



Comparing Levels of Marital Satisfaction among Chinese Populations in Mainland China and Australia: A Cross-sectional Study

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[May 2020]

Keywords

Mental Health, Happiness, Marital Satisfaction, Chinese Cultural Norms, Australian Cultural Norms.

Abstract

Purpose: The purpose and specific aim of this study are to understand the cultural differences in marital satisfaction when Chinese couples live in Chinese cultural norms and Chinese couples live in Australian cultural norms.

Background: Marital satisfaction has been one of the major reasons to impact couples' mental health in China. Improving marital satisfaction and wellbeing is one of the most important, contentious and exciting issues in contemporary public health.

Methods: To answer this question, this quantitative study measured and compared the level of marital satisfaction and the degree of happiness for Chinese people living in mainland China and living in Australia by using independent sample t-test. The instrument, The Couples Satisfaction Index (CSI-32) in both Chinese and English version, have been validated in both languages and were published online. By and large, 1235 responded and finally selected 420 responses (Australian Chinese, n=202; Mainland Chinese, n=218) after data screening.

Results: The result of analysing this quantitative data indicates the level of marital satisfaction and the degree of happiness for those Chinese people who are living in mainland Chinese cultural norms and Australian cultural norms differ significantly. Overall, the Chinese living in mainland China have a lower level of marital satisfaction when compared with Chinese who live in Australia. The higher degree of happiness corresponds to a relative level of the higher degree of happiness. Therefore, both groups considered themselves happy in reference to their cultural situation. Consequently, this was not able to be compared. Furthermore, the length of time Chinese couples spend in Australia increases their level of marital happiness, possibly demonstrating some impact of the Australian culture on happiness.

Implications: Finally, the findings suggest that cultural beliefs can have positive or negative influences on couple relationships. Therefore, health professionals who caring and treating Chinese in mainland China and Australia, need to promote positive cultural factors and inhibit the negative factors in order to improve mental wellbeing for Chinese. This study emphasises the need to take into account the impacts of cultural norms in mental health services along with marital satisfaction for Chinese people.

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List of abbreviations

CCND	China Core Newspapers Full-text Database
CI	confidence interval
CGSS	Chinese General Social Surveys
CPQ	Communication Patterns Questionnaire
CSI-32	Couples Satisfaction Index-32
CWICSS	Chinese-Western Intercultural Couple Standards Scale
DAS	Dyadic Adjustment Scale
IGRS	Inventory of General Relationship Standards
M	Mean
N	Number
NIHCE	National Institute for Health and Care Excellence
SBREC	Flinders University Social and Behavioural Search Ethics Committee
SD	Standard Deviation

Statement of original authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: _____

Wen Yang


Wen Yang _____

Date: 13/10/2020 _____

Acknowledgements

This thesis became a reality with the kind support and help of many individuals. I would like to extend my sincere thanks to all of them.

Foremost, I wish to express my deep sense of gratitude and profound to my principal supervisor, Dr Yvonne Parry, College of Nursing and Health Science in Flinders University, for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped me all the time during my research and the writing of this thesis. I could not have imagined having a better advisor and mentor for my master's study.

Besides my principal supervisor, I would like to thank my co-supervisor, Dr Didy Button, College of Nursing and Health Science in Flinders University, for her guidance and constant supervision as well as for providing information regarding this research, and also both supervisors for their support in completing this endeavour.

I would like to express my gratitude towards my family for the encouragement which helped me in completion of this paper. My beloved and supportive family members, Xiu Yang, Jun Yang, Juan Li, Kira Li, Yu Qiu, Jixian Zhong, Jichao Zhong, who served as my inspiration to pursue this undertaking.

My sincere thanks are to friends: Clara Mwoyounotsva, Chengjiang Li, Eidan S E H S Alrasheid, Juntong Liu, Jiaqi Dong, Maria Espinosa, Ensieh Fathollah Zadeh, MD Abdul Ahad, Gedion Dzando, Liu Gang, Mei Yuan, Ruikang He, Xi Zhang, Yu Wu. They all helped to keep me going and helped in completing my work successfully.

My appreciation also extends to Flinders University Social and Behavioural Search Ethics Committee (SBREC), in Adelaide, Australia, and the First Affiliated Hospital of Chongqing Medical University, in Chongqing, China, for their consideration, and all the respondents for their honest and cooperative responses to all the questions solicited in this study.

I give special thanks to Mr Jun Lai, for granting my study. This thesis would not have been possible without the financial support.

Chapter 1: Introduction

1.1 Introduction

The World Health Organization (World Health Organization, 2018) has defined health as “a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.” Mental health is an integral and essential component of health (World Health Organization, 2018). Physical and psychological health linked to marriage problems have been discussed for more than 50 years in Western society (Robles, Slatcher, Trombello & McGinn, 2014). However, one in four individuals worldwide who has a stable relationship still suffers from a mental disorder (Richmond & Roehner, 2016).

Worldwide, three decades of research has demonstrated a credible, bi-directional link between mental disorder and marital discord (Robles et al., 2014). Schaakxs et al. (2017) state that marital distress is associated with psychological distress both simultaneously and longitudinally. Marital distress in one direction raises the danger of mental disorder in conjunction with a defined diathesis (Gotlib & Joormann, 2010). In order to achieve better mental health outcomes, Gotlib and Joormann (2010) and Schaakxs et al. (2017) suggest that research should focus simultaneously on both psychological health prevention and marital satisfaction. This chapter discusses, first, societal impact of marital issues in China and Australia; second, it introduces the objectives, sub-questions, research hypothesis statements, aim, research question statements, and then explains the study's significance and scope, as well as definitions of special terms; third, it outlines the thesis.

Additionally, this thesis explores the use of critical theory and how it informs research into marital satisfaction and mental as well as physical health. The use of critical theory here is important as critical theory is a social philosophy that enables researchers to critique a society and its culture (Kincheloe 2011). The use of critical theory here establishes the link between the language of marital satisfaction, which is subjective despite the use of a quantitative measure, and foundational as it a means of comparing the potential influence of a new culture on a highly socialised structure, marriage and marital satisfaction (Kincheloe 2011). The exploration of power and relationships related to gender and intergender dynamics is central to critical theory. As marriage and marital satisfaction is set within highly personal and intimate language then the use of critical theory is central to any critique of the impact of culture (Kincheloe 2011). The application and relevance of critical theory is central to this research and its findings.

As a first part of this research thesis explores levels of marital satisfaction and the impact of culture. In defining the term culture, the work of Iwelunmor and Airhihenbuwa (2017) asserts that culture is the ‘ubiquitous influence that shapes everything we are and do’, is used here. Additionally, the work of Limaye et al (2017) outlines the importance of linking the ‘social theoretical aspects of practice’ to

the delivery of health care. Therefore, in exploring the impact of culture on marital satisfaction it is central to maintain some form of social lens.

1.2 Marital satisfaction and its impact on society

Marital satisfaction has been identified as one of the major factors to impact on a couple's mental health. Improving marital satisfaction and wellbeing is one of the most important, contentious and exciting issues in contemporary public health (World Health Organization, 2011). International evidence increasingly demonstrates the connection between mental illness and marital satisfaction (World Health Organization, 2011). This link has been proven to significantly impact upon population morbidity, mortality, and health disparities, according a meta-analysis review of 126 published articles over the past 50 years (Robles et al., 2014). Marriage is a key factor in efforts to change health-compromising behaviours such as substance abuse, nonadherence, and to initiate and maintain health-enhancing behaviours such as physical activity, a healthy diet and adherence (Homish & Leonard, 2008; Meyler, Stimpson & Peek, 2007), and poor marital quality is linked to poor health outcomes (Yang & Schuler, 2009, Li & Johnson, 2018). As mental disorders are fundamentally linked to a number of other physical health conditions such as, high blood pressure, cholesterol levels, stroke, and heart disease (Allen, Balfour, Bell & Marmot, 2014; Li & Johnson, 2018; Robles et al., 2014; Yang & Schuler, 2009). Managing mental health and marital satisfaction could effectively curtail these conditions and may also reduce physical health ill-health and thus improve health overall.

Moreover, a recent analysis estimated that the cumulative global impact of mental disorders in terms of lost economic output will amount to US\$16,000 billion over the next 20 years (World Health Organization, 2011). The increasing impact of marital satisfaction is one of the major reasons for raised government expenditure on the treatment of mental illness (Richmond & Roehner, 2016; Makki & Mohanty, 2019; Robles et al., 2014). Thus, it is meaningful to find out if culture impacts on the couple's marital satisfaction. Furthermore, as relationships are construct through cultural and social lens the understanding of the impact of culture may also assist in define the role society plays in relationship satisfaction (Aniciete & Soloski 2011).

Additionally, the Nobel Prize winners Banerjee and Duflo (2011) state that poor mental health conditions frequently lead individuals and families into poverty and hinder economic development at the national level. Whilst this link is emerging, and the causal link between poverty and mental health is complex and multi-dimensional, the impact of marital satisfaction is a known factor in mental health (Banerjee & Duflo, 2011). Consequently, this research explores the link between culture and marital satisfaction, with some attention to mental illness. While this thesis is a start this research focus will require further study beyond the scope of a Master thesis.

1.2.1 Marital satisfaction and its impact on society in China

Chinese marital satisfaction has been a matter of increasing concern in mainland China since the 1980s (Chen & Li, 2014). Marital issues have been one of the main reasons for people seeking mental health consultations in China since 1990, resulting in a rapid increase in health expenditure by the Chinese government (Yang & Ran, 2011; Ma & Wang, 2013; Fu Keung Wong & Song, 2008; Xiang, Yu, Sartorius, Ungvari & Chiu, 2012; Dehui & Huiming, 2012). Figure 1.1 below illustrates the rate of mental health disorder as a portion of the total burden of disease. This shows that the rates of Mental Health disorders are increasing in China.

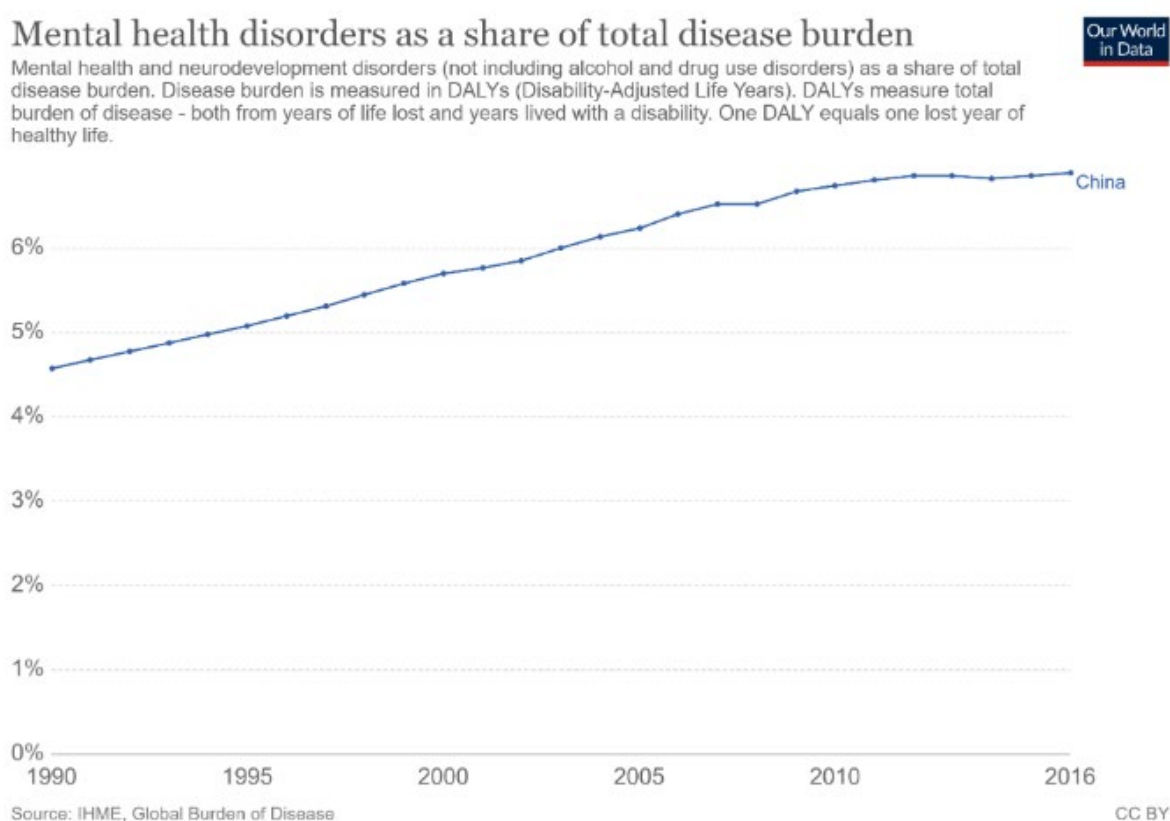


Figure 1.1 The Rate of Mental Health Disorder as share of total disease burden in China from 1990 to 2016 (Global Burden of Disease Collaborative Network in China, 2017)

According to recent statistics on mental health disorders, as a share of the total disease burden the percentage of mental health disorders in China increased from 4.58% in 1990 to 6.90% in 2016 (Global Burden of Disease Collaborative Network, 2016; see Figure 1.1. above). Given these concerns, the Chinese government launched the National Mental Health Work Plan (NMHWP) in 2015, seeking better public mental health care, of a quality striving to match international standards (Xiong & Phillips, 2016). As discussed above, marital issues are not the only factor to impact on people's mental health and increase government expenditure but are an important issue to be addressed in China.

1.2.2 Marital satisfaction of Australian–Chinese and its impact on society in Australia

From the point of view of mental health, some studies show that lower marital satisfaction may increase the risks of mental health issues (Gotlib & Joormann, 2010; Richmond & Roehner, 2016; Robles et al., 2014; Schaakxs et al., 2017) which leads to an increase of government expenditure on mental health treatment in Australia. In Western countries such as Australia, married women have lower rates of mental illness compared with the unmarried group (Galyunker & Galyunker, 2017; Stack & Kposowa, 2016). Therefore, people who married or live with partner are happier and have lower rates of mental illness. Research in Western cultures has found that marital distress is one of the major risk factors for depression (Fukino, 2005). This is the same in China, and while marital issues are not the only cause of mental illness they still need to be taken into account. This is important because as a share of the total disease burden, mental health problems in Australia increased from 9.39% in 1990 to 10.74% in 2016 (see Figure 1.2 below).

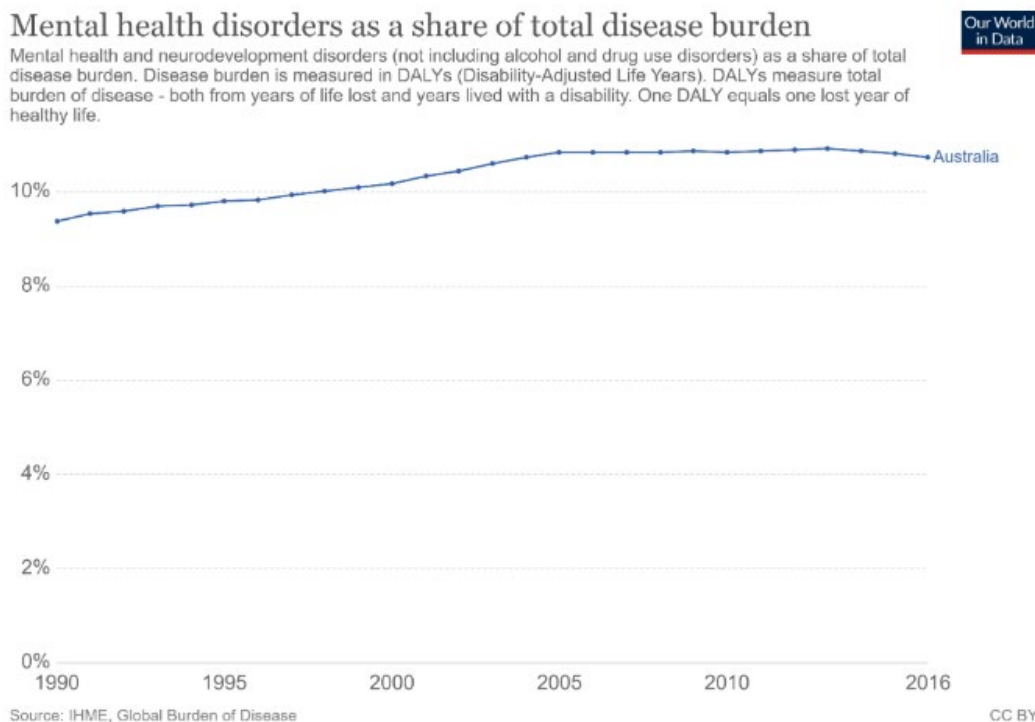


Figure 1.2 The rate of mental health disorders as share of total disease burden in Australia from 1990 to 2016 (Global Burden of Disease Collaborative Network in Australia, 2017)

This statistic, from the Global Burden of Disease Collaborative Network, calculated all ethnicities living in Australia, not only the Australian–Chinese population. However, the trend of mental health disorders still shows that mental health issues of Australian–Chinese are increasing. According to the Australian Bureau of Statistics (2012), the proportion of Chinese in Australia was 4.0%. The 2016 Census found Australia is home to more than 1.2 million people of Chinese ancestry. Of these, 41% were born in mainland China (Australian Bureau of Statistics, 2016). Therefore, there were about 492,000 mainland Chinese living in Australia in 2016. From the above data, we can calculate the

number of Chinese people suffering from mental illness in Australia in 2016 was about 85,608 (Global Burden of Disease Collaborative Network, 2017; Australian Bureau of Statistics, 2016).

From the point of view of statistics, the national recurrent expenditure on mental health-related services was estimated to be around \$9.1 billion in 2016–17. Overall, national expenditure on mental health related services increased from \$359 per person in 2012–13 to \$375 per person during 2016–17 (Australian Institute of Health and Welfare, 2019). The expenditure on mental health will be continually increasing, predicted from current data trends. Therefore, marital satisfaction as one of the major causes of mental health issues should be taken into account to promote mental health for Chinese living in Australia (Fukino, 2005; Wang, Wang, & Miller, 2014).

1.2.3 Comparison of the rate of mental health disorder as a share of total disease burden in China and Australia from 1990 to 2016

As shown in Figure 1.3 (below), the line chart compares the rate of metal health disorder as a share of the total disease burden in both China and Australia from 1990 to 2016. Australia had a significantly higher rate of metal health disorders when compared with China in that time period.

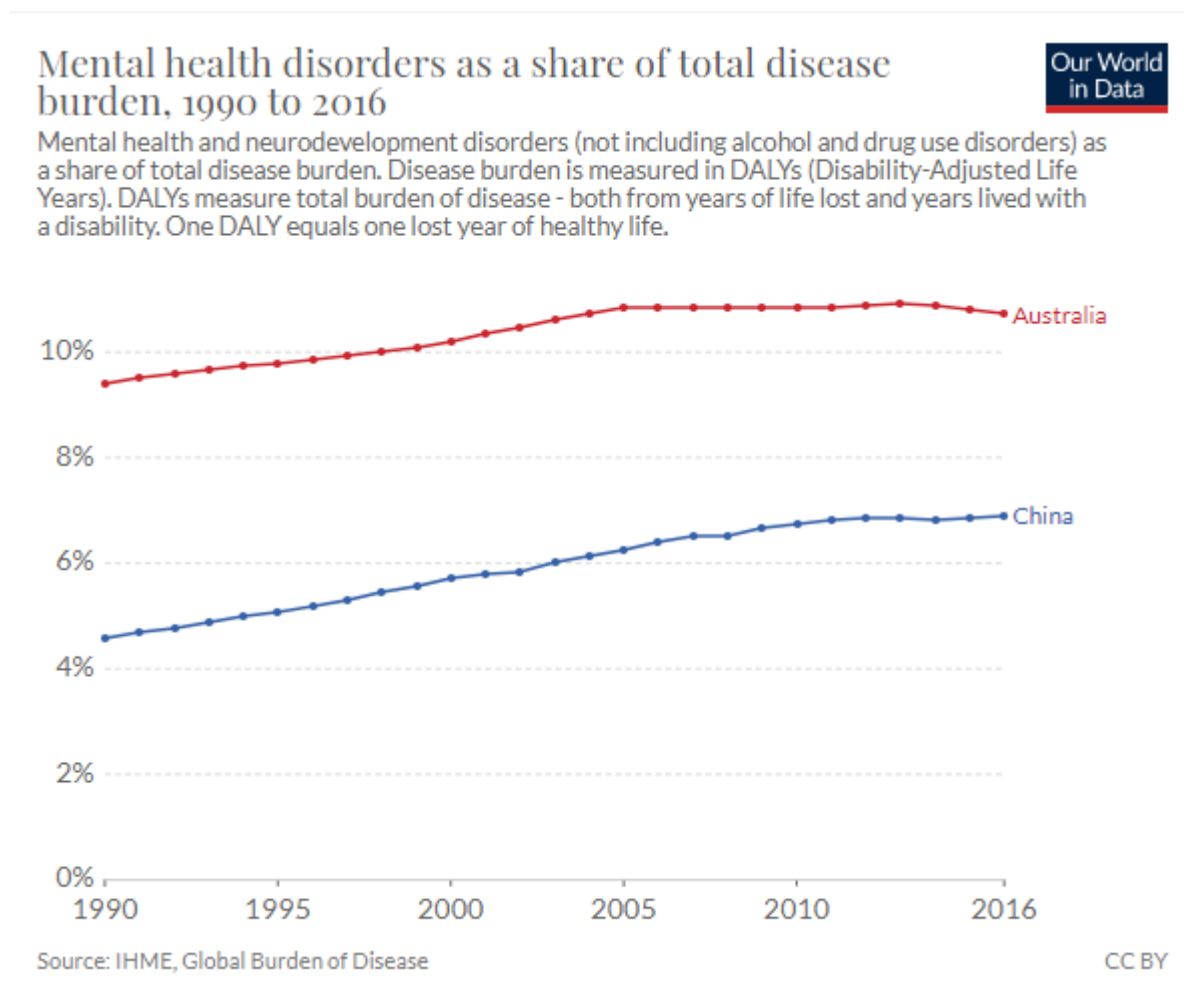


Figure 1.3 Comparison of the rate of mental health disorder as a share of total disease burden in China and Australia from 1990 to 2016 (Global Burden of Disease Collaborative Network in Australia, 2017)

Figure 1.3 above underestimates the levels of mental health issues in China. A meta-analysis by Han et al (2019) found that while the treatment for mental illness, especially in males was comparable to the rates in Australia above, few hospital admissions occurred due to the stigma of mental health issues in China. The epidemiological studies reported that the treatment rate of mental illness, particularly in psychiatric hospitals, was low in China (Han et al., 2019), mental illness in China remains undiagnosed, underreported, and undertreated due to the stigma regarding the use of mental health services, especially for marital related issues (Han et al., 2019). The findings of Han et al. (2019) are important as the meta-analysis used robust and validated research sources from the Capital Medical University. This university contains many powerful databases in both Chinese and English including Chinese National Knowledge Infrastructure, WanFang, SinoMed, PubMed, Cochrane Library, PsycINFO, and Web of Science databases from 1990 to 2018.

