee's age and family circumstances on adjustment (Polón, 2017). Only a small group of articles in this review investigated the significance of viewing psychological adjustment as a single dimension and reported that the specific aspects of psychological strain experienced by MNC expatriate workers experience remain unclear (Chen, 2019). Andersen (2019) revealed that psychological wellbeing is a term rarely employed within this field and reported that only one-third of studies measured psychological wellbeing and/or psychological strain.

Both Doki et al. (2018) and Haslberger et al. (2013) reported the importance of identifying psychological adjustment strategies for MNC expatriate employees, emphasizing the importance of assessing the specific dimensions of affect, behavioral, and cognitive psychological adjustment during expatriation. The current review clarifies the need to comprehend these experiences better to implement successful adjustment strategies within the host countries for expatriate workers. Overall, the extant literature demonstrates that psychological adjustment, together with socio-cultural adjustment, is a crucial aspect of cross-cultural research and is worthy of future attention; this is the first recommendation this review offers.

CCT Effectiveness

According to Haslberger et al. (2013), the actual adjustment in the adaptation process is a persistent phenomenon and starts upon arrival in the host country. For training to support the adjustment, it must provide competencies designed to understand and manage the conflicting situations arising from daily challenges (Joshua-Gojer, 2012). The research assessed by this review highlighted that the mere existence of CCT is not enough. Given the poor history of existing CCT (especially pre-departure training) effectiveness, many MNCs do not provide CCT for their employees, which is commonly considered unnecessary (Cheema, 2012; Shen, 2005). For CCT programs to be beneficial, they are required to assist employees to develop the necessary skills to adjust successfully, not only before the transfer (pre-departure training), but this assistance should be continuously integrated based on experiential interactions within a learning environment upon arrival (Abdullah & Jin, 2015; Joshua-Gojer, 2012).

Mendenhall and Stahl (2000) advocated three new areas for effective CCT programs: host country real-time training, global mindset training (skills for resolving specific problems

related to cross-cultural challenges), and internet-based training. Therefore, it is vital to develop specific, experimental cross-cultural training for expatriate workers in real-time while they adjust to their new host country. This type of training is anticipated to reduce the negative effects on the psychological strain that expatriates may experience within their new culture (Okpara & Kabongo, 2011). This approach will also best assist expatriate employees in adjusting their cognitive process (i.e., 'mental maps') and adapting their behavior during expatriation adjustment phases (Wang & Tran, 2012).

Only a handful of researchers have examined the effects of post-arrival training, clearly suggesting a more rigorous form of training strategies is required, specifically targeting expatriate workers' psychological issues while living in their new host country (Takeuchi & Wang, 2019). While post-arrival cross-cultural programs are relatively rare, they have exhibited significant positive effects on adjustment by directly facilitating the change process upon arrival. It is reported that post-arrival CCT programs also counteract the commonly experienced "surprise upon arrival" situations (Fish, 2005, p. 227).

Importantly, Kuo (2012) emphasized both the importance of the timing of the CCT and an employee's motivation to learn as key aspects for a successful adjustment in the host country. Reichard and Louw-Potgieter (2014) reported that when these two aspects coincide with expatriates' psychological strain experience in the host country, a training program is more likely to be effective. Thus, educating expatriate workers about psychological resources results in higher adjustment effectiveness (e.g., increase in cultural intelligence, positive emotions, and decrease in ethnocentrism). Hanzmann (2016) also claimed that CCT programs would be beneficial if the learning material is adjusted to the individual's actual psychological state and experience.

Other training components, including the specific training content and the teaching methods employed to deliver the program, also appear to influence these programs' effectiveness (Chien, 2012). In sum, the results of the current review highlight that post-arrival CCT assists in enhancing expatriate adjustment dimensions within the host country as compared to pre-departure training. Therefore, the second recommendation offered by this review, is for a greater focus on the development and administration of effective post-arrival CCT, in order to increase the long-term success of expatriates' adjustment (Al Mahrouqi, 2018).

Subsequently, this review also strongly reaffirms that the lack of empirical cross-cultural studies undermines progress in this field, potentially masking the true benefits of CCT on adjustment (Joshua-Gojer, 2012). The data produced by this review also demonstrate that the development and evaluation of training programs are rarely theoretically based (Cheema, 2012). Therefore, researchers must identify the theoretical perspectives that drive the training programs they develop, as this will comprehensively explain how CCT facilitates an expatriate's success on an overseas assignment. Therefore, our third and final recommendation based on this review's findings is that subsequent cross-cultural research includes accepted theoretical perspectives to inform the design, assessment, and evaluation of their CCT programs. In sum, this evidence echoes recent calls to increase the theoretical rigor and research precision of studies investigating the adjustment and training of expatriate workers (Davis et al., 2018; Sit et al., 2017).

Based on the relevant theoretical dimensions reviewed, this paper summarizes that the study of expatriate adjustment and training emanated from two main theoretical foundations, that is, culture learning (learn the sociocultural knowledge and cultural practices) and social identification models (inter-group perceptions and relations) (Zhou, 2008). However, for expatriates to be effective in their host country, they need to develop competences to help reduce

stress and facilitate coping (Sussman, 2011; Zhou, 2008). This review identified few studies with stress and coping theoretical frameworks (understanding the psychological transitions with outcome variables variants of psychological wellbeing), for example, Lazarus and Folkman's stress model and broaden-and-build theory on positive emotions (Chen & Shaffer, 2018; Reichard & Louw-Potgieter, 2014). Moreover, recent research indicates that CCT programs with both behavioral and affective components along with cognitive dimensions were found to be more effective than cognitive - didactic-alone programs (Sit et al., 2017). Thus, suggesting there is increasing need to orient extending research within the context of a comprehensive psychological theory of cross-cultural adjustment and training.

Research Limitations

Because of the focused nature of this review, there were several research limitations. Only articles from an MNC ICT sector perspective were included. the review only considered peer-reviewed empirical articles published in the English language, potentially limiting the scope of evidence evaluated. Due to problems with the search terms execution, the small number of included studies limits the generalizability of the findings to other occupations and other expatriate populations. In addition, the review focused only on quantitative outcomes represented in the articles, not emphasizing any qualitative data. There is scope for future research to focus on qualitative data to explain CCT programs effectiveness, especially when a majority of the programs are non-theory based.

Conclusion

This review adds to the expatriate employees' existing literature, especially within the host country perspectives. The MNC ICT sector, with its remarkable growth projections is amongst the top recruiter of the expatriate population globally. The fact that international

assignments are costly and that the main reason for expatriate failures is adjustment-related issues, this review is clearly relevant and timely. An expatriate employee's success is their willingness to embark on new experiences, learn, and successfully adjust to working and living in a foreign culture. Usually, expatriation is a stressful process, and global MNCs must be aware of the challenges and recognize the importance of expatriate employee wellbeing. It is necessary to better prepare expatriates to adapt to the changing cross-cultural environment by improving their social and psychological wellbeing. The extant literature demonstrates that due to a lack of empirical evidence, there is no clear picture of CCT concerning the adoption of successful research designs, content, effectiveness, and implementation perspectives (Joshua-Gojer, 2012). As a result, this field requires further advancement in the synthesis of the literature and applications for future research.

Research in the post-arrival, cross-cultural adjustment and training field is an emerging area of interest. This review is the first to present the interrelationships between cross-cultural psychological adjustment and available CCT for the MNC technology sector to assess expatriate employees' success within their host country. In summary, the results of this review inform broader debates concerning the inclusion of psychological adjustment components (He et al., 2018) and the appropriateness and limitations of current CCT (Hånberg & Österdahl, 2009). This review recognizes that it is time to clarify the limitations of pre-departure training as being a useful standard by which to ensure expatriate success. Instead, this review demonstrates that a conceptual shift within CCT research is urgently required, suggesting that continuous CCT programs in the host country are vital for expatriate employees' successful adjustment.

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General Conclusion

Overall, with the research problems identified in Chapter 1, this thesis began by conducting a systematic literature review. This review demonstrated that theoretical and methodological rigor in much of the literature in this field is significantly limited. To advance the knowledge in this field, the orientation of the empirical research (psychological adjustment and training program) was adopted. As a first step towards answering this limitation, the theoretical framework utilised in this thesis is discussed in the next chapter.

Chapter 3: Psychological Adjustment from a Stress Perspective

Introduction

Growing globalisation and technological advances have increased work-life demands for expatriate employees working in MNC sectors (Chen, 2019; Czaika & Haas, 2014; D’Andrea & Gray, 2013; Ko & Li-Yang, 2011). Indeed, entering a new country means becoming immersed in a new culture, which can be confusing and stressful for expatriate employees, leading to uncertainties and ambiguities. Culture is a subjective value (Chen et al., 2018) and the expression of culture is different in various countries. For instance, expatriates working abroad face new environments with different values from their home country (Hofstede et al., 2010; Tsegaye et al., 2019). The challenges faced during expatriation are quite different from those faced during domestic adjustment, in both scope and complexity. Previous literature has drawn attention to the fact that expatriate failure (mostly via a socio-cultural perspective) is deep rooted in adjustment difficulties (Harvey & Moeller, 2009; Sterle et al., 2018). However, a growing acknowledgement in the research literature is indicative of the challenging and stressful experience and that examining psychological dimensions may alleviate distress for expatriates and facilitate their transition in the host country (Doki et al., 2018; Sterle et al., 2018).

Cross-cultural Adjustment

Foundational research by Black (1988) first contended that CCA is a two-dimensional construct, rather than a unitary construct as was proposed by initial cross-cultural researchers including Lysgaard (1955) and Oberg (1960). Torbiörn (1982, p. 77) defined CCA as an “individual’s satisfaction with his situation in the host country”. Further, the international adjustment framework by Black et al. (1991) defines CCA as the perceived degree of comfort and ease people have with the new host culture. Research differentiates CCA into three facets:

(a) general, (b) work and (c) interaction with the host country (Joshua-Gojer, 2012). *General adjustment* relates to finding comfort with the general day-to-day environments in the new host nation (Kraimer & Wayne, 2004). *Work adjustment* refers to the comfort associated with role responsibilities, co-workers, supervision, and performance expectations. *Interaction adjustment* refers to the comfort associated with socialising and interacting with the host country (Puck et al., 2017). Numerous studies have shown how these multifaceted dimensions interact and contribute to the overall degree of adjustment.

In addition, according to Searle and Ward (1990), CCA can be categorised as either *sociocultural* or *psychological* (emotional/affective). *Sociocultural adjustment* refers to the competencies developed for effective functioning in the host country, including dressing, eating, social interaction patterns and language skills (Theenanonndh, 2005). Specifically, *sociocultural adjustment* refers to the ability to fit in or negotiate elements of the host culture, as measured by the amount of difficulty encountered in handling these daily circumstances. *Psychological adjustment* refers to the emotional and affective state of wellbeing and life satisfaction, including a range of changes related to beliefs, perceptions, values, ideologies, and attitudes. Subjective wellbeing or mood states such as depression, anxiety, stress, and exhaustion are outcomes dealt with through psychological adaptation (Theenanonndh, 2005). Though the two domains are interrelated, they are independent, particularly since their theoretical foundations are different. Sociocultural adjustment is best understood within *cultural learning theory* while psychological adjustment is best understood within *stress models* (discussed in Chapter 3).

Expatriate adjustment to an unfamiliar environment is complicated, has a substantial risk of failure, and remains a major concern for MNCs. Previous studies suggest that 20–40% of foreign assignments terminate mid-way through the planned assignment, resulting in either

premature return home or wellbeing/performance related issues among expatriate workers.

Although research has failed to establish a clear view about expatriate failure rates (Giorgi et al., 2016), most of the literature indicates tangible costs (travel, pre-departure training) of expatriate failure is about 16–40%. While the non-tangible costs, such as the loss of business opportunities, productivity losses (organisational outcomes), and employee wellbeing (individual outcomes) are significantly more and are largely unmeasured. For the expatriate themselves, failure is typically associated with high levels of stress, low self-esteem, depression and anxiety, discomfort facing peers and supervisors, and strained relationships with family (Doki et al., 2018). The current thesis aimed to explain adjustment and expatriation success among ICT expatriate employees from a stress-strain perspective and therefore focuses exclusively on psychological, rather than sociocultural adjustment.

Psychological Adjustment

Failure of managing challenges and changes within the host country, may compromise expatriates' adjustment, resulting in stress/strain and deteriorating psychological wellbeing (Sterle et al., 2018). The World Health Organization has recognised stress as a “health epidemic of the 21st century” (Fink, 2016, April 26, pp 1). Stress is defined as a “psychological state that develops when an individual faces a situation that taxes or exceeds internal or external resources available to deal with that situation” (Wilkinson & Singh, 2010, p. 169). Mental health is a state of psychological wellbeing in which an individual can use their cognitive and emotional abilities and their social function to handle the usual demands of daily life (Gao et al., 2014). Increased workloads and exploitation, reduced job opportunities, payments and rewards are all associated with stress and depression. Many expatriates also report difficulties accessing resources, such as psychological support (Sterle et al., 2018) compared to local employees, resulting in

interpersonal relationship problems and mental health issues (Rostamzadeh et al., 2012). Recent report claims that the World Economic Forum (2018) has indicated that mental health disorders are increasing and will cost the global economy an estimated \$16 trillion by 2030 if not addressed. It is also important to note that the expatriate population is typically reluctant to acknowledge these mental health issues (Shermis & Lumpp, 2020).

It is therefore, apparent that there is a growing acknowledgment in the literature to examine psychological adjustment, that is, the mental wellbeing problems faced by MNC expatriate workers and the difficulties they face in adjusting to the culture of their adopted host country (Doki et al., 2018; Kokt & Dreyer 2018; Gai et al., 2021; Singh & Mahmud, 2018). While some studies have assessed the issues arising due to the psychological strain experienced by expatriate employees (Shah & Barker, 2017; Vijayakumar & Cunningham, 2019), there have been numerous calls for further studies to identify the psychological factors that influence adaptation process and determine expatriates' success (Setti et al., 2020). While research has demonstrated associations between stressors and CCA (Chen, 2019; Doki et al., 2018), minimal emphasis has been placed on the indirect relationships between stressors, strain, and psychological adjustment among MNC expatriate (Chen, 2019; Rosenbusch et al., 2015).

The psychological adjustment (affective) dimension refers to feelings an expatriate has towards their experiences in the host country. The internal aspects (happy and excited, obliged, misses family and home, own norms of behavioural appropriateness) of this dimension refer to an expatriate's feelings. In contrast, the external aspects refer to the norms and rules of expressing emotion and affection in the host country (Grelecka, 2016). In an intercultural milieu, psychological adjustment relates to difficulties with a person's beliefs, values, and behavioural

qualities (Shin et al., 2003; Takeuchi et al., 2005). This places psychological adjustment as the most significant determinant of mental wellbeing, and thus, successful expatriate adjustment.

Contemporary researchers contend that categorising CCA into emotional/affective and behavioural domains is the best method for measuring expatriate success (Haslberger et al., 2013). For instance, Collie et al. (2015) describe CCA as individual psychological stress relief, reduced conflict and achievement of psychological comfort and ease. Abdullah et al. (2015) argue that CCA is a process of moving from one specific culture to another culture, where an individual needs to adjust to cultural differences and alter their accustomed lifestyle and cognitive principles. Similarly, Noman et al. (2020) described adjustment as an adaptation to the host country's needs by changing personal views and belief systems to meet the new environment's demands. Thereby, highlighting the need to assess ongoing psychological aspects, where an individual's cognitive and emotional satisfaction within the host country environment become crucial elements to success (Haselberger et al., 2013; Nolan & Morley, 2014).

Generic Demands/Stressors

Cultural transition is an ongoing life experience that brings stress and tension (demands). When expatriates encounter a stressful cross-cultural situation, they undergo a significant cultural change experience. Such experiences sometimes create threatening, demanding and perplexing situations for expatriates, which are often challenging to cope with. It is acknowledged that occupational stress can lead to greater loss in terms of economic costs, employee health and wellbeing, and performance (Raper et al., 2020). Consistent with stress research, scholars investigating expatriate adjustment have traditionally argued that the high levels of stress associated with various antecedents such as role conflict (Zhao, 2016), role ambiguity (Kawai & Mohr, 2015), emotional demands (Silbiger & Pines, 2014), and

interpersonal and work-family conflicts (Chen, 2019; Maier et al., 2015; Rosenbusch et al., 2015; Vijayakumar & Cunningham, 2019) are detrimental to expatriates' adjustment. For instance, one study demonstrated that an increasing number of ICT employees are exhausted due to their daily work, resulting in psychological reactions to stressors (Ayyagari et al., 2011).

Expatriates who find it difficult to meet the demands of acclimatizing to their unfamiliar environment feel frustrated, unable to fulfil their work ambitions or goals, and will experience a sense of failure due to a lack of adequate resources (Silbiger et al., 2017), thus resulting in burnout (Doki et al., 2018). When one fails to cope with these facets, strain emerges, leading to expatriate maladjustment (Rattrie et al., 2020). This leads expatriates to experience several consequences such as poor work engagement (Lauring & Selmer, 2015), lack of employee retention (Ren et al., 2014), adaptation difficulties (Chen, 2019), withdrawal cognitions and thoughts about quitting (Silbiger & Pines, 2014), job dissatisfaction and poor performance (Doki et al., 2018). It is worthy to note that previous studies have mostly found a positive association between job demands and psychological strain, where high strain situations reduced levels of psychological wellbeing among workers and exacerbated their stress level (Brough et al., 2013).

Work and Behavioural Outcomes

Past research has indicated that expatriate employees are three times more likely to express feelings of being trapped and depressed, and twice as many expatriates are anxious and nervous compared to domestic workers (Truman et al., 2011). Overseas assignments are more stressful than domestic assignments, and their high failure rates are well documented (Truman et al., 2011). In addition to the negative psychological responses, individuals may also experience behavioural issues (e.g., high intention to quit, disengagement; Maier et al., 2015). Evidence suggests that stressors/strains lead to withdrawal behaviours (e.g., tardiness, lost workdays,

lateness; Moore, 2000) and negatively impact outcomes such as work engagement and turnover intentions (Armstrong et al., 2015; Moquin et al., 2019; Naidoo, 2016). For instance, in a work environment where 24/7 connectivity among employees is associated with longer working hours, it becomes difficult for employees to achieve psychological detachment. As a result, they experience lower engagement and this impacts their psychological health and wellbeing (Brough et al., 2005). Employee engagement relates to being psychologically present when performing a role and represents emotional and intellectual commitment and a discretionary effort towards an organisation (Richman, 2006).

Schaufeli and Bakker (2003) described employee engagement as a positive, fulfilling, work-related state of mind. It is characterised by three interrelated dimensions, namely, vigour, dedication, and absorption. Vigour is characterised by high levels of energy and mental resilience while working. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, and challenge. Finally, absorption refers to being fully focused and happily engrossed in one's work, often finding it difficult to detach oneself from work (Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004). Work engagement has been a focus in the CCA literature (Selmer & Luring, 2016). Selmer and Luring (2016) studied 640 self-initiated expatriate academics residing in China and found that work engagement was positively related to adjustment and predicted affective outcomes. Similarly, Rafiq et al. (2019) assessed 458 Eastern expatriates from different countries and hypothesised that poor adjustment would negatively influence work engagement. Their study claimed that those who are culturally not adjusted in their work can be anticipated to put less efforts into their work engagement in the new location (Chen & Shaffer, 2017). Thereby, suggesting that

expatriates who are deeply involved in their work assignments focus on the achievement of work-associated objectives and are emotionally and cognitively connected to the work.

Ford et al. (2013) also examined the extent to which burnout and disengagement were related to turnover intentions among IT (Information Technology) professionals employed at universities. Using the JD-R model framework, their study revealed a positive relationship between exhaustion and turnover intentions. Two major factors that play significant roles in prompting IT/ICT employees to decide to resign are (a) a talent shortage and highly competitive recruitment tactics, resulting in worker job-hopping (Grasz, 2014), and (b) taking on heavy workloads and deadlines. Such factors commonly result in decreased satisfaction, reduced organisational commitment, and increased mental health issues, leading to enhanced turnover intentions (Guha & Chakrabarti, 2014).

Challenge Job Demands

Research (e.g., Van den Broeck et al., 2010) suggests that all job demands may not necessarily be energy depleting. Podsakoff et al. (2007) argued that demands can be classified as either ‘challenge demands’ or ‘hindrance demands. Crawford et al. (2010) and Van den Broeck et al. (2010) suggested that when employees are willing to invest themselves in responding to job demands, they are likely to appraise these as ‘challenge’ demands because they feel more confident that they can successfully achieve these demands and that their effort expenditure will more likely result in recognition, reward, and future gain. LePine et al. (2007) defined challenge demands as facilitating personal gains and development (Cavanaugh et al., 2000). Challenge demands also have a motivational quality that results in positive affective states such as work engagement (Crawford et al., 2010) and work-life balance (Brough et al., 2018). Evidence demonstrates that challenge-based job demands have the potential to increase work engagement

and resources, and can reduce burnout (O'Brien & Beehr, 2019; Webster & Adams, 2020). In contrast to challenge demands, hindrance demands activate negative emotions and a passive, emotion-focused coping style; consequently, they can lead to burnout and other adverse outcomes such as increased turnover intentions.

Research demonstrates that hindrance and challenge demands have different relationships with strain and engagement (Crawford et al., 2010). In their meta-analysis of 64 studies, Crawford et al. (2010) found that challenge demands were positively associated with engagement and, to a lesser degree, burnout, while hindrance demands were positively associated with burnout and negatively associated with engagement. Leka et al. (2003) found that when workers' knowledge and abilities are not matched and there is little opportunity to exercise any control over choice or receive support from others, workers experience stress. On the other hand, when the demands and pressure of work are matched to workers' knowledge and abilities, they are less likely to experience work stress. Furthermore, Gerich (2016) and Gerich and Weber (2020) highlighted that challenge demands are negatively associated with psychological strain and outcomes (Van Laethem et al., 2019).

In addition, research has also shown that challenge job demands, and work engagement are positively associated, particularly because knowledge of these cognitive job demands may increase employees' work motivation, leading to increased engagement (Brough et al., 2018; Giebe & Rigotti, 2020) and improved mental health (Meyer & Hünefeld, 2018). Yang and Li (2021) for example, studied 233 employees and found that challenge stressors also enhanced employees' positive affect and self-efficacy, leading to thriving at work.

Challenge Job Demands Specific to ICT Employees

Within the IT/ICT MNC context, globalisation, and technological employment have increased demands to the point where many expatriates working in IT/ICT face a never-ending work cycle. The 'night here, morning there' rapid mobility of projects, changing relationships at work, interactions with customers across multi-geographic locations, pressing targets to be met, painstaking work (Gopinathan & Raman, 2015), high workload, short deadlines, long working hours, high pressure from clients, and extensive projects and aggressive timelines (Messersmith, 2007) all lead to high levels of despair, pressure and stress (Calisir et al., 2011). Furthermore, the challenges of balancing work and family life are also heightened due to 24/7 culture in ICT environment, which enable long working hours that deprive employees of their family time (Cabanac & Hartley, 2013). Interesting, in an ICT context, previous research has shown that demands are positively linked to work-life conflict among expatriates working in a host country (Ahuja et al., 2007). One of the reasons is that working longer hours is considered a pathway to promotion and better pay; thus, resulting in the inability of employees to control their work environment and the blurring of boundaries between work and family life (Hoonakker et al., 2013; Maier et al., 2015; Moquin et al., 2019).

Globalisation and exacerbated job characteristics have made the workplace more complex for IT/ICT expatriates (Quratulain et al., 2018; Vijayakumar & Cunningham, 2019). Given the increasing complexity of work within the ICT sector, additional demands such as information processing (the extent to which a job is multifaceted and difficult to perform) and problem-solving (the extent to which a job requires innovative solutions or innovative ideas) are increasing. An increase of challenge job demands in particular directly contributes to a stressful work environment (Day et al., 2012; Meyer & Hünefeld, 2018). Within the ICT environment

expatriate employees need to constantly acquire new skills, ongoing knowledge skill development (Singh & Mahmud, 2018), adapt to rapid changes, and frequently encounter unfamiliar situations (Day et al., 2012; Meyer & Hünefeld, 2018; Zaho, 2016). In such challenging contexts, the boundaries between work and non-work domains are often permeable, thus making adjustment a crucial element of expatriate effectiveness (Reiche et al., 2021).

The generation of new knowledge and problem-solving are also integral parts of employees' work tasks in this sector. Therefore, maintenance of one's skills has become more difficult due to increasing skill variety, and employees are more frequently confronted with tasks that they have not learned or that they are not familiar with (Rainie & Anderson, 2017). Coping with new requirements and tasks is becoming increasingly relevant, not only for one's everyday working life but also for personal development; this necessitates the learning of new competencies and skills to maintain employability and for career growth within the sector. However, empirical studies on challenge are scarce and, to date, little is known about how these demands relate to the wellbeing of expatriate employees in a host country context.

As previously mentioned, the complex nature of work in contemporary knowledge-based economies requires the use of high-level cognitive skills that are likely to be both mentally demanding and mentally challenging. In this sense, demands such as information processing and problem-solving qualify as challenge demands. Thus, it is important for the MNC expatriate literature to consider and address the potential ambiguous effects of stress (challenge demands) on ICT expatriates' psychological adjustment factors in the context of living and working in the host country. Research in domestic contexts has demonstrated a distinction between hindrance stressors and challenge stressors, arguing that these have different effects on work-related outcomes, i.e., challenge demands is expected to have positive effects on work outcomes.

However, few scholars have addressed how challenge demands affect outcome variables in expatriate context (Rattrie et al., 2020). With these above contemporary views and previously discussed theoretical framework (discussed in Chapter 3) forming the foundation, this thesis aims to directly address these significant gaps in literature.

Job and Personal Resources

Research evidence indicates that high job demands, coupled with limited resources create a psychologically unhealthy work environment (Brough et al., 2018). Expatriate employees are expected to adjust to novel work roles in a new working environment while coping with a foreign culture and finding a balance with roles at home. In this situation, resources which include basic psychological needs satisfaction, mobility self-efficacy (refer to Chapter 6) and cross-cultural wellbeing programs (refer to Chapters 7 and 8) can be crucial factors aiding in reducing the strain experienced by expatriates. Drawing further on the JD-R theory, the current research intends to demonstrate how employees who receive more support (i.e., resources) in their unfamiliar environment are more likely to manage strain in a positive way and consequently, are more likely to experience successful expatriation.

Basic Psychological Needs Satisfaction

The basic psychological needs satisfaction (BPNS) concept is grounded in basic psychological needs' theory, which emerged from the broader self-determination theory (SDT) of human motivation proposed by Deci and Ryan (2000). Psychological needs are defined as “innate psychological nutriments that are essential for ongoing psychological growth, integrity and wellbeing” (Deci & Ryan, 2000, p. 229). The three basic psychological needs (autonomy, competence, and relatedness) are essential to ensuring an individual's optimal functioning and wellbeing (Van den Broeck et al., 2008). Autonomy relates to the feeling of directing and

determining one's own behaviour. Competence refers to controlling outcomes and feeling efficient. Relatedness refers to an individual's standing in relation to others, showing concern for others, experiencing acceptance by others, and being satisfied with the social world. According to Deci and Ryan (2000), psychological needs fulfilment contributes to feeling well (emotional wellbeing) and functioning well (psychological wellbeing).

The desire to fulfil basic psychological needs in a new culture is crucial, given the need to maintain wellbeing and life satisfaction during an expatriate's stay in a host country (Ramalu & Subramaniam, 2019). The satisfaction of these needs is expected to result in positive work-related outcomes, such as job satisfaction, work engagement, and low turnover intentions. In the context of employment, self-determination theory proposes that work environments that promote the satisfaction of the three basic psychological needs will increase employees' intrinsic motivation, which will lead to increased engagement and productivity (Liebenberg et al., 2022) leading to positive job outcomes (Van den Broeck et al., 2021). Researchers have found that psychological needs are strongly related to individuals' autonomous motivation and wellbeing across cultures (Chen & Chang, 2015). For example, Ramalu and Subramaniam (2019) examined a sample of 152 expatriate academics employed in 20 Malaysian public universities. They found that basic psychological need satisfaction was significantly positively related to work engagement, suggesting that perceived basic psychological need satisfaction may lead to greater work engagement

Diedericks and Rothmann (2013) assessed a sample of 205 employees in IT organisations in South Africa to examine the mediating effects of basic psychological need satisfaction on job satisfaction, work engagement, low turnover intent and subsequent flourishing of ICT professionals. The results demonstrated that the satisfaction of needs for autonomy, competence

and relatedness was positively related to wellbeing, resulting in lower turnover intentions. Within the ICT industry, since monetary satisfiers are easily achievable and matched, research suggests that there is a tendency to neglect basic psychological needs fulfilment (Harter et al., 2002).

Although the role of basic psychological need satisfaction has been researched in the domestic employment literature (Orkibi & Ronen, 2017), this concept is yet to be assessed in the expatriate environment (Ramalu & Subramaniam, 2019), particularly within the challenge/hindrane framework.

Mobility Self-efficacy

Self-efficacy is defined as the belief in one's ability to mobilise cognitive resources to obtain specific outcomes (van der Stelt, 2017). According to the concept of self-efficacy, individuals' perceptions about their ability to achieve certain tasks motivate them to achieve their objectives in both their workplace and personal life (Salanova et al., 2001). Self-efficacy, as a personal resource, is an important antecedent of work engagement (Tims et al., 2011; Timms & Brough, 2013). There is considerable research evidence on the direct (main) effect of self-efficacy on employees' performance and wellbeing (Bandura, 1999). The concept of self-efficacy has been widely applied in domestic employee research and might be similarly applicable in the context of expatriates (Bhatti et al., 2013).

Al Mahrouqi (2018) showed that personal resources such as self-efficacy was positively related to both work and interaction adjustments. Expatriates with high general self-efficacy were significantly better adjusted than those with low general self-efficacy. Expatriates with low self-efficacy tended to have increased absenteeism, more often searching for new jobs, had poor performance, and reported difficulties in their interpersonal relationships. Expatriates with low self-efficacy have also been found to have difficulty finding an efficient and effective coping

strategy to deal with situational demands (Galor, 2014). High self-efficacy among expatriates leads to better performance and high organisational commitment. Moreover, expatriates with higher self-efficacy tend to take the initiative to solve problems and manage critical situations during an international assignment, which may help them to adjust to the host country and improve their performance (Bhatti et al., 2013).

Self-efficacy is also reported to support employees' mental wellbeing and positive coping with stress and is considered a crucial component of the self that supports demanding and complex work tasks (Makara-Studzińska et al., 2019). Salanova et al. (2002) studied 405 employees working in the IT/ICT sector and showed that a specific level of self-efficacy moderated the relationship between job demands and burnout (exhaustion). However, there has been little empirical research on the moderating role played by self-efficacy in the stress process model among the expatriate population.

While moving to a new location can cause feelings of social isolation and loss of resources in some people, overcoming mobility challenges can also be a source of psychological satisfaction for others. According to the self-determination theory (SDT; Deci & Ryan, 1985), self-efficacy, or a sense of competence, is an inherent psychological need that leads self-efficacious people to believe they are capable of achieving success and producing expected results. They regulate their efforts and persistence in order to achieve their goals, becoming more persistent when confronted with difficulties and stressful situations as a result (Consiglio et al., 2015). Individuals with high levels of self-efficacy, for instance, may interpret demands and problems as challenges rather than hindrances, resulting in higher levels of engagement at work (Ventura et al., 2015) and other performance outcomes (Chan et al., 2020).