The research project addressed the levels of happiness and mental health. Through the levels of marital satisfaction, while the figure 1 above provides broad overview. The questionnaire used provides a focused lens on the factors influences marital satisfaction. The links between marital satisfaction and mental health were illustrated above. Marriage and its impacts have been increasingly attracting people's attention in all aspects of society (Yao, 2019). According to Robles et al.'s (2014) meta-analysis of the links between marital quality and health, aggregated findings across a half century of research worldwide found that a number of existing studies have concentrated on allosteric mechanisms related to marital issues, such as changes in hormones and immune interventions related to stress caused by marital issues (Robles et al., 2014). Most existing research on this issue has focused on the United States or other Western countries, and it is still uncertain to what extent previous findings are relevant in non-Western countries such as Asian countries. While some studies have measured Chinese marital satisfaction in Australia (Hiew, Halford, Van & Liu, 2015a; Hiew, Halford, Van & Liu, 2016; Halford, Leung, Hung-Cheung, Chau-Wan, Hiew, & van, 2018), they measured marital satisfaction either purely in China or purely in Australia. Only one study regarding marital quality and psychological wellbeing was conducted in China, by Shek (1995), based on Robles, et al.'s meta-analytic review of 126 quantitative studies in the past 50 years. There is minimal relevant research that has so far linked culture and marriage satisfaction with mental illness. This research will make some effort to fill that gap.

1.3 Focus and scope

The major research question was: What are the differences in marital satisfaction between Chinese couples living in China and Chinese couples living in Australia?

This research identifies the following objectives:

1.3.1 The objectives

- Objective 1: Identify the level of happiness in the couple relationship.
- Objective 2: Identify the impacts of culture in the couple relationship.
- Objective 3: Deduction: if people are happy in their marriage it often follows, they are mentally healthy.

1.3.2 Sub-questions

- How much happiness is there in their relationship?
- What are the impacts of culture in their relationship?
- Deduction: Does people's happiness in their marriage correlate with positive mental health?

1.3.3 The research hypothesis statements

- (null hypothesis) H_0 : There is no difference in the rate of marital satisfaction when comparing Chinese counterparts with Australian Chinese.
- (alternative hypothesis) H_1 : There is a different rate of marital satisfaction when comparing Chinese counterparts with Australian Chinese.
- (alternative hypothesis) H_2 : The degree of happiness regarding marital status is different when comparing Chinese counterparts with Australian Chinese.
- (alternative hypothesis) H_3 : Increased levels of happiness increase mental wellness.

Researchers have suggested that cultural factors are the explanation for Chinese couples in Australia having different levels of marital satisfaction.

1.3.4 Aim

The purpose and specific aim of the study was to understand the cultural differences in marital satisfaction between Chinese couples living in China and Chinese couples living in Australia. Furthermore, the level of marital satisfaction correlates, significantly, with positive or negative mental health status.

1.4 Significance and scope

This study is important because the findings will, first, identify the degree of happiness in a couple relationship, and then compare the levels of marital satisfaction for mainland Chinese people living with mainland Chinese cultural norms with Chinese people living with Australian cultural norms. If this goal is achieved, the result could provide evidence as to whether or not the culture influences

marital satisfaction. The further understanding of the correlation between cultural beliefs and marital satisfaction will be developed. Also, understanding marital satisfaction for Chinese couples is important for the public and for governments, as discussed above. Consequently, public health costs for mental health in China and Australia may decrease. No Chinese studies exist that have compared the levels of Chinese marital satisfaction within different cultural environments in China and Australia. Therefore, by comparing populations of similar backgrounds but who have lived with either Australian or Chinese cultural norms for years, this research can identify any differences in the level of relationship satisfaction and the degree of happiness.

1.5 Definitions

A marital relationship or couple relationship is defined as two people usually residing in the same household who share a social, economic and emotional bond usually associated with marriage and who consider their relationship to be a marriage or marriage-like union (Australian Family Law, 2019). This relationship is also identified by the presence of a registered marriage or de facto marriage (Australian Family Law, 2019). Thus, heterosexual or homosexual couples are identified as couples and included in this study.

High marital satisfaction is typically operationally defined by high self-reported satisfaction with the relationship, predominantly positive attitudes towards one's partner, and low levels of hostile and negative behaviour (Robles et al., 2014).

Low marital satisfaction is characterised by low self-reported satisfaction, predominantly negative attitudes towards one's partner, and high levels of hostile and negative behaviour (Robles et al., 2014).

Mental illnesses are conditions that affect a person's thinking, feeling, mood or behaviour, such as depression, anxiety, bipolar disorder, or schizophrenia. Such conditions may be occasional or long-lasting (chronic) and affect someone's ability to relate to others and function each day, according to the Centers for Disease Control and Prevention in 2018.

Mental health includes our emotional, psychological, and social wellbeing. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make healthy choices. Mental health is important at every stage of life, from childhood and adolescence and throughout adulthood, according to the Centers for Disease Control and Prevention in 2018.

Mainland Chinese is people from a traditional Chinese cultural background and permanently living in mainland China.

Australian Chinese is people from a traditional Chinese cultural background and permanently living in Australia.

Individualism is a social pattern that consists of loosely linked individuals who view themselves as independent of collectives are primary motivation by their own preferences, needs, and the contracts they have established with others; give priority to their personal goals over the goals of others, give priority to their personal goals over the goals of others, and emphasize rational analyses of the advantages and disadvantages to associating with others (Triandis, 2018).

Collectivism is a social pattern consisting of closely linked individuals who see themselves as parts of one or more collectives(family, co-workers, tribe, nation); are primary motivated by the norms of, and duties imposed by, those collectives; are willing to give priority to the goals of these collectives over their own personal goals; and emphasize their connectedness to members of these collectives (Triandis, 2018).

Culture as defined in anthropology usually refers to societies defined in national or ethnic terms, however, the concept of culture has been recently used for describing knowledge and behavior of other groups like in the concepts of corporate culture or organizational culture (Birukou, Blanzieri, Giorgini & Giunchiglia, 2013).

Critical social theory: A critical social theory is concerned in particular with issues of power and justice and the ways that the economy, matters of race, class, and gender, ideologies, discourses, education, religion, and other social institutions, and cultural dynamics interact to construct a social system (Kincheloe 2011).

Critical enlightenment. In this context critical theory analyzes competing power interests between groups and individuals within a society—identifying who gains and who loses in specific situations. Privileged groups, criticalists argue, often have an interest in supporting the status quo to protect their advantages; the dynamics of such efforts often become a central focus of critical research (Kincheloe 2011).

1.6 Thesis outline

This thesis firstly outlines the research background on marital satisfaction correlated to mental health, which has a big impact on Chinese and society. Marital satisfaction has been one of the major factors to impact on a couple's mental health and is thus a factor in continuously increasing government health expenditure in both China and Australia. The significance of the research, its aims, objectives, and research question, has also been addressed.

According to the literature review, this study is the first to compare the levels of marital satisfaction within Australian cultural norms and mainland Chinese cultural norms in the last decade. Based on the critical social theory, this study tests the impacts of Australian cultural norms on Chinese marital

satisfaction via the influence of perceived Australian cultural norms over time. This study also examines the degree of happiness in couple relationships.

The methodology chapter, Chapter 3, provides an overview of the quantitative research process, the cross-sectional method used to investigate the research problem, and the gap in the literature. Data were collected from 1,235 participants (Chinese in Australia: 420; Chinese in mainland China: 815) via an online questionnaire. Chapter 4 presents the findings of this research with a robust data analysis process using SPSS version 25. The final chapter, Chapter 5, compares the findings of this research with the results from the literature review, and also compares the findings with the other articles that used the same instrument (CSI-32, conducted by Funk, Rogers and Kazak (2007)).

Chapter 2: Literature review

2.1 Introduction

The purpose of this chapter is to search and critique the current literature that addresses the study objectives (see section 1.3.1). This section first presents both Chinese and Australian cultural beliefs regarding marital issues, and then compares and contrasts two of the cultural norms related to marital satisfaction.

The integrative literature review has been conducted in this review because of many benefits to the scholarly reviewer, including evaluating the strength of the scientific evidence, identifying gaps in current research, identifying the need for future research, bridging between related areas of work, identifying central issues in an area, generating a research question, identifying a theoretical or conceptual framework, and exploring which recommended by Christmals and Gross (2017) for postgraduate nursing research reviews. The 5-stage integrative review process includes: problem formulation, data collection or literature search, evaluation of data, data analysis, and interpretation and presentation of results. , consequently, to practice and research (Christmals & Gross, 2017).

This study reviews four critical points: first, reporting on the selected databases, the search terms, and the selection process for the articles following the 2009 PRISMA chart format; second, the critical evaluation of 11 primary studies through the use of appropriate evaluation tools for each research method; third, the findings regarding marital status and the five factors that influence Chinese marital satisfaction will be described and also presented in a summary table; finally, an overall summary table will be presented as well as an overall discussion of the findings. Additionally, the gaps in the literature and the limitations of this review will be outlined in the conclusion.

This chapter initially presents the mainstream Chinese cultural expectations for a couple relationship, Western cultural expectations for a couple relationship, especially, Australian cultural expectations of the couple relationship, then identifies the differences in expectations of couple relationships between mainland Chinese and Australian.

2.2 Culture and marital satisfaction

According to sociologists, culture consists of the values, beliefs, systems of language, communication, and practices that people have in common and that can be used to define them as a collective (Storey, 2018, p. 1). Culture dictates the language used to define issues, the identification of problems, the framing of those problems, the manner in which solutions are sought, and the methods for defining and measuring success (Anderson & Olsen, 2013).

The dimensions of individualism in Western countries such as Australia, and collectivism in mainland China provide a simple framework with which cultural differences in couple relationships can be

understood (Hiew & Leung, 2017). People from different cultural backgrounds could have different values, beliefs, systems of language, communication and practices (Storey, 2018, p. 1). As an illustration of Chinese–Western cultural difference, the dimension of individualism–collectivism describes the extent to which a culture encourages individual needs, wishes, desires, and values, as opposed to group and collective ones (Bhawuk, 2017).

Evidence provided by Hofstede, Hofstede and Minkov (2010) ranked the individualistic tendencies of 76 countries on a scale ranging from 0 (highly collectivist) to 100 (highly individualistic). Consequently, Australia received a ranking of 90, whereas China received a ranking of 20. Chinese and Australian cultures differ widely on many important dimensions of cultural values (Halford et al., 2018), and relationship standards regarding psychological intimacy and emotional support also differ along the dimension of individualism–collectivism (Hiew & Leung, 2017). Hence there may potentially be important differences in relationship satisfaction in Australia and mainland China which support H_0 – that Australian Chinese people have different rates of marital satisfaction when compared to their mainland Chinese counterparts.

The term “marital satisfaction” was proposed by the American sociologist G.V. Hamilton in his book *A Research in Marriage* (1929). Hamilton stated that “marital satisfaction” mainly refers to peoples’ subjective evaluation of their couple relationship, and that the level of marital satisfaction has an important impact on the quality of marriage. Therefore, self-reported satisfaction with a relationship came to be one of the fundamental evaluation criteria for marital satisfaction.

2.2.1 Mainland Chinese culture and marital satisfaction

At the macro level (i.e. taking the overall view) the priority of marital goals is also influenced by historical and cultural factors (Li & Fung, 2011). Therefore, beliefs about marriage vary across both cultures and historical periods.

Since 1949, in terms of the criteria for choosing a spouse, the priority was to emphasise the political ideology of revolution, which was also the premise of love and marriage (Liu & Shi, 2018). This remained the case until 1979, when the Chinese policy regarding reform and opening-up was announced; the form of politic marriage then changed to love-based marriage (Zhang, 2010).

Historically, in collectivist Chinese society, the self is defined by relationships with others, and self-worth is tied closely to positive feedback from others (Hiew & Leung, 2017). As a result, people who live in mainland China are more likely to assess their relationship satisfaction by others’ views instead of their own.

Also, traditional gender structure in marriage was created and facilitated by both structural and cultural contexts and day-to-day marital interactions (Yu, 2011). For example, in collectivist mainland Chinese society, most people believe that family comes first. As a result, women in China spend

more time on housework, caring for children and parents and/or parents-in-law, while men take the role of breadwinner (Zhang, 2015).

2.2.2 Australian culture and marital satisfaction

In Western countries people are perceived as separate beings whose behaviour is primarily determined by internal attributes such as individual thoughts and feelings (Hiew & Leung, 2017; Halford et al., 2018). Therefore, romantic love and psychological intimacy are believed to be central to a good couple relationship (Hiew & Leung, 2017). Due to their European ancestry the cultural values of the majority of Australians who emigrated from Europe are similar to European ones (Australian Bureau of Statistics, 2012).

In Australia, intimacy and the demonstration of love and caring are rated as important factors for successful couple relationships, based on the assessment of the Couple Bond scale (Hiew et al., 2015). For example, Australians whose major cultural framework is based on the Western one are more likely to nominate love or shared leisure activities as a reason for their marital satisfaction (Wong & Goodwin, 2009).

2.3 Does the context matter?

In the early 1990s, Markus and Kitayama (1991) stated that cultural values, beliefs and norms influence individuals' view of their selves. Furthermore, foundational research by Dion and Dion (1996) asserted that the construction of love and intimacy could be influenced by cultural values, beliefs and norms. China has experienced rapid Westernisation and industrialisation since the mid-20th century, which has influenced cultural values regarding marital satisfaction (Iwelunmor & Airhihenbuwa, 2017). Foundational research by Sternberg, Hojjat and Johnson (1999) found that the idea that marriages should be based on romantic love did not prevail. There also seem to be some enduring influences of traditional Chinese culture that may have an effect on the relationship standards of Chinese people (Halford, et al., 2018). Also, Yu (2011) states that marital satisfaction was more likely to be influenced by people's original culture, such as the traditional cultural values regarding marriage listed above. Although the research above indicated that the native cultural perception could influence people's view of marriage, the question of how much cultural change affects points of view on marital satisfaction has not been addressed. To further clarify whether the extent to which cultural beliefs regarding marital satisfaction impact on traditional cultural beliefs, the study compared the different levels of marital satisfaction for Chinese couples exposed to mainland Chinese cultural norms and Chinese couples exposed to Australian cultural norms. The following sections identified the factors which could impact on the marital satisfaction from a cultural perspective by using robust research strategies of integrated literature review.

2.4 Article search and selection strategies

An integrated literature review outlines the relative literatures regarding Chinese and Australian Chinese marital satisfaction in the last decade. An integrative review is a specific review method that summarizes past empirical or theoretical literature to provide a more comprehensive understanding of a particular phenomenon or healthcare problem (Sørensen, et al., 2012), such as mental issues related to marital satisfaction. In developing a robust literature review the search must use a framework that generates the appropriate literature to review to match the focus of the research question (Schulenkorf, et al 2016). An integrated review is the broadest type of review and allows for the integration of multiple methods, methodologies, research approaches and designs (Schulenkorf, et al 2016). Integrated literature reviews provide the “most comprehensive evidence-based approaches to reviewing literature (Schulenkorf, et al 2016, p7). Additionally, integrated literature reviews can generate new knowledge based on the existing literature (Torraco, 2016). Article selection followed the PRISMA chart process (see Appendix 2.1) to select articles from three sources: major databases, specific books, and “grey sources”, by using both Chinese and English language searches, as this researcher is bilingual. A research librarian from Flinders University was consulted to ensure the search strategy was comprehensive during this one and half year research project.

2.4.1 The sources of articles

The major databases covering the research area were searched for relevant articles, including four English databases, ProQuest, Scopus, PsycINFO and Informit, and one major Chinese database, Wanfang Data.

PsycINFO, for example, is the world’s largest resource for this field, with almost four million bibliographic records devoted to peer-reviewed literature in the behavioural and mental health sciences, including weekly updates (American Psychological Association, 2019). ProQuest and Scopus offer rich psychosocial literature that may have relevance to the topic at hand. Particularly useful for this study, Informit is an Australian database that publishes articles related to Australian research.

Wanfang Data is a leading provider of electronic resources for Chinese studies, and indexes content from some of the most important published resources on Chinese culture, medicine, business, science and engineering (EBSCO Information Services, 2020).

Furthermore, specific books, monographs, bulletins, reports and research articles – preference shown in most instances for literature of the last 10 years – were searched through China Core Newspapers Full-text Database (CCND). CCND links to related newspaper literature, academic journals, theses and dissertations, proceedings of conferences, yearbooks, and so on, providing information on the background of every piece of news, the latest developments and the developing

trends in related areas. It provides the most comprehensive information integration service to study developments in trends of a particular field (China Academic Journals Full-text Database, 2020). In addition, “grey sources” including dissertations, theses, papers presented at recent professional meetings not yet in published form, were also targeted using Google Scholar.

2.4.1.2 Inclusion and excision criteria

The inclusion and exclusion criteria are explicitly stated and summarised in the table below:

Table 2.1 Themes supported by studies that influence Chinese marital satisfaction

Inclusion	Exclusion
The literature search only included articles published after 2010	Articles published before 2010 except if the article represented a foundational piece of research/theory.
Article published in English or Chinese	Articles in other languages were excluded
Methodologies of qualitative, quantitative and mixed methods	Articles where the methodology was unclear.
Grey literature and these etc were included	Literature not relevant to the topic or research question.

2.5.2.1 Cultural beliefs

The major databases covering the research area were searched for relevant articles, including four English databases, ProQuest, Scopus, PsycINFO and Informit, and one major Chinese database, Wanfang Data.

2.4.2 Article searching procedure

The article search was for material concerning people’s beliefs regarding marital satisfaction for Chinese couples living with Chinese cultural norms and Chinese background couples living with Australian culture norms, with search combinations around marital satisfaction, China and Australia. For example, in the ProQuest database, the syntax used followed the ProQuest guide, and the following inclusion keywords were used: keyword one: (noft ((marital OR Marriage OR spouse* OR wedlock OR wedded OR couple) NEAR/4 (satisfact* OR content* OR happiness OR happy OR fulfil* OR wellbeing OR “well-being” OR standard* OR expectation*)) (n=57,276); keyword two: noft (china OR chinese) (n=2,925,488); and keyword three: noft (Australia) (n=16,292). After this, “keyword one” and “keyword two”, and “keyword three” were combined and searched.

Additionally, these three keywords were used in the Scopus, PsycINFO, ProQuest and Informit databases, with syntax changing according to the Database Syntax Guide for the Systematic Reviewer at Flinders University (Damarell 2016). Overall, 24 articles were captured, comprising: ProQuest (n=11), Scopus (n=5), PsycINFO (n=6), and Informit (n=2).

Also, a manual search of Google Scholar, by using the relevant article's reference list, identified five more articles. Furthermore, five more articles were captured from the Chinese database, WanFang. In total, 34 articles were identified; however, after removing duplicates only 31 articles remained to be included for further screening. After the title and abstract of the 31 articles were screened individually, only 10 articles were deemed relevant. A total of 21 articles were excluded, as the titles and abstracts failed to address the research question.

Finally, the 10 eligible articles were assessed using a critical evaluation tool (see Appendices 2.3 and 2.4) which revealed that two methodologies were used, namely quantitative statistical correlation studies (n=7) and mixed methods studies (n=3). No qualitative studies existed based on the integrative review framework in either Australia and China in the last decade.

The previous research in this area is scant as it is a relatively new area of research. Consequently, the research on Chinese relationship satisfaction needs further investigation and evidence. The strategy of this integrated literature review was to critically evaluate the 10 articles and identify key authors and the key works in the area.

2.4.3 Critical appraisal of the study and thematic analysis

In order to capture high quality research, the selected articles were critically reviewed using two critical evaluation tools: the National Institute for Health and Care Excellence (NIHCE, 2012) tool for quantitative studies that report correlations and associations; and the CASP evaluation tool for mixed methods studies.

The seven quantitative studies required the NIHCE critical evaluation tool (see Appendix 2.2), as this tool assists the researcher to evaluate the external and internal validity of the study. Five of the seven studies were included in the summary table, as they were acceptable according to the critical appraisal. This literature review will not include two of these seven studies, namely "A Survey on Chinese couples' marital satisfaction and suggestions for a happier marriage" (Wang, Li & Hu, 2013); and "A Research on Marital Satisfaction: The Case of Shandong Province" (Shen & Lin, 2013). This exclusion was due to the fact that the study fails to explain their inclusion and exclusion criteria, selection bias and confounding factors; therefore, the influence of these factors could not be determined, and the confounding factors could not be identified.

The CASP critical appraisal tool for mixed methods design was used to evaluate the three mixed methods studies. This tool is recommended for evaluating mixed method studies as it draws on appropriate questions from both the quantitative and qualitative evaluation tools (Heyvaert, Hannes, Maes, & Onghena, 2013). The tool provides a template of key questions to assist with the critical evaluation of both the quantitative and qualitative aspects of mixed methods studies (Heyvaert et al., 2013). This literature review will include each of the three studies, as CASP's nine questions were adequately answered and were therefore included in the evaluation table (see Appendix 2.3).

These two critical tools provided the means for evaluating each article, and after the critical appraisal a total of eight studies were deemed suitable to be included in the summary table (see Appendix 2.4) for review. The eight articles were critically evaluated as being meaningful, and thus able to provide a synthesis of the research problem as the purpose, methods, sampling and findings of each study were identified according to the aforementioned critical appraisal tools.

2.5 Presentation of the findings

The eight studies were conducted in mainland China (n=4) and Australia (n=4). Moreover, the selected studies are based on a survey method of data collection (n=8), while three out of eight articles are based on both in-depth interviews and surveys. All the evaluation tools used in these eight articles are presented below.

2.5.1 The tools used to measure marital satisfaction and relevant factors

All of the studies defined several variables that measure marital satisfaction, with each using one or more survey tools. The methods of data collection from the studies used the following surveys: the Couples Satisfaction Index (CSI) (n=3; Halford et al., 2018; Halford et al., 2018; Chi et al., 2013;); relevant factors which affect marital satisfaction from the Chinese General Social Surveys (CGSS) (n=2; Qian & Qian, 2015; Wang & Yu, 2013); the Couple Bond scale (n=1; Hiew et al., 2015); the Family Responsibility scale (n=1; Hiew et al., 2015); the Chinese–Western Intercultural Couple Standards Scale (CWICSS) (n= 1; Halford et al., 2018); the Inventory of General Relationship Standards (IGRS; n=1; Halford et al., 2018); the Dyadic Adjustment Scale (DAS, n=1; Zhang, 2015); Marital Happiness (n=1; Qian & Qian, 2015); Kansas Marital Satisfaction Scale (n=1; Wang & Yu, 2013); and the Communication Patterns Questionnaire (CPQ) (n=1; Chi et al., 2013). The CSI was the only scale that was specifically used to measure international marital satisfaction. The CSI survey was employed in the current study to gather data on the marital satisfaction levels of Chinese couples living in mainland China and Chinese couples living in Australia. This survey tool is deemed to be suitable for exploring this research problem and permission has been granted by the author of the survey for use in this study.

2.5.2 The key author regarding marriage satisfaction

Based on the research on marriage satisfaction in both China and Western countries in recent years, this review systematically identifies the key author and the key work in the area, measuring tools and influencing factors of marriage. A disciplinary research team at the University of Queensland should be particularly noted as this team published a series of articles from 2015 to 2019 focusing on marital and cultural norms, relationship education and so on (Hiew et al., 2016; Halford et al., 2018). One of the major authors in this team is W. Kim Halford, a professor of clinical psychology and a registered clinical psychologist.

2.5.3 Major themes identified

From a cultural perspective, five major themes were identified in this literature review as the main factors that have an impact on marital satisfaction and are related to the research question and are presented in Table 2.1 (below). First, cultural beliefs in collectivism such as in traditional Chinese culture, and individualism such as in Australian culture, regard marital satisfaction in different ways. Second, relationship standards differ between Chinese and Western culture. Third, methods of communication play an important role on marital satisfaction. Fourth, gender differences in marriage have a big impact on marital satisfaction. Finally, living environments, such as family arrangements and the regions or countries lived in, also matter for marital satisfaction. These five cultural themes identified, which belong with cultural beliefs regarding marital satisfaction, will be further discussed in the following sections.

Table 2.2 Themes supported by studies that influence Chinese marital satisfaction

Themes	Numbers (N)	Studies and references
Cultural beliefs	5	Halford et al. (2018); Wang & Yu, (2013); Chi et al. (2013); Hiew et al. (2015); Halford et al. (2018)
Relationship standard	5	Halford et al. (2018); Chi et al. (2013); Hiew et al. (2016); Hiew et al. (2015); Halford et al. (2018)
Communication method	3	Chi et al. (2013); Hiew et al. (2016); Halford et al. (2018)
Gender differences	3	Qian & Qian (2015); Halford et al. (2018); Zhang (2015)
Extended family	4	Qian & Qian (2015); Wang & Yu, (2013); Hiew et al. (2015); Halford et al. (2018)

2.5.2.1 Cultural beliefs

Five studies examined the impact of cultural beliefs on the marital satisfaction of Chinese couples, all of which indicated that people from different cultural norms think of marital relationships in different ways (Halford, Hiew, & van 2018; Wang & Yu, 2013; Chi, Epstein, Fang, Lam, & Li, 2013; Hiew et al.; 2015; Halford, Leung, Hung-Cheung, Chau-Wan, Hiew, & van, 2018). Hiew et al. (2015) interviewed 123 couples (Western couple group n=33 couples; Chinese couple group n=36 couples; Chinese–Western couple group n=54 couples) in Australia who completed the Couple Bond and Family Responsibility scales. The findings revealed that Chinese people who choose to live in Australia are more likely to identify with Western culture and values than Chinese people who choose to live in major Chinese cities (Hiew et al., 2015). There are significant cultural differences between China and Australia (Halford et al., 2018), with Western cultures such as Australia emphasising the independence, autonomy, and self-sufficiency of family members in couple relationships; Chinese culture, however, emphasises family devotion and dependence throughout life (Halford et al., 2018; Wang & Yu, 2013). Thus, the cultural belief in China of family being more important than self-

sufficiency in China leads to Chinese people experiencing increasingly conflicting demands and expectations during their marriage, through either choice or sacrifice.

2.5.2.2 Relationship standards

Different standards for couple relationships can affect the level of relationship satisfaction, as demonstrated in four studies (Halford et al., 2018; Chi et al., 2013; Hiew et al., 2016; Hiew et al., 2015; Halford et al., 2018), all of which used the Couple Bond scale to measure the strength of the bond between Australian and Chinese couples. This study states that Chinese couples living in Australia have higher levels of marital satisfaction than Chinese couples (Halford et al., 2018). In addition, Hiew et al. (2015) found that couples who are originally from Western countries have a higher level of relationship satisfaction than Chinese couples, and marital satisfaction in intercultural couples was in the middle of the scale when compared to the two other groups. Additionally, Hiew et al. (2015) used the Family Responsibility scale to measure 69 couples (Western couple group n=33 couples; Chinese couple group n=36 couples) and found that the Chinese group adhered to the standards of family responsibility more strongly than did the Westerners. As a result, couple relationships can be negatively affected if one of the partners fails to play their assigned family role such as earning money or doing the housework and caregiving. Accordingly, agreements about family responsibilities have a potentially significant influence on relationship satisfaction (Hiew et al., 2015).

2.5.2.3 Communication methods

Three studies support the view that Chinese couples are likely to communicate with their partner in an indirect way (Chi et al., 2013; Hiew et al., 2016; Halford et al., 2018). Although there is no evidence to support a strong association between indirect communication and satisfaction in Chinese couple relationships (Halford et al., 2018; Heiw, 2016), it is clear that indirect communication could increase the risk of lower marital satisfaction due to misunderstandings between the couple. Heiw (2016) interviewed 33 Western couples and 36 Chinese couples and found that Chinese couples exhibited less direct positive communication both verbally and nonverbally (such as via facial expression), and more direct negative communication, than Western couples. Thus, there is evidence that different ways of communicating result from differing cultural backgrounds. Importantly, Chinese couples use more direct negative and less direct positive communication than Western couples (Heiw et al., 2016).

2.5.2.4 Gender differences

Three of the selected studies reported an association between marital satisfaction and gender role differences (Qian & Qian, 2015; Halford et al., 2018; Zhang, 2015). Qian and Qian (2015) stated that in China, within a marriage the role of the man is to be the main provider by earning an income, while the role of the woman is to take care of the children and the parents. If the husband fails to fulfil the role of breadwinner, the wife juggles both full-time employment and the housework and caregiving,

which leads to increased perceptions of unfairness among the couple, family and friends. Such perceptions contribute to increased psychological distress and decreased feelings of relationship satisfaction (Qian & Qian, 2015). On the other hand, Western countries such as Australia emphasise the independence, autonomy and self-sufficiency of family members, in comparison with countries such as China (Halford et al., 2015).

2.5.2.5 Extended family

The findings in the four studies were somewhat inconsistent regarding the matter of extended family (Qian & Qian, 2015; Wang & Yu, 2013; Hiew et al., 2015; Halford et al., 2018). Two studies from China report that living separately from extended family has a positive effect on marital satisfaction (Qian & Qian, 2015; Wang & Yu, 2013). In China, parents, parents-in-law and children are likely to live permanently with a couple, which is part of the traditional culture of China (Wang & Yu, 2013). However, two of the selected studies reported that living with both parents and children leads to a greater likelihood of unhappiness compared to living with either of the parents or the children, or no one (Qian & Qian, 2015). Logically, this makes sense because extended co-living families can create additional pressures such as lack of housing space, finances, elder care, and the children's education.

2.6 Study limitations

The main limitation of this review is that non-qualitative study regarding the marital satisfaction for Chinese living in mainland China and Chinese living in Australia is not captured. This is due to the exclusion criteria for recency of publication set at the last 10 years. Therefore, the factors impact on the level of marital satisfaction could be limited or be insufficient in this study. This results from the limited word count in a Masters Thesis. Furthermore, the limitation of this literature review was in only selecting articles from ProQuest, Scopus, PsycINFO. Informit and WanFang databases for the literature review, as this may not have captured all the research available in this field. Additionally, the synthesis of the findings and the development of the themes might not have been as exhaustive as they could have been due to the limitations of the discarded studies relating to sample sizes and data collection. Moreover, as the research area is new, there were only eight existing articles that were deemed relevant for this study.

2.7 Conclusion

This chapter initially discussed the cultural beliefs of marriage from traditional Chinese and Australian perspectives. It then highlighted the cultural influence on marital satisfaction. The procedure for identifying the articles was then explained, following the PRSMA chart.

This integrated review formed the basis of the measurements and the five themes related to Chinese marital satisfaction from a cultural perspective. The significance of the selected studies, and the

relationships between the eight studies and the research problem, have been strongly argued and critiqued. A total of eight studies demonstrated that the main cultural factors affecting the relationship of Chinese couples are cultural beliefs, relationship standards, communication methods, gender role difference and extended family. Overall, seven articles suggested that people from different cultural environments regard marital satisfaction in different ways, especially considering the major cultural differences around individualism, as in Australia, and collectivism as in China. However, none of these articles addressed the question of whether living with different cultural norms will change the original cultural beliefs, or how much they could be changed. This gap was identified from the literature review and will be addressed in the master project.

2.8 Implications

The findings of the literature review strongly suggest that there is a need for more research in this area to identify changes in marital satisfaction that may be exposed and influenced by different cultural beliefs. This review has addressed the important aspects of the research tools used and the methodological designs needed to undertake such research on the relationships of Chinese couples. The literature review has also provided a basis for Australian–Chinese couple recruitment strategies. The review’s findings also have implications for enhancing marital satisfaction through changes in communication methods and relationship standards. Finally, the review provides evidence of cultural beliefs which can have positive or negative influences on couple relationships. If this is so, the health professions, such as nurses, doctors, psychologists, social workers and paramedics, who caring and treating Chinese in mainland China and Australia, will thus be able to promote these positive cultural factors and inhibit the negative factors in order to improve mental wellbeing for Chinese. Using knowledge generated in this literature review, the role of culture and its importance has been highlighted here, and the extent to which it is incorporated in health professional’s practice is a matter of urgency.

2.9 Recommendations

Cultural differences are not simply variations reflecting a biological core. These variations offer insights into qualitatively different views about love that have developed and evolved across different societies and in the same society at different phases of its history (Li, Connolly, Jiang, Pepler & Craig, 2010). Consider that there are cultural differences in response styles, so that people in different cultures might report different answers to the same question, even if in other respects their life quality is the same (Helliwell, Layard, & Sachs, 2012).

Additionally, future research should explore and apply the “critical social theory” framework to marital satisfaction in different countries to determine the impact of culture as an important factor in relationship satisfaction.

Chapter 3: Research design

3.1 Introduction

The previous chapter presented a review of the current literature in this field. The review indicates that there is little information available regarding the influence of culture on marital satisfaction based on critical theory. Critical theory is a social theory that argues that social problems are influenced and created more by societal structures and cultural assumptions than by individual and psychological factors (How, 2017, p. 15). Additionally, critical theory premises the critique of the social aspects of society in an effort to understand social life (Schneider, 2008). As this research focuses on the level of marital satisfaction and how it is influenced by cultural norms in Australian and mainland Chinese societal structures. The use of critical social theories can assist in our understanding of the role of cultural as a social phenomenon and its impact on our social life (Schneider, 2008).

This chapter provides an overview of the research process, the methodological approach, quantitative, used to investigate the research problem. The quantitative approach was adopted in this study since it was considered the most appropriate to achieve the objectives of this study, as this research needed a large number of participants. This chapter outlines the research approach, study setting, and methodological foundations, including the steps taken to calculate the sample size, recruitment of participants, ethical considerations, and the collection and analysis of data.

3.2 Research approach

3.2.1 Cross-sectional study

Cross-sectional study is carried out at one time point or over a short period (Gallin & Ognibene, 2012, p. 59). Importantly, cross-sectional analytic (CSA) studies use inferential statistics to infer a relationship between two variables (Schneider & Whitehead, 2016, p. 24) such as culture and marital satisfaction. The purpose of this study is to find the prevalence of levels of marital satisfaction for Chinese populations exposed to Chinese cultural norms and for Chinese populations exposed to Australian cultural norms, within those populations at a given time point. In this way cross-sectional study provides a “snapshot” of the outcome and the characteristics associated with it, at a specific point in time (Gallin & Ognibene, 2012, p. 63).

While cross-sectional studies may not provide definitive information about cause-and-effect relationships, as such studies only offer a “snapshot” of a single moment in time and do not consider the “before” or “after” but rather the moment the snapshot is taken (Gallin & Ognibene, 2012), this kind of study will generally help to understand the broader perspectives of the subject under study.

This study is aimed to measure the level of marital satisfaction instead of factors which impact on the marital satisfaction. Also, a larger number of participants are needed in this study. Therefore, quantitative study has a significantly advantages in this international program. Conversely, qualitative focus on the causes and reasons which could not be measured (Polit & Beck, 2017).

3.2.2 Research design rationale

According to Seeram (2019), in a cross-sectional study the researcher aims to observe the world in a natural way without directly interfering with it, in contrast to an experimental study where the researcher is looking for manipulation effects on variables. A non-experimental cross-sectional design was implemented in this study due to its ability to examine the relationships between dependent and independent variables (Polit & Beck, 2017, p. 203) rather than direct cause–effect relationships (Mayne, 2011). There is no randomisation and manipulation in this type of study (ibid.). Due to the nature of the current study, manipulation is neither ethical nor possible as participants' characteristics or variables, such as marital satisfaction and culture, are not subject or amenable to experimental intervention or randomisation (Schneider & Whitehead, 2016, p. 156). There was no attempt to control variables; this was not feasible, as variables such as age, gender and length of couple relationships were matters of fact, and the researcher was not aiming to do that in this study.

Polit and Beck (2017) state that although this approach has some drawbacks, such as weakness in its ability to support causal relationships among dependent and independent variables, it has an important role in nursing research. Many interesting issues in nursing research do not provide causal relationships or are not feasible for experimental intervention, as it would be unrealistic (or impossible) and unethical to do so (Schneider Whitehead, 2016, p. 157; Polit & Beck, 2017, p. 196).

Therefore, experimental study designs such as randomised controlled trials which need manipulation and randomisation (Geddes, 2014), and quasi-experimental designs that need intervention to estimate the causal impact on the target population without random assignment (Polit & Beck, 2017, p. 197), were not considered appropriate for this study.

3.3 Research setting and recruitment

The two settings of this study are Australia and mainland China. Data were primarily collected from an official WeChat account: "Exploring Marital Satisfaction". WeChat is a Chinese social media network mainly used by Chinese, with functions similar to Facebook. The official WeChat account, "Exploring Marital Satisfaction", was set up by Yu Qiu, a psychiatrist who consented to researchers collecting the data from the WeChat account (the consent is listed in the Ethics Application – see Appendix 3.5). The WeChat account is available online to Chinese people living in mainland China and Australia, and individuals who met the inclusion criteria were encouraged to take part in the study after a statement of aim and consent to participate were obtained. The announcement of data

collection was published on the WeChat account. Then, the user can access and answer the survey directly as well as share the link to their friend.

The highest click rate of push notification in the official WeChat account was 11,035 times and the average click rate of push notification in November was 10,020 times. Therefore, it was decided that sufficient primary data could be collected by using the official WeChat account “Exploring Marital Satisfaction”.

3.3.1 Sampling methods and sample size

The selection and recruitment of respondents is for every research project the foundation for answering the questions under study. Study participants must therefore be a true representation of the population under study (Fisher & Bloomfield, 2019). Given the potential population pool in China is billions of couple's, recruitment was not considered an issue there, however, the numbers of Chinese Australians do rate in the millions (Wash et al 2018). Limits were placed on the Chinese cohort to ensure there were similar numbers of participants and the difference in sample size was adjust for in the statistical calculations. Data were collected from 1, 235 participants (Chinese in Australia: 420; Chinese in mainland China: 815) via an online questionnaire. The differences in the sample size did not impact on the inferential statistical calculations.

3.3.1.1 Convenience sampling

This study used the convenience sampling method to explore the variables under study. The convenience sampling method is a specific type of non-probability sampling where participants are selected from online users who are both available and willing to participate in the study (Polit & Beck 2017, p. 252). Although convenience sampling is considered to be a limited approach due to the lack of opportunity to control for bias due to participants' self-selecting as volunteers, using the most readily accessible and willing people as participants is a common sampling technique in quantitative studies (Polit & Beck 2017, pp. 252-253).

Additionally, snowballing sampling is an effective convenience sampling strategy used to access samples difficult to locate, such as Chinese people living in Australia. This approach uses social networks and the fact that friends or colleagues tend to have common or similar characteristics (Schneider & Whitehead, 2016, p. 170). For example, participants may share the push notification in the questionnaire with some Chinese WeChat groups in Australia to assist in recruiting others who also meet the inclusion criteria.

However, using probability sampling rather than non-probability sampling best achieves representativeness for the study (Polit & Beck, 2017, pp. 225-226), and self-selected participants may differ from those people who do not volunteer (Polit & Beck, 2017).

3.3.1.2 Sample size

Researchers inferred the number of potential participants who saw the participation request and thus had the opportunity to take part. This means that factors such as response rate and response bias, for example, could be measured (Hewson, 2017).

Nearly all quantitative studies can be subjected to a sample size calculation. However, sample size may be of little value in early exploratory studies when doing an online survey (Polit & Beck 2017, p. 281). This research will perform post-calculations of power, effect and sample size. The effective size was calculated manually using eta squared based on the information provided in the output from SPSS (Yeung, 2014, p. 83). Eta squared measures the proportion of the total variance in a dependent variable that is associated with the membership of different groups defined by an independent variable (Sánchez & Cervantes, 2016). Manual calculation of effect size, instead of using software, was performed because SPSS does not provide effective size statistics for t-test in the output. The formula for eta squared is as follows:

$$\text{Eta squared} = \frac{t^2}{t^2 + (N_1 + N_2 - 2)}$$

The result for eta squared was compared with the guidelines (proposed by Cohen, 2013, pp. 284-287) for interpreting this value: less than .01 is small; .06 is a moderate effect; .14 is a large effect.

3.3.1.3 Inclusion criteria of participants

The purpose of these inclusion criteria was to identify the target population (Schneider & Whitehead, 2016, p. 167). The sample inclusions were: first, people who were over 18 years of age (Australian Family Law, 2019); second, people who had a stable couple relationship of more than one year in duration (Australian Family Law, 2019); third, Chinese adults living permanently in either Australia or China were included, as the study compares Chinese couples who originate from the same cultural background and are then exposed to different cultural norms.

3.3.1.4 Exclusion criteria of participants

The purpose of the exclusion criteria was to achieve statistical validity (Schneider & Whitehead, 2016, p. 168). The basis for selection aimed to fully answer these three objectives and achieve the principal research question. The screening tool removed those participants who did not meet the inclusion criteria. The sample exclusions were: first, people who were underage (Australian Family Law, 2019); second, Chinese couples living in countries other than mainland China and Australia; third, people who were in a stable relationship but for less than one year were removed as the couple relationship could not be identified as a marital relationship (Australian Family Law, 2019).