It is worth noting that expatriate self-efficacy research has primarily focused on general self-efficacy (Waibel et al., 2018). However, more recently, researchers have considered domain-specific self-efficacy (belief in one's capabilities for tasks in general across domains), with a meta-analysis demonstrating that domain-specific self-efficacy is more strongly related behavioural and performance outcomes (Seltzer, 2013). Wiernik and colleagues (2018) have found that high feelings of confidence in one's ability to handle mobility challenges were associated with a variety of expatriate wellbeing outcomes, including better location adjustment, job satisfaction, work–life balance, subjective health, and stress perceptions. Therefore, this thesis was particularly interested in understanding the role of mobility self-efficacy (expectations of personal proficiency when it comes to moving and adapting to unfamiliar places and cultures; Waibel et al., 2018). Accordingly, based on JD-R theory, the present study empirically investigated the moderating influences of *basic psychological needs satisfaction* and *mobility self-efficacy* on the relationship between demands and strain, and the resulting impacts on outcomes (strain, work engagement, and turnover intentions).

Conclusion

In conclusion, although research has examined expatriates' adjustment issues and outcomes from the perspective of Black et al.'s adjustment sociocultural model (Zhu et al., 2016), the psychological dimension is increasingly recognised as an important determinant and its role is yet to be satisfactorily documented (Doki et al., 2018; Sterle et al., 2018). Thus, the goal of this thesis is to examine and increase our understanding of the role of challenge demands and resources (job and personal) in explaining expatriate strain and their influence on outcome variables such as work engagement, and turnover intentions.

This chapter concludes by arguing the significance of considering psychological adjustment aspects as a separate dimension within the cross-cultural literature. From the previously discussed chapters which reflected on the gaps in the existing research, this thesis proposes a research design aimed at addressing this gap and to contribute empirically to the literature. In the next chapter, the methodological chapter, I highlight the empirical design of this thesis in detail. The development and implementation of the wellbeing program is also discussed (see Chapters 7 & 8 for more details).

Chapter 4: Theoretical Perspectives in Cross-cultural Studies

Historical Context

“Culture” according to ecocultural framework developed by Berry (2001) refers to human psychological diversity, and both cultural and psychological, is a set of collective and individual adaptations to context (Georgas et al, 2004). Chen et al., (2018) claims that for successful enculturation expatriate’s self-adjustment (i.e., reinforces the well-being) is an important aspect. The field of psychology has investigated the cross-cultural experiences of expatriates from three theoretical perspective applied to cultural transitions: *culture learning*, *social identity*, and *stress and coping models* (Hippler et al., 2015; Sussman, 2011). While the two main dimensions sociocultural and psychological—are broadly indistinguishable, their theoretical underpinnings are different. Gebregergis et al. (2019) reported that socio-cultural adjustment is core to cultural learning theories, while psychological adjustment is based within stress and coping models.

Cultural Learning and Social Identity Theories

The connections between multifaceted cross-cultural factors and expatriate success have been discussed in the literature. *Cultural learning* theories (socio-cultural adjustment) were developed from Lysgaard's (1955) work, which emphasised the time process between different adjustment phases. Lysgaard’s U-curve hypothesis described individuals as experiencing three stages of adaptation: adjustment (honeymoon period), crisis (culture shock) and regained (recovery) adjustment. However, the empirical evidence supporting this U-curve is mixed and highlights several limitations (Furnham & Bochner, 1986). Contemporary analysts claim that the U-curve concept is seldom replicable in real-life (Bhaskar-Shrinivas et al., 2005). Existing empirical tests of the U-curve have been limited to expatriate or student samples in international

settings; therefore, the applicability of the U-curve theory to expatriates in organisational settings is not clear.

Black and Mendenhall (1991) revisited the U-curve theory and proposed a social-cognitive perspective to clarify why individuals tend to experience a U-shaped process of adjustment. Social cognitive theory (SCT) suggests that a person's learning depends on their senses and resulting perceptions of other groups' behaviour, contributing to incentives and motivation (Bandura, 1977). Researchers have adopted the ideas from Bandura's (1977) work to understand the socialization procedure and have suggested that to overcome stress and acclimate to another culture, an individual must have confidence in their ability to do so; this is known as self-efficacy. Accordingly, SCT is an appropriate theory to use when examining the multifaceted cross-cultural learning process.

Cultural shock theory is another relevant theory in this field. Oberg (1960) used the term *culture shock* to portray how vulnerability results from not knowing how to function because of the removal of familiar cues when trying to adapt to a new and different environment. The available research typically emphasises four phases of cultural shock. The honeymoon phase is the first phase and is characterised by excitement to explore the new culture. The crisis phase is the second phase and occurs when individuals become more realistic about the new culture. For example, they start to encounter problems and increasingly experience negative thoughts, disappointments, frustrations, impatience, and tension. The third phase is the recovery phase; this is the turning point where individuals gain an understanding and adjust to the culture, they are living in. During this stage, expatriates learn to cope and develop the skills required to adapt to their new culture. Once the culture begins to make sense, acceptance and adaptability grow, and expatriates enter the adjustment phase.

The development of a positive attitude towards meeting the challenges associated with a new culture and resolving any issues is necessary to function in a new culture. Only then do expatriates enter a phase described as one of integration: individuals feel integrated, although still experience occasional instances of anxiety and strain. The culture shock phase becomes less salient when expatriates adjust cognitively, behaviourally, and affectively to their new cultural surroundings (Shaw, 1990). Adler (1975) examined the *transitional experience* and stated that “culture shock is associated with negative consequences; it can be an essential aspect of cultural learning, self-development and personal growth” (p. 14). He proposed a five-stage theory of culture shock—this theory comprises an educational and developmental process with positive and negative consequences.

Adler’s (1975) first stage (honeymoon stage) is where the newly arrived individual experiences the curiosity and excitement of a tourist, but where their basic identity is still rooted in the back-home setting. The second stage, disintegration, involves the disintegration of old familiar cues; the individual is overwhelmed by the new culture's requirements, and they typically experience self-blame and a sense of personal inadequacy for any difficulties encountered. The third stage, reintegration, involves new cues and an increased ability to function in the new culture. The emotions associated with this stage are typically anger and resentment toward the new culture as having caused difficulties and a sense of it being less adequate than the old familiar ways. In the fourth stage, reintegration, there is a continued process of reintegration toward gradual autonomy and an increased ability to understand both the negative and positive elements in the old and the new cultures. A balanced perspective emerges which helps the person to interpret both their previous home and the new host cultures. In the

final stage, reciprocal interdependence, the individual has ideally achieved biculturalism or has become fluently comfortable in both the old and the new cultures.

Researchers have considered several theories to better understand expatriate adjustment, CCT and expatriate success. Researchers have acknowledged that there is a considerable theoretical basis for exploring a holistic perspective of CCA. Theoretically, most cross-cultural studies have considered the sociocultural perspective; studies adopting a cognitive perspective (thoughts, attitudes, and perceptions), or a behavioural and affective perspective remain scarce. The expatriate management literature has raised pragmatic considerations related to the uncovering of factors around CCA, highlighting the potential roles of cognitive, affective, and behavioural skill deficits (Waxin & Panaccio, 2005), particularly further theoretical insight in relation to the role of psychological capital in expatriate success (Davis et al., 2018; Kraimer et al., 2016).

Stress-based Theoretical Models

Stress is a reaction that individuals may have when they experience demands that do not align with their knowledge and capacity; this misalignment challenges an individual's ability to adapt (Maulik, 2017). Given that living and working in a new culture can cause excessive stress, some researchers (Koteswari & Bhattacharya, 2007; Stahl & Caligiuri, 2005) have considered a stress-based model to examine expatriate adjustment (Ford et al., 2013; Rattrie et al., 2014). Maertz et al. (2009) contended that significant adjustment is difficult without a clear understanding of what expatriate's experience psychologically, with most research models being inadequate in their causal explanations. Cultural transition is a continuous life experience that transfers stress and tension to individuals in alignment with their resources and coping skills (Gebregergis et al., 2019; Ward et al., 2005).

According to Berry's (2006) model of assimilation stress, first-hand intercultural contact results in a substantial and exciting new cultural experience. Experiences are interpreted as threatening, demanding, challenging, and perplexing as a result of an individual's inability to cope with stressful events. An expatriate who finds it difficult to meet the demands of acclimatizing to the unfamiliar environment will feel frustrated, unable to fulfil his/her work ambitions or goals and will experience a sense of failure due to a lack of adequate resources (Silbiger et al., 2017); this can result in burnout (Doki et al., 2018). When one fails to deal with these challenges, strain emerges, thus leading to maladjustment issues among expatriate employees (Rattrie et al., 2020); disengagement (Lauring & Selmer, 2014), higher intention to leave (Ren et al., 2014; Silbiger & Pines, 2014), adaptation difficulties (Chen, 2019), thoughts about quitting, dissatisfaction, and poor performance (Doki et al., 2018).

Recent mobility publications address work engagement and burnout as side themes, indicating limited academic research (Rattrie et al., 2014; Suutari, 2013), indicating that "there is scarcely little serious academic research about this issue" (Selmer, 2013, p. 4). This is because previous research often lacked precise theoretical contributions or empirical evidence to support the advancement of the subject, especially in the international context (Gai et al., 2021; Rattrie et al., 2014). As a result, there is significant effort directed towards conceptualising and testing burnout frameworks in a range of different contexts (Rattrie et al., 2020). The JD-R theory (Demerouti et al., 2001) is a job design and wellbeing framework that is increasing in popularity. Most JD-R research has been conducted in single-nation contexts (Hu et al., 2017), while only a few studies provide cross-cultural insight relating to the JD-R theory (Brough et al., 2013; Stephan & Jones, 2017).

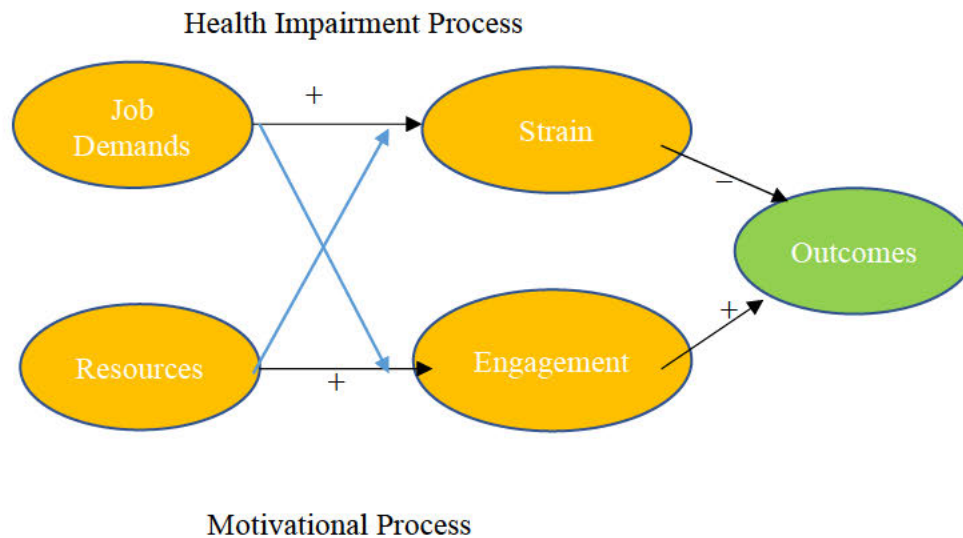
Job Demands-Resources Theoretical Framework

The JD-R theory is a predominant model in the occupational health and wellbeing literature that explains how factors impact employees' physical and psychological strain (Demerouti et al., 2001). Moreover, it is widely used as a theoretical explanation of the occupational stress process (Demerouti et al., 2001). At its core, the model assumes that job characteristics can be classified into job demands or job resources, which, through direct or interaction processes, impact individual wellbeing, including strain, engagement, and performance (Demerouti & Bakker, 2011). There are two main determinants of employee health and wellbeing within the JD-R model—job demands and job resources.

Job Demands. Job demands refers to "physical, social or organisational aspects of the job that require sustained physical or mental effort and are, therefore, associated with certain physiological and psychological costs (e.g., exhaustion)" (Demerouti et al., 2001, p. 501). Job demands are psychological and organisational characteristics of one's job that cause psychological stress and consume cognitive resources. Examples of job demands include work role demands (e.g., role conflict, overload, and ambiguity), workload (e.g., long work hours) and organisational constraints (e.g., incomplete job-related information, tight budgets, limited help from others, lack of task preparation, time unavailability, and poor working conditions; Jang, 2015). Individuals' psychological relationships with their jobs are related concepts between the negative experience of burnout and the positive experience of satisfaction (Maslach & Leiter, 2008; Timms et al., 2012). According to the JD–R (Job Demands Resources) (Job Demands Resources) model, when individuals experience excessive job demands physical and psychological health problems will occur. The theory further highlights two different processes, namely the *health-impairment* process which describes how chronic excessive job demands lead

to exhaustion and subsequent health problems, and the *motivational* process which describes when a job has sufficient resources for individual employees to complete their required tasks (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2014).

Job Resources. Within this theoretical framework, job resources are the primary determinants of employee engagement. Job resources are physical, psychological, organisational, or social job characteristics (e.g., basic psychological needs satisfaction) that potentially help employees to accomplish their goals, buffer job demands and facilitate personal growth (Demerouti et al., 2001). The JD-R model proposes that job resources have a motivational potential and may lead to several positive organisational outcomes, such as decreased turnover, and better work engagement (Brough et al., 2013; Nielsen et al., 2011). Job resources are beneficial for improving employee wellbeing, and performance outcomes (Demerouti et al., 2014). Cho and Jeon (2019) explored the cross-sectional relationships between psychological needs satisfaction and burnout and found psychological needs satisfaction was strongly and negatively related to the level of burnout. Thus, the JD-R model assumes that two key underlying additive effects are involved in the development of wellbeing and performance-related outcomes (Bakker & Demerouti, 2007; Hu et al., 2011). Figure 4.1 illustrates the basic JD-R Theoretical framework

Figure 4.1***JD-R Theoretical Framework******Refinements of the JD-R Model***

Challenge Job Demands. More recently, analysis of the JD–R framework has suggested that some types of job demand (e.g., challenge demands) play motivational roles in the stress-strain relationship (Bakker & Demerouti, 2017; Brough et al., 2018). Within the challenge-hindrance framework, Cavanaugh et al. (2000) found that *challenge job demands* (e.g., high workload and problem-solving) have the potential to promote proficiency and facilitate personal gains and development. The assumption is that individuals appraise stressful situations as threats when there is potential for harm or loss (*hindrance demands*), or as *challenges demands* when there is the potential for growth, mastery or gains (Webster & Adams, 2020). Research has demonstrated that challenge and hindrance job demand relate differentially to outcomes (Cavanaugh et al., 2000). For instance, challenge demands are associated with resource gains because they “evoke positive affect and attitudes” (LePine et al., 2007, p. 50). Through

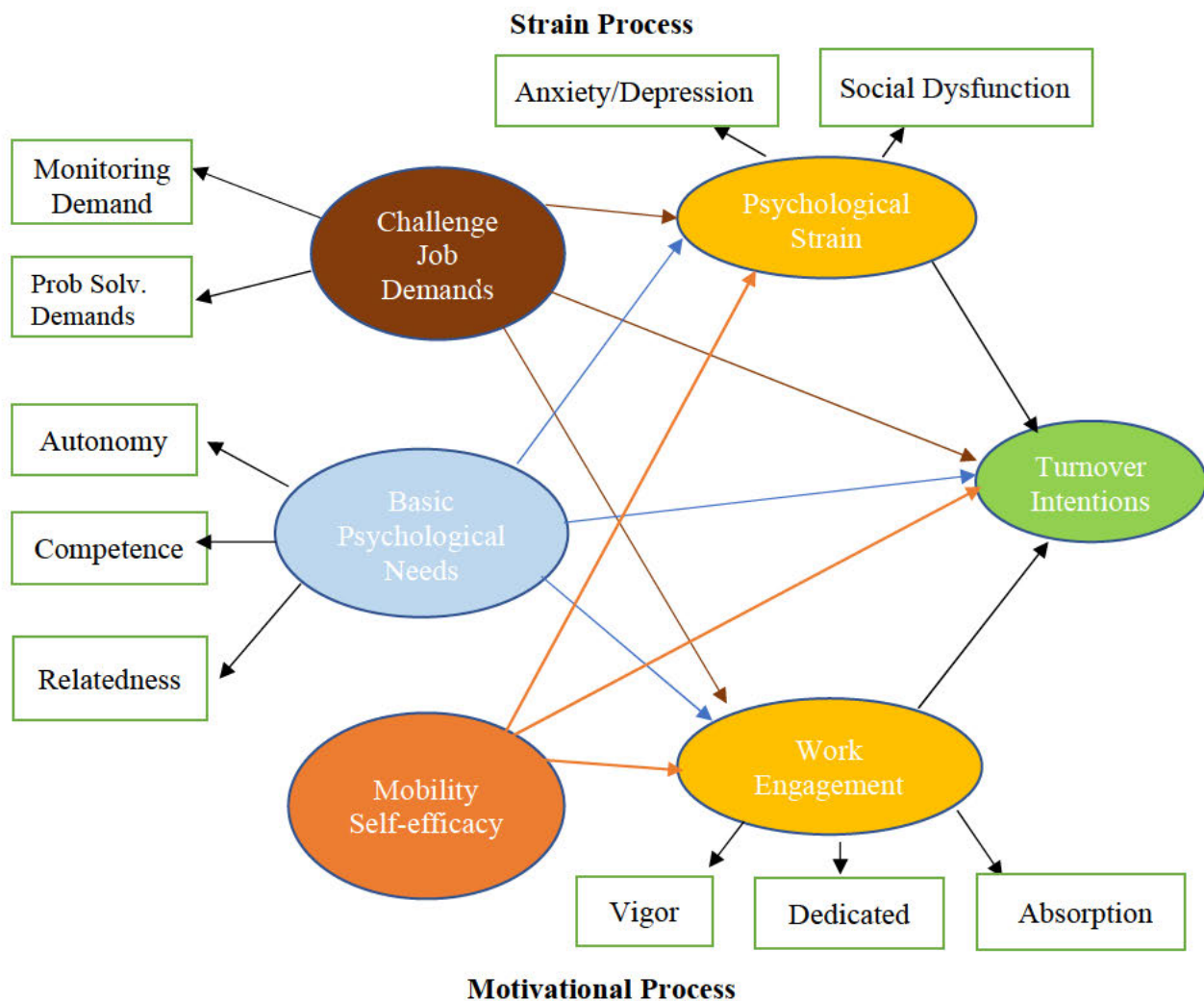
experience and training (proficiency), employees learn to work productively and achieve acceptable levels of performance, leading to a positive relationship between challenging work demands and positive outcomes such as work engagement (Brough et al., 2018; Tadic et al., 2015), and increased wellbeing (Meyer & Hnefeld, 2018), and improved work-life balance (see Brough et al., 2020 for an overview). Studies claim that challenge demands are negatively associated with psychological distress (Gerich, 2016) and turnover intentions (Van Laethem et al., 2019).

Personal Resources. Personal resources refer to an individual's "sense of their ability to control and impact upon their environment successfully" (Xanthopoulou, 2007, p. 123–124). Personal resources can start the motivational process, which leads to employees feeling optimistic about their future (Grover et al., 2018). These feelings are important for employees to be satisfied with their performance (Borst et al., 2017). Chan et al. (2017) revealed that employees who use their personal resources effectively are better able to cope with their job and family demands. Brough et al. (2018) also focused on identifying innate resources that best alleviate job demands.

There is a growing interest in how personal resources influence strain and work engagement as non-work characteristics in the JD-R model (Xanthopoulou et al., 2009). A more recent formulation of the JD-R model proposes that personal resources have similar motivational potential to job resources (Bakker et al., 2014). However, the role of employees' personal characteristics as an important determinant of burnout, work engagement, and consequently, work-related outcomes, has been neglected (Huang et al., 2016). Personal resources are positive self-evaluations that are linked to resilience (Hobfoll et al., 2003); one pertinent personal resource is self-efficacy (Schaufeli & Taris 2014). The acceptance of personal resources such as

self-efficacy (Kim & Hyun, 2017) and other self-regulatory mechanisms such as psychological needs satisfaction, within the JD-R model is gaining popularity (Giebe & Rigotti, 2020; Schaufeli & Taris, 2014).

Such self-mechanisms provide a stimulating experience that reinforces more needs-seeking behaviour, leading to a reduction in strain (Cho & Jeon, 2019), improved wellbeing (Trépanier et al., 2013), work engagement (Prokesova et al., 2019; Silman, 2014), and job performance and reduced intentions to leave (Kim & Hyun, 2017; Van den Broeck et al., 2016). These highly independent but simultaneously interconnected resources have been explored as important determinants of job burnout and have been found to be positively related to work engagement and work-related outcomes (Huang et al., 2015; Shoji et al., 2016). However, research into the exact role(s) of personal resources within the JD-R model, especially in association with challenge demands, is lacking (Gerich & Weber, 2020; Giebe & Rigotti, 2020). This thesis addresses this knowledge shortfall by adapting the JDR-model and incorporating challenge job demands and mobility self-efficacy as personal resources and their influence on criterion variables. Figure 4.2 depicts the JD-R model evaluated in this thesis.

Figure 4.2*JD-R Theoretical Framework Assessed in this Thesis*

Brough and Boase (2019) demonstrated that personal resources (e.g., cognitive restructuring) obtained from stress management training relieved the negative impact of stress. Their study indicated that when experiencing high levels of strain, the active use of cognitive restructuring is a preferred and effective option for managing occupational stress. The quantity of resources available to individuals is not important, but rather, the opportunity to actively use a single effective resource to manage stress experiences has a much greater impact. Mayerl et al.

(2016) suggested that interventions aimed at maintaining wellbeing in the context of work may act on two levels: (a) reducing work-related mental strain, and (b) strengthening resources.

Mayerl et al. (2016) found personal resources were negatively related to mental strain and health problems.

However, the role of employees' resources, which can be important determinants of adaptation to new environments, has been neglected in the literature. Most studies using the JD-R model have been restricted to job characteristics and established resources, such as job control and supervisor support (Brough & Boase, 2019). The refinements of the JD-R theory suggest that interventions that focus on improving behaviours and styles will modify actual or perceived psychosocial job characteristics, which, in turn, impacts psychological health outcomes (Biggs et al., 2013). In line with this evidence, the current study evaluated the impact of a personal resource (post-arrival wellbeing intervention) on key work outcome characteristics of psychological strain, work engagement and turnover intentions (refer to Chapter 8). This study (Chapter 8) draws on JD-R model and aimed to investigate the extent to which a novel wellbeing intervention program optimizes employee's key work attitudes (predictors and mediators) on turnover intention.

Interaction Effects

Besides these independent main effects described in the JD-R model, the job characteristics also impact one another via interaction effects (Bakker & Demerouti, 2018). The JD-R model describes two moderating effects. First, that job and personal resources *buffer* the potentially adverse effects of excessive job demands on employee health and wellbeing (buffering effects). Specifically, high demands and low resources are described as producing the highest psychological burnout and strain levels. Second, that highly demanding work situations

in combination with high levels of job and personal resources result in higher levels of work engagement (*boosting effect*; Bakker & Demerouti, 2017, 2018).

In a test of these interactions, Tadić et al. (2015) found a positive relationship between *cognitive job demands* and work engagement, with job resources boosting this relationship. Similarly, Geisler et al. (2019) investigated interaction effects between emotional demands and other types of job demands in relation to positive outcomes and revealed a small but significant interaction effect between emotional demands and work pressure on meaning of work, as well as between emotional demands and quantitative demands, and work pressure and role conflict, respectively, on quality of work. Though studies have investigated the interaction between job demands and job resources, only 30–48% of studies support interaction effects (Konze et al., 2017). Unfortunately, the magnitude of such moderating joint effects is small within the longitudinal JD-R literature (Brough et al., 2013; Hu et al., 2011). Zhao (2016) also found that expatriate employees who experienced low personal resources and high job demands reported high levels of burnout and disengagement with their work, providing evidence to support both the buffering and boosting effects of the JD-R model.

Conclusion

In conclusion, challenge demands at work are continually increasing and employees must learn and unlearn ever-changing tasks, especially in the ICT work environment. However, these work characteristics have received little attention as indicators of employee wellbeing (Brough et al., 2018; Meyer & Hünefeld, 2018), with few studies evaluating expatriates' psychological factors in a stress-strain model (Rattrie et al., 2020). Therefore, the aim of the present body of work is to contribute to the JD-R theory (Bakker & Demerouti, 2014, 2017) and the contemporary cross-cultural literature by testing the full JD-R model. Specifically, this thesis

aimed to examine 1) the role of challenge (cognitive) job demands and how it may differentially affect other work/non-work characteristics and outcomes, 2) the moderating role of job and personal resources (psychological factors) and how they may affect outcomes, and 3) the role of a wellbeing program (as a personal resource) in reducing strain and improving wellbeing while living and working in the host country. This thesis tests the first and second aims in Chapter 6, and Chapter 8 tests the third aim.

In the previous chapters, it is clearly demonstrated that expatriate employees' key issues are strain related and the significance of considering a stress-strain framework. The next session of this thesis expands and provides an overview of cross-cultural adjustment from a strain perspective. That is, the psychological adjustment and the significance of understanding the relevance of studying psychological adaptations for expatriate employees

Chapter 5: Research Design and Methodology

An Overview of the Research Design

Globalization has engendered cultural diversity in MNCs, requiring workplaces to acknowledge the diverse challenges faced by employees as a result of potential cross-cultural interactions (Doki et al., 2018; Kuo, 2012). These increasing internationalized cross-cultural interactions pose difficulties in researching and understanding a wide variety of psychological challenges experienced by expatriates working in a host country; the expatriate experience involves complex dynamics and layers. Despite researchers' burgeoning interest in cross-cultural research in recent times, methodological issues (Beins, 2019) are hampering the expansion and development of such research. There is a gap in the literature questioning and evaluating the validity of the research designs employed in cross-cultural research (Halder et al., 2017). For instance, to what extent are psychological constructs used? What is the research designed adopted? Are the samples a specific well-defined group? How is the data collected? Research with strong methodologies would provide vital information around the appropriate research methods and psychological measures to use in cross-cultural research (Aguinis et al., 2018; Matsumoto & Van de Vijver, 2010). Thereby suggesting that the selection of appropriate cross-cultural research methods is a key factor in explaining expatriation success (Halder et al., 2017).

Research Design

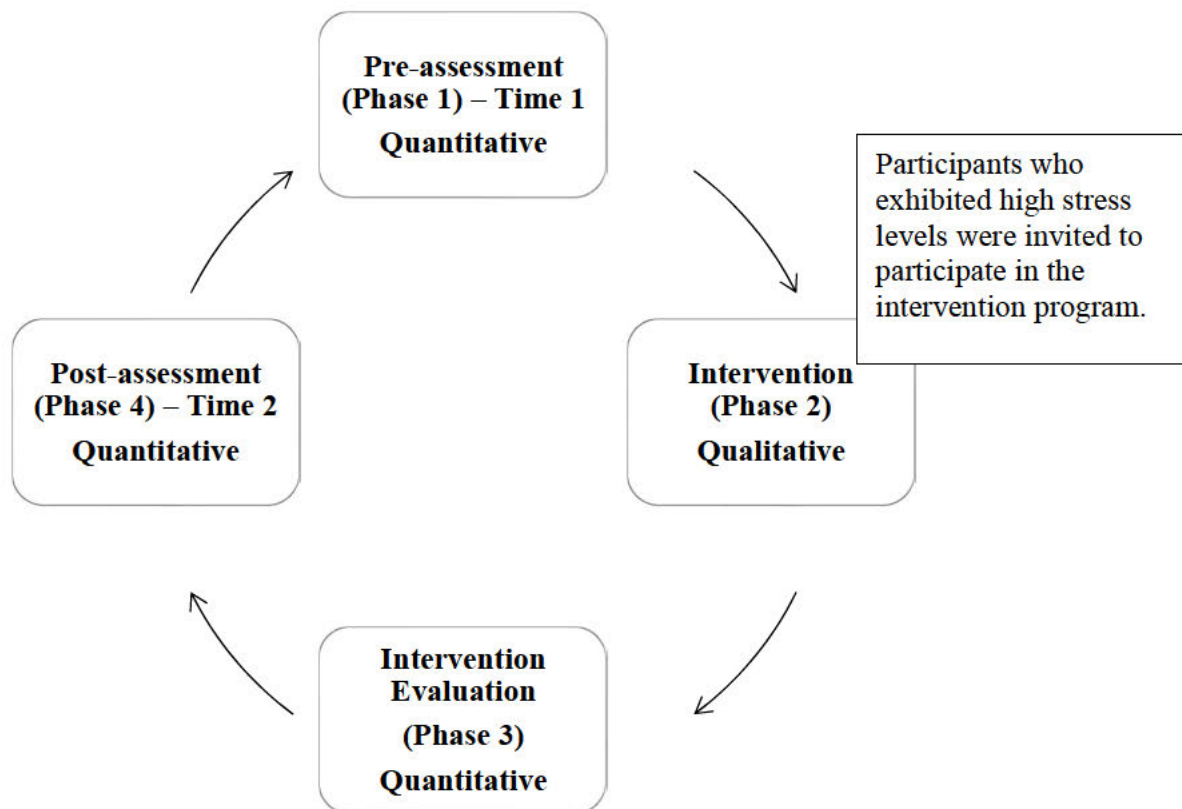
Given the low methodological transparency within cross-cultural research, this thesis emphasised on some of the best practices recommended by Aguinis et al. (2018). Firstly, Halsberger and Brewster (2009) stated that most expatriate research has been quantitative; more qualitative studies could provide insight into the subtle elements of expatriate adjustment. While there is an active and ongoing debate about the best approach - quantitative or qualitative

research methods, this thesis contends that, in addition to quantitative data, detailed qualitative investigations into what and how expatriates experience stress that impacts psychological adjustment will aid in gaining deeper insights and understanding of complex phenomena (Mumtaz & Nadeem, 2022). The qualitative method component was chosen to gain deeper insight into individual expatriates' actual experiences and evaluate the wellbeing program. Such "narrative data have become indispensable in understanding past experiences and events; the subjects' detailed and vivid descriptions cannot be accessed as efficiently with other research methods and techniques" (Scarneci-Domnisoru, 2013, p. 21).

According to Creswell (2014), mixed-methods research involves the collection, analysis, and integration of quantitative and qualitative data. Although, this thesis emphasised on selecting appropriate psychometric measures (enhancing measurement transparency; Aguinis et al., 2018) to understand the association between stressor-strain outcomes. It does acknowledge that self-reported questionnaires commonly suffer from bias such as social desirability responses and recall bias (Podsakoff et al., 2012). Therefore, the premise is that the combination of qualitative and quantitative data provides a better understanding of a research problem or issue and makes an informed insight into expatriate employees' experiences in their host country (Panda & Gupta, 2013).

Procedure

This empirical research comprised four phases: (a) pre-assessment phase, (b) intervention phase (qualitative), (c) evaluation phase, and (d) post-assessment phase; these phases were integrated into a web-based study. In particular, the quantitative approach adopted in this research involved the measurement of several psychological factors (Matsumoto & Van de Vijver, 2010). Figure 5.1 represents the research study design.