3.4 Ethical considerations

Given the impact of marital satisfaction on health and its involvement in both physical and mental wellbeing the ethical considerations were identified and discussed in accordance with the NHMRC guidelines. The core ethical principles underpinning the NHMRC ethical research practices for example, its significance and beneficence are illustrated on the growing correlations between marital satisfaction and mental health. This research will explore the influence of culture on marital satisfaction as this will increase our understanding on the role of marital satiation and its characters. Identifying the characteristics will enable researchers to identify which aspects of culture may be used to increase marital satisfaction and any related happiness to assist in addressing mental health issues in the future. Mental problems in China are increasing (*Xiang et al, 2012*). Mental wellbeing can be affected by family, and couple relationship shapes family functioning (Marmot & Allen, 2014). Additionally, a relatively better cultural understanding may create a better family life and improve mental health.

Ethical considerations are necessary for any study, whether the research is conducted in Australia or any another country, to protect the participants from harm (Schneider & Whitehead, 2016, p. 36). Anonymity and confidentiality, as well as privacy, voluntary participation and secure data management were the key ethical considerations for this study. Furthermore, local cultural values were acknowledged in the study design.

All potential participants were informed clearly via the information packs about the study aim and process, their rights, and any risks and burdens that may occur (Wiesing & Parsa-Parsi, 2016). The research information packs, including the information sheet and a questionnaire, were provided for participants prior to the recruiting process, and participation was completely voluntary. All the data were collected according to the protocols of both the Flinders University Social and Behavioural Research Ethics Committee and the First Affiliated Hospital of Chongqing Medical University. Written information sheets were provided to all potential participants, with details of how to contact both the researcher in the local area and the research committee.

3.4.1 Ethical approval

According to Human Research Ethics, ethical approval will be requested in accordance with the values and principles set out in the National Statement on Ethical Conduct in Human Research (NHMRC, 2018). It was not possible to rule out the opportunity for delicate private problems to be discussed and to cause discomfort to some respondents; therefore, in line with the checklist for Low and Negligible Risk Research (James Cook University, 2017; see Appendix 3.7), a full National Ethics Application was required. Consequently, this study obtained ethics approval from the Flinders University Social and Behavioural Research Ethics Committee (SBREC, 2018) in Australia, with project number 8353 (see Appendix 3.5). Additionally, this project was approved by the Ethics

Committee of the First Affiliated Hospital of Chongqing Medical University in Chongqing city with project number 2019 Ethics Review No. 026 (See Appendix 3.6). The ethic approval was prompt and well managed despite the different processes.

3.4.2 Anonymity

Anonymity was ensured in this study as the survey questionnaires did not require respondents to answer any personal identity questions, such as name and date of birth.

3.4.3 Voluntary participation, feedback and implied consent

Although the screening tool (as discussed in exclusion criteria, section 3.3.1.4) excluded some potential participants, for example, underage participants, the researcher anticipated that some vulnerable participants might be involved. Also, the introduction letter, which included permission to refuse to answer any question in order to avoid coercion, was attached before the questionnaire.

However, participants could call 1800RESPECT in Australia and 114 in China for mental support or counselling if any emotional discomfort was experienced. Additionally, participants who had inquiries or concerns regarding anticipated or actual risks or discomforts were encouraged to contact the researcher, Wen Yang, via telephone: +61 8 82013354, or to contact the supervisor, Dr Yvonne Parry, via telephone: +61 8 82013354.

In accordance with the ethical requirements and good research practices, participants with any queries regarding the ethics approval of this project, or to discuss any concerns or complaints, were encouraged to contact the Executive Officer of the Ethics Committee via telephone on +61 8 8201 3116 or email: human.researchethics@flinders.edu.au.

Language is also one of the factors which needed to be considered as one of the vulnerable factors (NHMRC, 2018). As some Chinese people do not use English, the questionnaire was provided in both Mandarin and English.

3.4.4 Secure data management

All questionnaire data files were retained in OneDrive in a password protected online file which is not allowed to be shared with others: only the researchers in this project could access this data. As the questionnaire is anonymous, after a questionnaire is submitted online there is no control of data for participants. Although the questionnaire is anonymous, the collected data were treated as highly confidential, in accordance with the Protective Security Policy Framework (Flinders University, 2020). The raw data collected was stored in a password protected folder in R Drive in Flinders University for five years by the principal supervisor, Dr Yvonne Parry (Flinders University, 2020).

3.5 Data collection

The quality of the data collection has an important role for the success of the study (LoBiondo-Wood & Haber, 2014). The data collection was a cross-sectional study using a self-administered questionnaire, online survey. The Anonymous Survey Link is: https://qualtrics.flinders.edu.au/jfe/form/SV_9HQWkA4xKBm7Rad; for the QR code see Appendix 3.1).

3.5.1 Self-administered online survey questionnaire

Self-administered questionnaires were used to collect descriptive statistics by using a web-based survey. Qualtrics, as one of the software tools for online surveys, is available for students at Flinders University to help researchers design and implement web-based surveys. The data collection process in this study is the self-reporting method (Polit & Beck, 2017, p. 323) that utilised an online survey system made available to respondents via the social media platform WeChat. WeChat is the biggest social media in China and had over 1.2 billion monthly active users from a wide range of age group (Statistic, 2020). The function of Wechat in China is similar with Facebook and Instagram in Western Countries. Some studies who study marital satisfaction are used social media, such as Instagram and Facebook in Australia (Halford et al., 2018; Hiew et al, 2016). WeChat was chosen in this study instead Facebook because of government prohibition in Mainland China.

Surveys are a research technique that allows the collection of data directly from a person involved in the research through a set of questions organised in a certain order. It is one of the most used quantitative techniques, since it allows obtaining information about a given phenomenon through the formulation of questions that reflect the opinions, perceptions and behaviours of a group of individuals. Data security is also enhanced, compared with email methods, which is an important ethical consideration in most research contexts. Responding to a web-based survey is also relatively straightforward for the participant, as long as they have a web browser and an active Internet connection.

To elicit a large number of responses, the WeChat official account “Exploring Marital Satisfaction” tried various ways to boost the rate of response. When the questionnaire was first published, 827 participants responded, with most of the participants living in mainland China. Then the WeChat official account, “Exploring Marital Satisfaction”, published the questionnaire again, and the number of responses increased by 408. During the second data collection, the link was shared with some of the WeChat Chinese groups in Australia in Melbourne, Sydney, Tasmania, Perth and Adelaide, and there was a steady rise in the number of participants.

Researchers had planned on taking two months to collect the data; however, due to low patronage by respondents at the initial stages, the timeline was extended by two weeks to gather more

responses. Altogether, 1, 235 responses (Chinese in Australia: 420; Chinese in mainland China: 815) were recorded.

3.5.1.1 Advantages of an online survey

The key advantages of using an online survey included: lower cost; time efficiency; ready access to a potentially vast, geographically diverse participant pool; and easier access to select, specialist populations (Reuter & Schaefer, 2017). These advantages were crucial for a one and a half year master's project to compare marital satisfaction in two countries, without funding. Other potential benefits of an online survey were a high level of anonymity and perceived privacy, which were ethical considerations (Putranto, 2019).

3.5.1.2 Disadvantages of an online survey

Several potential disadvantages in online surveys have raised concerns among social and behavioural researchers, particularly in terms of how these may impact upon the reliability and validity (or "trustworthiness") of online data. Key concerns have included: the biased nature of the Internet User Population (IUP) and the implications of this for the generalisability of data derived from online studies (Lee, Fielding, & Blank, 2017; Reuter & Schaefer, 2017); reduced levels of researcher control in online contexts compared with offline methods; and implications for the reliability and validity of online studies (Reuter & Schaefer, 2017). Issues of sample bias and reduced control are likely to be more problematic for quantitative approaches. The reliability of survey data is very dependent on the survey structure and the accuracy of answers provided by the respondents (Putranto, 2019).

Furthermore, online research is not intrinsically more likely to be harmful than face-to-face methods, yet it does pose different challenges (Reuter & Schaefer, 2017). With online research it was more difficult to assess the risk of participants coming to harm because fewer studies had been conducted from which researchers could learn, and it was harder to judge individuals' reactions to the research (Eynon, Fry, & Schroeder, 2017).

3.5.2 Critical social theory

Critical social theory critiques our modern social life (How 2017; Schneider 2008). The use of the critical theory by many disciplines such as, philosophy, sociology, psychology and humanities outline its usefulness in understanding the practical implications of social interactions (Thompson, 2017). Critical theory also provides the broad application of a theoretical framework to the understand of the impact of our social interaction on aspects of our lives (Thompson, 2017). For example, our use of communication and interactions are guided by our culture (Thompson, 2017). Culture is influenced by our society and how we live (Thompson, 2017). Recognising the importance of culture, and being able to critique our culture, is important as health professionals to provide evidence-based practice. As critical social theory is underpinned by it critique of the power relationship that motivate a society

it is useful here in exploring the role of culture within marriage and marital satisfaction. Marriage and marital satisfaction are often taken as standard practice and yet are influenced by many social factors (Kincheloe 2011). Exploring the role of culture as a factor that will allow us to understand possible characteristics involved in influencing marital satisfaction and provide a pathway to improving mental health. Furthermore, if we are to be aware of the aspects of life that impacted by culture, we can understand the need to change professional practice to include cultural sensitivity (Limaye et al 2017). Used in this study, incorporating the critique of culture will help to determine the impact of culture on marital satisfaction which is influenced by the society in which we live.

3.5.3 Study instruments

The study questionnaire consists of the social-demographic questionnaire and the Couples Satisfaction Index-32 (CSI-32, Funk et al., 2007) combined into one questionnaire. The questions on demographic information regarding the participants were placed before the CSI-32 questions. The CSI-32 is an internationally recognised research tool that is used to measure the level of marital satisfaction in participants (Funk et al., 2007), and has previously been used to measure marital satisfaction for Chinese couples (Halford et al., 2018; Hiew et al., 2016). The CSI-32 was translated into English by principal researcher Wen Yang, who holds a translation certificate (certificate number: CPN3FV05D) for English to Chinese. The questionnaire, which used both English and Mandarin Chinese, can be found in Appendix 3.2.

3.5.3.1 Demographic questionnaire

The demographic information was important for clarifying cultural identity, which was needed for achieving Objective 2: Identifying the impacts of culture in the relationship. In the questionnaire there was no question directly asked about norms, as cultural norms are difficult to define within one simple question. To address this issue, the demographic survey consisted of six questions regarding the demographic characteristics of each participant and focused on country- or region-demographic. The six demographic questions seek information on the participants' ethnicity, regions or countries normally lived in, numbers of years in a stable long-term relationship, years living in Australia, age and gender. These six questions will now be further explained.

3.5.3.2 The questionnaire item discussions

The ethnic identity question was used to clarify the cultural identity – Chinese. A country, such as China, can be characterised as having a single homogenous culture (Dittmer, Kim, & Buck, 2018) and its people as sharing the same or similar values, beliefs, systems of language, communication and practices (Storey, 2018, p. 1). This question identified participants as coming from the same cultural background, which is the foundation for the comparison of levels of marital satisfaction, once the population is exposed to Australian or Chinese cultural norms. This provides a point of difference, as although the cultural settings were in China and Australia, both China and Australia have diverse

ethnicities and cultures. This study only focused on the mainstream cultural norms, namely Han in China (Perkins, 2013) and Western culture in Australia (Australian Bureau of Statistics, 2012).

The demographic question regarding regions or countries normally lived in, addressed inclusion and exclusion criteria to identify whether the participants live in Australia or China rather than other regions or countries. This question was aimed at categorising participants into two groups with major cultural perspectives of either Australian or Chinese cultural norms.

To further clarify the cultural identity, Hong Kong and Taiwan were added as options in Question 5. Although Hong Kong returned to Chinese government in 1997 (Lui, 2015), cultural practices are different from mainland China as Hong Kong shares both Chinese and British culture, following 150 years of British colonial rule (Chan & Young, 2015; Lui, 2015). Similarly, the cultures of Taiwan and other Asian countries such as Singapore are culturally different from mainland China.

Demographic Question 3, regarding number of years in a stable long-term relationship, sought the vital information to identify whether participants were within the condition for a marital relationship (Australian Family Law, 2019). A stable couple relationship that has lasted for less than one year could not be included in the data.

Demographic Question 6, regarding years living in Australia, was to indicate the degree of influence of culture on marital satisfaction. Because people of different cultural backgrounds often have to interact with each other, the length of residence within a different cultural norm is directly proportional to the degree of influence of that culture (LeVine, 2018). However, LeVine (2018) states that the influence of culture on the level of marital satisfaction should be further clarified. Question 6 was aimed at further clarifying the influence of culture.

Demographic Question 1, regarding age, is important to exclude, for ethical reasons, any underage people. Persons under 18 years of age are defined as a vulnerable population (NHMRC, 2018). The aim of this question was to define if participants were under 18 years old.

Question 2 in the demographic questionnaire asked respondents their gender, as gender plays an important role regarding the attitude of marital satisfaction, based on the literature review. Question 2 does not necessarily fit in the demographic questionnaire because this research does not aim to focus on gender. However, this information may be needed in the discussion section of this thesis.

3.5.3.3 The Couples Satisfaction Index (CSI-32)

The recent research instrument, the Couples Satisfaction Index-32 (CSI-32, Funk et al., 2007, see Appendix 3.2) was selected as this instrument allows the researchers to achieve the study objectives. The instrument CSI-32 included two main parts: the first main parts is about the degree of happiness regarding their marital status, which contributed by one question; the second main part related to marital satisfaction, which contributed by 31 items. The instrument CSI-32 has been conducted in

different culture groups and countries including Sri Lankan (Siyana & Vithanage, 2015), Chinese (Hiew et al., 2015; Hiew et al., 2016; Halford et al., 2018), Australian Chinese (Hiew et al., 2015; Hiew et al., 2016; Halford et al., 2018), Turkey (Kuncewicz & Kuncewicz, 2019), Australian (Sim, Cordier, Vaz, Parsons & Falkmer, T. 2017; Sim, Fristedt, Cordier, Vaz, Kuzminski & Falkmer, 2019). Caucasian, Hispanic, African American, Asian, and Native American (Boals, 2014; James, 2015).

The CSI-32, as recommended by Robles et al. (2014), measures relationship satisfaction with excellent internal consistency and strong convergent and construct validity (Chomeya, 2010). Rating scales, such as Likert scales, could quickly give precise and consistent results, such as satisfaction (Golia & Simonetto, 2015). However, according to reliability value as a whole, a Likert 6-point scale, for example CSI-32, has higher reliability than the five-point scale, based on Cronbach's alpha coefficient (Chomeya, 2010).

According to a reliability of relationship satisfaction generalisation meta-analysis, the average reliability of the CSI was moderately high, with an average Cronbach's alpha of .940 which contributed to this average by five studies (Graham, Diebels, & Barnow, 2011). Additionally, Hiew et al. (2016) stated that the CSI had excellent internal consistency, α [alpha] = .97 for Western and Chinese men and women. Importantly, the validity of this instrument has been verified by previous studies (Halford et al., 2018; Hiew et al., 2015). The level of Cronbach's alpha value was α = .97 (Halford et al., 2018).

The CSI (Funk et al., 2007) instrument is a 32-item 6-point Likert scale measuring the level of relationship satisfaction and discriminating between relationships that are either distressed or not distressed (Funk et al., 2007). Therefore, this question is in the questionnaire as a foundation to construct Objective 3 (see section 1.4.1). For example, if people are satisfied with their relationship, that means they are more likely to have good mental health.

Another advantage of CSI-32 is that the 32 items in the questionnaire are calculated as a sum; Graham, Diebels and Barnow (2011) state that satisfaction, such as marital satisfaction, measures as a sum of discrete variables, which could have a higher validity.

The other 32 items use a variety of response anchors, all with 6-point scales. To score the CSI-32, all of the items were simply added up using the response values. Higher scores indicate higher levels of relationship satisfaction. The CSI-32 scores can range from 0 to 161, and scores falling below 104.5 suggest notable relationship dissatisfaction (Funk et al., 2007). The point values of each response of each item are shown in Appendix 3.2. The scale was presented to participants in online surveys with radio buttons to click in place of those point values. The CSI-32 was considered an appropriate instrument for this quantitative research as the researcher could easily calculate and analyse the data numerically.

In contrast, other popular instruments, such as the Quality Marriage Index (Norton, 1983) could be considered culturally outdated. Furthermore, the Kansas Marital Satisfaction Scale (Nichols, Schumm, Schectman & Grigsby, 1983) focus on the global evaluation of marital quality, referred to as “marital satisfaction”, which does not match the research aim of this project.

3.6 Data management

The first step in data management and creating a data set was coding and cleaning the data (Polit & Beck, 2017, pp. 426-428). All the variables in this study were thus labelled and coded accordingly. Then data cleaning was performed for both univariate and multivariate outliers and missing values to ensure the data were “clean” and properly prepared before conducting statistical analyses. This step in the process removed outliers and incomplete surveys.

The process of data cleaning examines the data and either corrects errors or minimises the impact of errors on the study’s result (Nardi, 2018). Data must be cleaned to ensure it is valid, reliable and suitable to produce unbiased results (Ritchie, Lewis, Nicholls & Ormston, 2013).

3.6.1 Coding data

Categories of data including gender, ethnicity, residential country or region, were coded into categorical data before transferring the data onto the software. Coding of data facilitates analysis by transforming data into a form understandable for the software used for data analysis (Field, 2018).

3.6.2 Cleaning data and outliers

Evaluating, assessing and handling data were conducted to find missing data, deletions, outliers and irregularities. An outlier is any value on one variable (a univariate outlier) or on two or more variables (a multivariate outlier) that is numerically distant from most of the other data points in a set of data (Tabachnick & Fidell, 2013). Outliers can occur by chance in any distribution (Kwak & Kim, 2017; Pallant, 2013, p. 83) and can affect the mean of a data set by skewing the results and thus making the result inaccurate (Field, 2018, p. 213); detecting outlier data is therefore important in all kinds of data, and is the existing management method focused on numeric data (Gupta, Gao, Aggarwal & Han, 2013). To detect an outlier in this study, boxplots and histograms were created. There were five significant outliers found, and all the other results cluster together.

3.6.3 Missing data

Missing data is a common problem in quantitative research (Dong & Peng, 2013; Kwak & Kim, 2017). Quantitative data’s robustness depends on the amount of missing data, the kind of missing data (single items, a full questionnaire, a measurement wave), the pattern and the reason for it. The strategies for handling missing data vary (Schlomer, Bauman, & Card, 2010).

A decision was made not to transform the missing data in the demographic section of the questionnaire to include all the participants. Furthermore, an incomplete questionnaire was not included in CSI-32 as in the CSI-32 incomplete answers do not match with a scoring system. All the incomplete questionnaires were therefore removed and the process of the data clean was presented in the section 4.2.1. Missing values in the study were calculated by inputting the most common values in the series. The missing values in the demographic questionnaire and CSI-32 were 0.6% and 62%, respectively. The reasons for the missing values are discussed in section 4.2.2.

3.6.3.1 Reverse questions in questionnaire

To get a stronger and more valid measure, three reversing questions were included in the questionnaire: “In general, how often do you think that things between you and your partner are going well?”; “I sometimes wonder if there is someone else out there for me”; and “I have had second thoughts about this relationship recently”. These three questions were reverse coded; reverse coded items indicate whether participants understood the question correctly or whether participants missed the reversing of the scale (Weijters, Baumgartner, & Schillewaet, 2013).

3.6.4 Outcome data

The cleaned and screened data divided participants into an Australian Chinese group and a mainland Chinese group. The outcome data of the continuous variable, the level of marital satisfaction, was measured by a Likert scale treated as an ordinal measurement (Polit & Beck, 2017, p. 426), and as an independent sample. Overall scores of CSI-32 were computed and described according to the specific scoring system for a comparison of the mean difference.

3.7 Data analysis

Data analysis procedures means extracting an accurate estimation from raw information (Polit & Beck, 2017, p. 400). An independent samples t-test statistical analysis was employed in the data analysis. Statistical Package for the Social Sciences (SPSS) version 25 was used to analyse the quantitative data.

3.7.1 Independent samples t-test

This quantitative research project measured Chinese marital satisfaction by using an online survey and analysed the bivariate between levels of marital satisfaction and cultural impacts by using categorical and numerical variables. An independent t-test is considered appropriate for comparing the averages of a numerical variable for two categories of a categorical variable (Pallant, 2013, p. 248). The dependent sample, a numerical variable, in this study was the level of marital satisfaction. The independent samples were the mainland Chinese group and the Australian Chinese group. The t-test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups (Pallant, 2013, p. 246), such as two groups

of participants exposed to Australian cultural norms and mainland Chinese cultural norms. In SPSS, the value in the Sig. (2-tailed) ³column is equal to or less than .05, which indicates a significant difference in the mean scores on dependent variable for each of the two groups (Pallant, 2013, p. 248). Once there is a statistically significant difference in terms of their marital satisfaction, we can infer that Western and Chinese cultural norms can have significant impacts on marital satisfaction.

3.8 Procedure and timeline

This study obtained ethics approval from both Australia and China. The research process time was four months. The duration of data collection for the research was 11 weeks, from 27 November 2019 to 12 February 2020. The time for data analysis was two months. The software for statistical analysis was SPSS version 25. SPSS was applied to analyse the differences in marital satisfaction for Chinese couples living in China and Australia. This software was selected to analyse the collected data as it offered advanced t-test statistical analysis. The conclusion took one month and editing of the thesis took two weeks (see Appendix 3.3).

3.9 Study rigour

Quantitative research rigour is defined as exploring the quality of the research (Claydon, 2015); it refers to the strength of the study design, sample size, data collection, data analysis and reporting (Marquart, 2017; Polit & Beck, 2017, p. 217). According to Claydon (2015), study rigour is essential to explore the bias and accuracy of a study's results. Study rigour focuses on validity and reliability to evaluate the study and determine the accuracy of the quantitative methods used (Polit & Beck, 2017, p. 221). Poor quality research that lacks rigour affects the validity and accuracy of the results (Claydon, 2015).

In an effort to improve the quality of data by online survey, however, researchers considering conducting online surveys are encouraged to read carefully about how the principles of survey research apply to online formats, in order to reduce bias and enhance rigour (Polit & Beck, 2017, p. 210). This research, therefore, used the Checklist for Reporting Results of Internet E-Surveys (CHERRIES, see Appendix 3.4) to improve the quality of the online survey, reduce the bias and thus enhance rigour (Helms, Gardner, & McInnes, 2017). The checklist ensured that all of the issues highlighted above that might produce biased results were considered by researchers and were discussed transparently in the report, ranging from survey design and sample selection, through ethical approval and data protection, to pre-testing, survey administration and data analysis. The CHERRIES checklist, developed in 2017 by Helms et al., was therefore a useful tool for researchers to use at the outset of their study to ensure they took into consideration all of the issues that might arise when conducting online research, and thus prevent publication. Helms et al. (2017) advise that many academic journals routinely reject reports based on online surveys due to their lack of rigour.

3.9.1 Sample size, data collection and data analysis

Methodological quantitative rigour refers to the quality of a study, specifically the quality of the study's plan, sample size, data collection and data analysis (Marquart, 2017). To estimate how large a sample is needed, and approach the effective size, power analysis was used in this study. Power analysis reduces the risk of Type II errors (β) as well as Type I (α) errors and increases statistical conclusion validity (Polit & Beck, 2017). In terms of data collection, the researcher used mobile friendly software and also tried to keep the questionnaire brief, easy to understand and easy to answer. In addition, to improve the overall comfort of the participant and increase response rates, participants were assured because of the sensitivity of marital issues, of the anonymity of their responses (Putranto, 2019).

3.10 Conclusion

This chapter summarised the design of the study, its setting, sampling method and sample size, ethical considerations, data collection, data analysis procedures, timeline and study rigour. The study's strengths and limitations were discussed in this chapter. The chapter also highlighted the research gap filled by this study and the robustness of the study in addressing the research need.

Chapter 4: Findings

4.1 Introduction

Statistical and systematic analysis were crucial to ensure that data were interpreted correctly and that apparent relationships were meaningful and not simply chance occurrences (Thomas & Peterson, 2012). This chapter presents key findings on the level of marital satisfaction explored using the Couple Satisfaction Index-32 (CSI-32) in the 2020 survey of 417 participants with couple relationships in mainland China and Australia.

Initially, this chapter presents the data, including the procedures of data preparation for missing values, anomalies and outliers. The screened data analysis was completed using descriptive statistics and inferential statistical analysis. The descriptive statistics are comprised of frequency tables, histograms and boxplots. Later, the present study illustrates the screened data analysis processes. Also, the hypotheses for the independent samples t-test were tested through p value and significant level. The equality of variances was tested via Levene's test (Wellek, 2010). Additionally, the effect size was calculated to show the strength of the associations between the attributes. The overall inferential statistical analysis was performed using SPSS version 25. Finally, through a systematic pattern, an interpretation and summarisation of the statistical findings were completed.

4.2 Screening the data

Data screening is the essential process of ensuring collected data is clean and ready to go before conducting further statistical analyses (Randall, Ferrante, Boyd & Semmens, 2013). Initially collected data were screened in order to ensure the data is useable, reliable, and valid for testing causal theory (DeSimone, Harms, & DeSimone, 2015). In this section two specific issues, including visually inspecting the data to data clean and reporting missing values via descriptive tables and boxplots, were addressed when preparing data.

4.2.1 Data preparation procedure

The questionnaire completion rate met the level required for power analysis (Polit & Beck, 2013). The rate required was 200 participants in each group. The survey was completed by 1235 participants over the 11 weeks, and only 479 participants completed all the questions in the questionnaire. Figure 4.1 (below) presents the procedure of data screening and the exact number of questionnaires in each step.

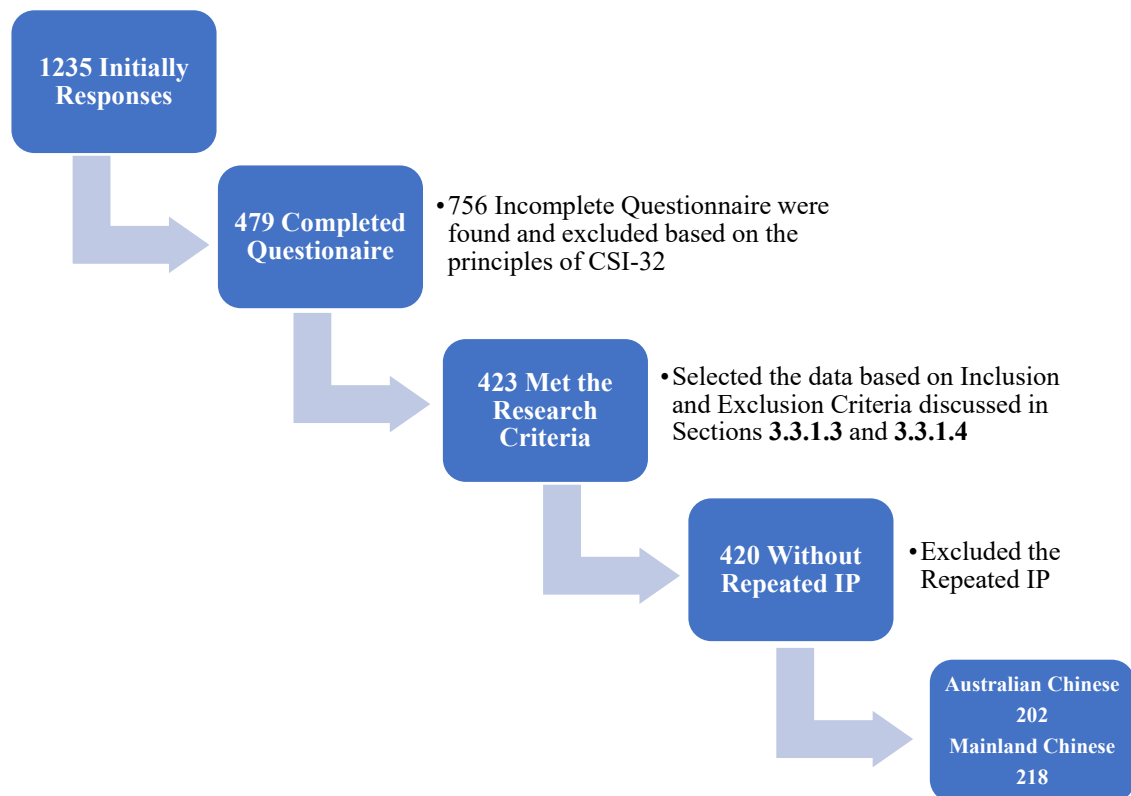


Figure 4.1 Data screening flow chart

This research initially collected 1235 responses online and finally selected 420 responses after data screening; these comprised 202 Chinese participants living in Australia and 218 Chinese participants living in mainland China. This balanced was achieved deliberately through research design.

4.2.2 Missing values

The data were collected via a two-part questionnaire including categorical variables to detect socio-demographic characteristics (six items in Section 1 of the questionnaire) and continuous variables using CSI-32 to measure the level of marital satisfaction (32 items in Section 2 of the questionnaire). Overall, the level of missing values in this study was 756 (approximately 61%) which indicates a high proportion of missing values. Only those completing 100% of questionnaire could be used in the study, as the original designer of the instrument recommended (Funk et al., 2007). Table 4.1 (below) and Appendices 4.1 and 4.4 detail the missing values in each question.

Table 4.1 Checking categorical variables

Category	Valid N	Missing N	Minimum	Maximum
Age	1230	5	1	2
Gender	1229	6	1	4
Years in relationship	1232	3	1	4
Ethnicity	1231	4	1	4
Living country/region	1230	5	1	6

In the categorical variables section, the level of missing values in the study was 0.6% (n=8). Note that the number of missing values shown in Table 4.1 sometimes included the duplication in each question. For example, Question 1, regarding age, had five missing values and Question 2, regarding gender, had six missing values. Once the five incomplete questions were removed, there was only one missing value left in Question 2. The number of missing values in each question is presented in Table 4.1.

The second section of the questionnaire, the CSI-32 section, was completed by 1235 respondents (see Appendix 4.1); however, only 471 respondents (about 38%) completed all the items of the CSI, and 756 CSI-32 questionnaires (about 62%) were found to be incomplete. Of these, 40 participants (about 3.2%) could not finish Question 7: Please indicate the degree of happiness, all things considered, of your relationship; and 399 (about 32%) respondents did not complete Question 9: How good is your relationship compared to most?. Therefore, only 471 respondents, those who provided complete answers to all 32 items of the CSI, were used, and these were divided, using the ethnicity question, into two groups.

Questions 7 and 9 of the questionnaire were two-sided scale questions, whereas the other 30 questions had a one-sided scale. Although the online survey had a mobile friendly model, Questions 7 and 9 were reported with a high proportion of missing values. Therefore, to minimise missing values, the researchers should investigate and address emergence of high-level missing values while using CSI-32 via Qualtrics. None of the reverse coded questions were missed from the cleaned data.

4.2.3 Outliers

This study addresses data bias via the assessment of outliers including histograms, boxplots and descriptive statistics. Data often can be affected through outliers, which are abnormal values or far

from the mean value (Field, 2013, p. 165). For this study, outliers will be detected using descriptive statistics.

4.2.3.1 Boxplots

Boxplots give information about the distribution of a continuous variable, the level of marital satisfaction. Each distribution of scores was presented by a box and protruding lines (ibid., p. 168). The length of the box was the range of marital satisfaction. The line across the inside of the box represented the median value (Yeung, 2014, p. 81). The small circle protruding from the box represented the variable's lowest and highest values (ibid.).

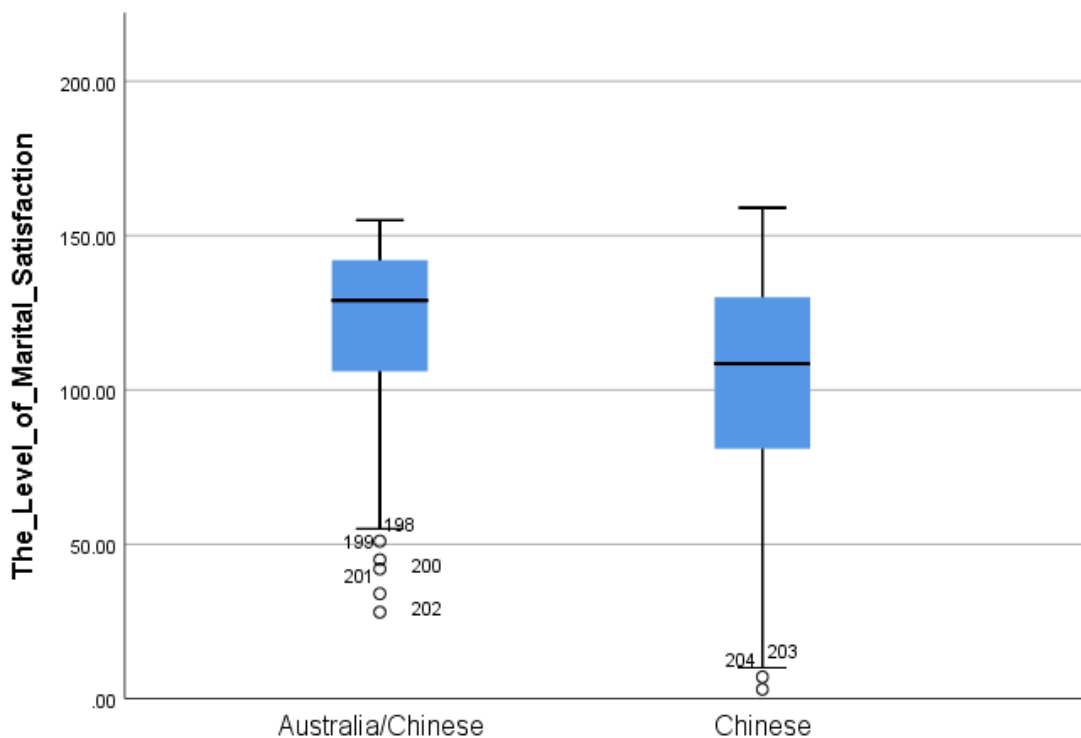


Figure 4.2 Boxplots of the data for mainland Chinese and Australian Chinese marital satisfaction

As Figure 4.2 (above) shows, ID numbers 198, 199, 200, 201 and 202 for the Australian Chinese group and ID numbers 203 and 204 for the mainland Chinese group were considered as outliers by SPSS. SPSS defined these points as outliers because these ID numbers extend more than 1.5 box-lengths from the edge of the box (Yeung, 2014, p. 64). Therefore, these ID numbers were data errors found via the boxplots and were removed from the data before final data analysis. The final number of participants included in further analysis was 413 (n=197 Australian Chinese, n=216 Mainland Chinese).

4.3 Screened data analysis

After refining the raw data through a screening process, screened or verified data were imported for further statistical analysis. To accomplish this process, both descriptive and inferential statistics were used. These descriptive and inferential analyses were performed using SPSS version 25.

4.3.1 Descriptive statistics

Descriptive statistics are brief descriptive coefficients that summarise a given data set, which can be either a representation of the entire population or a sample of a population (George & Mallery, 2016). Descriptive statistics was used to summarise the groups of data using a combination of tabulated description.

4.3.1.1 Descriptive table

A histogram is a graphical representation of a frequency distribution for numeric data, while a boxplot is a graphical method of summarising the important aspects of the distribution of continuous data (Salkind & Frey, 2019). In addition, descriptive statistics further cleaned the data before conducting a t-test.

The information in the descriptive tables (Tables 4.2 and 4.3; Appendix 4.3) indicates the extent of the outlying data. The 5% trimmed mean for the mainland Chinese group was 106.00 which was similar to the mean of 104.14 for the group. For Australian Chinese, the 5% trimmed mean was 124.58, similar to the mean of 123.20. These results indicated that the collected data were reliable and were thus retained for further analysis (Salkind & Frey, 2019).

Skewness is a measure of symmetry and kurtosis is a measure of the extent to which data are heavily tailed or hightailed relative to a normal distribution (Field, 2013). In Table 4.2 (below), skewness was -.65 and kurtosis was -.01 for the marital satisfaction level of mainland Chinese (n=216); for Australian Chinese (n=97) skewness was -.86 and kurtosis was -.38. These results indicated that the range of skewness for both groups was moderately skewed ($-1 > \text{highly skewed} > 1$; $-1 < \text{moderately skewed} < -0.5$; $-0.5 < \text{approximately symmetric} < 0.5$ (Rosenberg, 2012); for the output of descriptive statistics of SPSS refer to Appendix 4.5. Also, the range of values for kurtosis considered acceptable as the normal univariate distribution of kurtosis is between -2 and +2 (George & Mallery, 2016; Field, 2013; Gravetter & Wallnau, 2020).

Table 4.2 Descriptive marital satisfaction of mainland Chinese and Australian Chinese

	Mainland Chinese (216)		Australian Chinese (197)	
Description	Statistic	Std. Error	Statistic	Std. Error
Mean	104.14	2.31	123.20	1.71
Std. Deviation	33.96		24.00	
95% CI for Mean Lower Bound	99.59		119.83	
95% CI for Mean Upper Bound	108.70		126.58	
Margin error	4.53		3.35	
5% Trimmed Mean	106.00		124.54	

	Mainland Chinese (216)		Australian Chinese (197)	
Description	Statistic	Std. Error	Statistic	Std. Error
Median	109.00		130.00	
Minimum	10.00		55.00	
Maximum	159.00		155.00	
Skewness	-.65	.17	-.86	.17
Kurtosis	-.01	.33	-.38	.35

Confidence intervals (CIs) represent the range of scores that are likely to recur if the survey is repeated and are important to consider when generalising results (Pfister & Janczyk, 2013). A wide confidence interval indicates that a larger number is needed to increase confidence; conversely, a narrow or small confidence interval indicates that a similar result could be achieved with a different sample (Cumming, 2013). The present study was considered to have a 95% confidence interval.

The CIs for the mean of the two groups was 95% in Table 4.2. The 95% confidence interval was 104.14 ± 4.53 (95% CI 99.59 to 108.70; margin error = 4.53). For the Australian Chinese group (n=197), the confidence interval for marital satisfaction levels was 123.23 ± 3.35 (95% CI 119.83 to 126.58; margin error = 3.35).

The value of 5% for the trimmed mean indicates the possibility of outliers when the mean value is far from the mean (George & Mallery, 2016). The 5% trimmed mean for the mainland Chinese group was 3.73 which was similar to the mean of 3.71 in that group (see Table 4.3, below). For Australian Chinese, the value of 5% for the trimmed mean was 4.69, similar to the mean of 4.64 (see Table 4.3; Appendix 4.5). As this indicates that the data were reliable, the results for the degree of satisfaction for both the Australian Chinese group and mainland Chinese group were retained for further analysis.

In Table 4.3 (below), skewness for marital satisfaction of the mainland Chinese group (n=216) was -.14, indicating that it was approximately symmetric ($-0.5 < \text{approximately symmetric} < 0.5$ (Rosenberg, 2012)); kurtosis was -.61, which is considered an acceptable distribution. For the Australian Chinese group (n=197), the skewness was -.83, indicating moderately skewed ($-1 < \text{moderately skewed} < -0.5$ (Rosenberg, 2012)); kurtosis was -.31 which is also considered an acceptable distribution.

Table 4.3 Descriptive degree of happiness for mainland Chinese group and Australian Chinese group

	Mainland Chinese (216)		Australian Chinese (197)	
Description	Statistic	Std. Error	Statistic	Std. Error
Mean	3.71	.09	4.64	0.76

	Mainland Chinese (216)		Australian Chinese (197)	
Description	Statistic	Std. Error	Statistic	Std. Error
Std. Deviation	1.44		1.07	
95% CI for Mean Lower Bound	3.52		4.49	
95% CI for Mean Upper Bound	3.90		4.79	
Margin of Error	0.19		0.15	
5% Trimmed Mean	3.73		4.69	
Median	4.00		5.00	
Minimum	.00		1.00	
Maximum	6.00		6.00	
Skewness	-.14	.17	-.83	.17
Kurtosis	-.61	.33	-.31	.35

As shown in Table 4.3, the present study considered the CI for the mainland Chinese group 95% Confidence Interval: $3.71 \pm .19$ (margin error=.19). With 95% confidence the population mean was between 3.52 and 3.9, based on 218 samples. For the Australian Chinese group ($n=202$), the CI was 4.64 ± 1.07 (95% CI 4.49 to 4.79; margin error=.15; for the output of SPSS descriptive statistics of degree of happiness refer to Appendix 4.3).

The histograms below (Figures 4.3 and 4.4) show both the skewness and kurtosis of the data set. As the degree of happiness is one of the questions picked from the continuous variables, level of marital satisfaction, and the value of the skewness and the kurtosis were better than the continuous variable, the level of marital satisfaction. Therefore, in the following section, level of marital satisfaction as the main element investigated in this study, was chosen to represent the histogram as an example.

4.3.1.2 Histograms

Inspection of the shape of the histograms provided information on the distribution of scores on the continuous variable, the level of marital satisfaction (Pallant, 2013, p. 69). The scores for each of the variables for mainland Chinese and Australian Chinese were normally distributed, with most sources occurring in the centre, tapering out towards the extremes.

Figure 4.3 (below) presents graphically the distribution of the respondents' marital satisfaction scores for the mainland Chinese group. The mean SCI-32 of mainland Chinese marital satisfaction scores is 103.58 ($n=218$) for those who provided complete answers to all 32 items, with the scores ranging from 0 to 161.