Figure 5.1*Research Study Design***Ethics Compliance**

This study was performed in accordance with the ethical guidelines of Griffith University. A Pebble pad website was developed to provide detailed information on the research to potential study participants. Further, the quantitative data collection was performed in Redcap, a secure Griffith University web application for building and managing online surveys and databases; the research website and Redcap were integrated to deliver a comprehensive approach to participants, and information such as eligibility and the participant information sheet was always accessible. Redcap is specifically developed to support data collection for research

studies and operations. In the current research, the Redcap data collection was built sequentially, ensuring that participants completed all required steps in sequence. The initial website provided in-depth information about the research study and the link to the online survey was embedded on the website for participants to access the internet-based survey. After obtaining ethical approval (Appendix 1 - GU (Griffith University) 227/2020), participant recruitment was completed in June-July 2020 amidst the COVID-19 pandemic. Additional ethics approvals were required to support the various challenges the study faced during the data collection phase.

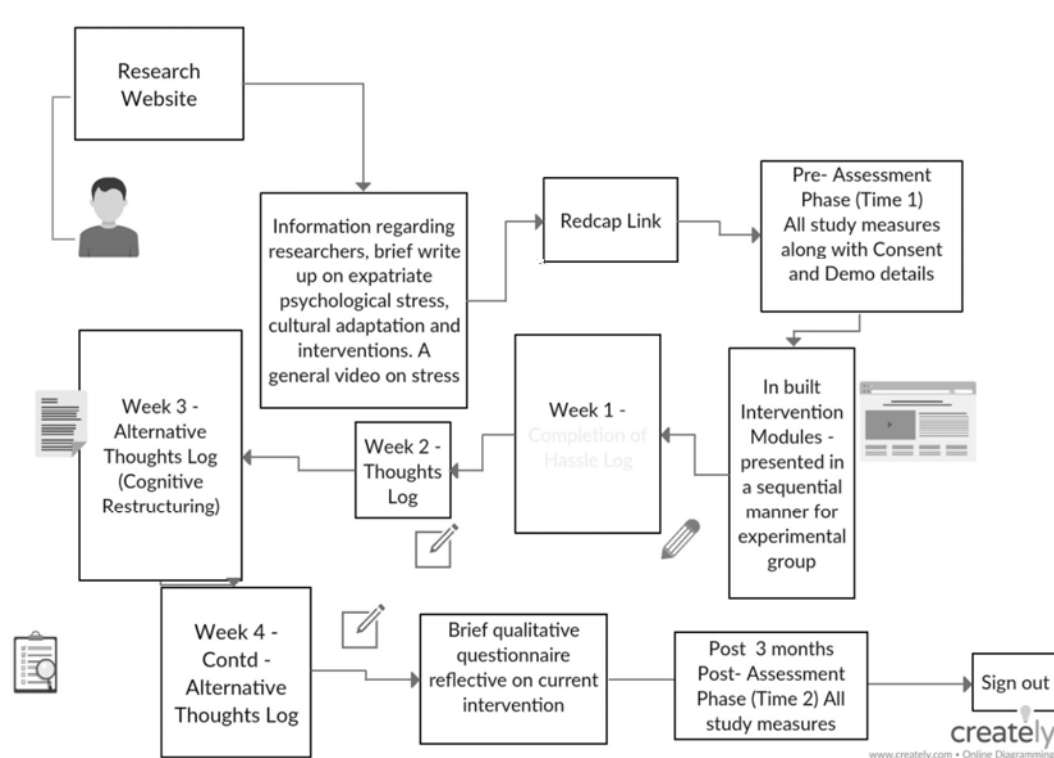
Redcap and Study Website

The study survey link was accessible to all eligible study participants. Upon clicking on the survey link, participants were prompted to complete the online consent form. They were then able to enter a prize draw (optional) in recognition of the time taken to participate. Once these items were completed, participants gained access to the pre-assessment survey link, consisting of a series of psychometric tests (Time 1). The online survey was also designed to give the participants the flexibility to return to the survey at their convenience. Participants re-accessed their survey using a unique survey code that was built into the system. The online survey was designed to provide sequential guidance through the various phases of the study, ensuring cohesive completion of the survey.

Furthermore, an in-built algorithm categorized the survey participants into an intervention group (participants who exhibited high stress scores) and a control group (participants who exhibited low stress scores), respectively. A system-generated link automatically directed the intervention group participants to a relevant information page regarding the voluntary eight-week intervention program (described below). Following completion of the intervention phase, the participants evaluated the intervention program. This

evaluation was based on Nielsen and Randall's (2012) guided process tool checklist. It involved a short quantitative survey to understand the effectiveness of the intervention training program.

Two months after completion of the intervention program, the researcher reached out to the participant pool with the survey link to the short evaluation survey (Time 2). Please note that the researchers maintained open communication with all research participants during all phases of this empirical study. The approximate time for completion of all stages of the research was, on average, estimated to be 10 weeks per participant. Figure 5.2 presents an outline of the integrated internet-based research design.

Figure 5.2*Integrated Internet-based Research Study Design Outline*

Note: This Study design was created using Creately.com

The intervention in this study was a sustainable web-based intervention to improve expatriate employees' psychological wellbeing and reduce their stress while adjusting to their new host country; this intervention was designed specifically for expatriate employees working in the ICT sector. A research website was developed to provide prospective participants with information about the study. The website was developed in adherence to the Griffith Ethics and Data Security guidelines.

Participant Recruitment

Following receipt of all required approvals, the researcher contacted and emailed research flyers to a number of ICT associations such as the Professional Association for the Australian ICT sector, the Information Technology Professional Association, social media, and other networks to recruit participants (see Appendix 2). A Honeybee recruitment consultancy based in Canada also contacted the researcher and offered to recruit research participants by hosting this study on their website. Further, due to the significant impact of the COVID-19 pandemic, difficulties were encountered in the recruitment of eligible participants and, thus, the decision was made to also recruit participants from Prolific (Palan & Schitter, 2017; Peer et al., 2017).

Prolific is a recently established platform for online subject recruitment and explicitly caters to researchers. It has good recruitment standards and reasonable costs. The platform has been used for successful recruitment of research participants across different research areas, including psychology (Callan et al., 2016). Participants from Prolific were recruited by adopting the following steps, adhering to the dedicated research tool's rules.

1. A pre-screening test was administered to ensure participants recruited for the study fitted the eligibility criteria. In total, 825 ICT employees' participants completed the pre-screening survey (see Appendix 3) and of these, only 270 employees met the eligibility criteria for the study. Table 5.1 provides details of the eligibility criteria used for this thesis.

Table 5.1*Study Eligibility Criteria*

Criteria	Details
1	Living and working/studying overseas for a minimum of six months to a maximum of five years
2	On a skilled visa category – work visa, study visa, employer visa, etc.,
3	Working in the ICT sector.
4	Aged between 24-45 years

2. All participants were informed of the various stages of the research study and what was expected of them as participants. Then, the Redcap survey invitation link was sent to all participants to complete the pre-assessment phase of the study.
3. Upon completion of the pre-assessment phase (Time 1), the researcher sent a Redcap survey link invitation to eligible participants (high stress levels) for the eight-week intervention program (details provided below).
4. In the 7th week, the researcher invited the intervention participants to evaluate the wellbeing program.
5. Interested participants were sent the quantitative Redcap survey invitation link to evaluate the wellbeing program.
6. Post-assessment/follow-up survey link invitations were sent to all participants.

Intervention group follow-up survey was administered after two months of completion of the intervention. The control group's follow-up was conducted after a gap of 6-8 months.

7. All participants received frequent updates regarding the progress of the research and what to expect next.

Research Phases

Pre-assessment Phase 1 (Quantitative)

During this phase, participants were first asked to complete a consent form. If they wanted to enter the prize draw in recognition of their participation in the study, they were then directed to complete the prize draw entry details; otherwise, they were directed to the selected psychometric tests (Time 1):

1. The pre-assessment phase took approximately 20 minutes to complete.
2. Based on these results, participants who exhibited high scores on the General Health Questionnaire scale were included in the intervention program (experimental group).
3. The control group comprised of participants who exhibited low scores on the GHQ.

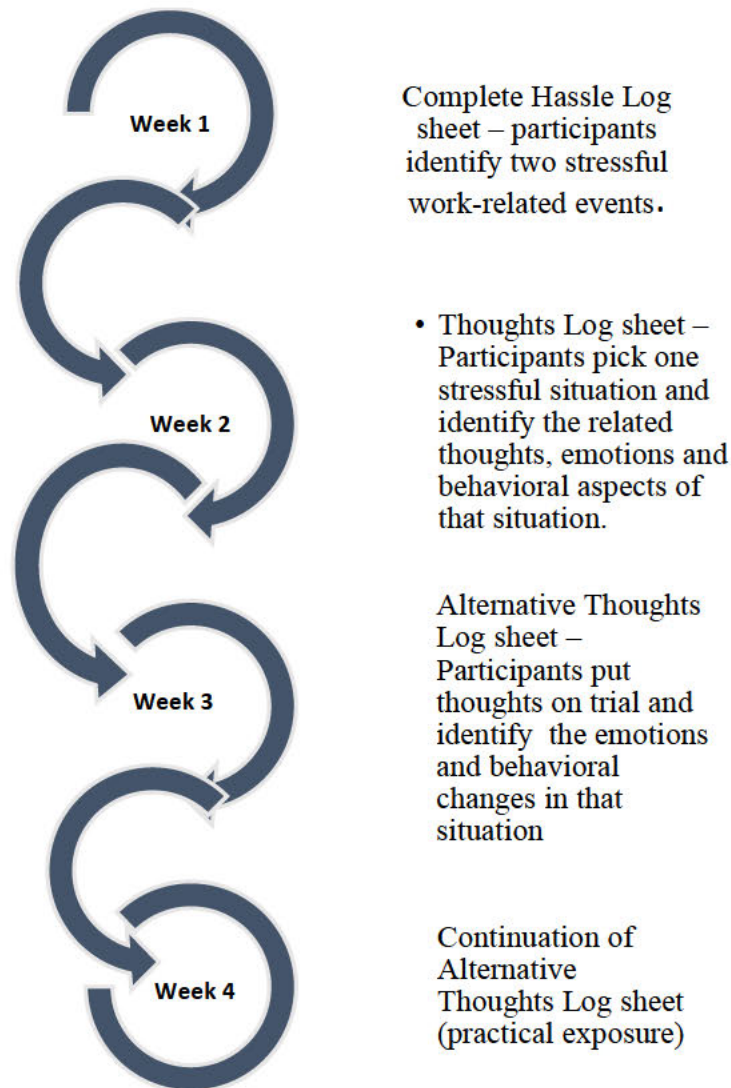
The participants who formed the control group (and did not receive the eight-week intervention) were informed of the next steps and were provided with dates that they would hear from the researcher for the Time 2 survey.

Intervention Phase 2 (Qualitative Approach)

The cross-cultural literature acknowledges that many of the major concerns of expatriate employees are related to their stressful environment and their values, beliefs, thoughts, and behavioural aspects (Biswas & Makela, 2021) a wellbeing program was designed and implemented. The three most common classification of occupational stress interventions was developed by Murphy (1988). Primary prevention aims to keep stressors at bay and to provide employees with the resources they need to do their jobs. Secondary prevention focuses on an individual's perception of job stressors as a threat or challenge, as well as the individual's ability

to cope with the stressors (presuming sufficient internal resources, such as higher self-efficacy or social support from a supervisor). When coping is unsuccessful (lack of resources, strains may form). Tertiary prevention tries to alleviate strains by addressing both the consequence and/or the source of the strain (e.g., reducing workload; Glazer & Liu, 2017). Given the rising complexity of workplace stressors for ICT expatriate employees, a wellbeing program (secondary prevention) implemented in the current research was informed by existing cognitive-behavioural wellbeing programs. In this research, the intervention was implemented via an internet-based platform. The study adopted a participatory wellbeing module with a web-based individual context-specific approach. The aim was to provide a real-time platform to help expatriates deal with stressors more appropriately and improve their psychological wellbeing (Gibson et al., 2015). This intervention was informed by standard cognitive-behavioural therapy (CBT) based wellbeing programs, particularly focused on stressful thoughts, behaviours, and emotions. The intervention design was consistent with a Kaizen-inspired improvement intervention tool (Nielsen & Noblet, 2018) and was conducted over eight weeks.

In week one, participants identified one stressful work-related event that they had recently experienced and entered it into their hassle log sheet. In week two, participants were asked to focus on the cognitive-emotional aspects of that stressful event and to complete a thoughts log worksheet. In week three, participants were encouraged to generate an alternative thought process (i.e., cognitive restructuring - challenging the reflexive reactions) for the stressful situation. In week four, the participants were encouraged to approach the situation with alternative thoughts, where each participant tried to apply their restructured thoughts into their real work setting. Finally, weeks one to four were repeated for a second stressful event identified by each participant. Figure 5.3 presents the intervention design. See Appendix 4 for more details.

Figure 5.3*The Intervention Design*

Note: This cycle was repeated for a second stressful event identified by participants (total of eight weeks).

Evaluation Process Phase 3 (Quantitative Approach)

The third phase of this research aimed to help researchers and practitioners to improve the development, implementation and evaluation of intervention initiatives designed to reduce exposure to stress and promote wellbeing and healthy organisations. In particular, understanding

of the how, when, and why interventions are designed to succeed or fail is crucial (Biggs & Brough, 2015; Brough & Hawkes, 2019). The approach here was to articulate the essential elements of the program developed and bridge the gap between theory, methods, and practice.

To effectively conduct a process evaluation, this research adopted the Nielsen and Randall (2012) three-phase framework to evaluate the current intervention program from an individual level. Accordingly, the evaluation addressed three aspects: 1) intervention context, 2) intervention design and implementation, and 3) participants' mental models. The latter has seldom been measured directly in wellbeing programs in cross-cultural research. In this research, participants were asked to complete a brief five-minute structured survey to evaluate the wellbeing program. Example questions included: "How useful was the information provided about the project and the various sessions before the beginning of the research study?" "How useful were the intervention activities in targeting the problems related to stress and psychological wellbeing?" "How valuable was the implementation strategy (online intervention program)?" and "Did you feel equally engaged during the intervention program?"

In intervention research, a balance needs to be reached between practical relevance and methodological rigour; recent developments in intervention process evaluation (IPE) across multidisciplinary research point towards the use of mixed methods as the way forward (Biron & Karanika-Murray, 2013). There are ample examples of mixed-methods studies in occupational health psychology and stress prevention. Thus, bridging the gap between research and practice in IPE within cross-cultural studies is a much-needed radical shift in the approach to establish tailored evidence-based interventions instead of off-the-shelf packages. One last point that has rarely been addressed in cross-cultural research is the sustainability of interventions; this study evaluated the intervention sustainability.

Post-Assessment Phase 4 (Quantitative Phase)

Upon completing the pre and/or intervention phases, the experimental group participants were sent a link to complete the post-assessment survey (Time 2). The invitation link was sent two months following completion of the intervention program. The control group participants were also sent the survey invitation link at the same time.

Demographic Details of the Participants

Two methods were employed for research sample recruitment. Personal and professional networks, including LinkedIn, a national computer society, and the Information Technology Professionals Association were employed to recruit participants for this study. Second, Prolific, an online recruitment platform was employed to recruit a (paid) research sample. A total of 270 employees within the ICT sector who were living in a host country on a skilled work visa were invited to complete the electronic self-report survey at Time 1. A total of 202 completed electronic surveys were returned at Time 1 (response rate of 75%; July to October 2020). The questionnaires were administered a second time to all Time 1 respondents with an approximate eight-month time lag (February 2021). A total of 139 completed surveys were returned at Time 2 (response rate of 69%); these surveys were matched with the Time 1 responses via a unique respondent identifier. Unmatched cases were deleted. Data screening was conducted using IBM SPSS (Statistical Package for Social Sciences) 27.0 software. The missing completely at random (MCAR) test ($\chi^2 = 1219.59$; $df = 1260$; $p = .78$) indicated that estimation of missing data via expectation-maximization imputation was appropriate.

Of the 202 participants who completed Time 1, 60 participants scored highly on the psychological strain measure at Time 1 and were invited to participate in the eight-week web-based wellbeing program from November to December 2020. Of the 60 respondents, only 31

respondents completed the eight-week intervention program, resulting in a 52% attrition rate.

The remaining 22 participants who were not interested in participating in the intervention program and the 86 participants with low stress at Time 1 formed the control group ($n = 108$).

Of the matched ($N = 139$) survey respondents, the majority were male ($n = 94$; 67.6%), with an average age of 32 years and an age range from 23 to 45 years ($SD = 5.56$ years). Half of the research participants were Caucasian ($n = 66$; 47.5%); the second most common ethnic group was Asian/Pacific Islanders ($n = 52$; 37.4%). Approximately 21% ($n = 29$) of respondents held USA work visas, 11% ($n = 15$) held United Kingdom (UK) work visas, and 10% ($n = 14$) had skilled work visas from Australia and/or New Zealand. Most respondents were employed as computer analysts, developers, and software engineers ($n = 71$, 51%) or were team leads or managers ($n = 29$; 21%). Respondents reported their highest education qualification as either a bachelor's degree ($n = 68$; 49%) or a master's degree ($n = 57$; 41%).

Measures

This study made use of several previously published scales to measure the variables of interest (Appendix 5).

Work Characteristics

Cognitive Job Demands

The nine-item job demands measure was used to assess two types of demands (Wall et al., 1995). An example item is: "Do you have to keep track of more than one task at once?" The measure includes two subscales: monitoring demands (four items) and problem-solving demands (five items). The items are measured on a five-point Likert scale (1 = *not at all* to 5 = *a great deal*). Previous findings have demonstrated high reliability for demand ($\alpha = .87$; Biggs et al., 2014).

Basic Psychological Needs Satisfaction

The nine-item basic psychological needs satisfaction scale (Gillet et al., 2008) was modified to include the word “work” to assess needs satisfaction within the work domain. Items for example, included: autonomy (e.g., “I can express my opinion about the planning of the tasks to be done”), competence (e.g., “Often, I feel that I am very efficient at work”), and relatedness (e.g., “I have a lot of sympathy for the persons with whom I interact at work”). All responses were recorded on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with high scores indicating high basic psychological needs satisfaction. Gillet et al. (2012) provided robust evidence for the factorial structure, construct validity, and internal consistency of this scale in the work context. (published $\alpha = 0.85$; Gillet et al., 2008).

Mobility Self-efficacy

Mobility self-efficacy beliefs, a four-item scale, was used to measure self-efficacy for moving and adapting to new places and cultures (Waibel et al., 2018). Example items include: “I can easily find my way in new surroundings” and “I feel confident in dealing with people of other cultures.” Participants responded on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*), with high scores indicating high self-efficacy ((published $\alpha = 0.82$; Waibel et al., 2018).

Work and Behavioural Outcomes

Psychological Strain

The 12-item General Health Questionnaire (GHQ; Goldberg, 1972) was used to assess psychological strain. Respondents reported the extent to which they were currently experiencing 12 symptoms of strain. Example items include: “Lost much sleep over worry?” (0 = *not at all*, 3 = *much more than usual*). Responses were recorded on a four-point response scale with high

scores indicating high strain. Previous research has demonstrated a two-factor model of psychological strain, consisting of anxiety/depression and social dysfunction (Hystad & Johnsen, 2020). Previous research has published α = ranges between 0.64 to 0.79.

Work Engagement

Engagement was measured with the nine-item Utrecht Work Engagement Scale grouped into three subscales with three items each: Vigor (VI), dedication (DE), and absorption (AB) (Schaufeli et al., 2006). An example item is: “When I get up in the morning, I feel like going to work.” Participants responded on a seven-point scale (0 = *never* and 7 = *every day*), with high scores indicating high levels of engagement.

Turnover Intentions

Brough and Frame’s (2004) three-item measure was included as a criterion variable. A sample item is: “How often do you actively look for jobs outside your organisation?” Responses were recorded on a frequency scale (1 = *never* to 5 = *great deal*), with high scores indicating high turnover intentions.

Process Evaluation Survey

The study evaluation survey questions were designed based on Nielsen and Randall’s (2012) guided process tool checklist. Example questions include: “How valuable were the activities tailored to you and your experiences?” and “How useful and engaging would you say the overall content was?” Responses were recorded on a four-point Likert scale ranging from *ineffective* to *very effective* (Appendix 6).

Control Variables

Various control variables were measured to ensure a more accurate estimation of the relationships in the conceptual model. Age was chosen as a control variable since research

demonstrates that many expatriates working on skilled worker visas in the ICT sector are aged between 24 and 45 years. “Duration of stay” in the host country was another control variable used in this study. Previous research suggests that expatriates who have been living in a host country for six months to five years’ experience the most adjustment challenges (Setti, 2020).

Demographic Variables

Key demographic information was also collected from the participants. Information such as gender, education, ethnicity, marital status, visa type, ICT experience, and working hours.

Appendix 7

Consent Form

The consent form was integrated into the Redcap system. Participants were first asked to complete the online consent form to gain access to the various phases of the study. Please note that all the supporting materials used is provided in Appendix 8.

Conclusion

This chapter describes the methodological research design adopted throughout this thesis. From the research planning phase, the thesis took a systematic approach in identifying the research problem and developed a research design to address these gaps. As a results of this synthesised approach, this thesis considered both qualitative and quantitative research methods, and consideration was given to include psychological measures. Furthermore, a careful consideration on recruiting the specific sample, and the design of the training program adds significant value to the research design aspects. The next chapter is the first empirical study of this thesis aimed at testing the full Job- Demand Resource model and emphasising the need to examine psychological adjustment in an expatriate context.

Chapter 6: Psychological Strain, Work Engagement, and Turnover Intentions Among Highly Skilled Expatriate Employees — the JD-R Model Perspective

Introductory Comments

While most previous research has focused on the negative consequences of work stress (see Doki et al., 2018), there is growing interest in the currently ambiguous roles of work stressors (Brough et al., 2018). Evidence suggests that the major challenges faced by highly skilled expatriates after arrival in their host country are related to occupational stress (Mohyuddin et al., 2021). A general increase in job demands has been noted in the previous literature (Brough et al., 2021). However, whether increased challenge job demands, such as information processing demands (the extent to which a job is multifaceted and challenging to perform) and problem-solving demands (the extent to which a job requires innovative solutions or new ideas) directly contribute to a challenging work environment (Meyer & Hünefeld, 2018) has not been empirically assessed among ICT expatriate employees. The challenging ICT work environment requires employees to constantly acquire new skills, adapt to rapid changes, and frequently encounter unfamiliar situations (Meyer & Hünefeld, 2018; Zaho, 2016). Furthermore, the dynamic conditions under which the expatriate transition influences the individual's work and non-work lives make the resources that the individual derives from their immediate environment critical when they adapt to their host country.

Hence, it is imperative to understand how job characteristics influence levels of strain, work engagement and turnover for this group of workers while they are living and working in a host country. The current research employed the JD-R model to understand how key job characteristics (cognitive job demands), psychological needs satisfaction (job resources) and self-efficacy (personal resources) impact psychological strain, turnover intentions, and work

engagement among highly skilled expatriate employees. Therefore, the following study presented as a journal article (currently under review) tests the full JD-R model in an expatriate work setting.

Statement of Contribution to Co-Authored Paper Under Review

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**Psychological Strain, Work Engagement, and Turnover Intentions Among Highly Skilled
Expatriate Employees — the JD-R Model Perspective**

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Abstract

With the increasing trends in globalisation of companies around the world, the demand for skilled employees, called expatriates, to relocate to foreign land for work has tremendously upsurged. Expatriate employees are crucial to the economic prosperity enjoyed by many multinational corporations (MNCs) in the ICT sector. Evidence indicates that the major challenge faced by highly skilled expatriate workers is occupational stress, resulting in psychological issues after arrival in the host country. Unfortunately, the negative psychological impact experienced by expatriate employees, particularly after arriving in the host country, is under researched. What is less clear however, is whether these detrimental outcomes are a result of the characteristics of the job, the expatriate employees' personal characteristics or a combination of these factors. The current research employs the Job Demands-Resources (JD-R) model to understand how key job characteristics (job demands), basic psychological needs satisfaction (job resources), and mobility self-efficacy (personal resource) impact psychological strain, work engagement, and turnover intentions amongst expatriate employees while in the host country. This study extends scholarly discussions within a longitudinal research design using examples of 139 expatriate employees employed in the ICT sector. Using structure equation modelling (SEM), the results revealed the ambivalent role of job demands within the models. Job demands were positively and negatively associated with psychological strain and turnover intentions cross-sectionally and over time, respectively. However, minimal evidence was produced for the motivational hypothesis of the JD-R model longitudinally. The implications for practices to address expatriate employee wellbeing outcomes are discussed.

Keywords: expatriate adjustment, job demands job demands, highly skilled expatriate employees, personal resources, job demand-resources model

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Introduction

The growing importance of global orientation has produced a steady increase in skilled expatriate employees who are now critical to multinational corporations (MNCs), for them to fulfil their strategic objectives (Sengupta et al., 2021). While expatriates on skilled work visas are crucial for economic development, relocating to a new host country result in many changes for expatriates in work and non-work domain (Biswas & Mäkelä, 2021), including poor adjustment to the host country (Harari et al., 2018), and failure to cope with cross-cultural differences (Okpara, 2016) leading to significant psychological impact (Mohyuddin et al., 2021). In the knowledge-based economy, where expatriate employees are an expensive commodity in a highly competitive environment, MNCs' financial gains have become a particularly important aspect and unfortunately, the levels of psychological wellbeing are not always a priority.

The increasing complexity of work in many contemporary MNCs, particularly in the Information and Communication Technology (ICT) sector, produces additional challenges to adapt to rapidly changing work and non-work domains. Given that the ICT work environment requires expatriate employees to constantly acquire new skills, adapt to rapid changes, meet unrealistic project deadlines, manage multi-geographical locations, and frequently encounter unfamiliar situations (Albrecht, 2015; Meyer & Hünefeld, 2018; Zaho, 2016) is mentally demanding and directly contribute to a challenging work environment (Albrecht, 2015; Meyer & Hünefeld, 2018). Many studies have reported that such challenges have resulted in a range of psychological issues (He et al., 2019), including psychological withdrawal, depression, anxiety, inability to concentrate, and issues with reasoning (Baruch et al., 2016; Doki et al., 2018;

Truman et al., 2011). Expatriate employees also commonly report a lack of information about the host country, a loss of resources and support system, and concerns about their health, security, and personal relationships, after their arrival in the host country (Vijayakumar & Cunningham, 2019). In these challenging contexts, the boundaries between the work and non-work domains are often ill defined, thus making adjustments (psychological presence) a crucial element of expatriate effectiveness (Reiche et al., 2021). Wellbeing, in this study refers to both positive and negative evaluations of reflections (such as work engagement, turnover intentions, burnout and stress; Biswas et al., 2022). To extend the knowledge of antecedents of expatriates' wellbeing and understand expatriate failure in terms of what factors –work-related and non-work-related antecedents (resources) and their relationship on outcomes remains relatively scarce among highly skilled expatriate literature (Biswas et al., 2022; Doki et al., 2018; Rattrie et al., 2020).

With increasing research interest in expatriates' employee's wellbeing recently, a widely adopted theory focusing on wellbeing framework is the Job Demand-Resource model (JD-R).

Extensive research supports the basic tenants of the JD-R model cross-sectionally (Bakker & Demerouti, 2017) and within single-national contexts, such as the Netherlands (e.g., Akkermans & Tims, 2017), Finland (e.g., Kinnunen et al., 2011), and China (e.g., Hu, Schaufeli, & Taris, 2013, 2017). However, the test of the full JD-R model over time (Brough et al., 2013) among highly skilled expatriate employee's context is scarce (Ford et al., 2013; Geisler et al., 2019; Rattrie et al., 2020). Therefore, the current research directly responds to recent calls to (a) examine the role of work characteristics and job resources and personal resources and their impact on outcome, and (b) test the full JD-R model within a two-wave longitudinal research designs (Brough et al., 2013; Geisler et al., 2019) in an expatriate context (Doki et al., 2018; Rattrie et al., 2020).

The Job Demands-Resources Model

Theoretical explanations of occupational stress have been discussed within multiple models, including the Job Demands-Resources (JD-R) model (Demerouti et al., 2001). The core tenants of the JD-R model categorise all job characteristics as either job demands (require physical or mental effort), or job resources (assist to achieve work goals and reduce job demands), to stimulate personal growth and development (Bakker & Demerouti, 2014). The original JD-R assumptions suggest that employee wellbeing can be understood, explained, and predicted by job demands and resources. These job characteristics operate via two independent psychological mechanisms: excess job demands, and insufficient job resources exert an energy-depleting effect on employees through a strain process. In contrast, high levels of job resources and low job demands produce positive work outcomes through a motivational process (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2014).

Ford et al. (2013) highlighted that expatriate employees in the ICT sector are particularly vulnerable to burnout; however, identifying and understanding its development and associations with critical psychological and behavioural outcomes has been limited. Furthermore, in their systematic review, Rattrie and Kittler (2014) demonstrated that none of the studies containing theoretical advancements of the JD-R model considered any characteristics specific to international work settings (e.g., those presented within foreign assignments, host country challenges). While most research has focused on the negative consequences of work stress (see Doki et al., 2018; Vijayakumar & Cunningham, 2019), recent research has suggested that not all job demands are energy depleting, such as challenging job demands (Raper et al., 2020; Mazzola & Disselhorst, 2019; Searle et al., in press). Challenge demands reflect work conditions that provide opportunities for personal achievement and growth, such as high levels of responsibility,

or ‘stretch’ assignments that serve as steppingstones for promotion. However, challenge stressors may also negatively impact outcomes through their positive relationship with strain. For instance, Firth et al. (2014) reported that the presence of challenging job demands during the initial phase in a host country contributes to heightened levels of psychological strain among expatriate workers. However, more empirical evidence is needed to support this argument.

Hypothesis 1: Job demands will be significantly negatively associated with psychological strain, work engagement, and turnover intentions, both cross-sectionally (H1a) and over time (H1b).

According to Bakker et al., (2014), wellbeing is not only a lack of ill-being (e.g., a strain/burnout) but also a distinct positive phenomenon (e.g., high work engagement). Recent research has described how job resources, such as basic psychological needs satisfaction and personal resources such as self-efficacy, can be categorised as key resources, which act to reduce the impact of strain (Bakker & de Vries, 2021). The concept of basic psychological needs satisfaction (Deci & Ryan, 2000) is advocated as a necessary requirement for psychological wellbeing and work engagement (Vansteenkiste et al., 2020). Research supports the notion that when job resources such as psychological needs are satisfied, optimal positive psychological energy enables a person to become involved and interested in their tasks and, hence, engaged with their work (Silman, 2014; Van den Broeck et al., 2008; 2010) and contribute positively to other outcomes (Bakker & Demerouti, 2018). However, it is plausible that recent COVID-19 restrictions have challenged the assumptions of basic psychological needs satisfaction and the impact of this is yet to be examined.