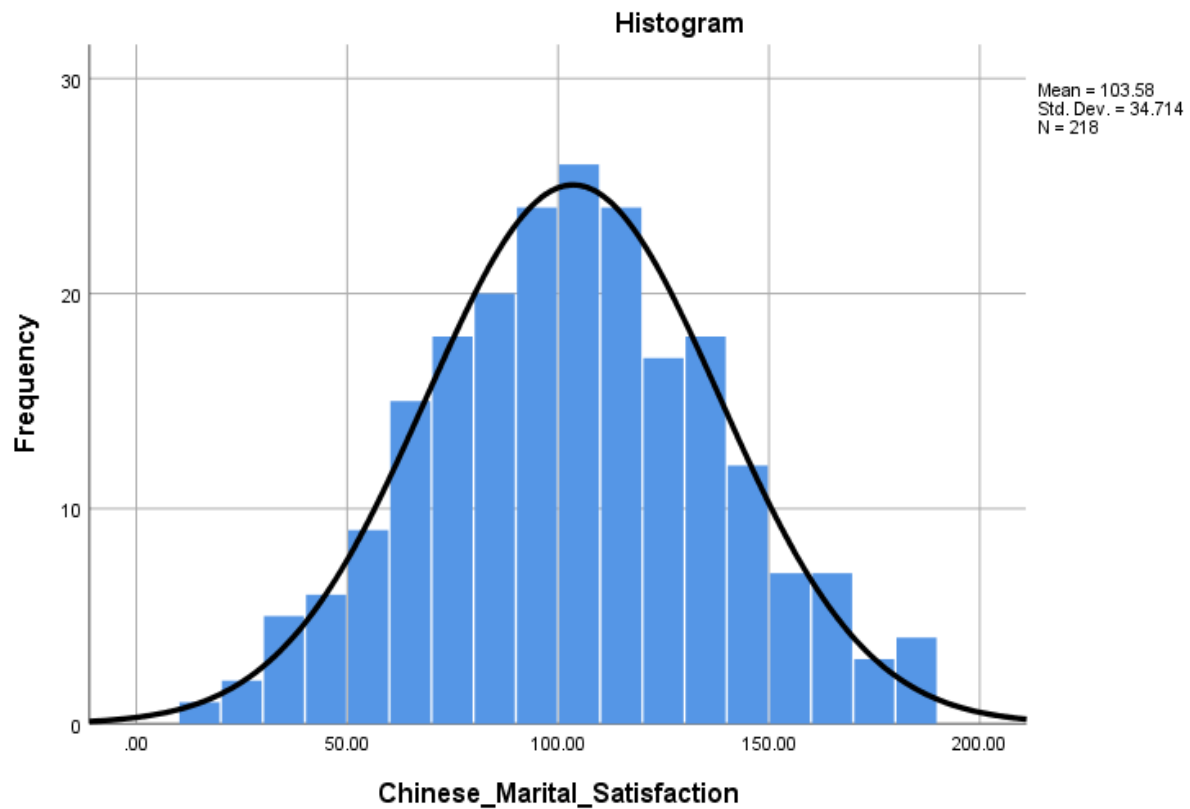


Figure 4.3 Distribution of mainland Chinese marital satisfaction

The mean SCI-32 for Australian Chinese marital satisfaction scores was 121.42 (n=202) for those who provided complete answers to all 32 items. Figure 4.4 (below) presents graphically the distribution of the respondents' marital satisfaction scores for this group.

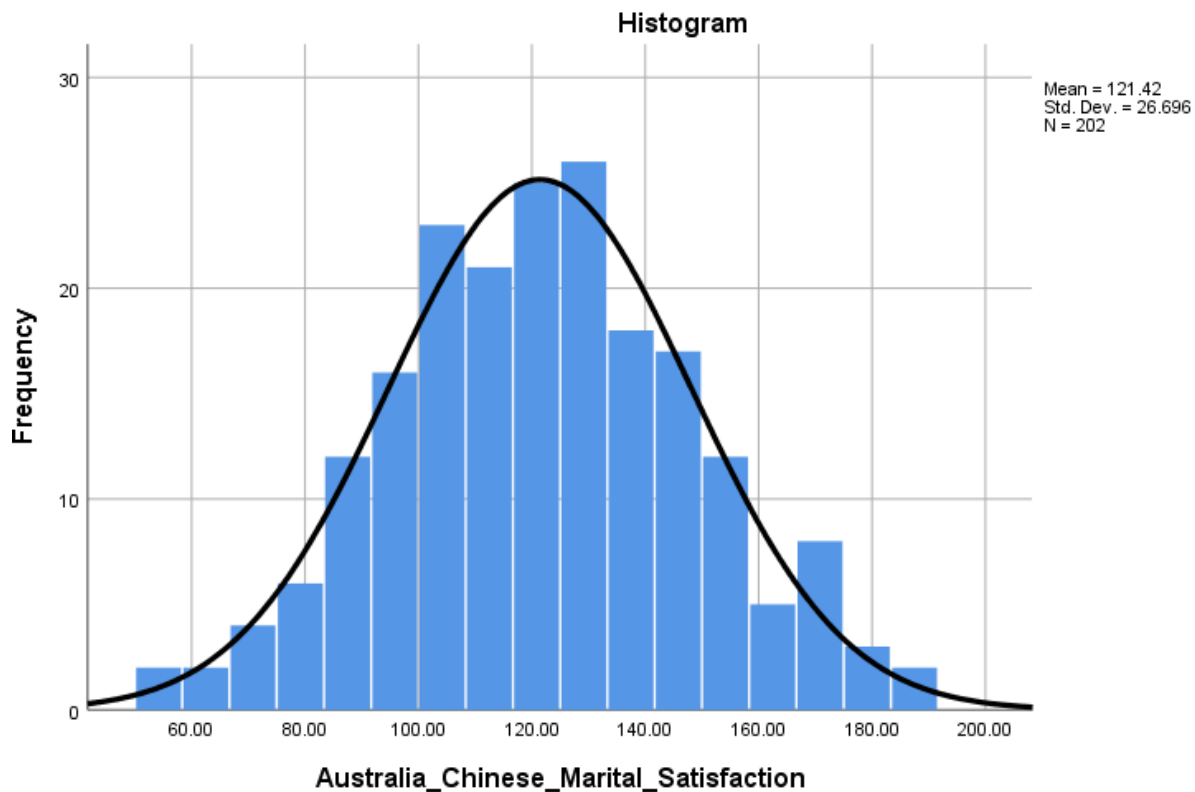


Figure 4.4 Distribution of Australian Chinese marital satisfaction

4.3.2 Inferential statistical analysis

Inferential statistics are techniques that allow researchers to use samples to generalise about the populations from which the samples were drawn. It is, therefore, important that the sample accurately represents the population (Amrhein, Trafimow, & Greenland, 2019). To perform inferential analysis, an independent samples t-test was administered. By using SPSS, the hypothesis testing was completed based on p value, and effect size calculated in following section 4.3.2.1. The inferential statistics also followed a Levene's test for equality of variances.

4.3.2.1 Hypothesis testing

Hypothesis testing, which includes confidence interval, significant level (α) and p value, allowed researchers to qualify the probability (Halsey, Curran-Everett, Vowler & Drummond, 2017). Additionally, Levene's test was performed to test the equality of variances for two groups.

Confidence interval, significant level (α) and p value were the decision-making tools to test the following hypotheses for an independent samples t-test:

- $H_0: \mu_1 = \mu_2$ ("the marital satisfaction means for Australian Chinese and mainland Chinese are equal")
- $H_1: \mu_1 \neq \mu_2$ ("the marital satisfaction means for Australian Chinese and mainland Chinese are not equal")

- $H_2: \mu_1 \neq \mu_2$ ("the degree of happiness regarding marital status means for Australian Chinese and mainland Chinese are not equal")

where μ_1 and μ_2 are the population means for Group 1 and Group 2, respectively.

Significant level (α)

The significant level, also denoted as alpha or α , is the probability of rejecting the null hypothesis and helps to determine the level of risk people are willing to accept. Therefore, choosing the significant level was important because it conveniently gave significant results. Confidence interval for mean was 95% (.95), and the significant level of α was 0.05 ($1-C=1-0.95$).

Calculate the degree of freedom

The degrees of freedom (df) were calculated to ensure the statistical validity of t-tests (Wicherts, Veldkamp, Augusteijn, Bakker, Van Aert, & Van Assen, 2016). For the mainland Chinese group: $df=N-1=216-1=215$; for the Australian Chinese group: $df=197-1=196$, since it was computed from N random scores minus the only parameter estimated as an intermediate step, which is the sample mean (Bridges, Brown, Hoffer & Ackley, 2013).

P value

The p value was the probability of obtaining results as extreme as the observed results of a statistical hypothesis test (Halsey, Curran-Everett, Vowler & Drummond, 2015). The p value was used as an alternative to rejection points to provide the smallest significant level (α) at which the H_0 would be rejected. A smaller p value means that there was stronger evidence in favour of the alternative hypothesis.

In this study, the comparison of the level of marital satisfaction produced a p value of .001 which is below the level of significance, .05. Therefore, cultural norms matter and the influence of marital satisfaction due to the level of significant is more than 0.1%. Consequently, the H_0 was rejected and H_1 was accepted. Therefore, this study shows a difference in marital satisfaction between Chinese living in mainland China and Chinese living in Australia.

4.3.2.2 Levene's test for equality of variances

Levene's test is required when running an independent samples t-test to determine if the variances of two samples are approximately equal (Wellek, 2010). This indicates whether the t-test is suitable for this study.

The hypotheses for Levine's test were:

- $H_0: \sigma^2_1 - \sigma^2_2 = 0$ ("the population variances of Australian Chinese and mainland Chinese are equal")

- $H_1: \sigma_{12} - \sigma_{22} \neq 0$ (“the population variances of Australian Chinese and mainland Chinese are not equal”)

The significance level of Levene’s test is p value less than .05 ($p=.001$, $F(413)=21.99$), which means the variances for the two groups were not same (Pallant, 2013, p. 247). As a result, H_0 , “Equal Variances Assumed”, was rejected and H_1 , “Equal Variances not Assumed”, was accepted.

4.3.2.3 Effect size

The Task Force on Statistical Inference of the American Psychological Association recommends that researchers “reporting and interpreting effective size in the context of previously reported effects is essential to good research” (2001, p. 599). The method for calculating effective size for an independent samples t-test is eta squared, which is recommended by Pallant (2013).

$$\begin{aligned}\text{Eta squared} &= \frac{t^2}{t^2 + (N_1 + N_2 - 2)} \\ &= \frac{6.63^2}{6.63^2 + (197 + 216 - 2)} \\ &= 0.09\end{aligned}$$

Based on the literature in Chapter 2, many authors routinely refer to Cohen’s (2013) guidelines of eta squared made in reference to power analysis ($q=1-p$), that .01 is a small effect, .06 is a moderate effect and .14 is a larger effect. In this comparison study, eta squared was .09 ($0.14 > 0.09 > 0.06$) which indicates a moderate effect. There was therefore a moderate difference in marital satisfaction between Chinese living in mainland China and Chinese living in Australia.

4.4 Statistical techniques to compare groups

This section focuses on the procedure of the independent samples t-test and reporting the statistics of the test.

4.4.1 Procedure for the independent samples t-test

An independent samples t-test is used when comparing the mean scores on continuous variables, for two different groups (Kim, 2015). The research question is: “What are the differences in marital satisfaction between Chinese couples living in China and Chinese couples living in Australia?” As mentioned in section 3.5.2.1, the categorical variable was mainland Chinese and Australian Chinese who originally came from same cultural background but were then exposed to either Chinese or Australian cultural norms. The continuous variable was the level of self-reported marital satisfaction measured by using 32 items of CSI. The procedure conducted for the independent samples t-test is presented in Appendix 4.2.

The syntax for this procedure of independent samples t-test in SPSS version 25 is:

DATASET ACTIVATE DataSet1.

T-TEST GROUPS=Ethnicity (1 2)

/MISSING=ANALYSIS

/VARIABLES= The Level of Marital Satisfaction

/CRITERIA=CI (.95).

4.4.2 Reporting statistics of independent samples t-test

An independent samples t-test was conducted to compare the self-esteem scores of marital satisfaction and happiness levels for couple relationships for two groups, mainland Chinese and Australian Chinese (for the SPSS output of independent samples t-test see Appendix 4.6).

Table 4.4 Group statistics

Level of marital satisfaction					Degree of happiness		
Ethnicity	N	Mean	Std. Deviation	Std. Error Mean	Mean	Std. Deviation	Std. Error Mean
Australian Chinese	197	123.20	24.00	1.71	4.64	1.07	0.8
Mainland Chinese	216	104.14	33.96	33.96	3.75	1.44	0.9

There were significant differences in scores for marital satisfaction for Australian Chinese ($M=123.20$, $SD=24.00$) and mainland Chinese ($M=104.14$, $SD=33.96$; $t(413)=6.63$, $p=.001$, two-tailed), which are presented in Table 4.4 (above) and Table 4.5 (below).

Table 4.5 (below) was referred to equal variances not assumed because the variances for the two groups were not the same (Pallant, 2013, p. 247) which was been tested by using Levene's test in section 4.3.2. 2.. The magnitude of the differences in the means (mean difference = 19.06, 95% CI: 13.32-24.80) was moderate (eta squared = 0.09). Additionally, the average degree of happiness in the relationship was significantly different ($t(413)=7.44$, $p=.001$, two-tailed; see Appendix 4.3) in the Australian Chinese group ($M=4.64$, $SD=1.07$) and the mainland Chinese group ($M=3.75$, $SD=1.44$).

Table 4.5 Independent samples test for the level of marital satisfaction

	Levene's test for equality of variances					t-test for equality of Mean		95% CI of difference	
	F	Sig.	t	df	Sig. (2 - tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	21.99	.001	6.53	411	.001	19.06	2.92	13.32	24.80
Equal variances not assumed			6.63	387.51	.001	19.06	2.87	13.40	24.71

Table 4.5 (above) shows significantly different levels of marital satisfaction for the two groups; Chinese living in mainland China had a relatively lower level of marital satisfaction.

Table 4.6 The mean levels of marital satisfaction (M) for Chinese couples in Australia

Description	Less than one year of living in Australia	2-5 Years of living in Australia	5-10 Years of living in Australia	More than 10 years of living in Australia
N	17	16	63	134
Mean	100.00	110.06	126.84	120.10
Std. Deviation	38.22	24.85	21.59	26.10

Table 4.6 (above; for SPSS output of independent samples t-test see Appendix 4.6) indicates the significant point that the mean level of marital satisfaction increased over time. Participants (n=17) who were in their first year of living in Australia had a similar level of marital satisfaction (M=100.00) to participants living in mainland China (M=104.14). For participants who had lived in Australia for two to five years (n=16) the marital satisfaction level was 10.06 (M=110.06) compared with the first group. The marital satisfaction level (M=126.84) peaked in the third group, participants (n=63) living in Australia from five to ten years. However, the level of marital satisfaction for Australian Chinese (M=120.10) stopped increasing and instead dropped 6.74 compared with the third group but was still higher than the level of dissatisfaction (104.5 is the boundary level of marital dissatisfaction, as specified by Funk et al., 2007).

4.5 Interpretation of data

The mean level of degree of happiness identified the happiness level in a couple relationship in order to achieve Objective 2 The group (n=216) living in mainland China reported a degree of happiness in their relationship of M=3.75 (SD=1.44). By comparison, the Australian Chinese group (n=197) reported a higher degree of happiness in their relationship (M=4.64, SD=1.07) than mainland

Chinese. The range for “happiness” is from 0 (Extremely Unhappy) to 6 (Perfect). The Australian Chinese group had a degree of happiness (4.64) which indicates very happy, compared with the average degree of happiness (3.75) reported by the mainland Chinese group.

The mainland Chinese group (n=216) reported a marital satisfaction level of $M=104.14$ ($SD=33.96$). By comparison, the Australian Chinese group (n=197) reported a significantly higher marital satisfaction level of $M=123.20$ ($SD=24.00$). The designers of instrument CSI-32 stated that a level of marital satisfaction below 104.5 suggests notable dissatisfaction (Funk et al., 2007). Therefore, the mean marital satisfaction level of mainland Chinese groups of 104.14 suggests the participants had a lower than average level of marital satisfaction. However, the mean level of marital satisfaction for participants living in Australia (123.20) suggests they had higher than average levels of marital satisfaction (ibid.)

To test the hypothesis that mainland Chinese and Australian Chinese couples have statistically significant different mean levels of marital satisfaction, an independent samples t-test was performed. As can be seen in Table 4.2 (above), the mainland Chinese and Australian Chinese distributions were of sufficiently normal distribution for the purposes of conducting a t-test (i.e. skew < | 2.0 | and kurtosis < | 9.0 | (Schönbrodt, Wagenmakers, Zehetleitner & Perugini, 2017).

Additionally, the assumption of homogeneity of variances was tested and satisfied via Levene’s F test: $F(413) = 21.99$, $p = .001$. The independent samples t-test was associated with a statistically significant effect, $t(413) = 21.99$, $p = .001$. Thus, the Australian Chinese responses were associated with a statistically significantly larger mean level of marital satisfaction level than for the mainland Chinese group. The result of eta squared was .06 which indicates a moderate sample size, based on Cohen’s (2013) guidelines. A graphical representation of the means and the 95% confidence intervals is shown in Table 4.4 (above). Therefore, the level of marital satisfaction can be impacted by cultural norms; also, Australian cultural norms have, for marital satisfaction, more advantages than Chinese culture norms.

Furthermore, comparison of the means of marital satisfaction and happiness in Table 4.4 shows that the mean of marital satisfaction for Australian Chinese groups was 123.21 (95% CI: 119.83-136.58) which indicates a relatively higher mean degree of happiness ($M=4.64$, 95% CI: 4.49-4.79). Conversely, the mainland Chinese group had a relatively lower mean for the marital satisfaction level ($M=104.14$, 95% CI: 99.6-109) which corresponds to a lower mean degree of happiness ($M=3.75$, 95% CI: 3.51-3.90). Therefore, as the H_2 stated, the degree of happiness is proportional to the level of marital satisfaction, so that a high level of marital satisfaction indicates a high degree of happiness; conversely, if the degree of happiness was low, this correlated with a lower level of marital satisfaction. Consequently, a deduction can be made that when people are happy in their marriage, they are healthy as a result of this relatively high degree of happiness. However, we cannot eliminate that the happier people are the more satisfied they feel in relationships.

Lastly, an important finding was that the mean levels of marital satisfaction for Chinese people living in Australia changed as the number of years in Australia increased (see Table 4.6, above). The average level of marital satisfaction in the first year of living in Australia was 100.00, similar to the mean level of marital satisfaction for the mainland Chinese group ($M=104.14$). However, the mean level of satisfaction progressively increased to 126.84 when participants were had lived in Australia for five to ten years. Although the mean level of marital satisfaction was 120.10 once participants had lived in Australia for more than ten years, the level of marital satisfaction was evolutionarily changed when moving into Australia. Thus, based on the concept of cultural determinates of health, the study results indicate that cultural norms matter, and influence levels of both marital satisfaction and happiness. For Australian Chinese couples, the length of time spent living in Australia correlates to a proportional increase in both marital satisfaction and happiness.

4.6 Conclusion

The results of analysing this quantitative data indicate that levels of marital satisfaction and happiness for people living with mainland Chinese cultural norms and people living with Australian cultural norms differ significantly. A significant difference in marital satisfaction levels was found in the two groups, with a higher degree of marital satisfaction corresponding to a higher degree of happiness. Furthermore, the length of time Chinese couples have spent in Australia significantly increases their level of marital satisfaction. However, alternative explanations for differences in marital satisfaction may include other culture or societal impacts that were beyond the scope of this master thesis.

Chapter 5: Discussion

5.1 Introduction

This chapter will firstly discuss the findings of the literature review and the findings in Chapter 4. Then the results of these findings will be compared with the findings from the literature review to achieve the three objectives (see section 1.3.1). Lastly, in order to improve the quality of future research, the whole research process will be evaluated. The study's limitations and recommendations will also be discussed. The research question "What are the differences in marital satisfaction between Chinese couples living in mainland China and Chinese couples living in Australia?" will thus be answered.

5.2 Differences in marital satisfaction

The difference in marital satisfaction within Australian cultural norms and mainland Chinese cultural norms had been identified in the literature review. The level of marital satisfaction and the degree of the happiness for Chinese couples living in these two cultural environments were measured.

5.2.1 The level of marital satisfaction for mainland Chinese and Australian Chinese

The current study is the first study to explore whether culture matters for marital satisfaction, when Chinese people are exposed to mainland Chinese cultural norms and Australian cultural norms. The level of marital satisfaction between mainland Chinese and Australian Chinese was measured using CSI-32, and the findings support the hypothesis that Australian Chinese couples ($n=197$; $M=123.2$; $SD=24$) have a significantly higher level of marital satisfaction than mainland Chinese couples ($n=216$; $M=104.14$; $SD=33.96$). There was support for the alternative hypothesis of this study. As predicted, there is a different level of marital satisfaction when mainland Chinese people are exposed to Western cultural norms; this is consistent with the findings of Hiew et al. (2015) who state that Chinese people ($n=572$; $M=117.9$; $SD=21.4$; see Table 5.1, below) living in China typically rate their relationship satisfaction less highly than Westerners ($n=66$; $M=138.3$; $SD=21$). The major finding of this study is also consistent with the study conducted by Funk et al. (2007) which found that the level of marital satisfaction for Chinese people was lower than average level of marital satisfaction in the United States ($n=5,315$; $M=121$; $SD=32$; see Table 5.1). Moreover, Hiew et al. (2015) also found the level of marital satisfaction for Australian couples to be higher than for Australian Chinese couples. Therefore, the level of marital satisfaction for mainland Chinese couples is the lowest when compared with Australian Chinese and Western couples; however, the level of marital satisfaction improved when people moved from mainland China to Australia. The possible explanation for this difference for Chinese couples in two countries – acculturation (Wong & Goodwin, 2009; Storey, 2018).

Table 5.1 Levels of marital satisfaction for Chinese people measured by SCI-32

Group	Mainland Chinese (this study, 2020)	Australian Chinese (this study, 2020)	Australian Chinese s (Hiew et al., 2015)	Australian couples (Hiew et al., 2015)	Caucasian (75.8%), with 5.0% African American, 5.1% Latino, and 4.1% Asian (Funk et al., 2007)
Number of Participants	216	197	72	66	5,315
Mean (M)	104.14	123.20	117.9	138.3	121
Std. Deviation (SD)	33.96	24.00	21.4	21	32

5.2.2 Marital satisfaction and cultural differences

The beliefs and values of mainland Chinese culture (see section 2.2.1) and Australian culture (see section 2.2.2) vary significantly regarding individualism (definition of individualism refer to section 1.5), in Australia, and collectivism (definition of collectivism refer to section 1.5) in mainland China. According to the literature review, there are five cultural factors that may impact on levels of marital satisfaction, as identified in the themes table (see Table 2.1). One of the explanations of the differences found is that romantic love and psychological intimacy are suggested to be less central to conceptualisations of a good couple relationship in mainland Chinese culture than in Australian culture (Kim, 2015). In mainland Chinese culture, fitting harmoniously into the family, taking care of elders and caregiving of offspring are considered to be more important (Yu, 2011). While Australian cultures regard individuation from the family-of-origin as a normal and healthy developmental stage, mainland Chinese cultures expect interdependence between family

The theoretical foundation of sociobiological philosophy underpins discussion in individualism and collectivisms (Triandis, 2018). Therefore, theories regarding marriage that were emphasized in both individualism and collectivism can explain the findings here (Bhawuk, 2017). In Australian culture, consistent with Western culture's emphasis on individual responsibility, people are expected to clearly state their thoughts and feelings if they wish to be understood (Halford et al., 2018). This is because open exchanges of ideas are valued and considered indicative of a good relationship. Conversely, in mainland Chinese culture messages and feelings are expected to be conveyed indirectly, and mainland Chinese people do not believe overt expressions of love and caring to be important ((Hiew & Leung, 2017). Consequently, more conflict occurs when Chinese couples deal with their marital issues while lacking communication.

Furthermore, research suggests that Chinese culture endorses a more traditional gender role norm (Yu, 2011) than Australian cultures. Therefore, from a traditional cultural perspective, women take

more responsibility in the home for housework and caring, and men take responsibility for earning money and raising the family. Although beliefs around gender role may be formed by traditional cultural values, Yu (2011) interviewed 15 Chinese immigrants in the United States at some length (i.e. 60 to 180 minutes) and found that the traditional gender structure in marriage was created and facilitated not only by cultural contexts but also by structural contexts. The findings from Yu (2011) can be used in this study because, based on the Australian immigration statistics (2013), many migrants from China to Australia are well-educated professionals. Thus, this data also supports the contention that Chinese people who migrate to Australia value at least some aspects of Western culture, including Western marriage ideals. Importantly, minority groups like Chinese people living in Australia often acculturate to the majority culture in a variety of ways (Schwartz, Vignoles, Brown & Zagefka, 2014) which may influence these relationship standards. The mechanisms of acculturation help to explain how the postnatal cultural environment, exposure to Australian cultural norms, affects levels of marital satisfaction for Australian Chinese couples. Therefore, once mainland Chinese couples are exposed to Australian cultural norms, mainland Chinese wives are more likely to change their perspective on gender roles to an Australian one.

Additionally, in traditional mainland Chinese culture, extended family (including parents and parents-in-law) should be taken care of by their offspring (Jankowiak & Moore, 2016), a value which differs from Australian cultural norms regarding the extended family. These measures are extended family care responsibilities for Chinese families and marital relationship that are not present in the Australian setting. This research will be undertaken in the future.

The explanations of acculturation are further supported by the second comparison in this study, the level of marital satisfaction. The Australian Chinese couples were grouped by number of years lived in Australia: less than one year; from two to five years; from five to ten years; and more than ten years. Surprisingly, the results of the comparison revealed that levels of marital satisfaction improve over time, peak in the group who have lived in Australia from five to ten years, then remain stable for the couples who had experienced ten or more years exposure to Australian cultural norms. This finding suggests that the traditional culture regarding marital satisfaction for mainland Chinese in Australia is acculturating to Australian cultural norms. The results also support the hypothesis that Australian cultural norms are more conducive to a satisfactory couple relationship than traditional Chinese cultural norms.

It must be noted that, although the study examines levels of marital satisfaction for Chinese couples living with Australian cultural norms and mainland Chinese norms, this study does not claim any direct causal connection between the two variables of marital satisfaction and cultural norms.

Conversely, according to Halford et al.'s (2018) study results, Chinese women living in Australia endorse the traditional Chinese values regarding family responsibility more than Chinese women living in China. Additionally, Emery and Tian (2010) found that internal culture has more influence

on this group's marital satisfaction than external culture. Although the process of acculturation has been explored in many studies, Hiew et al. (2016) suggest that different standards of marital satisfaction may be appropriate for different cultural contexts because specific standards may not be universally adaptive. Additionally, Diener, Oishi and Lucas (2009) state that there are no rigorous studies exploring the causal mechanisms linking culture and marital satisfaction. Thus, more research is needed in this field to investigate the impacts of cultural norms on marital satisfaction.

5.2.3 Marital satisfaction and the degree of happiness

Marital satisfaction is a key element of perceived happiness, and a growing number of empirical studies are attempting to identify its determinants, as comprehensively surveyed by Fincham and Beach (2010). Therefore, the degree of happiness for Chinese people living in Australia and mainland China has also been measured in this study. The important finding of this study suggests that a high degree of marital satisfaction corresponds to a relatively high degree of happiness. Australian Chinese couples have a significant higher degree of happiness in their relationship, which is consistent with the prior research result conducted by Hiew et al. (2015). Also, Sooky, Keramat, Sharifi, Dehghani, Tagharrobi, Taebi and Sadat (2014) conducted a cross-sectional study on 379 married women living in Shahroud, Iran in 2013, and multiple linear regression showed a significant association between levels of happiness and levels of marital satisfaction. Furthermore, Kobau, Bann, Lewis, Zack, Boardman, Boyd and Thompson (2013) state that people who are married or living with their partner feel more happiness and life satisfaction than those who have never married, and those who are widowed, divorced or separated. Therefore, maintaining a high level of marital satisfaction helps to maintain a higher degree of happiness, resulting in better mental health.

The data presented in Figure 1.3 and discussed in section 1.2.3, indicate that China has a significantly lower rate of mental illness than Australia. However, Han et al. (2019) states that mental illness in China remains undiagnosed, underreported and undertreated. This study's finding of a lower degree of happiness in mainland Chinese marriages when compared with Australian-Chinese marriages may be evidence to support the claim of Han et al. (2019) that mental illness in China remains undiagnosed and underreported. Conversely, a different result stated by Wang & Yu (2013) who found the level of marital satisfaction was generally high among Chinese couples. Thus, levels of marital satisfaction remain contested and require further investigation.

Furthermore, when Williamson et al. (2012) interviewed 50 American couples and 41 Chinese couples they found that there are different types of communication among individuals in collectivist and individualistic cultures. They suggested that the collectivist culture in China discourages the expression of anger towards in-group members, including their partners and family members. Therefore, mental health issues arise as negative emotions build up in daily life. This is another indication that mainland Chinese people may have more mental health issues than Westerners.

This finding is contrary to the study by Gupta et al. (2013) which suggests that rates of mental illness in the general population of mainland China are lower than in other countries. This study is the first meta-analysis conducted on the prevalence of mental illness in mainland China. Marital satisfaction levels, therefore, need to be tested more rigorously.

5.2.4 Marital satisfaction and mental health

Kendler, Karkowski and Prescott's (1999) study started to focus on marital satisfaction and mental health, as symptoms of depression frequently emerge following marital dissatisfaction. It is reasonable to consider a lack of marital satisfaction to be a risk factor for depression. Indeed, good mental status does positive impacts on the level of marital satisfaction in result higher degree of happiness (refer to Figure 5.1 below). There is substantial empirical evidence that marital distress is predictive of higher rates of depression (Chen & Li, 2014). Also, Wang et al. (2014) investigated 139 older couples in China and concluded that the husbands' marital satisfaction was significantly associated with their wives' depressive symptoms. As discussed above, we may safely draw the conclusion that marital satisfaction is positively correlated with mental health, which supports Objective 3: if people are happy in their marriage, they are mentally healthy. The correlation between marital satisfaction and mental health is shown in Figure 5.1 (below).

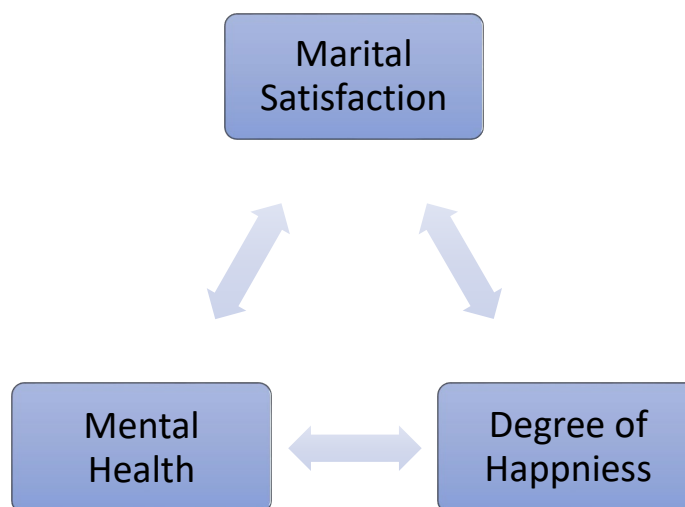


Figure 5.1 The correlation of marital satisfaction and mental health

This diagram depicts the correlation of marital satisfaction and mental health as evidenced by studies in mainland China, Iran, Japan, America and Australia (Chen & Li, 2014; Williamson et al., 2012; Kobau et al., 2013; Wang et al., 2014). As the findings in the literature review and this study suggest, cultural factors play an important role in levels of marital satisfaction; therefore, cultural factors should be taken into account in order to improve both marital satisfaction and mental health.

5.2.5 Cultural factors and mental health

According to the critical theory, recently, there is a growing recognition of what has been called a “population health” or a “health determinants” approach in which health is viewed as “a state of complete physical, mental and social wellbeing” and not merely the absence of disease or infirmity. In this view, non-medical or social determinants of health are considered when analysing the health of individuals and populations. In these models, other forces and factors in the lives and environments of individuals may have as much or more impact on their health than access to, or the provision of, medical services (Anderson & Olsen, 2013). This type of analysis and critique is based solely on the use of critical social theory which focuses a lens on societal power structures and engender social relations.

In addition, cultural factors often determine how much support people have from their families and communities in seeking help. This is particularly important because mental illnesses cannot simply be ignored and left untreated – doing so significantly impacts a person’s quality of life and can cause severe distress and secondary health effects (Zhang, 2010).

Makki and Mohanty (2019) examined 12,686 individuals in the United States and found that happiness is a psychological state that may depend to some extent on cultural factors, such as the influence of Western culture or Chinese culture. For example, Chi et al. (2013) reported that Chinese people living in China typically rate their relationship satisfaction less highly than Westerners. This may reflect the lower level of happiness with life in general reported by Chinese people compared with Westerners (Helliwell et al., 2012). Based on this evidence, the self-reported levels of marital satisfaction correlate to cultural norms and the degree of happiness. Thus, when considering the negative impact of marital satisfaction on mental health, couple education regarding issues related to marital satisfaction should be promoted. The cultural factors identified in Chapter 2 – including relationship standards, communication methods, gender roles and the extended family – could impact on marital satisfaction for Chinese. The method of communication, which belongs to the cultural context, could be changed because a substantial body of research has linked communication quality and marital satisfaction, both concurrently and longitudinally. Given that cognitive–behavioural approaches to couple and family therapy that explicitly address relationship standards have for the most part been developed in Western countries, this research raises a concern that cognitive–behavioural concepts and methods such as communication skills training and cognitive restructuring methods that challenge partners’ values will probably require tailoring to meet the needs of different cultures.

Whereas mutually constructive communication (e.g., suggesting compromise, validating a partner’s messages) has been found to be associated with relationship quality, negative responses (e.g. verbal attacks, criticism, defensiveness, contempt, withdrawal) are associated with relationship distress and dissolution (Falconier & Epstein, 2011; Williamson et al., 2012; Hiew, et al., 2016).

There were significant positive correlations between marital satisfaction and the degree of couple similarity on relationship standards (Chi et al., 2013). Therefore, family intervention is more likely to work if the couples involved are of cognitive consonance.

5.3 Conclusion

This study measured the differences in marital satisfaction levels within Australian cultural norms and mainland Chinese cultural norms by using an online survey. A significant difference in levels of marital satisfaction was identified. As expected, Chinese couples living in Australia have a higher level of marital satisfaction compared with Chinese couples living in mainland China. This finding supports the hypothesis that Australian and mainland Chinese cultural norms matter for marital satisfaction, and Australian culture norms are more conducive to higher levels of marital satisfaction. Surprisingly, the degree of happiness increases in correlation to the length of time Chinese people are exposed to Australian cultural norms. Another finding revealed that the level of marital satisfaction is in direct proportion to the degree of happiness in this study. It is therefore deduced that Australian Chinese people are mentally healthier than mainland Chinese people, if only taking marital satisfaction in account to assess mental states.

5.4 Limitation and recommendation

There are several noteworthy limitations to the current research. First, the marginal fit of the structural invariance model for the higher order structure of the measure requires some caution in interpreting results. Although, the sample size in this study is moderately effective with a robust data screen, the findings cannot be generalised because of the biased sample collected online.

Second, the samples differed on some demographic characteristics. The researchers measured Chinese participants who predominantly live in mainland China and predominantly live in Australia. The current sample still cannot be representative of the majority mainland culture because the cultures in mainland China included indigenous cultures and majority culture. In online recruitment, it is almost impossible to detect or prevent this.

Respondents were heterosexual or homosexual couples, a feature which was not identified because the intention of this study was to focus on general couple relationships rather than heterosexual or homosexual couples, which has been explained in section 1.5. Thus, further research could distinguish between heterosexual or homosexual couples.

In this study, data collected from Australia and mainland China. Participants from West Australia, South Australia, Tasmania, Vitoria, Queensland and New South Wales but not Northern Territory. Also, huge population in China, so 218 participants met the requirements after data screening. Therefore, this study could not be generalised to all of the resident who live in mainland China or Australia.

This study identified the impacts of cultural norms on marital relationships by comparing Chinese people with a Chinese cultural background but living within either Australian cultural norms or mainland Chinese norms. However, this study did not investigate the correlation between marital satisfaction and cultural norms directly. Future research needs to investigate the correlation between two of the major Chinese and Australian cultural norms and marital satisfaction.

This cross-sectional study only focused on the level of marital satisfaction at one point in time rather than dyadic process of the whole marriage. Therefore, further research should investigate the correlation between cultural norms and marital relationships via longitudinal study.

In addition, Australia is distinctive in that 28% of the population was born in another country. More than 160 countries of origin are represented in the Australian population, and the most widely spoken languages (in descending order: English, Mandarin, Italian, Greek and Hindi) are drawn from diverse cultural traditions (Australian Bureau of Statistics, 2015). Australia can be described as culturally hyper-diverse, and greater acceptance of cultural minorities has been found in culturally hyper-diverse countries than in countries with low migration rates and a large majority drawn from a single culture (Van de Vijver, Blommaert, Gkoumasi, & Stogianni, 2015). Hence, generalisability of the current findings to Chinese migrants in other Western countries needs to be tested rather than assumed.

This study mainly focuses on the level of marital satisfaction and cultural norms. A significant difference in reported marital satisfaction levels does not simply mean that cultural norms are the only impact factor. Further research should address the causes of the differences in marital satisfaction levels in Australia and mainland China. Importantly, a validity of the translated version of CSI-32 in a Chinese context should be developed.

References

- Allen, J., Balfour, R., Bell, R., & Marmot, M. (2014). Social determinants of mental health. *International review of psychiatry*, 26 (4), 392-407.
- American Psychological Association. 2001. *Publication manual of the American Psychological Association*, 5th, Washington, DC Author
- American Psychological Association (2019), *PsycINFO*. Retrieved from: <https://www.ebsco.com/products/research-databases/psycinfo>.
- Amrhein, V., Trafimow, D., & Greenland, S. (2019). Inferential statistics as descriptive statistics: There is no replication crisis if we don't expect replication. *The American Statistician*, 73(sup1), 262-270.
- Anderson, K., & Olsen, S. (2013). Leveraging Culture to Address Health Inequalities: Examples from Native Communities. *Leveraging culture to address health inequalities – examples from native communities: Workshop summary*.
- Aniciete, D., & Soloski, KL., (2011). The Social Construction of Marriage and a Narrative Approach to Treatment of Intra-Relationship Diversity. *Journal of Feminist Family Therapy*, 23:103–126.
- Australian Bureau of Statistics. (2007). Marriages, Australia, 2006. Retrieved from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyTopic/7947008D6F6787CFCA25739900118817?OpenDocument>.
- Australian Bureau of Statistics. (2012). Cultural diversity in Australia. Reflecting a nation: Stories from the 2011 Census, 2012-2013 (Issue 2071.0). Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2071.0main+features902012-2013_
- Australian Bureau of Statistics. (2012). Media Release-National <<https://www.abs.gov.au/websitedbs/censushome.nsf/home/CO-62?opendocument&navpos=620>>.
- Australian Bureau of Statistics. (2016). Census Independent Assurance Panel to the Australia statistician, Report on the Quality of 2016 Census Data. [https://www.abs.gov.au/websitedbs/d3310114.nsf/home/Independent+Assurance+Panel/\\$File/CIAP+Report+on+the+quality+of+2016+Census+data.pdf](https://www.abs.gov.au/websitedbs/d3310114.nsf/home/Independent+Assurance+Panel/$File/CIAP+Report+on+the+quality+of+2016+Census+data.pdf).
- Australian Bureau of Statistics. (2019). 3101.0 – Australian Demographic Statistics, <https://www.abs.gov.au/ausstats/abs@.nsf/0/D56C4A3E41586764CA2581A70015893E?OpenDocument>.
- Australian Government. (2020). *Protective Security Policy Framework*, 8 Sensitive and classified information, Attorney-General's Department.
- Australian Family Law. Australian Government, Attorney-General's Department. (2019). *Australian Family law*, viewed 25 June 2019. Retrieved from <https://www.ag.gov.au/familiesandmarriage/families/pages/default.aspx>.
- Australian Government, Department of Immigration and Citizenship, Australia's Migration Trends 2011–12 (2013) Editing. Retrieved from: <https://www.homeaffairs.gov.au/research-and-stats/files/australian-migration-trends-2011-12.pdf>.