In addition, self-efficacy refers to an individual’s perception of their ability to organise and execute the courses of action required to produce a given attainment (Schaufeli & Taris

2014). Chan et al. (2017) proposed that building personal resources creates a reserve that directly influences employees' perceptions of their job demands, which, in turn, improves reported levels of work engagement, thus providing emotional relief and work motivation to reduce turnover intentions (Kim & Hyan, 2017). In contrast to general self-efficacy, the current study adopts a domain-specific form of self-efficacy: *mobility self-efficacy*, which refers to expectations of personal proficiency in the specific context of moving and adapting to unfamiliar places and cultures (Chan et al., 2017; Waibel et al., 2018). To date, only a few studies have examined this form of domain-specific self-efficacy within the expatriate employee context (Waibel et al., 2018).

Research has demonstrated that both psychological needs satisfaction and self-efficacy are resources that promote positive work experiences, to reduce perceptions of occupational stress (Schonfeld et al., 2019; Shoji et al., 2016), promote work engagement (Prokešová et al., 2019), improve wellbeing (Trépanier et al., 2013), and decrease turnover intentions (Kim & Hyun, 2017; Van den Broeck et al., 2016). However, evidence of the exact role of job and personal characteristics within the JD–R model remains largely unexamined (Gerich & Weber, 2019). This study, therefore, contributes to these discussions by considering the role of these psychological mechanisms as resources that influence optimal outcomes for highly skilled expatriate employees

Hypothesis 2: The job resources – basic psychological needs satisfaction and personal resource mobility self-efficacy will each be significantly positively associated with work engagement, both cross-sectionally (H2a) and over time (H2b). The job resources – basic psychological needs satisfaction and mobility self-efficacy will each be significantly negatively

associated with psychological strain and turnover intentions, both cross-sectionally (H2c) and over time (H2d).

In addition to the main effects described by the JD-R model (i.e., strain and motivational processes), JD-R theory also recognises two more nuanced processes: the ‘buffering’ and the ‘boosting’ effects (Bakker & Demerouti, 2018). The buffering effect refers to instances in which certain job resources buffer or reduce the effect of demands on job strain, or how resources can reduce the likelihood that specific organisational aspects will be perceived as sources of stress (Demerouti & Bakker 2011). The boosting effect refers to the way in which job resources become particularly important for employees—or boost their engagement—when job demands are high. Thus, workers strive to protect, maintain, and increase their resources and use these resources to limit the impact of their high job demands, thereby boosting an individual’s wellbeing (Bakker & Demerouti, 2017, 2018).

Recent studies have supported the occurrence and interaction of these two effects. For instance, Tadić et al. (2015) reported a positive association between job demands and work engagement and reported that job resources boosted this relationship. Zhao (2016) also demonstrated significant interactions with expatriate employees who experienced low personal resources and high job demands and reported high levels of burnout and disengagement with their work. Zhao (2016) provided evidence to support both buffering and boosting effects of the JD-R model. It is not alarming to see that only less than half the studies that investigated the interactions between job demands and job/personal resources supported the hypothesised interaction effects (Konze et al., 2017). The occurrence of these significant moderating effects is further reduced when assessed within longitudinal research designs (two-wave or more, Brough et al., 2013; Hu et al., 2011).

Hypothesis 3: The resources - basic psychological needs satisfaction and mobility self-efficacy will each moderate over time the relationship between job demands and psychological strain, work engagement and turnover intentions. Increased resources (at Time 1) will reduce the associations between job demands and psychological strain and turnover intentions (at Time 2; H3a); and will increase the associations with work engagement (at Time 2; H3b).

Method

Participants and Procedure

To maintain data quality across different methods for recruitment, the study relied on specific selection criteria and additionally pre-screening survey questions such as 1) “I have a visa to live/work/study in the country where I reside? Or 2) No, I don't have a visa or 3) I don't require a visa to work/study in a foreign country for Prolific participants. With an outreach to 850 plus participants within the ICT sector, a total of 270 employees living in a host country on skilled work visas, who responded yes to questions 1 or 3 and who met the specific study selection criteria were invited to complete electronic self-report surveys at Time 1. A total of $N = 202$ completed electronic surveys were returned at Time 1 (response rate of 75%; July 2020). The questionnaires were administered a second time to all the Time 1 respondents approximately eight-months later (February 2021). A total of $N = 139$ completed surveys were returned at Time 2 (response rate of 69%) and were matched with the Time 1 responses via a unique respondent identifier. Unmatched cases were deleted. Data screening was conducted with IBM SPSS 27.0 software. The missing completely at random (MCAR) test ($\chi^2 = 1219.59$; $df = 1260$; $p = .78$) suggested the estimation of missing data via expectation–maximisation imputation.

Of the matched ($N = 139$) survey respondents, the majority were males ($n = 94$; 67.6%), with an average age of 32 years and an age range from 23 to 45 years ($SD = 5.56$ years). Half of

the research participants were Caucasian ($n = 66$; 47.5%), and the second-highest ethnic group was Asian/Pacific Islanders ($n = 52$; 37.4%). Approximately 21% ($n = 29$) of respondents held U.S. work visas, 11% ($n = 15$) held U.K. work visas, and 10% ($n = 14$) had skilled work visas from Australia or New Zealand. Most respondents were employed as computer analysts, developers, and software engineers ($n = 71$, 51%), or were team leads or managers ($n = 29$; 21%). Respondents reported their highest education qualification as either a bachelor's degree ($n = 68$; 49%) or a master's degree ($n = 57$; 41%).

Measures

Job demands. The 9-item job demands measure was included to assess two types of demands (Wall et al., 1995). Items include “Do you have to keep track of more than one task at once?” The measure includes subscales of *monitoring demands* (four items) and *problem-solving demands* (five items), measured on a five-point Likert scale, (1 = *not at all* to 5 = *a great deal*).

Basic Psychological Needs Scale (BPNS). The 9-item BPNS measure (Gillet et al., 2008) was modified to fit the workplace context to assess needs satisfaction within the work domain. An example item is “I generally feel free to express my ideas and opinions” All responses were recorded on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with high scores indicating high BPNS.

Mobility Self-Efficacy. Mobility self-efficacy beliefs, a 4-item scale, measures self-efficacy for moving and adapting to unfamiliar places and cultures (Waibel et al., 2018). Example items are “I can easily find my way in new surroundings” and “I feel confident in dealing with people of other cultures.” Participants responded on a scale (1 = *strongly disagree* to 5 = *strongly agree*), with high scores indicating high self-efficacy.

Psychological Strain. The 12-item General Health Questionnaire (GHQ; Goldberg, 1972) was included to assess psychological strain. Respondents reported the extent to which they currently experienced 12 symptoms of strain. Example items include “Lost much sleep over worry?” (0 = *Not at all*, 3 = *Much more than usual*). Responses were recorded on a four-point response scale, with high scores indicating high strain. Previous research has indicated evidence of a two-factor model of psychological strain consisting of anxiety/depression and social dysfunction (Hystad & Johnsen, 2020).

Work engagement. Engagement was measured with the 9-item Utrecht Work Engagement Scale (Schaufeli et al., 2006). An example item is “When I get up in the morning, I feel like going to work.” Participants responded on a seven-point scale (0 = *never* and 7 = *every day*), with high scores indicating high levels of engagement.

Turnover intentions. Brough and Frame’s (2004) three-item measure was included as a criterion variable. A sample item is “How often do you actively look for jobs outside your organisation?” Responses were recorded on a frequency scale (1 = *never* to 5 = *great deal*), with high scores indicating high turnover intentions.

Preliminary Data Analyses

Although structural equation modelling (SEM) is commonly a large-sample technique of data analysis, SEM models can also be evaluated with small samples (i.e., $N = 100 - 150$; Kyriazos, 2018). Because there was no evidence of non-normality within the data, confirmatory factor analysis (CFA) with maximum likelihood estimates were performed to assess the convergent and discriminant validity of the measurement model, using IBM SPSS and SPSS AMOS 27.0 software. The composite reliability (CR) of each measure ranged from 0.7 to 0.9. A common method variance (CMV) test revealed that the six-factor model (constructed with latent

variables) produced a good fit to the data (χ^2 (104)=177.78, $p < .001$, CFI = .92, TLI = .90, AIC = 275.78, RMSEA = .07, SRMR = .07), compared to a one-factor model with all measures loading onto one factor (χ^2 (119)=666.34, $p < .001$, CFI = .40, TLI = .32, AIC = 734.34, RMSEA = .18, SRMR = .15). These results indicated that the six measures were empirically distinct from each other (discriminant validity; Table 1; Gaskin et al., 2019; Podsakoff et al., 2003).

Two SEM models were constructed to assess the hypothesised relationships between the study variables, and both the cross-sectional data (Time 1 dataset, $N = 202$) and the longitudinal data (matched dataset, $N = 139$; consisting of Time 1 independent variables and Time 2 dependent variables). In each model, the Time 1 latent variables were correlated with each other. For the two-wave longitudinal model, each Time 1 residual term was correlated with its respective Time 2 residual term (Brough et al., 2014). To test moderation effects, the indicator interaction method was performed: each independent variable was mean centred to compute the interaction terms (Hu et al., 2011). The SEM models included three exogenous latent variables with their respective indicators: job demands, basic psychological needs satisfaction and mobility self-efficacy, and two interaction terms (job demands X basic psychological needs satisfaction and job demands X mobility self-efficacy).

Table 6.1*SEM goodness-of-fit statistics*

Model	χ^2	<i>df</i>	χ^2/df	CFI	TLI	AIC	RMSEA	SRMR
1. One Factor CFA Model	666.34***	119	5.5	.40	.32	734.34	.18	.17
2. Six Factor CFA Model	177.78***	104	1.7	.92	.89	275.78	.07	.07
3. Cross-sectional SEM	238.47***	135	1.7	.89	.86	348.47	.07	.07
4. Longitudinal SEM	406.39***	261	1.5	.92	.90	586.39	.06	.08

Note: *** $p < .001$

Results

Descriptive Statistics

The descriptive statistics and bivariate associations between the research variables are summarised in Table 6.2. For brevity, only results from the longitudinal matched sample are reported. The correlational analysis provided no support for the JD-R model's strain hypothesis and minimal support for the motivational hypothesis of the JD-R model. For instance, cross-sectionally, the results demonstrated significant association between basic psychological needs satisfaction with psychological strain ($\beta = -.36, p < .01$) and work engagement ($\beta = .43, p < .01$) and turnover intentions ($\beta = -.28, p < .01$). However, longitudinally, basic psychological needs satisfaction was positively associated with work engagement ($\beta = .29, p < .05$). Furthermore, personal resource mobility self-efficacy was positively associated with work engagement ($\beta = .25, p < .05$), but cross-sectionally only.

Table 6.2*Means, Standard Deviations and Bivariate coefficient Across Time 1 and Time 2 (N = 139).*

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
CJD (T1)	31.81	5.73	(.81)											
BPNS (T1)	50.37	7.21	.29***	(.85)										
MSE(T1)	15.21	2.45	.22***	.34***	(.71)									
PS (T1)	14.27	6.36	.01	-.36***	-.05	(.88)								
WE(T1)	34.19	7.78	.30***	.43***	.25***	-.16	(.89)							
TI(T1)	6.625	3.16	.14	-.28***	.06	.45***	-.31***	(.82)						
CJD (T2)	31.22	5.39	.41***	.16	.05	.18**	.14	.13	(.78)					
BPNS (T2)	51.15	6.94	.27***	.45***	.11	-.12	.21**	-.03	.28***	(.86)				
MSE (T2)	15.44	2.51	.14	.11	.42***	.13	.08	.13	.30***	.39***	(.77)			
PS (T2)	12.93	6.29	-.13	-.15	.07	.58***	-.02	.31***	.21**	-.33***	-.02	(.89)		
WE(T2)	34.29	7.95	.15	.29***	.07	-.10	.54***	-.21**	.36***	.52***	.25***	-.12	(.90)	
TI (T2)	6.722	3.15	-.01	-.08	.06	.32**	-.13	.58***	.19**	-.19**	.06	.47***	-.28***	(.87)

Note: T1 = Time 1; T2 = Time 2. Cronbach's alpha coefficients are listed on the diagonal. Challenge Job Demands, BPNS = Basic Psychological Needs Satisfaction, PS = Psychological Strain, WE = Work Engagement, MSE = Mobility Self Efficacy, TI = Turnover Intentions. * $p < .05$; ** $p < .01$, $p < .001$ ***

Furthermore, an independent sample t-test was conducted to compare the differences in mean between prolific and convenience sampling respondents in this study. The Levene test of variance equality can be assumed for all research variables. The t-test showed that this difference was not statistically significant for all variables, except for psychological strain and turnover intentions, which were significant at 0.05 level. However, looking into the standard deviation column of both these variables, it is indicative of the fact that the values are close enough to assume equal variances. Figure 6.3 above summarises the results.

SEM Cross-Sectional Results

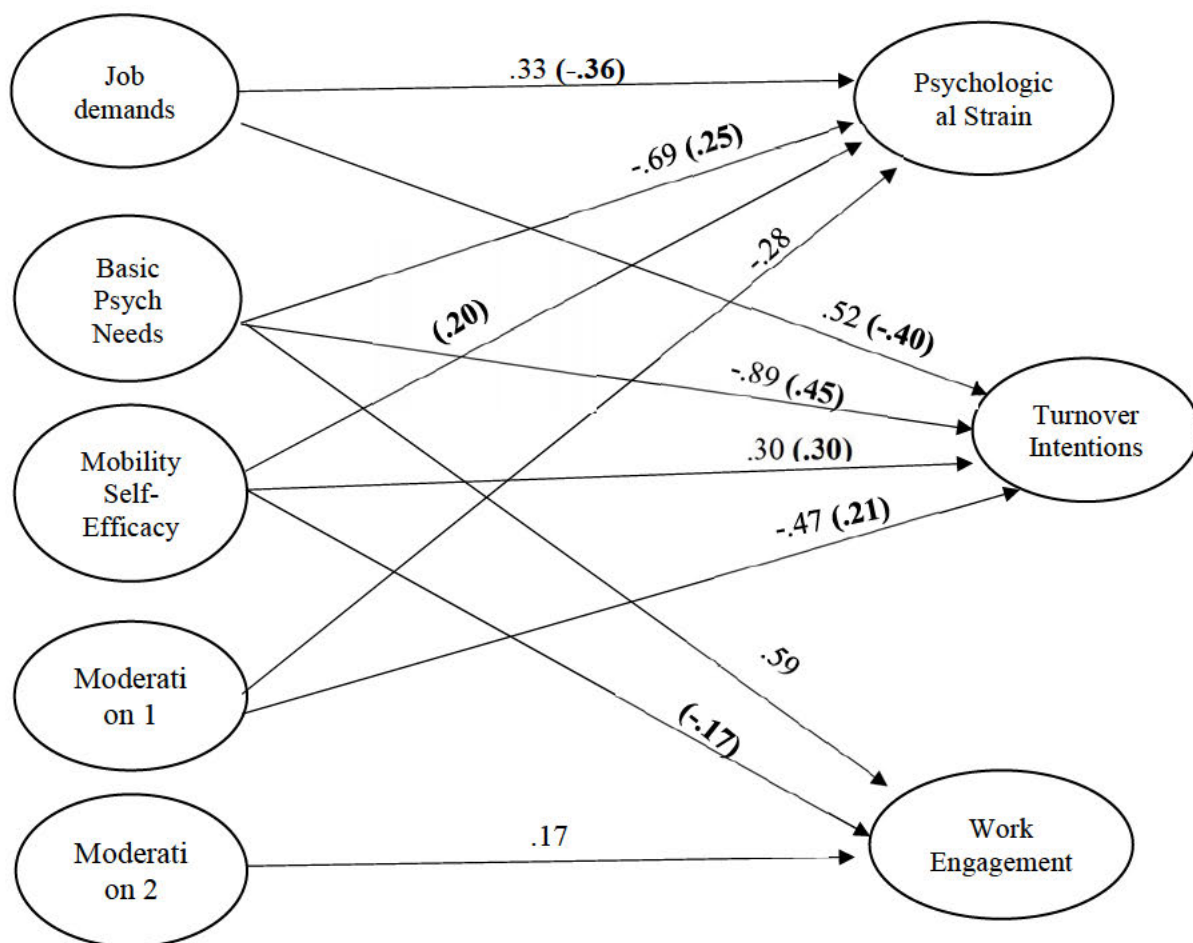
The cross-sectional moderation SEM model assessed the hypothesised JD-R model associations between the research variables. The model produced, as expected, statistically significant associations between the variables and an adequate fit to the data ($\chi^2(135) = 238.47, p < .001$, CFI = .89, TLI = .87, AIC = 348.47, RMSEA = .07, SRMR = .07; Table 1 (row 3) and Figure 6.1). The results revealed that job demands were significantly positively related to both psychological strain ($\beta = .34, p < .01$) and turnover intentions ($\beta = .52, p < .001$), thus offering no support for H1a.

Regarding tests of the motivation process, only basic psychological needs satisfaction was positively significantly associated to work engagement ($\beta = .59, p < .001$), thus supporting H2a. This data also partially supported H2c, i.e., basic psychological needs satisfaction was negatively associated with psychological strain ($\beta = -.70, p < .001$) and turnover intentions ($\beta = -.89, p < .001$). However, personal resource mobility self-efficacy was positively associated with turnover intentions ($\beta = .31, p < .01$). The interaction term results for job demands X basic psychological needs satisfaction demonstrated a significant negative effect in its association with both strain ($\beta = -.29, p = .001$; see Figure 6.2) and turnover intentions ($\beta = -.46, p < .001$; see

Figure 6.3), thus supporting H3a. Job demands X mobility self-efficacy demonstrated a significant positive effect on work engagement ($\beta = .17, p < .05$; See Figure 6.4), thus supporting H3b.

Figure 6.1

Cross-sectional and Longitudinal SEM Time 1- Time 2 (N = 139)



Note: All factor loadings are significant. The results in parenthesis and bold refer to the longitudinal data. Moderation 1 = job demands X basic psychological needs satisfaction, Moderation 2 = job demands X mobility self-efficacy.

SEM Two-Wave Longitudinal Results

The research hypotheses were also assessed in an SEM model with the longitudinal data to assess the tenants of the JD-R model over time, and the significant results are illustrated in Table 1 (row 4) and Figure 6.1 (within parentheses in bold). Job demand had a direct negative association on both psychological strain ($\beta = -.35, p < .001$) and turnover intentions over time ($\beta = -.39, p = .001$), thus partially supporting H1b. The model fit results were acceptable: ($\chi^2(261) = 406.39, p < .001$, CFI = .92, TLI = .90, AIC = 586.39, RMSEA = .06, SRMR = .08),

The longitudinal analysis provided unique but significant evidence to support the JD-R model's motivational process in relation to the job demands job demands. Both basic psychological needs satisfaction ($\beta = .25, p < .05$) and mobility self-efficacy ($\beta = .20, p < .05$) produced positive associations with psychological strain. Furthermore, unexpectedly personal resources mobility self-efficacy was significantly negatively associated with work engagement over time ($\beta = -.17, p < .05$), offering partial support for H2b. In addition, basic psychological needs satisfaction was significantly positively associated with turnover intentions ($\beta = .44, p = .001$), thus partially supporting H2d. A significant positive interaction term of job demands X basic psychological needs satisfaction with turnover intentions was reported ($\beta = .22, p < .05$; see Figure 6.5), providing partial support for H3a over time.

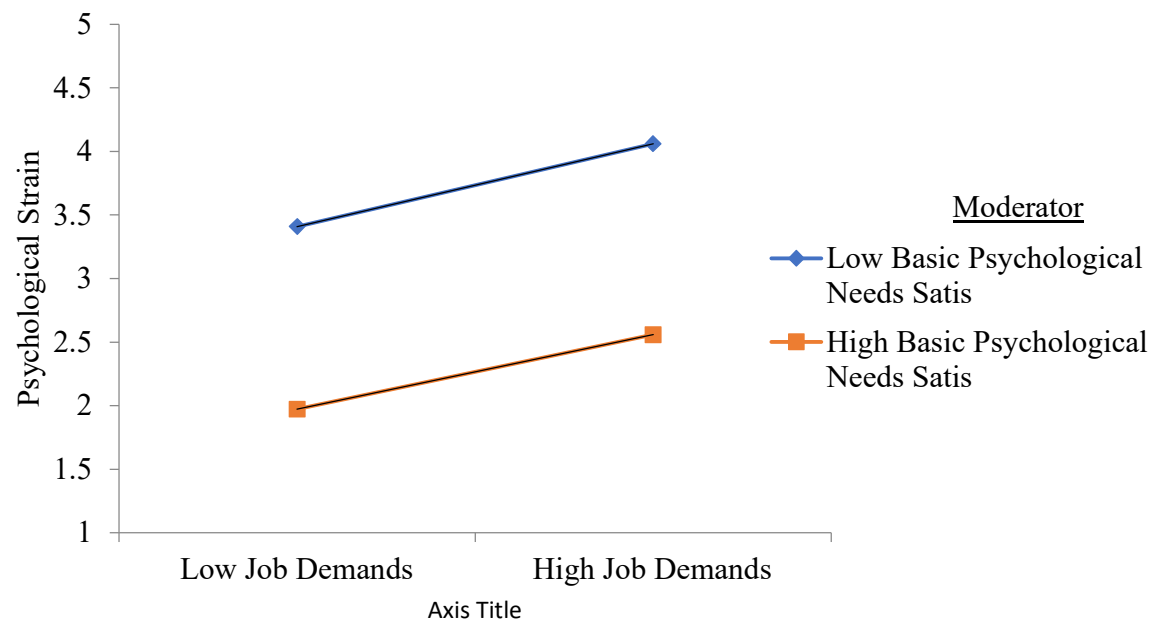
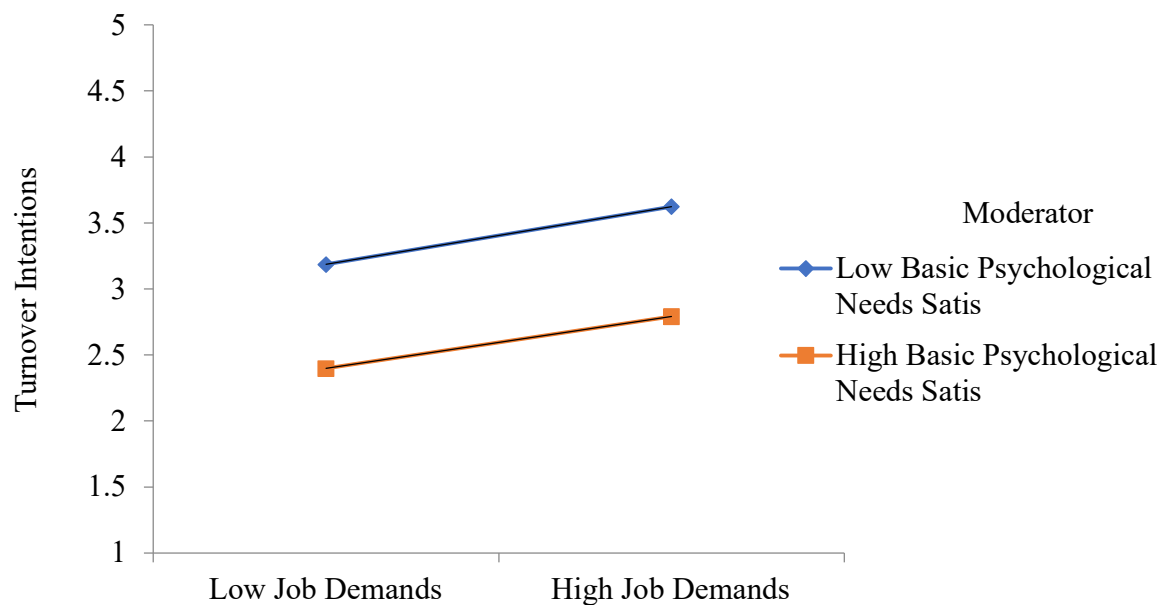
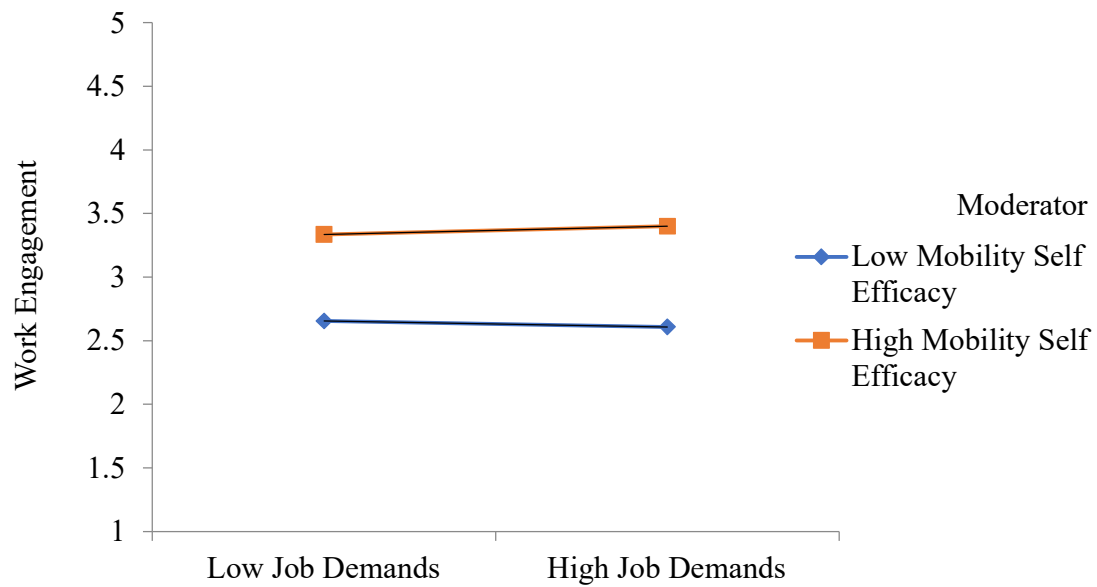
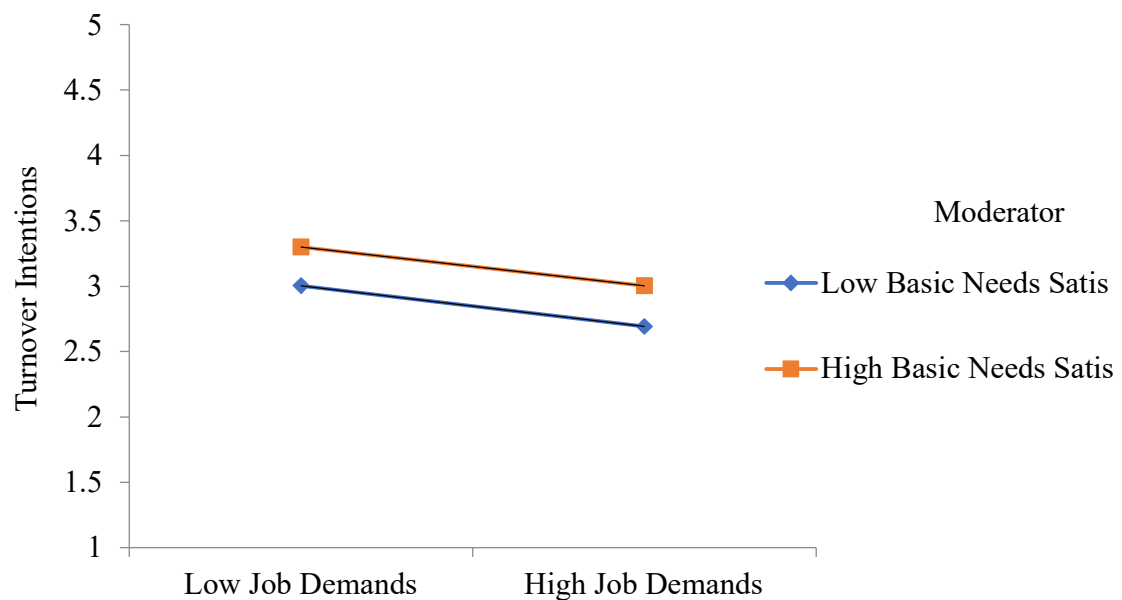
Figure 6.2*Cross-sectional moderating effect on Psychological Strain***Figure 6.3***Cross-sectional moderating effect on Turnover Intentions*

Figure 6.4*Cross-sectional moderating effect on Work engagement***Figure 6.5***Longitudinal moderating effect on Turnover Intentions*

Discussion

This study employed JD-R theory to explore the relationship between challenge-based job demands and job/personal resources with strain, work engagement and turnover, and assessed the moderating role of psychological mechanism resources. Findings yielded support for the job demands/resources and strain/engagement relationships (representing the core of JD-R theory) and partial support for the moderating role of resources. Analyses were conducted cross-sectionally and longitudinally (over time) to compare the results with those within the (largely cross-sectional) literature (Brough et al., 2013).

Strain Process

The strain process of the JD-R model posits that in conditions of high job demands, maintenance of employee wellbeing and performance-related outcomes results in strain. The current research produced mixed evidence for the strain process after a time lag of 8 months between T1 and T2. Notably, the study results indicated that job demands were positively and negatively associated with both psychological strain and turnover intentions, respectively, both cross-sectionally and longitudinally. These results support recent research discussions regarding the importance of classifying job demands as challenge demands or hindrance demands, which have different influences on the stress process. Thus, echoing the findings of Scanlan and Still, (2019) that “while all job demands require effort expenditure, not all produce feelings of exhaustion”. However, future research must consider these aspects of work characteristics further.

Furthermore, as stated in past research studies, the relationship between job demands on strain is evident significantly after a period of 6 months or more, supporting the assumption that job demands causes strain in the long run (Jimenez & Dunkl, 2017). The time lag adopted in this

study was apt in examining this association. These changes suggest that employees perceived job demands as both depleting energies (cross-sectionally) and stimulating (challenging; longitudinally) them to put effort into their job (Van den Broeck et al., 2010; Firth et al., 2014). For instance, this study found positive association between job demands and turnover intentions cross-sectionally. However, this association was negative longitudinally, replicating Esteves and Lopes's (2017) findings. One explanation for these results is that when employees perceive a lack of challenge in their jobs, it decreases their motivation, leading to increased turnover intentions. However, more empirical evidence is needed to support this association over multiple times and different time lags.

The motivation process of the JD-R model occurs when resources are available to assist an employee to perform their job and directly influence levels of work engagement (Bakker & Demerouti, 2017). Resources are, therefore, considered to be crucial predictors of work motivation, learning, and engagement (Bakker et al., 2017) and a stronger preventive factor even after 6 months (Jimenez & Dunkl, 2017). The current research found evidence for the motivation process in the expected directions within the cross-sectional analyses, where the contribution of job resources (basic psychological needs satisfaction) accounted for a significant negative association with both psychological strain and turnover intentions and was positively related with work engagement (Schaufeli & Taris, 2014). Mobility self-efficacy also produced a positive association with turnover intentions. One explanation for these findings is that when expatriate employees exhibit confidence in their ability to complete tasks, their self-efficacy increases which, in turn, influences their turnover intentions and behaviours. When employees perceive they are overqualified for their role and believe that their abilities exceed the needs of their

current job. This overconfidence contributes to their high levels of self-efficacy, producing high turnover intentions and behaviours (Chen et al., 2021).

The ability of the motivational process of the JD-R model to occur over time was only partially supported by the current research. Both resources of basic psychological needs satisfaction and mobility self-efficacy were positively associated with psychological strain over time. One explanation for these results is that during the COVID-19 outbreak in 2020, employees experienced several restrictions that challenged their basic psychological needs satisfaction (i.e., reduced autonomy and decision-making, reduced relatedness [low feeling of connectedness], and reduced competence [less opportunities to extend and exert their skills]; Cantairo et al., 2021).

These work experiences create a perception that needs satisfactions are obstructed, resulting in frustration and *needs thwarting* (Bartholomew et al., 2011). Past studies have demonstrated that needs thwarting is positively associated with adverse outcomes, such as burnout (Giebe & Rigotti, 2020; Vansteenkiste & Ryan, 2013). An explanation for self-efficacy's positive associations with psychological strain and negative relation with work engagement is the demonstrated negative effect of increases in self-efficacy (Ouweneel & Schaufeli, 2013). Workers with high self-efficacy exhibit persistent efforts to maintain their higher performance levels, despite experiencing high challenges (job demands), due to their belief they can resolve difficulties via their increased efforts. Although these efforts do assist them to succeed, this is also a plausible explanation for their reports of high levels of psychological strain (Peng et al., 2015), further creating a relaxed environment that could reduce performance (e.g., work engagement).

Similarly, basic psychological needs satisfaction was positively related to turnover intentions over time. These results contrast with self-determination theory's prediction that

achieving needs satisfaction leads to more favourable outcomes. One explanation for the findings of the current research is that when employees master the key knowledge, skills, and abilities (challenge job demands) valued by their employers, then employees may perceive they have ‘outgrown’ their position and seek opportunities elsewhere (Van den Broeck et al., 2016).

Research indicates that expatriate employees have an approximately 30% higher rate of turnover compared to their local colleagues (Zhang et al., 2019). Zhang et al. (2019) suggested that especially after moving to a host country, expatriate employees exhibit weaker place identities, which is a substructure of self-identity linking ‘who we are’ to ‘where we are.’ Thus, for expatriate employees who have less desire to remain, it is psychologically easier for them to terminate their work and move. The current research, therefore, offers unique support for the longitudinal impact of the motivational process of the JD-R model.

Interaction Effect Validation

Of the two interaction terms tested within each of the cross-sectional and longitudinal models, cross-sectionally, this research found only the job demands X basic psychological needs satisfaction interaction term for the prediction of psychological strain, and turnover intentions to be statistically significant. This study also observed a significant interaction effect of job demand X mobility self-efficacy only for the prediction of work engagement. Longitudinally, the interaction effect (job demands X basic psychological needs satisfaction) was evident only for the prediction of turnover intentions. Therefore, the current research supports the hypothesised H3a interactions of job demands and job and personal resources and offers minimal support for hypotheses 3b. It is, therefore, apparent that the ability of job demands and job resources to influence one another in the estimation of job attitudes and work outcomes remains ambiguous.

The job demands and job resources interaction remains a theoretically sound concept, but an empirically elusive one (Brough & Biggs 2015; Taris, 2006).

Implications, Limitations and Future Directions

Theoretically, first this study extends the test of full JD-R model with significant evidence for challenge demands or hindrance demands nature of job demands and how these changes over time, indicative of how key characteristics change and impact employee outcomes over time. Thereby, contributing to literature by showing the ambivalent role of job demands within the JD-R model (Webster & Adams, 2020). However, future research is needed to advance the theoretical views further.

This study results indicate that job demands are both stressors and resources, thus on a practical level, first, organisations must consider the rise of new cognitive based demands at work as a crucial factor. This study clearly demonstrated that ICT workplaces contribute to excessively challenging work environment, in which employees lose their ability to decide on their actions and interact with their environment effectively, which may result in basic need thwarting and thus increased exhaustion and decreased job satisfaction (Giebe & Rigotti, 2020). It is important for organisations to design workplaces to include these demands in work tasks and are informed about the cognitive demands of their employees through risk assessment and being part of the appraisal plans.

Second, during these challenges, organisations should offer additional on-going support employees in developing individual coping strategies by considering the needs of each employee (Xie, 2020). The current study supports the proposed role of the psychological mechanisms as resources, particularly personal resources within the JD-R model (e.g., Van den Broeck et al., 2016). To enhance expatriate employee's outcomes, organisations are also encouraged to focus

on facilitating expatriate's job and personal resources (Tu et al., 2019). When faced with high levels of job demands, whether they be motivating or energy depleting, to perform well employees require a sense being engaged competence to feel energised and involved at work and protected against the potential harm associated with psychological strain and emotional exhaustion. This research acknowledges that job/personal specific resources are valuable in predicting work-related health and performance (Brough et al., 2013; Brough & Biggs, 2015).

This study has several research limitations. First, this study was conducted with a small research sample. Hence, caution should be exercised to generalise the results to a broader labour market. The sample exclusively included highly skilled employees working in contemporary work environments, such as ICT, and those who held visas. These sampling conditions significantly constrained the potential sample pool and could be reconsidered in future research with expatriate employees for better statistics effect (Brough & Boase., 2019). Although the sample is small, it is important to note that it consists of persons with more strain and higher stress and the level of attrition were at acceptable levels. Furthermore, the study collected data at different points in time, a practice suggested to reduce the effects of common method bias (Jimenez & Dunkl, 2017). Second, in examining the relationships between the research variables, this study focused on composite factors only, primarily due to the small research sample (Rattrie et al., 2020). For instance, the three factors defined within the basic psychological needs' satisfaction construct (i.e., autonomy, competence, and relatedness satisfaction) were not individually assessed. However, future research should assess these individually to see more variations in results. Third, the methodological issues are that this study could not find more longitudinal effects may lie in the period of eight months. Non-significant results could be due to lack of power because of our small sample size. It is also plausible to assume that for a health

indicator such as burnout, which is considered as relatively stable, permanent changes are not easily achieved but require an exposure over a longer time interval. This assumption is supported by other analyses where effects over a period of 1 year were found (Jimenez & Dunkl, 2017). Furthermore, despite the longitudinal research design, data was collected at two time points only, presenting minimal effects. The value of including shorter time lags (i.e., shortudinal designs) and/or three or more survey waves has been acknowledged (Dormann & Guthier, 2018; Schneider et al., 2017) and is recommended for consideration in future research.

Conclusion

Job demands are an integral part of work for highly skilled expatriates working in ICT. This study provided broad support for differentiating job demands and extended the applicability of the JD-R model by demonstrating that inclusion psychological mechanisms that are essential for understanding and managing expatriate employees' psychological wellbeing and work engagement, and, in turn, improving retention among expatriate employees while living in the host country. This study also highlighted some potential significant associations of both positive and negative employee outcomes longitudinally, in the context of expatriate employees living and working in a host country. Overall, this research addressed significant gaps in the literature and highly recommends and encourages future research to consider examining the differential role of job demands and psychological mechanisms (inner resources) to better explain expatriation experiences.

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General Conclusion

The above study submitted to the *Journal of Cross-Cultural and Strategic Management*, provides insights into specific job demands that is relevant to expatriate employees work environment. This paper aimed to address the recent calls of theoretical and methodological rigor within cross-cultural research by considering the examination of the Job Demands-Resources model, assessing specific job demands and personal resources, within a longitudinal research design. Thus, highlighting the need to explore psychological adjustment as a separate dimension in cross-cultural research.

The findings revealed the importance of measuring psychological dimensions during expatriate employee's adaptation in the host country. This thesis next considers another core

element, examining the crucial role of training programs that provide support to expatriate's during their expatriation experiences. The next chapter provides an overview of the existing cross-cultural training literature and positions this thesis to consider a more context-specific integrated and sustainable approach of training programs for today's global expatriate employees in the current work environment.

Chapter 7: Training Program Study

Introduction

Cross-cultural adaptation can be a significant challenge and can derail expatriates' success (Jassawala et al., 2004). As discussed in previous chapters, expatriate failure is a critical issue for MNCs and requires the identification of effective ways to counteract these problems (Al Mahrouqi, 2018). It is important to highlight that the literature has emphasised that expatriate employees need different skills and abilities to perform a job overseas compared to working within their domestic environment (Liu & Lee, 2008). Therefore, providing awareness of the challenges associated with adjustment may enable expatriates to be better prepared. Such awareness may be fostered through the provision of appropriate training programs to develop relevant abilities. However, CCT offered by many MNCs has not led to optimal outcomes in relation to expatriate success. Despite increasing efforts to improve expatriates' experiences by providing them with adequate training programs, over the last two decades, research has indicated that expatriate failure is a persistent problem (Rajasekar & Renand, 2013, as cited in Al Mahrouqi, 2018). Assessing the impacts of training programs on expatriates and identifying their usefulness requires a significant move beyond offering a contextual understanding of unique expatriate experiences.

Although training and development are now increasingly offered by MNCs, in most circumstances, training remains a short-term, "one-shot" learning situation, often of just one week's duration or less (Scullion & Collings, 2006). Given that many of the problems experienced by expatriates are stress-related experiences (characterised as having enormous, long work hour, see Chapter 1 for more details) following arrival in the host country, they can rarely be effectively addressed in a single week of training. Furthermore, these individuals who

live or work outside his or her own home country on a non-permanent basis are also highly skilled professionals or knowledge workers who are stigmatised about associating with mental health issues. Thus, taking into consideration the growing with mental health concerns and practical limitations of accessibility for adequate support to ICT expatriate employees, the goal of this study was to conduct a context specific program to reduce the strain experienced by expatriates when adjusting to their new host country.

Definition of Cross-cultural Training

CCT stems from the belief that such training will help acclimatise individuals to their new culture, thus improving their ability to perform their new role. Commonly, CCT facilitates adjustment through the gradual development of familiarity, comfort and proficiency relating to expected behaviours and, therefore, the values and assumptions inherent within the new culture. According to Grove and Torbiörn (1985), CCT must be planned based on both the context of the assignment and the expatriates' unique characteristics. Additionally, Caligiuri et al. (2005) highlighted that CCT must help employees feel comfortable while living and working in a host country by promoting CCA and strengthening the individual's ability to understand and appreciate multiple cultural perspectives.

Caligiuri et al. (2001) found that CCT programs have three main advantages. First, CCT programs enable expatriates to learn the correct cultural behaviours and appropriate ways of performing necessary tasks within the host country. Second, this training helps expatriates to cope with unforeseen events in their new culture and reduces stress due to unexpected situations and actions. Third, the training creates realistic expectations for expatriates about living and working in the host country. For expatriates to rapidly adjust to their new culture and be more effective in their roles, they need appropriate CCT.

CCT as a resource has been extensively investigated and is considered an essential element in promoting expatriate success (Black et al., 1991). Although there is a body of literature recognising the importance of and advocating for the inclusion of CCT, many corporate leaders do not provide CCT to employees and may doubt the effectiveness of CCT for expatriates. Subsequently, these organisations view CCT as an unnecessary expense rather than as a necessity (Joshua-Gojer, 2012). This may be due to a lack of empirical evidence regarding the implementation and effectiveness of CCT (Black & Mendenhall, 1990; Deshpande & Viswesvaran, 1992; Selmer et al., 1998). Joshua-Gojer (2012) claimed that most studies that support the effectiveness of training have applied flawed methodologies or were based on anecdotal or limited information, restricting their generalisability. According to Shen (2005), MNCs pay little attention to international training and management development. Shen (2005) concluded that there is a considerable gap between academic theories and the practices of multinationals. This indicates that inadequate international training and management development may harm MNCs and their employees' success.

In the Global Relocation Trends survey (Brookfield, 2012), 80% of the organisations surveyed provided CCT for just one day. Moreover, Black and Gregerson (2007) confirmed that the performance of nearly one-third of expatriates who had completed their overseas assignments did not measure up to their superiors' expectations. Further, research has estimated that only 30% of MNCs offer their expatriate employees CCT. The financial costs of expatriate failure and underperformance are usually extremely high (Harzing & Christensen, 2004; Scullion, 2005). When an expatriate leaves their home country, they face many difficulties, including those related to food habits, culture, and day-to-day work practices. These difficulties can lead to the early return of expatriates, which has high associated costs (Black & Mendenhall, 1990).

Opportunities are lost, productivity is delayed, or relations damaged, which is again a loss (Bennet et al., 2000; Selmer et al., 1998). Expatriate failure is a severe problem for MNCs (Black & Gregerson, 2007; Tung, 1981), requiring the identification of effective ways to deal with this issue.

Research suggests that expatriates face many challenges that they can only deal with successfully if they are properly prepared through appropriate CCT. A plethora of studies have highlighted the importance of organisations providing comprehensive, strategic, context-specific, realistic programs of preparation for expatriates. As a result, it is now widely accepted by academic researchers and human resource practitioners that CCT must be tailored to help expatriates adapt while living and working in a foreign environment (Waxin & Panaccio, 2005). Managing and developing international opportunities via isolated or one-time interventions in response to succession is flawed. As a result, researchers have emphasised that CCT should be an integrated and coordinated approach, and if it is not, it will remain adhoc and reactive (Joshua-Gojer, 2012). CCT is reported to be most useful when it considers the cultural transition phase in real-time for the expatriate (Mendenhall & Stahl, 2000).

Traditional CCT Approach

CCT is seen as a major step in paving the way for expatriates to travel, settle and work successfully in foreign countries. A variety of approaches are used to help expatriates develop cross-cultural skills and the frequently used approaches are summarised here. *Pre-departure training* is a widely discussed topic in the cross-cultural literature. Littrell and Salas (2005) argued that this training is successful in supporting expatriates in their adjustment processes. Research indicates that most MNCs do not provide much pre-departure training at all (Shen,

2005). Other companies that provide such training do as a one- or two-hour introduction to the culture of the host country, which includes only basic, pragmatic survival skills.

Didactic training is one of the most common forms of CCT—it involves informal briefings to expatriates before they travel abroad. This approach utilises traditional teaching methods, i.e., one-way communication to transfer information through lectures or other formats (Littrell & Salas, 2005). Information about working, living conditions and cultural aspects of the host country is provided to expatriates through didactic training. However, researchers such as Caligiuri et al. (2001) and Österdahl and Hånberg (2009) have argued that such training must not be the only way to prepare expatriates for foreign assignments and suggested combinations of other forms of training. *Language skills* are among the most obvious training needs. Without reasonable skills in the local language, one must question whether real adjustment in the workplace and beyond will be possible. However, in many places, expatriates may survive in their jobs without such competencies. It is important to note that English is the predominant international business language, and structures and processes in international companies are being standardised, all of which minimise the impact of cultural influences in workplaces.

Interaction training can either occur before departure with previous expatriates or upon arrival in the host country. Interaction training is based on interactions between new expatriates and existing expatriates who have more local cultural experience (Brewster, 1995). Overlaps, also known as on-the-job training, are the most generic form of interactional training used in expatriate preparation (Brewster, 1995; Littrell & Salas, 2005). This method can be beneficial for the expatriate adjustment processes by explaining tasks, introducing contacts, and providing coaching in workplace management and operation. Even though pre-departure CCT has been found to have an overarching positive effect on adjustment dimensions, this training is seen as

problematic and conflicting results regarding its effectiveness have been reported (Abdullah & Jin, 2015; Littrell et al., 2006; Mnengisa, 2017), especially in terms of its long-term effectiveness in reducing the growing costs of expatriate failure (Polón, 2017). Puck et al. (2008) also questioned the effectiveness of pre-departure CCT. As expatriates experience specific challenges and need to respond to specific needs and concerns upon arrival in the host country, researchers claim that in-country training/interventions are a more effective strategy that can facilitate the whole change process upon arrival, give a platform for motivation to change, change/promote new attitudes and behaviours based on current information, and provide cognitive redefinition (Selmer, 2002). For CCT to be effective, CCT precision is paramount.

Mendenhall and Stahl (2000) advocated host-country, real-time training. The review by Gai et al. (2021) highlighted the growing preference for post-arrival interventions and empirically validated that post-arrival CCT as an alternative to more traditional pre-departure training was effective in improving expatriate adjustment in the host country. Instead of merely providing brief information before the move through pre-departure training, post-arrival CCT aims to change an expatriate's attitudes and behaviours while they are adapting to their new host country. A sequential context-specific training helps expatriates to reshape their mental maps and enables them to adapt specific behaviours to interculturally challenging situations during expatriation (Wang & Tran, 2012); this was discussed in detail in Chapter 2.

Contemporary Approaches in Training Programs

Arguably, the mere existence of CCT is not enough. Evidence suggests that helping expatriates to understand and manage conflict situations arising from cross-cultural differences by enhancing the training content and methods will better prepare expatriates for the day-to-day reality of interacting with host nationals (Joshua-Gojer, 2012). This indicates that creating lower-

stress familiarisation situations for expatriates will contribute to the success of expatriation. As a result, developing appropriate content for CCT programs to suit expatriates' experiences while living and working in a unique culture is vital. Most orientation programs aim to help expatriates to be more effective in their jobs and in their interpersonal encounters with nationals. However, many CCT programs have vague, unspecified aims and an unsystematic rationale.

Furthermore, the CCT literature has expounded that method of training employed to deliver the intervention also has an influence on the effectiveness of the CCT program (see Gai et al., 2021 for more details). Thereby, this thesis adopted the cognitive and affective approach formulated by Brislin (1979) and Gertsen's specific experiential approach (1990) to design the intervention implemented in this research (discussed in more detail in chapters 7 and 8).

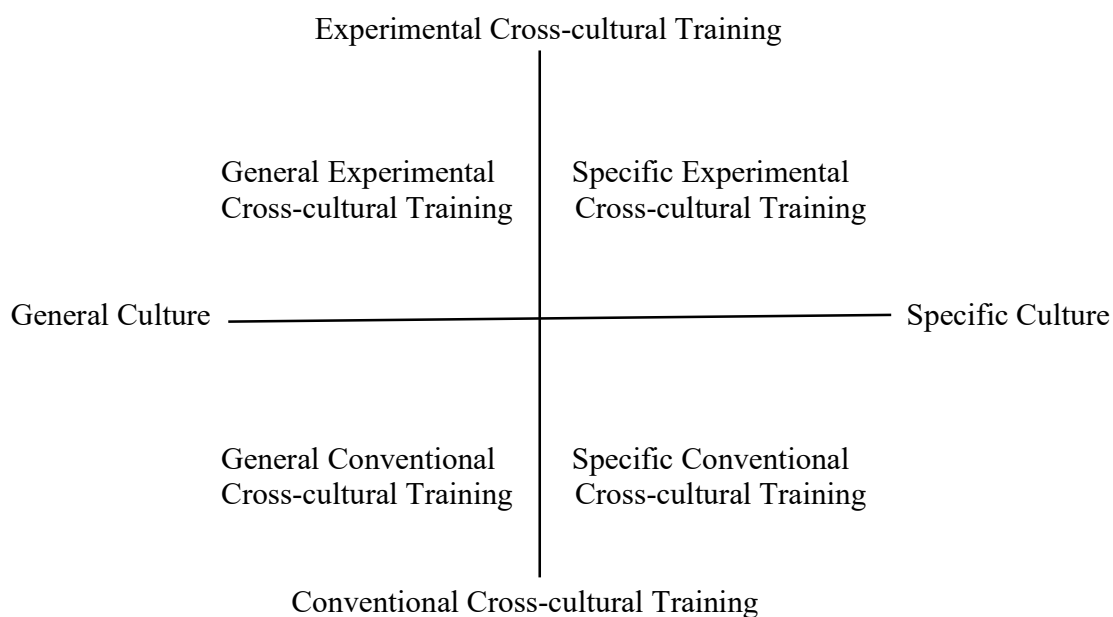
According to Brislin (1979), the cognitive and affective approach recognises individual reactions. Training using this approach aims to sensitise participants to the notion of culture or focuses on one specific culture and aims to make participants more competent in that culture (Graham et al., 2013). The trainee can develop the required competencies to deal with critical cultural incidents relating to the culture in which they interact. Further, the behavioural method focuses on improving the trainee's ability to adapt to the host country's communication style and to establish positive relationships with other cultures (Waxin & Panaccio, 2005).

Gertsen's (1990) seminal work classifies CCT into *conventional training* and *experimental/practical training*. *Conventional training* is when information is transmitted through unidirectional communication and *experimental/practical training* is where the trainer encourages the trainees to participate by simulating real-life, hands-on situations. According to Gertsen (1990), combining these two dimensions reveals four training types (for e.g., general conventional, specific conventional, general experimental and specific experimental), as

represented in Figure 7.1. Okpara and Kabongo (2011) investigated the influence of these several types of CCT among 400 Western expatriates from the US, UK, France, Germany, Netherlands, Greece, Sweden, Norway, and Denmark who were working in Nigeria and found different types of CCT predicted expatriate adjustment (Al Mahrouqi, 2018). Their study further revealed that experimental types of training were the most effective. For these reasons, the current study adopted an CBT based experimental-specific training approach, where expatriate employees learned to recognise their stressful events and develop appropriate ways to deal with situations in real-time. Figure 7.1 depicts Gertsen's typology of CCT methods.

Figure 7.1

Gertsen's Typology of Cross-cultural Training Methods (1990)



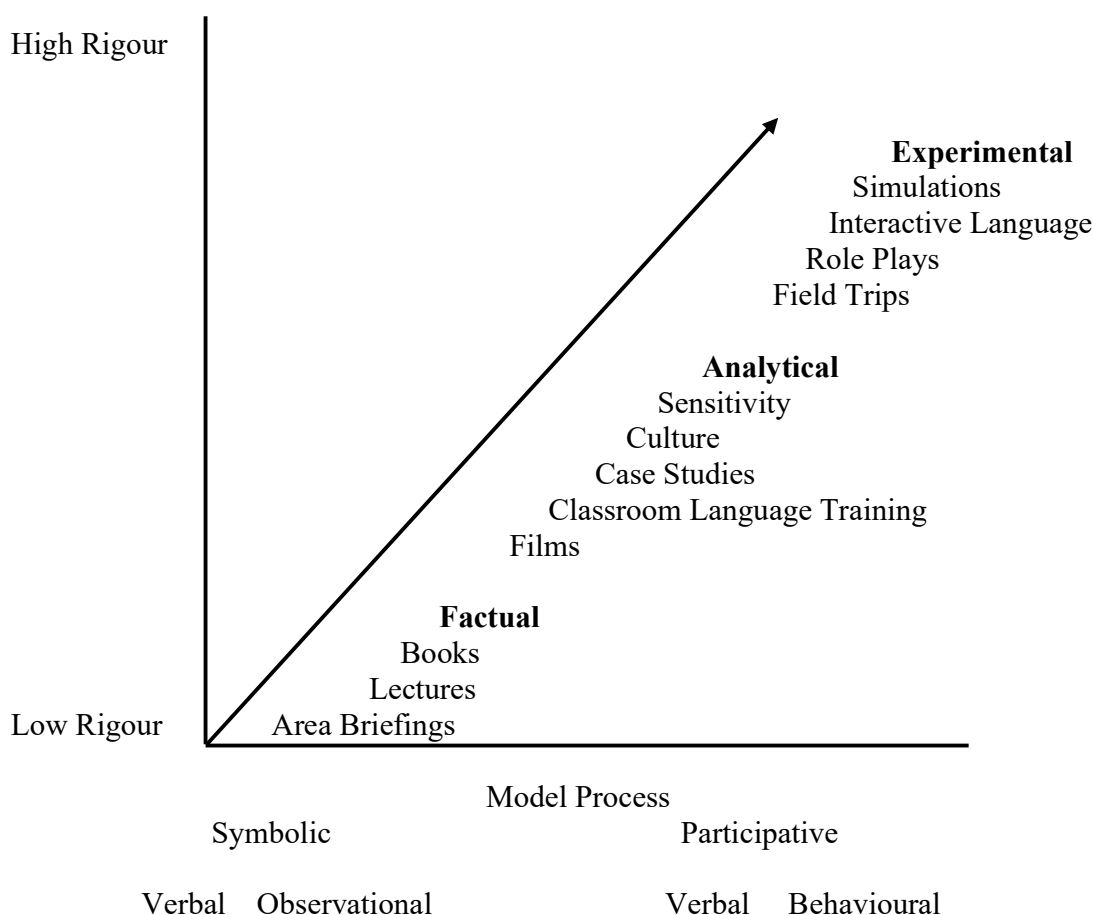
Note: Derived from Waxin and Panaccio (2005).

The more dissimilar, foreign, or strange a situation in the unfamiliar environment appears, the more negative an expatriate's attitudes are towards those circumstances. Therefore, it

is vital to develop specific experimental CCT programs for expatriate employees with a focus on the specific culture in which they work. Specific experimental CCT programs would minimise these perceived negative attitudes and would help improve expatriate employees' experiences, resulting in improved expatriation success. Black and Mendenhall's (1989) CCT rigor framework proposes a *modelling process* where the degree of rigor determines the effectiveness of the intervention with higher cognitive involvement of the participants. Figure 7.2 presents the model processes and rigour required to measure the effectiveness of CCT.

Figure 7.2

Modelling Processes, Rigour and Training Methods



Note: Sourced from Black and Mendenhall (1989).

Expatriate CCA is indispensable to MNCs for both developmental and functional reasons. While the world is getting smaller due to ICT innovations, MNCs need to remind themselves that cultural differences are genuine and will affect their expatriates' success on global assignments. *Comprehensive best practices* in CCT are one way to improve a MNC's chances of having well-adjusted expatriates on critical global assignments while reducing post-entry adjustment problems among expatriates (Caligiuri, 2001). To enable this, a more comprehensive and specific participatory experimental training, where expatriates experience simulated real-life, hands-on situations in their new culture world is required to facilitate improved expatriate adjustment (Cheema, 2012; Okpara & Kabongo, 2011; O'Sullivan et al., 2002).

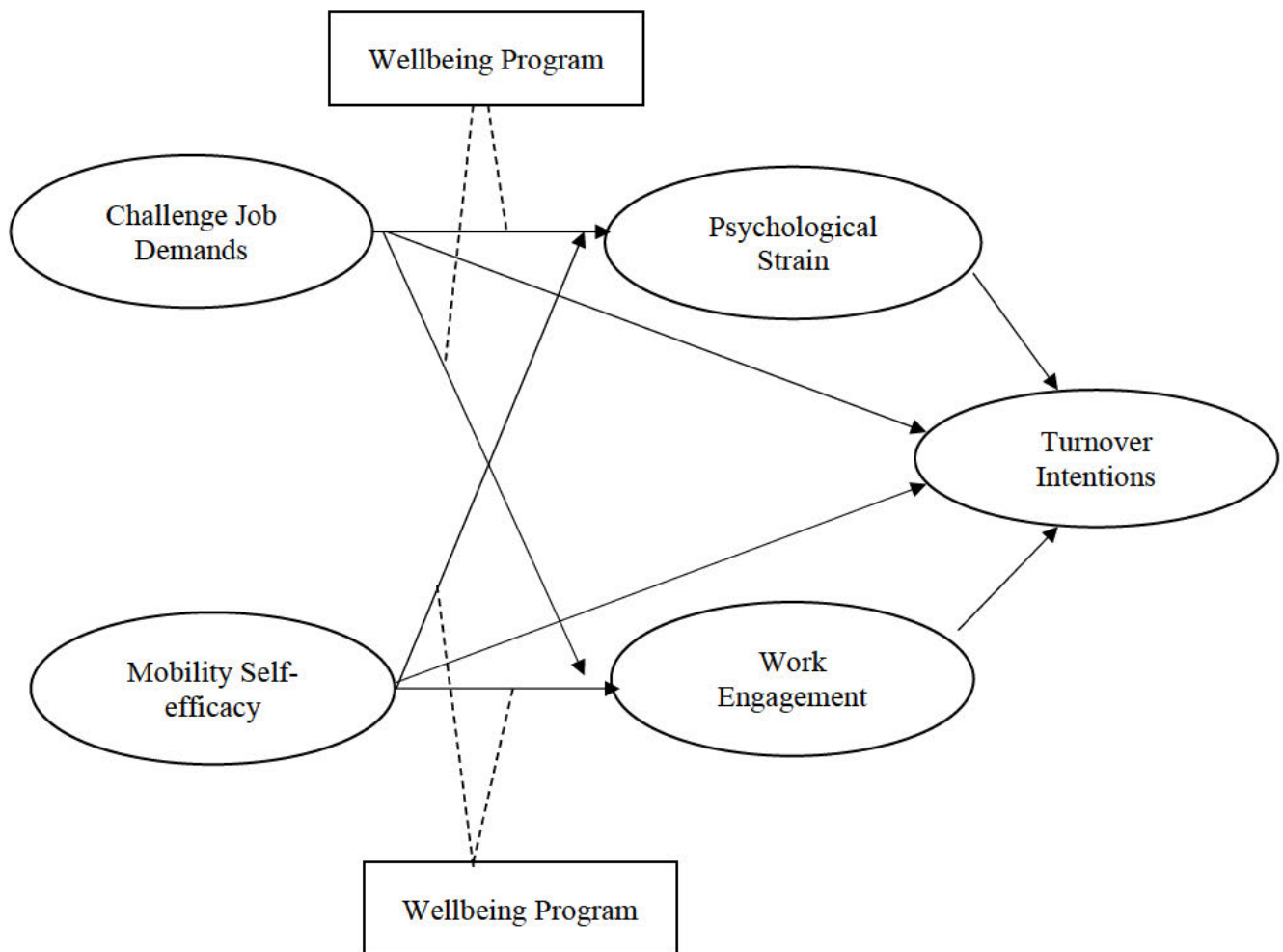
Wellbeing Programs as Post-arrival Personal Resource

Working overseas brings about significant changes in work and life, and ICT expatriate employees are recognised as a highly stressed group of individuals. This stress and strain can significantly impact their wellbeing and performance outcomes (Chen, 2019; Doki et al., 2018). When faced with a stressful situation, an individual will evaluate the potential risk or harm presented by the event. To ensure expatriate assignment success, foreign companies provide training for employees. However, traditional training is limited to language, factual training (briefings, information sessions), and pre-departure training. Thus, training to help expatriates to cope with stress under different situations is critical for employees working in a dynamic, multi-cultural project environment (Chen, 2019; Xie, 2020). However, there is a lack of CCT that focuses on stress, coping and performance framework, particularly for MNC expatriates. Shaping individuals' perceptions to anchor long-term change in behaviour is important (Chan et al., 2019).

Richardson and Rothstein (2008) claimed wellbeing programs comprising of cognitive-behavioural techniques are the most effective methods for managing occupational stress and exhibit the largest effect sizes. Similarly, Brough and Boase (2019) reported that the relationship between job demands, and work engagement is moderated by cognitive-behavioural techniques. Their study revealed that more frequent use of cognitive restructuring was associated with increased levels of work engagement during periods of high job demands and employees who did not use cognitive restructuring exhibited reduced levels of work engagement. These results further demonstrate the role of wellbeing programs as personal resources within the occupational stress process (e.g., Biggs et al., 2014b). Individual-level, stress-management strategies aim to reduce ill health by enhancing the capacity of employees to cope with stressors, rehabilitating strained individuals (Richardson & Rothstein, 2008), and enhancing work-related attitudes (Biggs et al., 2014b). Most existing wellbeing programs tend to focus on introducing stress management skills or practices (e.g., time management or problem-solving skills). The lack of implementation of individual-level, stress-management strategies is a major limitation within work-stress research (Biggs et al., 2013). A lack of emphasis on the personal awareness of stress at the affective (emotional stress) and physical (physical stress) level is also evident in the literature (Chan et al., 2018).

A wellbeing program is an initiative that focuses on reducing stressors to minimise the associated negative outcomes. Despite the wide variety of stress-related initiatives to improve employee wellbeing and performance in the literature, little empirical evaluative research on wellbeing interventions has been reported in the MNC expatriate literature. Empirical research suggests that for a wellbeing program to be effective, it should be developed to include a participatory approach and details of the process involved in implementation should be publicly

provided (Pignata et al., 2018). Person-directed (individual) interventions, such as cognitive-behavioural therapy, focus on improving an individual's coping resources. In the context of expatriates, the aim is to assist expatriates to deal more effectively with demanding situations or to modify their appraisal of specific work-related stressors to reduce the perception of threat and its associated aversive emotional responses (Pignata et al., 2018). Based on the JD-R theory, this study first aimed to explore the moderating role of a post-arrival wellbeing program as a personal resource on job characteristics and to explore its influence on study outcomes via psychological strain and work engagement as mediators. The second aim was to evaluate the effectiveness of the wellbeing program as a post-arrival training program (real-time) for expatriates. Figure 7.3 depicts the role of CCT within the JD-R model.

Figure 7.3*Role of Wellbeing Program within JD-R Model***Web-based Approach**

CCT is a process used to develop the competencies needed for successful interactions in diverse cultures. Traditionally, employees were expected to physically attend such training programs (face-to-face mode); however, technology has made it possible to implement CCT via the internet, in self-paced learning modules; this empowers expatriates to interact in a multi-

cultural setting. Electronic mental health interventions (e-interventions) have recently emerged as a promising strategy for increasing psychosocial care access (Apolinário-Hagen et al., 2018). Prolonged stress may, at times, exceed a person's capacity to cope effectively, and this is when mental healthcare may be sought. However, traditionally, the focus in mental healthcare has been on treating mental disorders and symptoms rather than promoting wellbeing (Wersebe et al., 2017). Electronic mental health interventions include a wide range of digitalised services, such as psychoeducational information, electronic patient records, e-learning, needs assessment, counselling, and self-help. Electronic-based wellbeing programs have been shown to be accessible, feasible, cost-effective, and less stigmatising than traditional face-to-face interventions (Nixon et al., 2021).

Web-based wellbeing programs can also encourage individuals to seek help in a time-effective manner. For example, Melville et al. (2009) reported that internet-based interventions have increased acceptability, user satisfaction and user engagement, with lower dropout rates among potential participants. However, these interventions also come with some limitations, including accessibility to skilled professionals, not getting help when needed, and fear of the stigma associated with mental illness (Juniar et al., 2019). Carolan et al. (2017) demonstrated the benefits of web-based wellbeing programs for improving employee wellbeing and effectiveness in a general workplace setting. Furthermore, Nardon et al. (2015) acknowledged that online adjustment resources (e.g., internet intervention) might help expatriates deal more effectively with stressful situations.

Conclusion

In this context, the current research developed and implemented an evidence-based web-based wellbeing program. Based on research indicating that strain is a major problem for

expatriate psychological adjustment in the host country, a context-specific intervention (wellbeing program based on cognitive-behavioural techniques) was designed to help reduce employee strain and improve outcomes among ICT expatriates. The web-based approach remains novel in cross-cultural evidence-based practice within the expatriate adjustment and training setting (Hattingh et al., 2012). This study embraced a unique opportunity to advance the field by considering some of the best practices to implement and measure the effectiveness of CCT (wellbeing program) and explain expatriation success in a quantifiable way.

Given the benefits of the web-based approach over traditional techniques, the next chapter of this thesis reflects on design and implementation of a context-specific program for ICT expatriates. Furthermore, this empirical study also evaluated the effectiveness of the web-based program (refer to Chapter 8), thus contributing to address a significant gap in literature.

Chapter 8: Development and validation of a Web-based Wellbeing Program for Expatriate Employees

Introductory Comments

Working globally and succeeding involves changes in work and non-work conditions and the experience of dynamic and complex environments that require unique skills for an individual to adapt and adjust in the host country (Nardon et al., 2015). Psychological strain is an occupational concern that negatively impacts employees' health and work-related outcomes (Bakker et al., 2014). It is reported that expatriates have rapidly developed mental health issues in recent times (Vijayakumar & Cunningham, 2019) and they tend to distance themselves psychologically from their new host country (Setti et al., 2020). Furthermore, the COVID-19 pandemic has significantly highlighted the need to emphasise the psychological wellbeing aspects of employees (Agteren et al., 2021). In the context of continually changing and stressful situations, there is a need for more integrated and sustainable interventions to address both wellbeing and distress (Agteren et al., 2021; Chen & Chang, 2015).

As psychological strain conditions are both preventable and treatable (Pignata et al., 2017), effective strategies to assist employees to better manage their stress experiences are emerging (e.g., Biggs et al., 2014a; Brough & Bose, 2019). Research on interventions (as resources) from a psychological perspective has revealed that such interventions can increase the likelihood of successful expatriation (Davis et al., 2018; Doki et al., 2018; Sterle et al., 2018). Evidence suggests that wellbeing programs consisting of cognitive-behavioural techniques are among the most effective methods for managing occupational stress (Bakker & de Vries, 2020; Brough & Boase, 2019).

Further the presence of physical restrictions (e.g., during COVID-19 lockdowns) has promoted the popularity of internet-based solutions for sustainable impacts in the case of lower-intensity problems or issues related to psychological distress and mental health (Agteren et al., 2021). The evidence supporting the use of web-based interventions delivered in a workplace setting has been promising (Carolan et al., 2017). Thereby, in this study, we developed and implemented a real-time web-based wellbeing program focused on improving employee coping skills to reduce employee strain and improve wellbeing among expatriate employees who were identified to have higher psychological strain while living and working in their host country. This study further advances the literature by evaluating the effectiveness of this program; this is a first in the MNC expatriate literature.

Statement of Contribution to Co-Authored paper is submitted to

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Development and validation of a Web-based Wellbeing Program for Expatriate Employees

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Abstract

Inadaptability to the host country's environment is a major reason for expatriates' non-adjustment, experiences of occupational stress, reduced work performance, and turnover. There is evidence that wellbeing issues are preventable and treatable in the workplace, especially while individuals are living and working in their host country. Thus, successful international expatriation is increasingly dependent on context-specific intervention programs. This study investigated this proposition by designing and validating a web-based wellbeing program to enhance expatriate employees' psychological wellbeing and work productivity. A total of 139 expatriate workers completed a novel quasi-experimental training program. A multivariate analysis of variance (MANOVA) was conducted to determine the effect of the program, compared to a control group, and the results demonstrated significant effects of the program over time. Taking a step further this study tested the moderating effect of wellbeing program with the JD-R model by conducting PROCESS 4.1 version moderated mediation analysis. MANVOA findings indicated the web-based wellbeing program was effective at reducing psychological strain in the long-term. The findings revealed significant interaction term between mobility self-efficacy and wellbeing program on psychological strain. Thus, indicating that person-directed program initiatives are an effective method to reduce strain, maintain work performance and increase retention for expatriate employees.

Keywords: Expatriate employee, psychological adjustment, stress intervention, wellbeing

Development and validation of a Web-based Wellbeing Program for Expatriate Employees

Success among expatriate employees in international work environments requires them to adapt to changes in both work and non-work conditions in the dynamic and complex circumstances of the host country (Nardon et al., 2015). However, the extant literature acknowledges that within multinational corporations (MNCs), expatriate employees commonly experience high levels of psychological strain, burnout, and turnover (Czaika & Haas, 2014; He et al., 2019), resulting in inadequate adjustment for expatriates to their host country (Setti et al., 2020; Vijayakumar & Cunningham, 2019). With increasing globalisation, the importance of adequate adjustment and support are increasingly recognised as valuable long-term processes to improve expatriates' work-related wellbeing, job performance, and retention (Czaika & Haas, 2014; He et al., 2019).

Retention and Performance of Expatriate workers

Within the MNC Information and Communication Technology, (ICT) sector, expatriate workers face a constant work cycle (Gopinathan & Raman, 2015) due to increasing demands, high workloads, long working hours, high pressure due to aggressive timelines, which are strongly associated with high levels of despair, pressure, and stress (Calisir et al., 2011) creating a complex work environment (Quratulain et al., 2018). In addition, expatriate employees need to repeatedly learn and unlearn new skills and advance their knowledge, thereby exposing them to rapidly changing unfamiliar situations (Singh & Mahmud, 2018). This high stress work environment ensures that many expatriate workers experience challenges with balancing their work and family life (Cabanac & Hartley, 2013), leading to decreased satisfaction, disengagement, and increased mental health issues, leading to high levels of turnover (Guha & Chakrabarti, 2014).

Knowledge-based expatriate workers who use high-level cognitive skills that are likely to be both mentally demanding and mentally challenging, is indicative that expatriate failure is a complicated issue (Wang & Varma, 2019) and requires the identification of effective ways to combat these challenges (Al Mahrouqi, 2018). A well-integrated, targeted, and sustainable program that effectively address expatriate employees' psychological wellbeing is, therefore, considered an important resource for expatriates within their host environment (van Agteren et al., 2021; Naeem et al., 2020).

Work-related Wellbeing Programs

Work-related wellbeing is defined as the optimal experiences and positive functioning of an individual at work (Brough et al., 2009; Morrow & Brough, 2017) and is conceptualized as both the presence of promotional factors (e.g., work engagement), which can foster employee's work-related health, and the absence of detrimental conditions (e.g., stress, burnout; see Bakker, 2015). Evidence suggests the common occupational stressors experienced by expatriate workers are largely preventable and treatable within the workplace and that workers who experience such preventative treatments are highly productive (Pignata et al., 2017). For example, stress management interventions (i.e., wellbeing programs) based on cognitive-behavioural techniques have been demonstrated to be one effective work-related wellbeing program for managing occupational strain. More specifically, the use of cognitive restructuring has been demonstrated to increase employees' levels of work engagement; Bakker & de Vries, 2020; Brough & Boase, 2019), work-life balance and wellbeing (Biggs et al., 2014; Brough & Biggs, 2015), and to reduce levels of turnover (Holman & O'Connor, 2018). Evidence also indicates that online resources (i.e., web-based programs) are effective with assisting expatriate workers to manage their common occupational stressors (Nardon et al., 2015). Effective internet-based programs

have demonstrated their cost-effectiveness and are readily accessible, feasible and less stigmatising compared with many traditional in-person interventions (Juniar et al., 2019; Nixon et al., 2021). They are also sustainable and offer flexibility of use for fast-paced work environments (Pardes, 2020) and during physical work location restrictions, such as recent COVID-19 lockdowns (van Agteren et al., 2021).

Despite the evidence suggesting the prevalence of poor psychological wellbeing among expatriate employees, there is a lack of research assessing the effectiveness of work-related wellbeing programs to assist such workers while they are living and working within their host country (Pignata et al., 2017). Research on the role of resources, defined as, “anything perceived by the individual to help attain his or her goals” (Halbesleben et al., 2014, p. 1338; which can be important determinants of adaptation to new environments), has especially been neglected in expatriate contexts (Knight et al., 2017). Research identifies those positive psychological interventions can be a promising tool for enhancing employee wellbeing and performance (Wingerden, Bakker & Derks, 2016). However, to date, no studies have examined an intervention and attempted to foster work engagement and improve wellbeing within the expatriate context. Therefore, the current study draws on a common explanation of occupational stress, the Job-Demands Resources (JD-R) model to investigate the extent to which a novel wellbeing intervention program optimizes expatriate employee’s work attitudes and organisational-behavioural outcomes (namely, turnover intention and work engagement).

Job Demands-Resources Model

This study adopts the JD-R model as a theoretical framework. The central assumption of the JD-R model is that there are two broad categories of work variables associated with burnout: job demands and job resources (Demerouti et al., 2001). Job demands refer to physical, social, or

organisational aspects of a job that require physical and/or cognitive effort and are, therefore, associated with physiological and psychological costs. Job resources refer to the work variables which enable goal achievement and can reduce job demands. Job resources also stimulate personal growth and development. The JD-R model suggests that when job demands are high, additional effort must be exerted to achieve work goals and to prevent decreased performance, resulting in psychological strain (Demerouti et al., 2001, p. 501). Excess demands and insufficient job resources produce an energy-depleting effect on employees through a strain process (Bakker & Demerouti, 2007). In contrast, associations between high job resources and positive work outcomes through a motivational process are well documented. However, the assessment of personal resources within the JD-R model is still relatively rare (Bakker & Demerouti, 2008; Brough & Boase, 2019).

Within the challenge–hindrance framework, Cavanaugh et al. (2000) distinguished between challenging job demands (cognitive job demands) as inducing strain yet also promoting mastery and facilitating personal development (Brough et al., 2018; Webster & Adams, 2020). Many studies have reported a positive relationship between challenging job demands and outcomes such as work engagement (Brough et al., 2018; Tadić & Oerlemans, 2015), and negative associations with psychological strain and turnover intentions (Gerich & Weber, 2020; Van Laethem et al., 2019). This suggests that challenge demands foster positive outcomes, particularly when combined with sufficient personal resources (van Wingerden et al., 2015).

Recent formulation of the JD-R model proposes that personal resources have similar motivational potential to job resources (Bakker et al., 2014), often defined as factors of the self generally associated with resilience. Personal resources are positive self-evaluations and have the

potential to attenuate the negative impact of job demands on health outcomes and/or wellbeing (Schaufeli & Taris 2014). The acceptance of personal resources such as self-efficacy (Kim & Hyun, 2017) within the JD-R model is gaining popularity (Bakker & de Vries, 2021). Studies have revealed that employees who use their personal resources (identifying innate resources) best alleviate job demands (Brough et al., 2018; Chan et al., 2017). However, the role of employees' personal characteristics as an important determinant of burnout, work engagement, and consequently, work-related outcomes, has been neglected (Huang et al., 2016), particularly in expatriate adjustment research (Cooper, 2021). This study aims to address this significant gap in expatriate context.

Integration of a Wellbeing Program within the JD-R model

The JD-R model demonstrates that resources have a motivational potential in the stress-strain relationship (Bakker et al., 2014). For instance, Brough and Boase (2019) demonstrated employees who utilised personal resources (e.g., cognitive restructuring) obtained from stress management training, successfully reduced negative impacts of occupational stress. Their study also indicated that when experiencing high levels of strain, the active use of cognitive restructuring is a preferred and effective option for managing stress. Further, they emphasised that it is not the quantity of resources available to individuals that is important but, rather, the opportunity to actively use these resources to manage stress experiences that has a greater impact. Thus, it is apparent there is growing interest in how personal resources, including skills obtained from workplace wellbeing interventions, influence employees' psychological and organisational outcomes (Brough & Boase, 2019; Pignata et al., 2018).

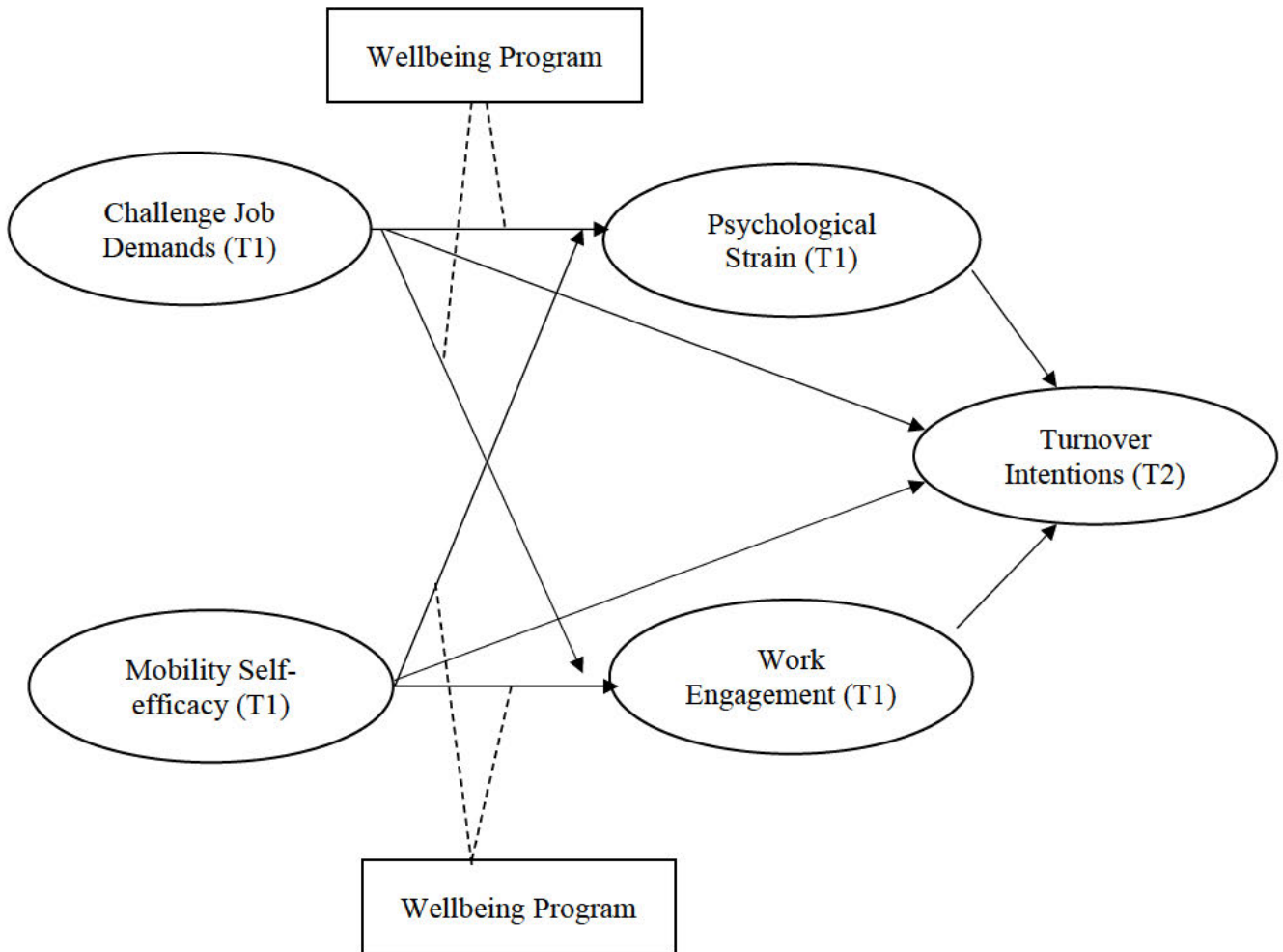
The consideration of stress management interventions as a personal resource has also indicated these programs can increase the likelihood of successful expatriation (Sterle et al.,

2018) and reduce the impact of the stress-strain process for expatriate employees (Lloyd et al., 2017). Mayerl et al. (2016) for example, found personal resources were negatively related to mental strain and health problems reported by expatriate employees and suggested that programs aimed at maintaining workplace wellbeing act on two levels: a) reducing work-related mental strain, and b) strengthening innate resources. The JD-R theory suggests that interventions that focus on improving behaviours and styles can modify actual or perceived psychosocial job characteristics, which in turn can impact psychological outcomes (e.g., Biggs et al., 2013).

Given these positive relationships, it is important for both individuals and organizations that employees have an adequate number of resources available. Thus, creating ways for employees to acquire new skills, knowledge, and problem-solving abilities (Bakker & Demerouti, 2014) which may optimise work characteristics and improve outcomes, is the central aim of the JD-R intervention (wellbeing program) utilised in this study (see Figure 1). The moderation effect of a wellbeing program on key work characteristics and psychological outcomes is therefore the focus of this research.

Figure 8.1

Hypothesised JD-R Model



The Current Research

Given that many of the problems experienced by expatriates are experiences encountered upon their arrival in a host country (Platanitis, 2017), assisting them to deal more effectively with demanding situations or to modify their appraisal of specific work-related stressors to reduce the perception of strain and its associated aversive emotional responses (Pignata et al., 2018), remains important. Recognition of these issues occurring within ICT expatriate workers is particularly evident (Vijayakumar & Cunningham, 2018). However, a lack of research on the consideration of wellbeing programs as personal resources is a significant limitation within the work-stress literature (Burgess et al., 2020) and especially within the expatriate literature (Sterle et al., 2018). This study, therefore, aims to advance this literature by developing and validating the effectiveness of a web-based wellbeing program focused on improving coping skills, reducing strain, and improving wellbeing among expatriate employees who reported high levels of psychological strain. To our knowledge, no other work has evaluated a wellbeing program for MNC expatriate employees while they are living and working in their host country.

The bottom-up crafting of job demands, and resources initiated by employees themselves, has a substantial role in recent iterations of the JD-R model (Bakker & Demerouti, 2014). This study, therefore, focuses specifically on resources at an individual level following Nielsen et al. (2017), where personal characteristics or behaviours enable individuals to better cope with their job demands and attain their work-related goals, thereby promoting wellbeing and improved performance outcomes. This study was also informed by recent calls to formally evaluate the impact of wellbeing programs (Brough et al., 2018; Pignata et al., 2017) and to evaluate their effectiveness at increasing employee psychological wellbeing by targeting a reduction in

psychological strain. Therefore, the current study aims to directly address this gap in the literature by assessing the following hypotheses:

Hypothesis 1: Expatriate employees' levels of challenge job demands (H1a) will significantly decrease; and mobility self-efficacy (H1b) will significantly increase after completing the wellbeing intervention program (T2), as compared to their baseline levels prior to the intervention (T1) and compared to the control and low-stress groups.

Hypothesis 2: Expatriate employees' levels of psychological strain (H2a) and turnover intention (H2b) will significantly decrease, and their work engagement (H2c) will significantly increase after completing the wellbeing intervention program (T2), as compared to their baseline levels prior to the intervention (T1) and compared to the control and low-stress groups.

Recent perspective of the JD-R model describe how personal resources refers to the psychological capabilities that serve as the basis for easier adaptation to life's changes and circumstances (Novaes et al., 2020), and that these resources moderator the relationship between work characterises and outcome. However, the role of personal resources requires further clarification, particularly in regard to understanding personal-level moderators (Lloyd et al., 2017). In sum, theory and research suggest that employees with low resources may be more vulnerable to the impact of occupational stressors, however, to our knowledge, no research has examined how expatriate employees respond to interventions designed to reduce strain. Based on this consideration, the present study investigated the influence of a wellbeing program as a moderator on occupational strain and outcomes, thereby, contributing to theoretical discussions (Lloyd et al., 2017). Figure 8.1 depicts the hypothesised model developed by this research and the following hypotheses were formulated:

Hypothesis 3: The wellbeing intervention program will moderate the relationship between challenge job demands and turnover intentions via psychological strain (H3a) and work engagement (H3b), such that those who participate in the intervention program report lower psychological strain and turnover intentions, compared to both the control and low-stress groups over time (H3c).

Hypothesis 4: The wellbeing intervention program will moderate the relationship between mobility self-efficacy and turnover intention via work engagement (H4a) and psychological strain (H4b), such that those who participate in the intervention program will report lower psychological strain and turnover intentions than both the control and low-stress groups over time (H4c).

Methods

Participants

Two methods were employed for research sample recruitment. Personal and professional networks, including LinkedIn, a national computer society and the Information Technology Professionals Association, were employed to recruit participants. Prolific, an online recruitment platform, was also employed to recruit a (paid) research sample. A total of 270 employees within the ICT sector who were living in a host country on a skilled work visa were invited to complete the electronic self-report survey at Time 1. A total of 202 completed electronic surveys were returned at Time 1 (response rate of 75%; July 2020). The questionnaires were administered a second time to all the Time 1 respondents after an 8-month time lag (February 2021). A total of 139 completed surveys were returned at Time 2 (response rate of 69%) and were matched with the Time 1 responses via a unique respondent identifier. Unmatched cases were deleted. Data screening was conducted with IBM SPSS 27.0 software. The missing completely at random

(MCAR) test ($\chi^2 = 1219.59$; $df = 1260$; $p = .78$) indicated that estimation of missing data via expectation–maximisation imputation was appropriate.

Of the 202 participants who completed Time 1, 53 participants obtained above threshold scores for psychological strain at Time 1 and were invited to participate in the 8-week web-based wellbeing program from November to December 2020. A total of 31 completed the 8-week program (intervention group). The remaining 22 participants formed the control group. Participants who exhibited low stress formed a second control group ($n = 86$).

Among the matched ($N = 139$) survey respondents, the majority were male ($n = 94$; 67.6%), with an average age of 32 years (age range 23–45 years, $SD = 5.56$ years). Nearly half of the research participants were Caucasian ($n = 66$; 47.5%); the second most common ethnic group was Asian/Pacific Islanders ($n = 52$; 37.4%). Approximately 21% ($n = 29$) of respondents held U.S. work visas, 11% ($n = 15$) held U.K. work visas, and 10% ($n = 14$) had skilled work visas from Australia or New Zealand. Most respondents were employed as computer analysts, software developers and engineers ($n = 71$, 51%), or were team leads or managers in these fields ($n = 29$; 21%). Respondents reported their highest education qualification as either a bachelor's degree ($n = 68$; 49%) or a master's degree ($n = 57$; 41%).

Research and Intervention Study Design

The study adopted a quasi-experimental, mixed-methods research design with four phases: (a) pre-assessment phase (Time 1), (b) web-based wellbeing program phase, (c) intervention evaluation phase, and (d) post-assessment phase (Time 2). Pre-assessment and post-assessment consisted of a series of psychometric tests to measure challenge job demands, job-personal resources (Mobility Self-efficacy) and dependent variables of psychological strain, work engagement, and turnover intentions.

Based on the literature, the intervention phase contained a participatory module and provided a platform for participants to assess their key stressors, learn to effectively cope with these stressors, and to improve their level of mental health. The intervention was a cognitive-behavioural wellbeing program focused on stressful thoughts, behaviours, and emotions. The design of the wellbeing program was based on a Kaizen-inspired intervention tool (Nielsen & Noblet, 2018). The wellbeing program was conducted sequentially over 8 weeks. In week one, participants identified one work-related stressful event that they had recently experienced and entered the details into a worksheet. In week two, participants were asked to focus on that stressful situation and complete a reflective worksheet. In week three, participants were encouraged to generate an alternative thought process, i.e., cognitive restructuring (for example, challenging reflexive reactions) of the stressful situation. In week four, participants were encouraged to approach the situation via alternative approaches, where each participant tried to apply the restructured thoughts to their real work setting. Finally, in weeks five to eight, the tasks completed in weeks one to four were repeated for a second stressful event identified by each participant.

Intervention Process Evaluation

A process evaluation of the wellbeing program was conducted with four primary aims: (a) to assess the success of the wellbeing program recruitment methods, (b) to assess fidelity to the intervention guidelines provided before the intervention, (c) to examine hindrances for wellbeing program success, and (d) to assess wellbeing program participants' levels of satisfaction, based on Nielsen and Randall's (2013) guided process tool checklist.

Procedure

This study was approved by the University's research ethics committee (227/2020). At the beginning of each intervention week, participants received a weblink with instructions and an explanation of what was expected of them. For example, after completing the week 1 wellbeing program, participants received the week 2 link via email. After completion of the 8-week wellbeing program, all intervention group participants were invited to complete an evaluation survey, consisting of 14 questions. A total of 23 (74%) participants completed the evaluation survey. Two months after completion of the intervention, the post-treatment (T2) survey was completed by participants from all three groups.

Measures

Cognitive Job Demands

The nine-item job demands measure was used to assess two types of demands (Wall et al. 1995). An example item is: "Do you have to keep track of more than one task at once?" The measure comprises two subscales to measure *monitoring demands* (four items) and *problem-solving demands* (five items). Each item was scored on a five-point Likert scale (1 = *not at all* to 5 = *a great deal*).

Mobility Self-efficacy

Mobility self-efficacy beliefs were measured on a four-item scale that assesses self-efficacy for moving and adapting to new places and cultures (Waibel et al., 2018). Example items are: "I can easily find my way in new surroundings," and "I feel confident in dealing with people of other cultures." Participants responded on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*), with high scores indicating high self-efficacy.

Psychological Strain

The 12-item GHQ (Goldberg, 1972) was used to assess psychological strain. Respondents report the extent to which they are currently experiencing 12 symptoms of strain. An example item is: “Lost much sleep over worry?” (0 = *not at all*, 3 = *much more than usual*). Responses were recorded on a four-point response scale and high scores indicate high strain. Previous research has provided evidence of a two-factor model of psychological strain consisting of anxiety/depression and social dysfunction (Hystad & Johnsen, 2020).

Work Engagement

Work engagement was measured with the nine-item Utrecht Work Engagement Scale (Schaufeli et al., 2006). An example item is: “When I get up in the morning, I feel like going to work.” Participants responded on a seven-point scale (0 = *never* and 7 = *every day*), with high scores indicating high levels of engagement.

Turnover Intentions

Brough and Frame’s (2004) three-item measure was included as a criterion variable. A sample item is: “How often do you actively look for jobs outside your organisation?” Responses were recorded on a frequency scale (1 = *never* to 5 = *great deal*), with high scores indicating high turnover intentions.

Evaluation Survey

The study evaluation survey questions were designed based on Nielsen and Randall’s (2013) guided process tool checklist. Example items include: “How valuable were the activities tailored to you and your experiences?” and “How useful and engaging would you say the overall content was?” Responses were recorded on a four-point Likert scale ranging from *ineffective* to *very effective*.

Statistical Analyses

All data analyses were performed with IBM SPSS Statistics version 28. Missing values were imputed using maximum likelihood estimation with the expectation-maximisation algorithm. To assess the intervention effectiveness and test hypothesis 1 and 2, a series of repeated measures MANOVAs in SPSS version 27 were performed. Repeated measures MANOVA (Wilk's criterion) was the most appropriate method for examining whether the intervention led to changes in all the study variables. The intervention condition was dummy coded, with "1" representing the intervention group, "2" representing the control group and "3" representing the non-stress group. This enabled assessment of the main and interacting effects of time (within-subject factor) and intervention condition (between-subject factor) on the dependent variables. When significant effects were observed, univariate results were analysed for each research construct to identify individual measures that produced significant effects. Additionally, partial η^2 was used as an effect size measure. An effect size between 0.01 and 0.05 is typically considered small, an effect size between 0.06 and 0.13 is considered moderate, while an effect size equal to or greater than 0.14 is considered large (Richardson, 2011; Schäfer & Schwarz, 2019).

In addition to testing intervention effects, this study examined the underlying theoretical mechanisms of JD-R theory. The hypothesised moderated mediation model (see Figure 1) was tested with challenge job demands and mobility self-efficacy as the Time 1 predictor variables and two separate models using the PROCESS macro V4.1 (Hayes, 2022) in SPSS V 28 was evaluated to assess the significance of the indirect effects at differing levels of the moderator (intervention, control, and non-stress groups). The hypothesised moderated mediation model (see Figure 1) was tested in a single model using a bootstrapping approach to assess the significance

of the indirect effects at differing levels of the moderator. Moderated mediation analyses test the conditional indirect effect of a moderating variable (training program) on the relationship between a predictor (challenge job demands and mobility self-efficacy) on outcome variable (i.e., turnover intention) via two mediators (i.e., psychological strain and work engagement). This macro enables the testing of relationships involving a combination of mediation and moderation using bootstrapped estimates and bias corrected confidence intervals to assess significance. For each analysis, variables were mean centred, analyses were conducted with 5,000 bootstrap samples, and 95% bias corrected confidence intervals and heteroscedastic-consistent standard errors (HSE) were employed.

Results

Descriptive Statistics

The means, standard deviations, correlations, and reliabilities between all study variables at both measurement points and between groups are displayed in Table 8.1. As expected, significant relationships were observed between the predictor variables (challenge job demands and mobility self-efficacy) and the dependent variables (psychological strain, work engagement and turnover intentions) at both Times 1 and 2. Specifically, the mean scores for psychological strain were reduced for the intervention group from Time 1 to Time 2, translating to an improvement of mobility self-efficacy for this group over time. Interestingly, the intervention program did not show any impact on work engagement or turnover intentions for this group.

Table 8.1

Means, Standard Deviations, Cronbach's alpha coefficients (on the diagonal) of the research variables on Time 1 and Time 2

Variables	Mean	SD	CJD (T1)	CJD (T2)	MSE (T1)	MSE (T2)	PS (T1)	PS (T2)	WE (T1)	WE (T2)	TI (T1)	TI (T2)
CJD (T1)	31.8	5.7	(.81)									
CJD (T2)	31.2	5.4	.41***	(.78)								
MSE (T1)	15.2	2.4	.22***	.05	(.71)							
MSE (T2)	15.4	2.5	.14	.30***	.42***	(.77)						
PS (T1)	14.3	6.4	.01	.18*	-.05	.13	(.88)					
PS (T2)	12.9	6.3	-.13	.21*	.07	-.02	.58***	(.89)				
WE (T1)	34.2	7.8	.30***	.14	.25***	.08	-.16	-.02	(.89)			
WE (T2)	34.3	7.9	.15	.36**	.07	.25***	-.10	-.12	.54***	(.90)		
TI (T1)	6.6	3.2	.14	.13	.06	.13	.45***	.31***	-.31***	-.21*	(.82)	
TI (T2)	6.7	3.1	-.01	.19*	.06	.06	.32***	.47***	-.13	-.28**	.58**	(.87)

Note: T1 = Time 1; T2 = Time 2. CJD = Cognitive Job Demands, MSE = Mobility Self-efficacy, PS = Psychological Strain, WE =

Work Engagement, TI = Turnover Intentions.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Hypotheses Testing – Examining the Effects of the Wellbeing Program

To test Hypotheses 1 and 2, a repeated measures multivariate analysis of variance (MANOVA) was conducted to examine the effectiveness of the intervention on the research variables. Both between- and within-subjects effects were evaluated simultaneously for all research variables. The between-subjects effect represents the effect of the wellbeing program conditions (intervention, control, and low-stress group). A significant difference was found between the three groups ($F(10, 264) = 2.87, p = .002$, partial $\eta^2 = .09$, observed power = .97), which suggests that the wellbeing program produced significant positive effects on the intervention group as compared to the control and low-stress groups ($p < .002$).

The within-subjects tests the timing effect between T1 (pre-test) and T2 (post-test). The results revealed a significant time effect ($F(5, 132) = 6.01, p < .001, \eta^2 = .18$, observed power = .99), indicating that the results for all groups have changed over time. The repeated measures MANOVA revealed a significant interaction between time (pre-test and post-test) and the group conditions with the significant interaction effect being $F(10, 264) = 3.06, p = .001, \eta^2 = .10$, observed power = .97. Univariate analyses showed that the groups differed significantly on psychological strain ($p < .001$) and mobility self-efficacy ($p = .05$) over time.

Table 8.2*Scale descriptive and mean differences across Times and Groups (N = 139)*

Variables	Intervention Group (N = 31)		Control Group (N = 22)		Low-Stress Group (N = 86)		Time				Time X Groups		
	Mean	SD	Mean	SD	Mean	SD	Type III sum of squares	F		η^2	Type III sum of squares	F	η^2
CJD (T1)	31.72	6.04	31.95	5.90	31.80	5.64	CJD	5.66	0.39	0.02	13.01	0.38	0.003
CJD (T2)	31.64	5.16	31.95	5.95	30.87	5.35	MSE	15.76	4.58	.033**	20.32	2.95	.04**
MSE (T1)	15.29	2.53	14.41	2.87	15.39	2.29	GHQ	335.96	22.66	.14***	298.56	10.07	.12***
MSE (T2)	15.80	2.55	15.73	2.14	15.24	2.58	WE	9.75	0.34	0.003	55.13	0.99	0.01
GHQ (T1)	17.65	5.00	18.36	4.91	12.00	6.09	TI	1.60	0.38	0.003	3.59	0.42	0.006
GHQ (T2)	13.90	5.49	14.09	6.75	12.28	6.42							
WE (T1)	33.19	7.86	29.95	8.85	35.63	7.07							
WE (T2)	32.55	7.55	32.06	9.00	35.49	7.65							
TI (T1)	6.58	3.28	7.73	2.98	6.36	3.13							
TI (T2)	7.10	3.42	7.79	2.92	6.31	3.06							

* $p < .05$, ** $p < .01$, *** $p < .001$.

Taken together, these results revealed that the intervention group reported a small but significant reduction in challenge job demands and improved mobility self-efficacy (see Table 8.2). However, there was a reduction in challenge job demands and mobility-self-efficacy also observed by the other two groups, thus partially supporting H1a and H1b. However, despite the reduction of psychological strain, work engagement was lower, resulting in higher turnover intentions among the intervention group. Thereby offering support to H2a, and no support was produced for H2b and H2c. Despite these results, the evaluation process clearly indicated that 77% of the study participants ($n = 24$) found the wellbeing program to be effective, revealing that participants were optimistic about the program, which helped them to mitigate strain and provided them with the skills to effectively manage with these strains.

In addition to testing the intervention effects, this study examined the moderating role of the wellbeing program (informed by the JD-R model) to test Hypotheses 3 and 4. For each predictor variable (challenge job demands (Model 1) and mobility self-efficacy (Model 2)), we modelled both mediators (psychological strain and work engagement) simultaneously in the regression equation (Model 7 PROCESS V 4.1). This study observed no difference in psychological strain at T1 between the intervention group and control group ($\beta = .69$, $SE = 1.3$ $p = .61$). Nevertheless, the results showed that there was significant difference between the intervention group and low-stress group ($\beta = -5.63$, $SE = 1.1$, $p < .001$), suggesting that members of the low-stress group had lower psychological strain compared to those in both the intervention and control groups.

Moderated Mediation for Challenge Job Demands

To assess Hypothesis 3, Model 1 with challenge job demands as the predictor was tested. The results revealed significant pathways from challenge job demands to psychological strain for the intervention group ($\beta = -.25$, $SE = .14$, $t = -1.70$, $p = .09$) compared with the control group. However, the pathways were insignificant for work engagement ($\beta = .32$, $SE = .25$, $p = ns$) and turnover intentions ($\beta = .00$, $SE = .05$, $t = .06$, $p = ns$). The direct effect between psychological strain at T1 and turnover intention at T2 was significant ($\beta = .15$, $SE = .05$, $p = .003$). However, the pathway between work engagement (T1) and turnover intentions (T2) was insignificant ($\beta = -.03$, $SE = .04$, $p = ns$). The conditional indirect effects of challenge job demand (T1) on turnover intentions (T2) via psychological strain (T1) for the intervention group was $\beta = -.03$, $SE = .02$, 95% CIs $[-.09, .006]$. For the control group the indirect effect was $\beta = .04$, $SE = .02$, 95% CIs $[-.00, .09]$ and for the low-stress group it was $\beta = .00$, $SE = .01$, 95% CIs $[-.03, .04]$. The results revealed that participants in the intervention group perceived job demands as more challenging and reported a reduction of psychological strain to a greater extent compared to members of either the control and low-stress group. However, this effect was insignificant. The interaction terms between challenge job demands and the wellbeing program fell short of reaching statistical significance ($p = .07$). Overall, the results demonstrated partial support for H3a and H3c and no support for H3b.

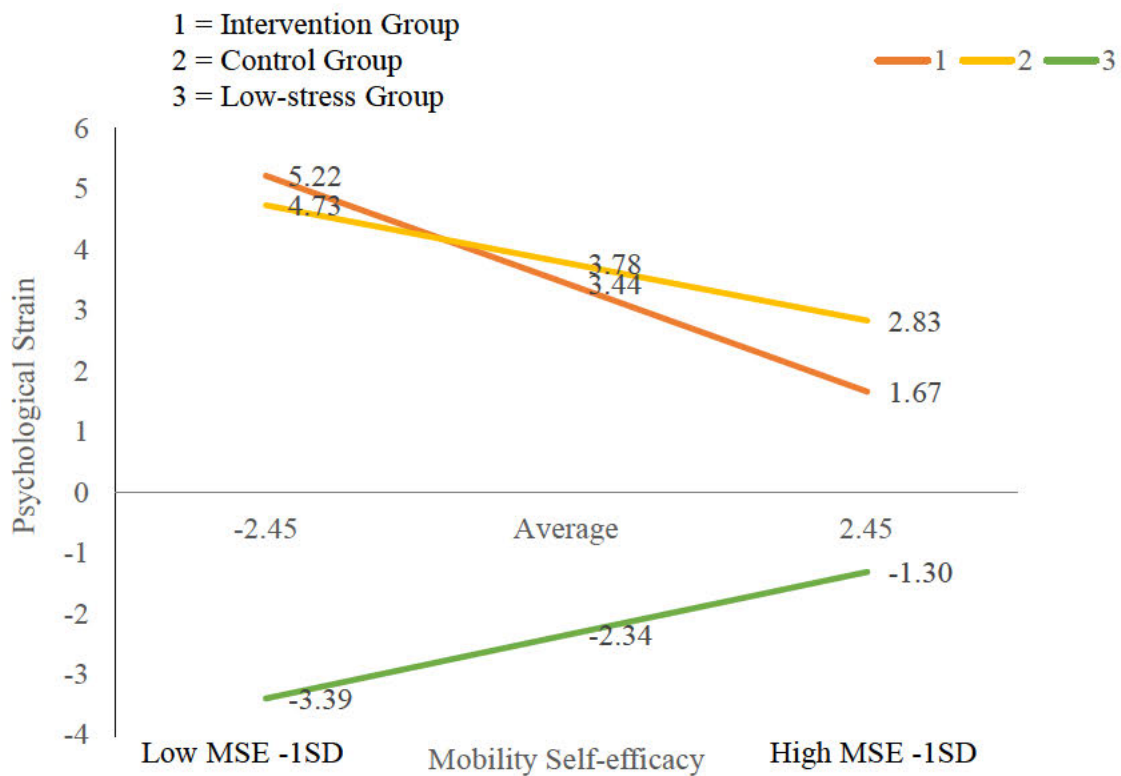
Moderated Mediation for Mobility Self-efficacy

For testing Hypothesis 4, Model 2 with mobility self-efficacy as the predictor variable was tested. The results revealed non-significant pathways from mobility self-efficacy to work engagement ($\beta = -.93$, $SE = .144$, $t = -.66$, $p = ns$). However, the association from mobility self-efficacy to psychological strain ($\beta = -.72$, $SE = .31$, $p = .02$) was significant. The path between

mobility self-efficacy and turnover intentions over time ($\beta = .14$, $SE = .10$, $p = .16$) was also non-significant. The direct effect between psychological strain and turnover intention was significant ($\beta = .15$, $SE = .48$, $p = .002$), but the association between work engagement (T1) and turnover intention (T2) was non-significant ($\beta = -.04$, $SE = .03$, $p = ns$). The conditional indirect effects of mobility self-efficacy (T1) on turnover intentions (T2) via psychological strain (T1) for intervention group was $\beta = -.11$, $SE = .05$, 95% CIs $[-.24, -.01]$. For the control group the indirect effect was $\beta = -.05$, $SE = .05$, 95% CIs $[-.17, .05]$ and for the low-stress group it was $\beta = .06$, $SE = .05$, 95% CIs $[-.01, .20]$. The results revealed that with increased mobility self-efficacy, the participants in the intervention group experienced reduced strain compared to members of both the control and low-stress groups. Thereby, supporting hypothesis H4b. Further, the interaction term between mobility self-efficacy X wellbeing program was significant for the psychological strain path, indicating that the wellbeing program effectively moderated the relationship between mobility self-efficacy and psychological strain for the intervention group ($\beta = -.72$, $SE = .31$, $p = .02$, 95% CIs $[-1.34, -.10]$) compared to both the control ($\beta = -.38$, $SE = .35$, $p = ns$, 95% CIs $[-1.09, .31]$) and low-stress group ($\beta = .42$, $SE = .30$, $p = ns$, 95% CIs $[-.18, 1.03]$), thus offering support to H4c. Figure 8.2 depicts the interaction effect between mobility self-efficacy and the wellbeing program for psychological strain. The results indicated that those who participated in the intervention group had reduced strain and improved mobility self-efficacy over time.

Figure 8.2

Interaction of Mobility self-efficacy and wellbeing program on psychological strain



Note: MSE = Mobility Self Efficacy

Discussion

Psychological strain within expatriate employees' work and non-work environments is high and will remain so in the future given the changing global work environment (Giorgi et al., 2016). The current study described research responding to recent calls to extend our current understandings of expatriate adjustment based on a dynamic framework and to examine vital questions from a stress perspective (Doki et al., 2018; Sterle et al., 2018). The current study designed and implemented an 8-week wellbeing program and examined its effectiveness in reducing psychological strain among expatriate employees living and working in their host

countries. To our knowledge, this is the first study to have developed and investigated the feasibility of a web-based wellbeing program for expatriate employees, an emerging area of interest in the international human resource management literature (Naeem et al., 2020). The intervention program was based on the theoretical assumptions of the JD-R model (Bakker & Demerouti, 2014), which state that optimizing job demands and improving (personal and job) resources may decrease strain and subsequently improve positive outcomes over time.

It is evidence from the JD-R literature that individuals with low resources utilise fewer coping mechanisms and experience high levels of strain. Whilst personal resources have been found to moderate the impact of workplace stressors on various indices of occupational strain (Mayerl et al., 2016). Thereby, the primary objective of this study was to extend this line of research and assess the wellbeing program as a moderator on key work and non-work characteristics and their associated psychological outcomes. The results revealed the wellbeing program moderated the association between mobility-self-efficacy and turnover intentions at T2 via psychological strain, such that expatriate employees who participated in the wellbeing program had reduced strain and improved mobility self-efficacy over time. The results were also indicative that employees with high levels of psychological strain reported stronger intervention effects, relative to employees with low levels of psychological strain (Lloyd et al., 2017). Thus, suggesting that offering training via wellbeing programs is a highly effective method for reducing occupational strain and assisting workers to identify effective coping strategies, especially during crisis such as COVID-19 (Gabriel & Aguinis 2022).

Interestingly, the intervention group reported low work engagement and high turnover intentions over time. One explanation for this finding could be that resources may take some time to reflect changes on these criterion variables (Mastenbroek et al., 2015). Future research

over a longer follow-up period is required to substantiate this explanation. Another explanation may be that some participants experienced fluctuations in their work engagement and available resources daily, suggesting sustained engagement was an issue that could lead to higher attrition rates (Howarth et al., 2018; Xanthopoulou et al., 2008). Using larger samples in future studies would help to verify this interpretation.

The overwhelmingly positive responses in the evaluation phase suggested that those who did take part in the intervention perceived it to be beneficial. Over the 8 weeks, intervention participants cultivated their ability to reflect and to increase their self-acceptance and their perceptions about their situation (Mastenbroek et al., 2015). Despite low participation and limited statistical results, this study has found evidence of the effectiveness of the program, consistent with other intervention studies in related fields (e.g., Knight et al., 2017), suggesting that person-directed (rather than organisation-directed) interventions are effective in reducing psychological strain (Bakker & de Vries, 2020). These intervention results also highlight the need to go beyond statistical evaluations of programs to incorporate evaluation process and to examine the extent to which program plans are adhered to (Abildgaard et al., 2016).

Theoretical Implications

The present study makes four main theoretical contributions. First this study proposes that before intervention programs are designed, comprehensive theoretical models should be considered to provide an integrative structure to include specific work stressors at the individual level (Burgess et al., 2020; Tetrick & Winslow, 2015). To date, this point has not received sufficient attention in MNCs expatriate employee research. Without better theoretical frameworks to guide the design and evaluation of programs, empirical evidence in support of the

relevant interventions will remain insufficient. Thus, we recommend future research to consider a more dynamic perspective on expatriate experiences and their outcomes.

Second, this is the first study that revealed significant effects of a wellbeing program as JD-R intervention aimed at optimising work and non-work characteristics by reducing strain and improving positive outcomes. There is evidence that context-specific wellbeing programs compared with traditional programs, can be effective in helping expatriates successfully adapt to their host country (Naeem et al., 2020). Theoretically, this study was one of the first to investigate a work-related wellbeing program as a personal resource among MNC expatriate employees who are living in their host country, highlighting its saliency as an important asset for expatriate employees. Thus, this study overwhelmingly supports its inclusion within the JD-R framework and highlights the importance of considering individual needs (Lloyd et al., 2017). Furthermore, the JD-R model with its positive motivational and negative resource depletion mechanism, appears to be a useful framework for this intervention program. This study also examined wellbeing programs that focused on increasing positive aspects of individuals' psychological wellbeing (e.g., work engagement). Although this study did not find significant evidence to support this association, more research is recommended to test the effectiveness on this process.

Third, the study findings also acknowledge and contribute to the theoretical understanding of the growing role of web-based wellbeing programs in the expatriate employee context specifically. The advantage of such programs (person-level moderators) is that the activities involved can be performed by individuals themselves, without support from others (e.g., a coach) or the organisation. Research suggests that these simple programs can lead to significant and lasting increase in wellbeing indicators (e.g., work engagement,) while reducing

strain and turnover intentions (Tetrick & Winslow, 2015), a potential future avenue to explore.

Overall, these findings, especially the higher order interactions between personal resources offer a novel contribution and highlight the importance of testing person-level resources.

Practical Implications

Given the emphasis that most multinational companies place on expatriate employees towards gaining a global competitive edge, we expect that organisations will find these empirical findings useful. First, it is important to acknowledge adjustment is an ongoing continuous process, and a successful intervention must address the real problems faced by expatriates and must help them cope with their difficult situations as they arise (Gauche et al., 2017).

Organisations must encourage employees to view work-related wellbeing programs as personally relevant. The “bottom-up” strategy offers a potential means of enhancing employees’ health and wellbeing; however, the most effective means of implementing such an intervention needs to be better understood. Therefore, tailored person-oriented interventions are recommended to be adopted in future research (Demerouti et al., 2017; Kinnunen et al., 2016).

Second, the need for thoughtfulness when implementing any intervention is essential. Organisations must provide expatriates with resources to increase their ability to cope with problems in the host country, along with pre-departure training programs to explain expatriation success (Lin et al., 2012; Setti, 2020). The results in the current study bolster the evidence indicating that web-based wellbeing programs can play a significant role in improving psychological outcomes among this population. Such tailored interventions help employees achieve improved wellbeing outcomes (Xiao et al., 2020). The web-based approach is suitable and easily administered to suit many worker populations particularly in the changing post-COVID-19 workplaces. It would be valuable for home country managers, co-workers, or human

resource workers to check in (e.g., via weekly meetings) with expatriate employees with respect to the challenges they face (Zhu et al., 2016), and provide sustainable programs to increase their awareness of their psychological wellbeing.

Despite numerous sampling efforts and significant challenges to recruit participants during the COVID-19 pandemic, the research sample of $N = 139$ is a very limited representation of the expatriate working population and restricted the statistical analyses reported in this article . Data collection occurred between June 2020 and February 2021 and hence the results must be observed with caution. Replication of these findings with larger and more heterogeneous research samples is required to offer further evidence of the validity of this wellbeing program. Third, this study observed a significant dropout (52%) after the 6th week of the program in the intervention group. The reasons for this attrition are not clear and suggest that either a program conducted over fewer weeks is more desirable to participants, and/or the replication of the training content with a second workplace stressor was not deemed to be attractive by these participants. The research attrition may also have been influenced by the Coronavirus (COVID-19) pandemic, when both work conditions and personal health priorities were rapidly changing for workers.

Conclusions

The findings of this study provide substantial evidence for advancing wellbeing programs among MNC expatriate employees. This study has addressed several gaps in the literature. Specifically, the results revealed a personal resource of the wellbeing program can provide support for expatriate employees who were experiencing high levels of psychological strain. The program described here may serve as an ongoing support program to help expatriate employees and employers of expatriates learn successful management strategies. Additionally, by

recognising that the workplace is a dynamic and complex environment that can affect how individual expatriates receive and engage with web-based interventions, it is important to identify the need for context-specific interventions. The process evaluation also supported the modest intervention effects found in the current study. Finally, though this study was conducted on a relatively under-researched population (i.e., expatriates working within the MNC-ICT sector), it is hoped the findings from this study stimulate discussion among academics and practitioners towards helping to inform the direction of future research and practice aimed at building a sustainable expatriate management practice in the host country.

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Chapter 9: General Discussion

Introductory Comments

Research on expatriates and the problems they experience is widely recognised (Mendenhall & Oddou, 1985; Setti et al., 2020). However, it has received recent impetus due to the globalisation of work environments where many multinational corporations have explicitly indicated their need for well-adjusted expatriate workers (Doki et al., 2018). Despite the increase in the expatriate workforce, one of the costliest elements of expatriate employee management is expatriate failure, commonly experienced in terms of the incapability to adapt to a new culture (Wang & Varma, 2019). This expatriate failure results in high levels of psychological distress, burnout, poor work performance, low job satisfaction, high turnover, and an early return to the home country (Harari et al., 2018; Sterle et al., 2018). Therefore, when the costs associated with the failed international missions are high, identifying adjustment challenges and effective strategies to manage them are of extreme importance for individuals and organisations. It is critical for companies to intervene early before severe psychological and physical ailments ensue, especially in consideration that many individuals typically ignore self-care behaviours (Rosenbusch et al., 2015).

Empirical studies have demonstrated that ICT expatriates are vulnerable to burnout, given their highly demanding work environments (Ford et al., 2013) and their reported levels of psychological strain are extremely high (Doki et al., 2018; Vijayakumar & Cunningham, 2019). However, the available support and interventions to address these issues are scarce for expatriate employees within the host country. Therefore, this thesis first conducted a systematic literature review to find answers for these research questions: 1) How often is

psychological adjustment examined in MNC expatriate literature (i.e., is psychological adjustment different from work, interaction, or general adjustment? and how is psychological dimension measured?); 2) What types of effective strategies such as CCT or intervention strategies that multinationals use to manage expatriates to improve business performance and the feasible strategies to better manage expatriates, were examined regarding expatriation success?; and 3) Given the theoretical and methodological issues within the literature (Buil, 2012), this review evaluated the evidence of empirical trends; that is how empirically driven is the field and what types of theoretical bases and stress-strain theories are commonly adopted? The findings and recommendations from the analyses of Study One (chapter 2), informed the designs of Study Two and Study Three (chapters 6 and 8) to directly address the long-standing concerns around theoretical and methodological issues within the expatriate literature. Thus, echoing previous research to stimulate further relevant research and novel theoretical insights offering more detailed, theoretical, and practitioner-relevant implications to capture the context-specific nature of expatriate success (Xie, 2020).

Given that this thesis has already discussed (in chapters 2, 6 and 8) the specific theoretical and practical contributions and implications relevant to Studies One, Two and Three. This final chapter instead discusses overarching insights into enhancing our understanding of expatriate research, in order to establish a more comprehensive and robust approach for this field. Following clarity of conceptualising the term expatriate (significant limitation in most cross-cultural literature), theoretical and industry/practitioner implications with recommendations are presented, and final conclusions are presented.

Conceptualisation of the Term “Expatriate”

The present study contributed to the conclusion that the field of expatriate studies requires, as a starting point, a specific statement about expatriates (McNulty & Brewster, 2017). Specifically, the definition (chapter 1) implied that employment by an organisation (MNCs) is a crucial characteristic, thus distinguishing them from non-business expatriates (e.g., tourists, immigrants, and sojourners). This research sits within the intersection of occupational health psychology and cross-cultural expatriate literature. Therefore, its focus and interest were on managing people who work for organisations, engage in international geographical mobility, and have legal employment (visa categories) in a country where they do not hold citizenship or are on the path to permanent residency. This research demonstrated that the conceptualisation of expatriates from other forms of international experience advances research and practice. Researchers can clarify the research design and demonstrate greater conceptual clarity regarding expatriate characteristics, which will allow for better understanding and greater comparability of research in the multidisciplinary field of expatriate studies. This advances current knowledge by developing an empirically driven specific statement and a solution, i.e., conceptualising the meaning of expatriates and establishing construct clarity.

While analysing the literature, it was observed that most scholars conceptualisation of expatriates lacked consensus and presented too many unstated assumptions, making it hard to develop cumulative knowledge. Furthermore, scholars have connected a range of factors of adjustment and cross-cultural training (mostly conceptual frameworks) in many ways, making it challenging to build on each other's work. Recent studies have acknowledged that this situation is worsening (McNulty & Brewster, 2017). Despite these challenges, the present

study contributed to the literature by theorising the meaning of expatriates and constructing clarity of a specific industry (MNC ICT) sector and type of expatriates. That is, primarily self-initiated expatriates (SIEs) serving as knowledge transfer agents (Baruch et al., 2016; Kraimer et al., 2016) and exercising advanced technological skills (Lin & Zhao, 2016). This precision provides scholars with a common language and a clear conceptual understanding of an expatriate employee definition (Podsakoff et al., 2016).

Significance of Measuring Psychological Adjustment (CCA) from a Theoretical Perspective

Although stress and strain are crucial factors causing expatriate employee failure (psychological wellbeing), the review acknowledged that stress factors were not represented in the MNC expatriate literature (see chapter 2). The literature indicated that scholars have been preoccupied with socio-cultural aspects of adjustment; that is an individual's ability to fit into the new culture by examining the impact of geographical distance and length of the assignment (Polón, 2017). This study acknowledged that although this aspect of adjustment is important, their subjective wellbeing (e.g., psychological adjustment; Ersoy, 2020) while trying to fit into the culture is also vital and has not been adequately addressed within the existing literature. For example, to what extent did the adverse experience of geographical distance in the host country, result in psychological strain? What was their psychological state? Did this phase influence their work performance and hinder their work-life balance while living and working in the host country? What are some of the specific adjustment challenges that were faced? What factors (work and non-work characteristics) caused stress among these individuals in the host country? How did this influence their wellbeing and

performance outcome aspects? What type of support would be helpful for these expatriates throughout the expatriation process?

There is limited empirical evidence to support the psychological adjustment of expatriates in real-time during expatriation. To fill this gap in the literature, the present study provided an in-depth analysis (chapter 2) and concluded that psychological adjustment was best illustrated and empirically tested via a psychological stress and coping framework (JD-R model, challenge demands; described in chapters 3, 4 and 6). Thus, the current research advanced expatriate research to explore an empirically driven approach.

As ICT expatriate employees continue to be a major force in the global economy, human resource professionals require empirical research, such as the present study, to help guide the expatriate management strategy of their organisation. Therefore, host country managers (HCN) supervising expatriates in the ICT sector must recognise that not all stressors are alike and must determine how relationships vary among wellbeing and other outcome variables. For instance, the present study found that job challenges (stressors) were both positively (i.e., cross-sectionally) and negatively (longitudinally) related to strain and turnover intentions. Therefore, paying closer attention to reducing the presence of strain might result in expatriate employees remaining in their work with improved performance (reduced turnover intentions; Jannesari et al., 2021).

Significance of Context-Specific Interventions from a Theoretical Perspective

The literature review also acknowledged that achieving an integrated approach that features learning and exhibiting new behaviours and cognitive changes in the host culture is crucial for a successful adjustment (Zhang, 2013). However, the present study showed that

pre-departure cross-cultural training (e.g., etiquette, understanding housing procedures, shopping, medical care arrangements, and recreational facilities) was the most popular training available to expatriates. The review findings indicated the main factors that must be incorporated into a well-designed CCT programme were based on three training levels (i.e., cognitive, affective, and experiential; Mendenhall & Odoou, 1986); the duration and timing of the intervention; and training rigour (Schutte, 2016). Based on these results, the present study questioned the very bases of pre-departure training. That is, is pre-departure training (mostly information/briefing sessions) enough for expatriates to succeed, especially when research indicates that most of the adjustment issues are experienced in the *host* country by these highly skilled self-initiated expatriates.

Research demonstrated the need to offer more post-arrival CCT spread over a specific timeframe, beginning as a regular event a few months before departure and ending a few months after arrival in the host country (Schutte, 2016). To fill this research gap, the present study conducted an in-depth analysis (chapter 2) and echoes previous literature that as expatriates are working in a foreign country on-going support is necessary to ensure that expatriates can cope with the living conditions and enhance their positive performance outcomes (Xie, 2020). The bottom-up web-based wellbeing was developed by this research and evaluated as an effective approach to answer this growing concern (see chapters 4, 7 and 8). Thus, the intervention is recommended as a feasible way for future expatriate research to explore an empirically driven approach.

Organisations should help promote emotional resilience among their expatriate population. Typically, SIEs (characteristic of most ICT workers) do not receive the same level of support as company-sponsored expatriates. Therefore, it is recommended that HCN

managers/leaders learn more about the available interventions, such as web-based wellbeing programs, and intervene early before severe psychological and physical ailments ensue (Jannesari et al., 2021; Rosenbusch et al., 2015). HCN managers/leaders should also encourage expatriate employees not to ignore self-care, especially in work conditions where added strain and tension is inevitable (Jannesari et al., 2021; Rosenbusch et al., 2015). Research by this thesis found that wellbeing programs are related to many positive outcomes (see chapters 7 and 8) for expatriate employees in their host country, thus suggesting organisations should consider offering programs that will improve psychological wellbeing (increasing chances of better adaptation) and further benefit the organisation through reduced expatriate hiring and failure costs.

Significance of Methodological Rigour

Despite recent interest in cross-cultural research, the expansion and development aspects of this research are hampered by methodological issues (Beins, 2019). Research across this multidiscipline field presents several unique challenges (Buil, 2012); therefore, the adoption of appropriate research methods in cross-cultural research is crucial (Halder et al., 2017). A successful cross-cultural research design in future must frame substantive questions to establish a common denominator. For example, are the constructs or theories investigated in each research context? Furthermore, based on a solid theoretical construct, other aspects of the research must be followed. For instance, what research design and psychological measures are needed, (Matsumoto & Van de Vijver, 2010); what research samples should be selected, how should the data be collected, and are the measures employed in the study invariant in each unit of analysis investigated?

Specifically, the lack of methodological rigour at the various levels of the research process is a main problem identified throughout the literature in this thesis (Buil, 2012). To overcome this challenge, the present study emphasised a theory-based approach as it provides a solid foundation for empirical studies (Davis et al., 2018; Sussman, 2011). The thesis encouraged greater methodological rigour (e.g., longitudinal mixed method, use of psychological measures, well-designed intervention program, and a formal evaluation process) to advance this field by offering a fresh perspective based on the contemporary trends and suggestions from the recent literature (see chapter 5 for more detail). Thereby, advocating for future research to explore the same or other issues systematically and comprehensively.

Research Limitations and Challenges

Despite several strengths of this thesis, there were also several overarching challenges that the research experienced. The specific limitations for each of the three Studies were previously discussed (refer chapters 2, 6 and 8). The main challenge that this thesis faced was the sense making of concepts associated with expatriation (expatriate, expatriate failure, adaptation, adjustment, and expatriation success), as these concepts were used interchangeably by different authors. These terms can also mean different things for different companies; therefore, the performance measuring metrics of companies vary, with some not conducting measuring at all (KPMG, 2016). Even the definition of the term expatriate (e.g., MNC expatriate, working and living in host country within 6 months -5 years; McNulty & Brewster, 2017) caused significant problems when attempting to compare different research results and further reducing relevant articles for synthesis (Polón, 2017). Therefore, the gathering of comparable and accurate data was difficult.

Second, psychological adjustment can have a major influence during expatriation. MNC expatriate research currently does not account for an individual's psychological factors and their potential effect on success in their host country. Third, another concern was regarding the CCT/intervention program. Although this thesis advocated methodological rigour in designing and implementing the program, past CCT has been conducted over different periods, utilising different methods and research criteria, thus making it difficult to directly compare and validate the effectiveness with other programs. To ascertain more validity of the program, it is important to evaluate the training program across a more heterogenous sample, and consideration of different industries will also be helpful for future research to consider.

Fourth, the small sample included in the present study means that the results have limited generalisability to the population of working expatriates. This research was conducted at the peak of COVID-19 and thus, struggled to recruit large numbers of ICT expatriate employees. Nonetheless, this provides an opportunity for future research to consider recruiting a larger sample of expatriates to ensure better generalisation of the results to the expatriate population. One consequence of this constraint was the difficulty of comparing any demographic differences. For instance, exactly how gender plays a role in influencing psychological adjustment and work outcomes was out of the scope of this thesis. Previous studies have stated the importance of gender and the need for further research on performing subgroup analyses regarding gender, age groups, and educational level for research advancement (Ali, 2018; Hutchings et al., 2010)

Industry/Practitioner Implications

According to the OECD (2020) report, ICT is one of the largest sectors for employing highly skilled expatriates (50% in the USA and 53% in OECD countries). ICT represents approximately USD 11.5 trillion globally (Henry-Nickle et al., 2019) and has become an essential driver of productivity and innovation in the knowledge economies, making highly skilled expatriate workers essential aspects of global economic growth (Manyika, 2017). The literature states that adjustment difficulties (psychological challenges) experienced by expatriates in the host nation are the primary reason for expatriate failure (Doki et al., 2018; Vijayakumar & Cunningham, 2019). Because expatriates are working in a foreign country, an environment with an unfamiliar culture, their on-going support will be necessary to ensure that expatriates can cope with the living conditions and enhance their positive performance outcomes (Xie, 2020). Research has recently advocated continual support for improving the competencies of expatriates while adjusting to their host country, i.e., a more integrated and sustainable process (Wilczewski et al., 2019). Therefore, companies and individuals need to embrace appropriate adaptation in the host country to maximise productivity and sustain global competitive advantage.

According to the I.T (Information Technology) Professionals Australia and OECD (2020) report, the complex and highly competitive Australian I.T. employment market is one of the largest sectors for employing highly skilled expatriates, temporary work visas, and international students, representing a GDP of 6.6% per year in Australia. However, the Australian Computer Society (Johanson, 2020) highlighted that the silent stigma of mental health has become a growing issue in the technology industry, reporting that employees working in the I.T. industry are five times more depressed than in other industries and 52% have suffered from anxiety or depression at some point. The results from this study posit

questions to individual expatriates, organisations, and the broader community (e.g., government, policy makers), such as are organisations offering their expatriates the emotional support, they need to succeed in their host country (Vaiman et al., 2015)? What strategies do multinational corporate leaders need to manage expatriates to improve wellbeing and business performance? and what are the feasible strategies to better manage expatriate employees who are experiencing occupational stress?

The findings from the present study support previous research that shows that constant monitoring of the strain and psychological wellbeing of expatriate employees is limited in expatriate management literature (Zhong et al., 2021). Thereby further leading to scarce knowledge about high-stress environments and its consequence among expatriate employees (Koveshnikov et al., 2022). This is the first step for scholars and practitioners to identify what it takes for a successful expatriation in the global workforce. In addition to previously mentioned practical implications, the results of this thesis will also inform business leaders, and Human Resource managers of MNCs to act on the need to improve their expatriate management systems such as improve the training, developing, and retention of expatriate talents in the host country. Even, potential expatriate employees themselves or organisations must aim to provide individualised support to ensure they can more engaged and focused on the completion of their work (Xie, 2020). Leveraging human assets to enhance the performance of organisations has long been the focus of the executive teams of MNCs (Hooi, 2019).

Subsequently, individual expatriates also need to be aware of the policies and use the resources within their environment to support their wellbeing in the host country. Strategically aligning expatriate adjustment to their personal goals (i.e., gains such as

promotion, better career development, security, and financial benefits; McNulty, 2013) and corporate missions (Xie, 2020) is a crucial step to progressing expatriate management. When this individual expatriate return on investment is positively associated with expatriation, benefits should be seen across personal and professional development (McNulty & de Cieri, 2016), reducing the turnover intentions among this population. This leads future research to explore whether expatriates' loyalty to the organisations improves or not.

Furthermore, although the present study promoted the bottom-up intervention, the benefits of such interventions would be further enhanced if firms could aggregate and develop the capability to adapt available resources (such as wellbeing programs) within the cross-cultural work environment of expatriate employees. By facilitating the learning process and building on their position, firms can strive and thrive in the international market over the long term. Thus, integrating web-based wellbeing after arrival in the host country as a perceived organisational support (POS) plays a critical role in reducing expatriate strain and increasing work engagement, performance, and retention (Kurtessis et al., 2017). In an MNC, POS is even more essential for overseas employees than for domestic employees in a complicated cross-cultural environment (Sokra et al., 2021). It is one of the most critical factors to help expatriate employees adjust properly to be functional in cross-cultural contexts and ensure they can undertake international assignments (Xie, 2020).

Overall, the present study emphasised that working expatriates constitute a significant workforce of global talent that is an increasingly critical human capital for MNCs. Building a mentally healthy expatriate population needs to be the priority of business executives and local government agencies, policy makers and expatriates themselves. This integrated approach will enhance the cross-cultural experiences and further develop the economics and

improve the living standards of expatriates (Xie, 2020). Thus, tenaciously reconsidering the research-organisation partnerships to revamp expatriate management strategies and improve performance and business needs, creates a new avenue in expatriate research.

Directions for Future Research

The empirical studies of this thesis recommend two major avenues for future research on expatriate management. First, future research on working expatriates should consider adopting a psychological stress perspective to examine the work and career outcomes of self-initiated expatriates. Specifically, this study adopted a psychological stress perspective to offer insights on how individual factors (psychological adaptation), job factors (domain-specific challenge stressors) and contextual factors (visa status, residing in host country between 6 months to 5 years, ICT sector) may influence the psychological and work outcome of expatriate employees while working in a host country. This study investigated if challenge stressors have a different influence, and scholars should explore the influence of these stressors on other variables such as organisational support in relation with host country context and psychological adjustment. Researchers should also explore how challenge and hindrance stressors may be related to the work and non-work adjustment by self-initiated expatriates. Scholars may also consider how workplace stressors may influence working expatriates across different MNC sectors.

Second, this study designed a unique web-based wellbeing program in late 2019 that was tested during the COVID-19 crisis (between November and December 2020) when employees were embarking on the new normal (i.e., social distancing and remote work). This is an indication for research and industry partnership to seriously consider whether they are equipped to handle such enormous setbacks regarding employees' mental health, especially

for expatriate employees. Thus, future partnerships should consider adjustment as a continuous on-going process and integrate web-based stress management intervention programs as management strategies that are available in a timely manner to expatriates experiencing stress/strain. Although this research reached out to individual expatriate employees directly, integrating organisation-wide support (i.e., feedback from HCNs and colleagues) in implementing such programs would benefit a larger group of expatriates. Furthermore, having more self-reflexivity workshops inducing positive experiences cross-culturally as opposed to just cultural knowledge sharing is perhaps a future direction for research (Shepherd, 2019). Finally, the adopted methodological rigour produced some interesting findings to advance the expatriate stress-strain literature. The thesis also acknowledges that the findings must prompt future empirical studies to investigate psychological consequences and context-specific interventions (personal resources) for MNC expatriates in their host country. When evaluating such programs, it is highly recommended that adopting both qualitative and quantitative approaches for future expatriate research to explore this further.

Conclusion

Globalisation and worldwide business expansion are unprecedented. The demanding work of expatriates contributes a determinant and large share to the prosperity of global businesses. Given the conceptual and theoretical nature of expatriation studies (McNulty & Brewster, 2017), the present study demonstrated that more empirical research is required. The key findings were a) being aware of the specific type of expatriation and expatriate type, b) understanding the precise adjustment challenges experienced by this group of expatriates and c) ensuring the availability of needed support to expatriates. Future research must provide

clarity of constructs via a well-established theoretical lens. Even though cross-cultural literature has evolved, the field has yet to connect the dots in terms of well-defined terms, constructs and linking research and practice. The contribution of this thesis lies within this scope and encourages future research to advance these arguments with greater clarity about who it is that we are aiming to study when using the word ‘expatriate.’ This study also enhances the ability of researchers to engage in more innovative and theoretically grounded research. Practically, this study revealed the strategies to manage expatriates, and for leaders in MNCs to correctly identify the adjustment challenges and provide appropriate support aligning to the needs of individual expatriates, thereby ensuring expatriates grow within their environment, and assuring a win-win situation for all.

Overall, this thesis has achieved its goal of providing answers to the research questions based on the available data. This thesis joins the research cluster that echoes expatriation, cross-cultural adjustment and training support is still significantly lacking in specificity and accuracy. Therefore, more expansive, and thorough research into the varied factors surrounding employee expatriation is required, in order to unequivocally promote expatriate employees’ success.

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Appendix 1 - Ethical Approval

Web-based Stress Intervention for Improving Psychological Wellbeing for Expatriate Employees

INFORMATION SHEET

Who is conducting the research

Professor Paula Brough
Senior Investigator
School of Applied Psychology
T [REDACTED]
[REDACTED]

Sheetal Gai
Research Team
School of Applied Psychology
T [REDACTED]
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Project overview

According to Finaccord ExpatriateBASE, 2018 report, the expats world level growth is forecasted to accelerate from 2017 to 2021. As of 2017, the amounted expats globally are 5.8% (66.2 million) and this is forecasted to reach 7.2% (87.5 million) by 2021. Of these the “individual expat” are the largest group of expatriates accounting to 73.6% of the total expatriate population and is forecasted with strong growth rates.

For instance, The **Australian Census and Migrants Integrated Dataset** (ACMID) report provides an insight into the settlement patterns of overseas-born persons by visa stream, suggesting that more than half of the 2.2 million permanent migrants who move to Australia each year do so via the “Skill stream” category. According to the migrants integrated dataset 2016 report, about 35% of skilled migrants are working in professional occupations such as information and communications technology (ICT).

With workplaces becoming more diverse, expatriate employees are an entrenched employee group in Multinational Companies (MNCs). The likelihood of intercultural encounters and conflicts are on the rise, creating increasing problems particularly for the expatriate population.

What is this project about? Why is the research being conducted?

The mental health issues due to difficulties in adapting to their new culture and the challenges resulting from the unwritten psycho-cultural norms and workplace challenges/stressors have echoed the necessity to produce more integrated ways to identify these stressors and provide sustainable intervention approaches to manage these challenging situations.

Research has identified numerous sources of stress in the workplace due to growing globalization, technological advances and is considered as a high-risk environment. It is adduced that the stressors experienced by MNC technology expatriate employees include various factors both in and out of work. These stressors have diverse effects both in and out of work, including changes in behavioural, and affect, resulting in heightened risk of developing affective disorders, depression and anxiety, and other mental health illnesses. Recently Aetna (Insurance company) July 2017 and Mobility Insights, June 2019, reported that mental health is a “growing issue” among expats.

The actual adjustment in the adaptation process is a persistent phenomenon and starts upon arrival in the host country. Most cross-cultural training have focused primarily on providing advance cultural information and training prior to departure, with less focus on helping expatriate employees develop coping strategies or meeting realistic expectations in the host country. Contradicting the traditional cross-cultural training, which generally explains a ‘shallow-effect’ on adjustment, this research proposes developing sustainable process-based interventions to facilitate an effective long-term adjustment.

This study conducted by Researchers at Griffith University will adopt an online/web-based research study that aims to assist expatriates to identify stressful events and develop skills to manage these challenges, thus promoting their psychological wellbeing.

How will this research benefit expatriate who relocate?

This research aims to address various stress factors experienced while expatriate employees adjust in the new host country. The research also aims to develop an appropriate need-based intervention for expatriate employee’s while they adjust in the host country is crucial for expatriate employee’s success. The study will evaluate the effectiveness of a sustainable cross-cultural interventions aimed at improving expatriate employee’s psychological wellbeing when living and working in the new culture. Thus, encouraging a comprehensive best practice program in CCT to improve the likelihood of employing and retaining well-adjusted expatriate employees on global assignments.

The current research aims to introduce web-based interventions to the “digital natives” ICT expatriates, study its effectiveness, and evaluate a program in terms of reducing stress and improving wellbeing. Griffith University researchers will report survey results to a variety of employees, professional associations and organizations. This report can be further used to improve services provided to expatriate members who have relocated or relocating to a different country.

What you will be asked to do

You can help us if you as an individual identify yourself as:

- living and working/ studying for minimum of 6 months to a maximum of 5 years in the host country
- on skilled visa category – migrant visa, work visa, study visa, employer visa etc
- aged between 24-45 years
- working and/or studying in ICT (information and communication Telecommunication) sector.

The basis by which participants will be selected or screened

Research study URL will be distributed via broadcast email to associations, organizations, flyers and in social media using the research teams' personal networks. The research team intends to reach out to ICT associations such as the Professional Association for Australian ICT sector, and the Information Technology, Professional Association for participant recruitment. A written permission will be obtained from these organisations before the research is advertised to their membership. The researcher will recruit first year students from school of psychology research participant pool and connect via **Volunteer for Important Research Projects, Griffith University**. The researcher will also source participants (working and student pool) from social media network such as LinkedIn, Facebook and from similar other platforms.

This study will be hosted on Honeybeehub to recruit participants for this study. The study link, built adhering to GU policies, will be provided on the host website for participants to enrol into the study. https://is.gd/stress_wellbeing. This link will be shared with potential participants recruited from Honeybeehub. The link will be activated upon approval from ethics committee.

Prolific - Study details will be uploaded on to Prolific to recruit study participants. https://is.gd/expat_psychologicalwellbeing link will be provided on Prolific site for participants to voluntarily in this research study. This link will be activated upon ethic committee approval.

Online Participation

Participation is voluntary and responses will be kept anonymous.

Should you agree to participate, you will be asked to complete a 20-minute quantitative survey via RedCap which involves details about your work stress and health related information. Based on the results obtained, participants will be encouraged to engage in a 15 minute/per week for 8 weeks intervention program. The stress intervention based on CBT approached will engage participants to reflect on their thoughts and feels associated with a stressful event. Post the intervention, you will be again asked to complete a 20 minutes survey consisting of psychometric measures about stress and health.

Please visit our research website to learn more about the research.
<https://v3.pebblepad.com.au/spa/#/public/8kz7bbZcGgrqtt4MHgwk4c7MxW>

Please go to **“Research” tab** on the website to participate in this research by clicking on the link provided. The embedded link to research survey offers a sequential built-in system that will guide the participants throughout the various stages of the survey and intervention program, ensuring a hassle-free completion of the research project.

Data Storage

The entire survey will be hosted on a secure Griffith University network via RedCap survey. All research data will be retained in a password protected electronic file at Griffith University for a period of five years before being destroyed. The research project will use the GU Research Storage platform to store data. Data from the survey results will be kept confidential and will be interpreted and analysed only for this and related research and publication purposes. At any time, you are free to contact the research team.

The expected benefits of the research

Benefits of participating in this research:

- You will gain access to understanding your psychological wellbeing.
- Participants and professional associations will receive a summary of research findings.

Risks to you

This research will ask you to reflect on stressful events and psychological wellbeing you are/have experienced as an expatriate employee, which could raise some uncomfortable emotions, feelings and thoughts.

Some suitable support services are available to you, please contact the appropriate services you may require:

- Griffith University Psychology Services Centre; email: [REDACTED] Ph: [REDACTED]
<https://www.griffith.edu.au/griffith-health/clinics/psychology-clinic-mt-gravatt>
- Griffith University Work, Organisation and Wellbeing Services; email: [REDACTED]; Ph: [REDACTED]
<https://www.griffith.edu.au/work-organisation-wellbeing/our-centre/services>

Your consent

What is Personal Information

Personal information is defined as information or an opinion, including information or an opinion

forming part of a database, whether true or not, and whether recorded in a material form or not, about an individual whose identity is apparent, or can reasonably be ascertained, from the information or opinion. Personal Information can be almost any information that is associated with an identifiable living individual. It can include a name, gender, correspondence contacts, job culture details, family details, alpha-numerical identifiers and combinations of these.

How are we going to use your Personal Information?

The research results will be reported in an academic thesis and may also be disseminated via journal articles and / or conference presentations.

The data will be collected and will be used in two ways. Please note:

- “Re-identifiable” data means identifiers have been removed and replaced by a code, but it remains possible to identify a specific individual (e.g. using a code to match data to identifying details) – **this data will only remain with the senior investigator and the research team member as part of the analysis process.**
- “De-identified” data means that all identifiers will be removed from the data prior to any publication of the data, re-use of the data (e.g. in related research) or sharing of the data (e.g. with other researchers/ associations/ corporate companies). De-identified data can include information that has been coded so that it is possible to know that data relate to the same person, but it does not identify them – **this data will be used only if the results need to be published in reports, journals, conference proceedings or any other research related events in a way that will not identify your identity by third parties.** Access to de-identified data in the form of reports (i.e. De-identified data with Griffith maintaining control over the mechanisms to reidentify) will be provided (upon request) to participating associations/ its member participants/ corporate/ companies.

Privacy

The project has been approved by the Griffith University human research ethics coming to you and is bounded by strict privacy laws. Participants will be asked to provide personal contact voluntarily only to share the survey results.

Questions / further information

If you have any questions or need further information about this research, please do contact either the senior research investigator (Professor Paula Brough) or the primary student research team member (Sheetal Gai).

On a day-to-day basis, this project will be managed by Ms Sheetal Gai. Please free feel to contact her via email [REDACTED] or call [REDACTED]

The ethical conduct of this research

This research is conducted in accordance with the national statement on ethical conduct in human research.

If you have any concerns or complaints about the ethical conduct of the research project they should contact the Manager, Research Ethics on [REDACTED] or [REDACTED]

Feedback to you

You will receive a formal written report of research findings (individual expatriate, professional associations or organizations upon request as indicated in the consent form.

Privacy Statement – nondisclosure

“The conduct of this research involves the collection, access, storage and/or use of your identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes, including publishing openly (eg. in an open access repository). However, your anonymity will at all times be safeguarded. For further information consult the University’s Privacy Plan at <http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-plan> or telephone [REDACTED].”

Express Consent – Surveys, Questionnaires or Provision of Notes

If you participate/ completes a survey/questionnaire/instrument, you will be deemed to have consented to your participation in the research.

Appendix 2 – Email Advertisement

Email Advertisement sent to Individuals/ Professional Association groups and Organizations

Subject

Volunteers needed for research study - Expatriates and their psychological wellbeing

Are you an expatriate working and/or studying in Information and Communication Technology (ICT) sector?

If you have moved to a new country on a skilled visa to work/study in ICT sector, we at Griffith University would love to hear from you. Researchers at Griffith University are trying to understand the factors that influence adjustments while you adapt to your new living and working conditions and its impact on your psychological wellbeing.

You can help us if you are:

- working and/or studying in ICT (information and communication Telecommunication) sector.
- living minimum of 6 months to a maximum of 5 years in the new host country
- on skilled visa category – for example -work visa, employer visa, student visa etc.
- aged between 24-45 years

To learn more about this research study, please visit

<https://v3.pebblepad.com.au/spa/#!/public/8kz7bbZcGgrqtt4MHgwk4c7MxW>

Participation is voluntary and responses will be kept anonymous.

Griffith University Research team offers exciting prizes to participants in appreciation of their honest feedback.

Thanks, and Regards

Sheetal Gai| PhD Candidate| School of Applied Psychology

Griffith University| Mt Gravatt Campus| M24 Room 4.16

T [REDACTED] Email - [REDACTED]

Appendix 3- Pre-Screening Questions

I have a visa to live/work/study in the country where I reside?

- 1 Yes, I have a visa
- 2 No, I don't have a visa
- 3 I don't require a visa to work/study in a foreign country.

How long have you been residing in this country?

- 1 0-3 years
- 2 3-7 years
- 3 7-10 years
- 4 10 years or more

Appendix 4 - Intervention Details

Please note all intervention worksheets are free text entry format.

Hassle Log Worksheets – Week 1

Identify two recent work-related stressful events
Where did it occur?
What was your first reaction?

Intervention Thoughts Log sheets – Week 2

Thoughts Log			
Challenges	Instructions	Scenario Example	Your experience
Situation	Describe the situation that led to stress and unwanted emotions or behaviors. Record only what actually happened, without any interpretation.	I work in a 7-member team and I am the newest member of this team. It's been 1 1/2 years that I work in this team. Initial 6 to 8 months was all about the learning process and adapting to the new system. We generally have meetings and catching up in the 1st 2 hours of the day and later we carry on with our day-to-day activities. However, of late, I have noticed that after the daily meetings my manager and my senior colleagues are pushing their work onto me and expect me to complete these in a very short deadline because of the overload of work, I stay back at work late, I work for nearly 14 to 16 hours a day. By the time I go home, I am exhausted. I do not feel like talking to anyone much. If the work is not completed on that day, I returned to work with a very negative feeling.	
Thoughts	What were the inner monologue? It can be statements and/ or questions.	Why me? Why can't I tell this to my manager? What will happen if I tell this? Will my colleagues try to avoid me? Will I be a team player if I continue to overload myself?	
Emotions	Write statement/s or word/s that best describes your feeling. If your feelings have changed during the experience, please describe this process.	I feel like I should point fingers at my senior colleagues and tell my manager that I am not able to focus on things that I need to focus because of these people. I feel I am taken for granted at the moment as most of the senior members, just tell what and how they need the work to be done, none of them usually ask/ nor there is a request. I feel that I don't belong to this team and also feel that I am not adding any great value to the team, I am just following orders. It's so frustrating.	
Behaviour	Record what action you took in response to the situation.	I always hold back because I'm new to this team and not sure how this will be taken by my manager. I'm at the moment very confused not sure whether I need to report the extra work I'm doing or not. But I feel the need to do something to motivate myself at work, if not I will surely lose my interest.	

Intervention Alternative Thoughts Log sheets – Week 3

Alternative Thoughts Log			
Challenges	Instructions	Scenario Example	Your experience
Situation	Describe the situation that led to unwanted emotions or behaviors Record only what actually happened, without any interpretation	I work in a 7-member team and I am the newest member of this team it's been 1 1/2 years that I work in this team Initial 6 to 8 months was all about the learning process and adapting to the new system We generally have meetings and catching up in the 1st 2 hours of the day and later we carry on with our day-to-day activities However, of late, I have notice that after the daily meetings my manager and my senior colleagues are pushing their work onto me and expect me to complete these in a very short deadline because of the overload of work, I stay back at work late, I work for nearly 14 to 16 hours a day By the time I go home, I am exhausted I do not feel like talking to anyone much If the work is not completed on that day I returned to work with a very negative feeling	
Alternative Thoughts	Can you consider a different thought? The goal isn't to be overly positive—you just want to be fair.	I think my manager is testing my abilities to work under pressure Or is this a way that this team works giving juniors more work?	
Emotions	Write a single statement or word that makes you feel better	feels great to be an important member of the team	
Behaviour	Record what differently you reacted to the situation	I actually had a one -one interaction with my colleague, not a senior colleague, who was with this team and manager about a year back, but now is with another team She told me that the manager expects the new members of the team to be aware of all the projects that the team works on Hence he ensures that all the operational day to day of project/s updates needs to be handled by juniors in the team At the moment, since I am the only one, all the work is directed to me After this, i felt like I was an important part of the team and freely started interacting with seniors colleagues with a open mind There are definitely times when I m more stressed because of short deadlines, i try to seek help from senior colleagues who i have built rapport with to get an extension to complete the work	

Continuation of Alternative Thoughts Log sheet – Week 4

Continued Alternative Thoughts Log		
Challenges	Instructions	Your experience
Situation	Describe a situation in which you are applying the learnings from this intervention?	
Alternative Thoughts	How did you use the alternative thoughts skills?	
Emotions	Was there any changes to the emotional aspects during the situation?	
Behaviour	Did you notice any changes in behavioral aspects within you?	

Appendix 5 - Measures

Job Demand Scale

Instructions: These 9 questions evaluate how much control you have over the way you do your job. Please circle the answer on the table that best describes your current job.

<i>Not at all</i>	<i>A little</i>	<i>Moderate</i>	<i>A lot</i>	<i>A great Deal</i>
1	2	3	4	5

Please provide your responses

1. Does your work need your undivided attention?
2. Do you have to keep track of more than one task at once?
3. Do you have to concentrate all the time to watch for things going wrong?
4. Do you have to react quickly to prevent problems arising?
5. Are you required to deal with problems, which are difficult to solve?
6. Do you have to solve problems, which have no obvious correct answer?
7. Do you need to use your knowledge of the general work process to help prevent problems arising in your job?
8. Do the problems you deal with require a thorough knowledge of the general work process in your area?
9. Do you come across problems in your job you have not met before?

Work Engagement Scale

Instructions: The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the “0” (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

Almost never	Rarely	Sometimes	Often	Very often	Always
1	2	3	4	5	6

1. At my work, I feel bursting with energy
2. At my job, I feel strong and vigorous
3. When I get up in the morning, I feel like going to work
4. I am enthusiastic about my job
5. I am proud on the work that I do
6. My job inspires me
7. I am immersed in my work
8. I get carried away when I'm working
9. I feel happy when I am working intensely.

Turnover Intentions Scale

Instructions: *These questions ask about any recent thoughts you may have had about leaving your job.*

<i>Not at all</i>	<i>A little</i>	<i>Moderate</i>	<i>A lot</i>	<i>A great Deal</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Please circle your response below

1. How much have you considered leaving your job in the past 6 months?
2. How likely are you to leave your job in the next 6 months?
3. How often do you actively look for jobs?

Basic Psychological Needs Satisfaction Scale

Note: this scale was changed to fit the workplace context.

Instructions: *The following proposals concern opinions you may have about your professional activity. For each of them, select the check box that best fits your thoughts.*

"7-point response scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). "

In my professional activity...

1. I have a lot of sympathy for the people i interact with.
2. Often, I feel very competent.
3. I generally feel free to express my ideas and opinions
4. I get along well with the people i am in contact with
5. I feel like i'm doing well
6. I have the opportunity to make decisions about the tasks to be performed.
7. The people i meet feel and appreciate me
8. I feel that i can meet the requirements of the tasks to be performed.
9. Am involved in planning the tasks to be performed.

Mobility Self-Efficacy Belief Scale

Instructions: Please carefully read the below statements and indicate the best that describes you.

<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Netural</i>	<i>Agree</i>	<i>Strongly Agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

I can easily find my way in new surroundings

I quickly feel at home in new places

I think it's exciting to better get to know a foreign country

I feel confident in dealing with people of other cultures

Psychological Strain

Instructions: This part of the questionnaire is concerned with your general state of health over the past few weeks.

Have you recently?	Please circle your answer:			
	0	1	2	3
Been able to concentrate on whatever you are doing?	Better than usual	Same as usual	Less than usual	Much less than usual
Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
Felt that you were playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable

Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
Been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less able
Felt that you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
Been feeling reasonably happy all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual
Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual

Appendix 6 - Process Evaluation Survey

Pre-Intervention Stage

How useful was the information provided about the project and the various sessions prior to the beginning of the research study?

How useful was the clear directions on how to navigate through the platform?

During Intervention Stage

How useful were the intervention activities in targeting the problems related to stress and psychological wellbeing at workplace?

How valuable was the implementation strategy (online intervention program)?

How valuable were the activities tailored to the you and your experiences?

How effective was the implementation strategy (online intervention program)?

Post Intervention Stage

How useful was the supportive and trusting atmosphere?

Did you feel equally engaged during the intervention program?

How useful and engaging would you say the overall content was?

Did you assume responsibility for the program and completion of activities?

How useful was the method used to bring about change/s (if any) in how you handle stressful situation?

Was there any event/s that took place during the intervention phase that may have influenced in any manner?

How would you rate the overall functionality and accessibility of this intervention program?

Can you describe how successful the intervention outcome was compared to your expectations?

Appendix 7 - Demographic Details

What is your gender?

Female Male

What is your primary language?

English Other, please specify

Your Age (In years) _____

What is the highest level of education you have completed? Please circle the appropriate option

Highschool Bachelor's degree Master's degree Doctoral
degree

How would you classify yourself?

Caucasian/White Asian/Pacific Islander Indigenous or Aboriginal Multiracial
Others, please specify if you choose to answer

What is your current marital status?

Married Divorced Single Separated Others

How many dependents (spouse/children) you have living with you in Australia?

Please specify here _____

Skilled Visa Type

189 skilled visa 190 skilled visa 457 skilled visa
others, please specify

What is your current household income in Australian dollars? Please circle

Under \$50,000 \$50,000 - \$74,999 \$75,000 - \$99,999 \$100,000 -
\$150,000 Over \$150,000

In-Country Stay – Residing in Australia since:

Please specify here in years -----

ICT Sector Experience

Please specify here in years -----

In-country (Australian) ICT Work Experience

Please specify here in years -----

Your Designation

Please specify here

Organization/ services you work in

Please specify here

How many hours do you work on an average a day?

Please specify here in hours-----

How often do you work overtime in a week on an average?

Please specify here in hours-----

Is it your personal choice to work overtime? Please tick your option

Yes

NO

Appendix 8- Consent Form

Web-based Stress Intervention for Improving Psychological Wellbeing for Expatriate Employees

Online Consent format

Research Team

Professor Paula Brough
Senior Investigator
School of Applied Psychology
T [REDACTED]
[REDACTED]

Sheetal Gai
Research Team
School of Applied Psychology
T [REDACTED]
[REDACTED]

By providing digital signature below, I confirm that I have read and understood the information package and in particular:

- ☐ I agree to participate in the project.
- ☐ Please provide your Prolific ID
- ☐ I understand that my involvement in this research will may include the completion of a set of psychometric tests in two phases and being part of intervention program averaging about 25 mins per week of participation for 10 weeks.
- ☐ I consent to the inclusion of my personal information in publications or presentations resulting from this research
- ☐ I consent to the inclusion of my recorded voice or image in publications or presentations resulting from this research
- ☐ I consent to the inclusion of my written and/or verbal comments/opinions in for relevant research proceedings, resulting from this research by keeping my anonymity at all times
- ☐ I understand the risks and the benefit to me from my participation in this research.

☐ I understand that my participation in this research is voluntary

☐ I consent to give my email address solely for participation/receiving communication from this research team.

If Yes, Please provide your email id here

☐ I understand that if I have any additional questions, I can contact the research team;

☐ I understand that I am free to withdraw at any time, without explanation or penalty.

☐ I understand that I can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee on [REDACTED] [REDACTED] (or [REDACTED] [REDACTED]) if I have any concerns about the ethical conduct of the project; and

☐ I consent to being contacted about future research