- Australian Institute of Health and Welfare Australian Government. (2019). Expenditure on mental health-related services, Mental health services in Australia. Retrieved 17 January 2020 from <https://www.aihw.gov.au/getmedia/a188ec24-8542-48a7-8d8f-c20842200b5a/Expenditure-on-mental-health-services-2016-17.pdf.aspx>
- Banerjee, A. V. & Duflo, E. (2011). *Poor economics: A radical rethinking of the way to fight global poverty*. PublicAffairs.
- Bergin, T. (2018). *An Introduction to Data Analysis: Quantitative, Qualitative and Mixed Methods*. SAGE Publications Limited.
- Bhawuk, D. P. (2017). Individualism and collectivism. *The International Encyclopedia of Intercultural Communication*, 1-9.
- Billings, M., Lopez Mitnik, G., & Dye, B. A. (2017). Sample size for clinical trials. *Oral diseases*, 23(8), 1013-1018.
- Birukou, A., Blanzieri, E., Giorgini, P., & Giunchiglia, F. (2013). A Formal Definition of Culture. In K. Sycara, M. Gelfand, & A. Abbe (Eds.), *Models for Intercultural Collaboration and Negotiation* (pp. 1-26). Dordrecht: Springer Netherlands.
- Boals, A. (2014). Using event centrality to predict depressive symptoms after a romantic conflict: A prospective design. *Applied Cognitive Psychology*, 28(2), 259-265.
- Brandão, T., Pedro, J., Nunes, N., Martins, M., Costa, M., & Matos, P. (2017). Marital adjustment in the context of female breast cancer. *Psycho-Oncology*, 26 (12), 2019-2029.
- Bridges, R. E., Brown, L. B., Hoffer Jr, J. M., & Ackley, K. R. (2013). *U.S. Patent No. 8,525,983*. Washington, DC: U.S. Patent and Trademark Office.
- Burns, J. W., Post, K. M., Smith, D. A., Porter, L. S., Buvanendran, A., Fras, A. M., & Keefe, F. J. (2018). Spouse criticism and hostility during marital interaction: effects on pain intensity and behaviors among individuals with chronic low back pain. *Pain*, 159(1), 25-32.
- Callegaro, M. (2017). *Mario Callegaro discusses web survey methodology*. California: Thousand Oaks.
- Chan, M. K., & Young, J. D. (2015). *Precarious Balance: Hong Kong between China and Britain, 1842-1992: Hong Kong between China and Britain, 1842-1992*. Routledge.
- Chen, Y-CC., & Li, J-CA. (2014). Family change in East Asia. In J. Treas, J. Scott, & M. Richards (Eds.), *The Wiley Blackwell Companion to the Sociology of Families*, (pp. 61-82). Chichester, UK: Wiley.
- Chi, P., Epstein, N. B., Fang, X., Lam, D. O., & Li, X. (2013). Similarity of relationship standards, couple communication patterns, and marital satisfaction among Chinese couples. *Journal of Family Psychology*, 27(5), 806-816. doi:10.1037/a0034113
- Chien, W.Y. & Yi, C.C. (2014). Marital power structure in two Chinese societies: Measurement and mechanisms. *Journal of Comparative Family Studies*, 45(1), 93-111.
- China Academic Journals Full-text Database (CJFD, 2020), China Academic Journal (CD) Electronic Journals Publishing House Co., Ltd. <http://oversea.cnki.net/kns55/brief/result.aspx?dbPrefix=CJFD>

- Chomeya, R. (2010). Quality of psychology test between Likert scale 5 and 6 points. *Journal of Social Sciences*, 6(3), 399-403.
- Christmals, C. D., & Gross, J. J. (2017). An integrative literature review framework for postgraduate nursing research reviews. *European Journal of Research in Medical Sciences Vol*, 5(1).
- Claydon, L. S. (2015). Rigour in quantitative research. *Nursing Standard (2014+)*, 29(47), 43.
- Cohen, J. (2013). *Statistical power analysis for the behavioural sciences*. Routledge.
- Critical Appraisal Skills Programme (2018). *CASP Checklist: 10 questions to help you make sense of qualitative research*. Retrieved from https://casp-uk.net/wp-content/uploads/2018/03/CASP-Qualitative-Checklist-2018_fillable_form.pdf.
- Cui, W., Wang, H., Liu, P., Ma, J., Jing, T., Liu, S., & Zou, J. (2014). Relationship between occupational stress and depression in migrant workers. *Zhonghua lao dong wei sheng zhi ye bing za zhi= Zhonghua laodong weisheng zhiyebing zazhi= Chinese journal of industrial hygiene and occupational diseases*, 32(2), 112-114.
- Cumming, G. (2013). *Understanding the new statistics: Effect sizes, confidence intervals, and meta-analysis*. Routledge.
- Curtis, E. A., Comiskey, C., & Dempsey, O. (2016). Importance and use of correlational research. *Nurse Researcher*, 23(6).
- Damarell, R. (2016). *Database Syntax Guide for the Systematic Reviewer*, Flinders University.
- Data storage. (2020). Retrieved 18 February 2020, from <https://staff.flinders.edu.au/workplace-support/digital-services/datastorage>.
- Dehui, W. & Huiming, Z. (2012). Analysis of the causes and personnel structure of 20-year visits to psychiatric clinics. *Sichuan Mental Health*, 25(3), 135-138.
- DeSimone, J. A., Harms, P. D., & DeSimone, A. J. (2015). Best practice recommendations for data screening. *Journal of Organizational Behavior*, 36(2), 171-181.
- Diener, E., Oishi, S., & Lucas, R. E. (2009). Subjective well-being: The science of happiness and life satisfaction. *Oxford handbook of positive psychology*, 2, 187-194.
- Dittmer, L., Kim, S., & Buck, D. (2018). China's quest for national identity. *Australian Journal of Chinese Affairs*, 33, 212-214.
- Dion, K. K., & Dion, K. L. (1996). Cultural perspectives on romantic love. *Personal relationships*, 3(1), 5-17.
- Dong, Y., & Peng, C. Y. J. (2013). Principled missing data methods for researchers. *SpringerPlus*, 2(1), 222.
- EBSCO Information Services. (2020). Retrieved 17 January 2020 from <https://www.ebsco.com/news-center/press-releases/four-databases-wanfang-data-now-indexed-ebsco-discovery-servicetm>
- Emery, C., & Tian, K. R. (2010). China compared with the US: Cultural differences and the impacts on advertising appeals. *International Journal of China Marketing*, 1(1), 45-59.
- Ethics Committee of Chongqing Mental Health Centre. (n.d.). Retrieved 28 May 2019, Chongqing Mental centre, Chongqing, Web site: <http://www.cqsjwzx.com/html/zxjs/zxyxllwyh/17/02/1504.html>.

- Eynon, R., Fry, J., & Schroeder, R. (2017). The ethics of online research. *The SAGE handbook of online research methods*, 2, 19-37.
- Falconier, M. K., & Epstein, N. B. (2011). Female-demand/male-withdraw communication in Argentinian couples: A mediating factor between economic strain and relationship distress. *Personal Relationships*, 18(4), 586-603.
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed).
- Fielding, N., Lee, Raymond M., & Blank, Grant. (2017). *The SAGE handbook of online research methods* (Second ed.).
- Fincham, F. D., & Beach, S. R. (2010). Marriage in the new millennium: A decade in review. *Journal of Marriage and Family*, 72(3), 630-649.
- Fisher, M. J., & Bloomfield, J. (2019). Understanding the research process. *Journal of the Australasian Rehabilitation Nurses Association*, 22(1), 22.
- Fowler Jr, F. J. (2013). *Survey research methods*. Sage publications.
- Flinders University Social and Behavioural Research Ethics Committee. (n.d.). Retrieved 28 May 2019, from Flinders University, Adelaide. Web site: <http://www.flinders.edu.au/research/researcher-support/ebi/human-ethics/applying.cfm>.
- Fu Keung Wong, D., & Song, H. X. (2008). The resilience of migrant workers in Shanghai China: the roles of migration stress and meaning of migration. *International Journal of Social Psychiatry*, 54(2), 131-143.
- Fukino, H.T.A.N. (2005). Depressive symptoms and life satisfaction in elderly women are associated with natural killer cell number and cytotoxicity. *International Journal of Behavioral Medicine*, 12(4), 236-243.
- Funk, J., Rogge, R., & Kazak, A.E. (2007). Testing the Ruler with Item Response Theory: Increasing Precision of Measurement for Relationship Satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, 21(4), 572-583.
- Gallin, John I., & Ognibene, Frederick P. (2012). *Principles and Practice of Clinical Research* (3rd ed.). Elsevier Science.
- Galynker, I., & Galynker, I. I. (2017). *The suicidal crisis: clinical guide to the assessment of imminent suicide risk*. Oxford University Press.
- Geddes, J. (2014). Randomised controlled trials. *The British Journal of Psychiatry*, 205(1), 43.
- General Office of the State Council on Transmitting Health and Family Planning Commission and Other Departments. 2015. Retrieved 8 June 2019, Notice of National Mental Health Work Plan (2015-2020). Web site: http://www.gov.cn/zhengce/content/2015-06/18/content_9860.htm.
- George, D., & Mallery, P. (2016). Descriptive statistics. In *IBM SPSS Statistics 23 Step by Step* (pp. 126-134). Routledge.
- Global Burden of Disease Collaborative Network. *Global Burden of Disease Study 2016* (GBD 2016) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2017.
- Golia, S., & Simonetto, A. (2015). Treating ordinal data: A comparison between rating scale and structural equation models. *Quality & Quantity*, 49(3), 903-915.

- Gotlib, I. H., & Joormann, J. (2010). Cognition and depression: current status and future directions. *Annual review of clinical psychology*, 6, 285-312.
- Graham, J. M., Diebels, K. J., & Barnow, Z. B. (2011). The reliability of relationship satisfaction: A reliability generalization meta-analysis. *Journal of Family Psychology*, 25(1), 39.
- Graham, J. W., Cumsille, P. E., & Shevock, A. E. (2012). Methods for handling missing data. *Handbook of Psychology*, 2nd Edition, 2.
- Gravetter, F. J., Wallnau, L. B., Forzano, L. A. B., & Witnauer, J. E. (2020). *Essentials of statistics for the behavioral sciences*. Cengage Learning.
- Gupta, M., Gao, J., Aggarwal, C. C., & Han, J. (2013). Outlier detection for temporal data: A survey. *IEEE Transactions on Knowledge and Data Engineering*, 26(9), 2250-2267.
- Hagan, Teresa L. (2014). Measurements in quantitative research: How to select and report on research instruments. *Oncology Nursing Forum*, 41(4), 431-433.
- Halford, K., Leung, P. W. L., Hung-Cheung, C., Chau-Wan, L., Hiew, D., & van de Vijver, F. (2018). Couple relationship standards and migration: Comparing Hong Kong Chinese with Australian Chinese. *Family Process*, 57(4), 996-1011. doi:10.1111/famp.12337
- Halford, W., Lee, S., Hiew, D. N., & van de Vijver, F. J. (2018). Indirect couple communication and relationship satisfaction in Chinese, Western, and Chinese-Western intercultural couples. *Couple and Family Psychology: Research and Practice*, 7(3-4), 183-200.
- Halford, W. K., Leung, P. W., Hung-Cheung, C., Chau-Wan, L., Hiew, D. N., & van de Vijver, F. J. (2018). Relationship standards and relationship satisfaction in Chinese, Western, and intercultural couples living in Australia and Hong Kong, China. *Couple and Family Psychology: Research and Practice*, 7(3-4), 127-142.
- Halsey, L. G., Curran-Everett, D., Vowler, S. L., & Drummond, G. B. (2015). The fickle P value generates irreproducible results. *Nature methods*, 12(3), 179.
- Hamilton, G. V. (1929). *A research in marriage*. American Psychological Association. Boni. Washington.
- Han, Q., Lok, G., Wen-Wang, R., Feng-Rong, A., Ungvari, G., Balbuena, L., . . . Yu-Tao, X. (2019). Treatment Rate for Major Depressive Disorder in China: A Meta-Analysis of Epidemiological Studies. *Psychiatric Quarterly*, 90(4), 883-895.
- Helliwell, J. F., & Wang, S. (2013). World happiness: Trends, explanations and distribution. Retrieved 20 February 2020 from <http://worldhappiness.report/ed/2013/>
- Helliwell, J. F., Layard, R., & Sachs, J. (2012). World happiness report. The University of British Columbia. Retrieved 20 February 2020 from <https://open.library.ubc.ca/cIRcle/collections/facultyresearchandpublications/52383/items/1.0053622>
- Helms, C., Gardner, A., & McInnes, E. (2017). The use of advanced web-based survey design in Delphi research. *Journal of advanced nursing*, 73(12), 3168-3177.
- Hewson, C. (2017). Research design and tools for online research. *The SAGE handbook of online research methods*, 57-75.
- Heyvaert, M., Hannes, K., Maes, B., & Onghena, P. (2013). Critical appraisal of mixed methods studies. *Journal of mixed methods research*, 7(4), 302-327.

- Hiew, D. N., & Leung, P. W. (2017). Cultural Diversity in Couple Relationships. In *Foundations for Couples' Therapy* (pp. 82-91). Routledge.
- Hiew, D., Halford, W., Van de Vijver, F., & Liu, S. (2015a). The Chinese–Western Intercultural Couple Standards Scale. *Psychological Assessment*, 27(3), 816-826.
- Hiew, D., Halford, W., Van de Vijver, F., & Liu, S. (2015b). Relationship Standards and Satisfaction in Chinese, Western, and Intercultural Chinese–Western Couples in Australia. *Journal of Cross-Cultural Psychology*, 46(5), 684-701.
- Hiew, D., Halford, W., Van de Vijver, F., & Liu, S. (2016). Communication and Relationship Satisfaction in Chinese, Western, and Intercultural Chinese–Western Couples. *Journal of Family Psychology*, 30(2), 193-202.
- Homish, G. G., & Leonard, K. E. (2008). Spousal influence on general health behaviours in a community sample. *American journal of health behaviour*, 32(6), 754-763.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). Cultures and Organizations: Software of the Mind. Revised and expanded 3rd Edition. N.-Y.: McGraw-Hill.
- How, A. (2017). *Critical theory*. Macmillan International Higher Education. New York.
- Hunter, L. (2012). Challenging the reported disadvantages of e-questionnaires and addressing methodological issues of online data collection. *Nurse researcher*, 20(1).
- Iwelunmor, J., & Airhihenbuwa, C. (2017). Culture, a Social Determinant of Health and Risk: Considerations for Health and Risk Messaging. In *Oxford research encyclopedia of communication*.
- Jackson, J. B., Miller, R. B., Oka, M., & Henry, R. G. (2014). Gender differences in marital satisfaction: A meta-analysis. *Journal of marriage and family*, 76(1), 105-129.
- James, M. J. (2015). Influence of Gender-Role Egalitarianism as Moderated by Gender on Intimate Relationship Satisfaction. Michigan School of Professional Psychology.
- James Cook University. (2017). LOW/NEGLIGIBLE RISK HUMAN RESEARCH ETHICS APPLICATION. Human Research Ethics Committee. Retrieved 7 January 2020 from https://www.jcu.edu.sg/__data/assets/pdf_file/0015/243141/Low-Negligible-Risk-Checklist.pdf.
- Jankowiak, W. R., & Moore, R. L. (2016). *Family life in China*. John Wiley & Sons.
- Kalinowski, P., & Fidler, F. (2010). Interpreting Significance: The Differences Between Statistical Significance, Effect Size, and Practical Importance. *Newborn and Infant Nursing Reviews*, 10(1), 50-54.
- Karandashev, V. (2015). A cultural perspective on romantic love. *Online Readings in Psychology and Culture*, 5(4), 2.
- Kendler, K. S., Karkowski, L. M., & Prescott, C. A. (1999). Causal relationship between stressful life events and the onset of major depression. *American Journal of Psychiatry*, 156(6), 837-841.
- Kim, T. K. (2015). T test as a parametric statistic. *Korean journal of anaesthesiology*, 68(6), 540.
- Kincheloe, J.L., (2011) Rethinking Critical Theory and Qualitative Research in Hayes, K., et al., (eds.), Key Work in Critical Pedagogy: 285–326. © 2011 Sense Publishers. All rights reserved.

- Kobau, R., Bann, C., Lewis, M., Zack, M. M., Boardman, A. M., Boyd, R., ... & Thompson, W. (2013). Mental, social, and physical well-being in New Hampshire, Oregon, and Washington, 2010 Behavioural Risk Factor Surveillance System: implications for public health research and practice related to Healthy People 2020 foundation health measures on well-being. *Population health metrics*, 11(1), 19.
- Kwak, S. K., & Kim, J. H. (2017). Statistical data preparation: management of missing values and outliers. *Korean journal of anaesthesiology*, 70(4), 407.
- Lai, D. (2010). P02-102 – Socio-cultural determinants of mental health of elderly immigrants: Lessons learned from Canada. *European Psychiatry*, 25, 706.
- Limaye, R.J., Sullivan, T.M., Dalessandro, S., and Hendrix-Jenkins, A., (2017). Looking through a social lens: conceptualising social aspects of knowledge management for global health practitioners *Journal of Public Health Research*; volume 6:761
- Larson-Hall, J. (2015). *A guide to doing statistics in second language research using SPSS and R*. Routledge.
- Leung, C., Moore, S., Karnilowicz, W., & Lung, C. (2011). Romantic relationships, relationship styles, coping strategies, and psychological distress among Chinese and Australian young adults. *Social Development*, 20(4), 783-804.
- LeVine, R. A. (2018). *Culture, behaviour, and personality: An introduction to the comparative study of psychosocial adaptation*. Routledge.
- Li, P. F., & Johnson, L. N. (2018). Couples' depression and relationship satisfaction: Examining the moderating effects of demand/withdraw communication patterns. *Journal of Family Therapy*, 40, S63-S85.
- Li, T., & Fung, H. H. (2011). The dynamic goal theory of marital satisfaction. *Review of General Psychology*, 15(3), 246-254.
- Li, Z. H., Connolly, J., Jiang, D., Pepler, D., & Craig, W. (2010). Adolescent romantic relationships in China and Canada: A cross-national comparison. *International Journal of Behavioural Development*, 34(2), 113-120.
- Limaye, R.J., Sullivan, T.M., Dalessandro, S., & Hendrix-Jenkins, A., (2017). Looking through a social lens: conceptualising social aspects of knowledge management for global health practitioners. *Journal of Public Health Research*; volume 6:761
- Linkov, I., & Trump, B. D. (2019). Resilience Quantification and Assessment. *In the Science and Practice of Resilience* (pp. 81-101). Springer, Cham.
- Little, T. D., Lang, K. M., Wu, W., & Rhemtulla, M. (2016). Missing data. *Developmental psychopathology*, 1-37.
- Lui, T. L. (2015). A missing page in the grand plan of "one country, two systems": Regional integration and its challenges to post-1997 Hong Kong. *Inter-Asia Cultural Studies*, 16(3), 396-409.
- Liu, & Shi. (2018). Self-identity and Subject Construction of Urban Bottom Housewives in the Period of Collectivism. *Journal of women's studies*, (3), 83-94.
- LoBiondo-Wood, G., & Haber, J. (2014). *Nursing research-e-book: methods and critical appraisal for evidence-based practice*. Elsevier Health Sciences.

- Ma X., & Wang, L. (2014). Analysis of 1903 counsellors in outpatient psychiatric clinic of a psychiatric hospital. *Health education in China*, 30 (11), 1020-1022.
- Makki, N., & Mohanty, M. S. (2019). Mental Health and Happiness: Evidence from the US Data. *The American Economist*, 64(2), 197-215.
- Malagon-Maldonado, G. (2014). Qualitative research in health design. *HERD: Health Environments Research & Design Journal*, 7(4), 120-134.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological review*, 98(2), 224.
- Marmot, M., & Allen, J. (2014). Social determinants of health equity. *American Journal of Public Health*, 104 Suppl 4(S4), S517-9.
- Marquart, F. (2017). Methodological rigor in quantitative research. *The international encyclopedia of communication research methods*, 1-9.
- Mayne, J. (2011). Contribution analysis: Addressing cause and effect. *Evaluating the complex*, 53-96.
- Miller, R. B., Mason, T. M., Canlas, J. M., Wang, D., Nelson, D. A., & Hart, C. H. (2013). Marital satisfaction and depressive symptoms in China. *Journal of Family Psychology*, 27(4), 677.
- Meyler D., Stimpson J.P., & Peek M.K. (2007). Health concordance within couples: A systematic review. *Social Science and Medicine*, 64(11), 2297-2310. doi: 10.1016/j.socscimed.2007.02.007. [PubMed:17374552].
- Moinester, M., & Gottfried, R. (2014). Sample size estimation for correlations with pre-specified confidence interval. *The quantitative methods for psychology*, 10(2), 124-130.
- Nardi, P. M. (2018). Doing survey research: *A guide to quantitative methods* (4th ed.). Routledge.
- National Health and Medical Research Council 2007, retrieved 2 May 2019, from the National statement on ethical conduct in human research, NHMRC, Australia, Web site: <https://www.nhmrc.gov.au/about-us/publications/national-statement-ethical-conduct-human-research-2007-updated-2018>.
- Newton, Ryan, King, & Smith. (2014). Cohort differences in the marriage–health relationship for midlife women. *Social Science & Medicine*, 116, 64-72.
- Nichols, C. W., Schumm, W. R., Schectman, K. L., & Grigsby, C. C. (1983). Characteristics of responses to the Kansas Marital Satisfaction Scale by a sample of 84 married mothers. *Psychological Reports*, 53(2), 567-572.
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, 141-151.
- Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education (UK).
- Perkins, D. (2013). *Encyclopedia of China: History and culture*. Routledge.
- Pfister, R., & Janczyk, M. (2013). Confidence intervals for two sample means: Calculation, interpretation, and a few simple rules. *Advances in Cognitive Psychology*, 9(2), 74.
- Polit, D., & Beck, C.T. (2017). *Resource manual for Nursing research: Generating and assessing evidence for nursing practice* (10th ed.). Lippincott Williams & Wilkins.

- Putranto, L. S. (2019). The use of an online survey to speed up the data collection process. In *IOP Conference Series: Materials Science and Engineering* (Vol. 508, No. 1, pp .12-13). IOP Publishing.
- Qian, Y. & Qian, Z. (2015). Work, Family, and Gendered Happiness among Married People in Urban China. *Social Indicators Research*, 121(1), 61-74. doi: <http://dx.doi.org/10.1007/s11205-014-0623-9>
- Randall, S. M., Ferrante, A. M., Boyd, J. H., & Semmens, J. B. (2013). The effect of data cleaning on record linkage quality. *BMC medical informatics and decision making*, 13(1), 64.
- Regmi, P., Waithaka, E., Paudyal, A., Simkhada, P., & Van Teijlingen, E. (2016). Guide to the design and application of online questionnaire surveys. *Nepal Journal of Epidemiology*, 6(4), 640-644.
- Richmond, P., & Roehner, B. M. (2016). Effect of Marital Status on Death Rates. Part 1: High accuracy exploration of the Farr–Bertillon effect. *Physical A: Statistical Mechanics and Its Applications*, 450(C), 748-767.
- Richmond, P., & Roehner, B. M. (2016). Effect of marital status on death rates. Part 2: Transient mortality spikes. *Physica A: Statistical Mechanics and its Applications*, 450, 768-784.
- Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (Eds.). (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage.
- Reuter, K. E., & Schaefer, M. S. (2017). Illegal captive lemurs in Madagascar: Comparing the use of online and in-person data collection methods. *American Journal of Primatology*, 79 (11), e22541.
- Robles, T. F., Slatcher, R. B., Trombello, J. M., & McGinn, M. M. (2014). Marital quality and health: A meta-analytic review. *Psychological bulletin*, 140(1), 140-187.
- Rosenberg, A. (2012). Classifying skewed data: Importance weighting to optimize average recall. In *Thirteenth Annual Conference of the International Speech Communication Association*.
- Royal Adelaide Hospital Research Fund, 2018. Low and Negligible Risk Research. restrict from: <https://www.rahresearchfund.com.au/rah-research-institute/for-researchers/low-negligible-risk-research/>.
- Salkind, N. J., & Frey, B. B. (2019). *Statistics for people who (think they) hate statistics*. Sage Publications, Incorporated.
- Savin-Baden, M., & Howell-Major, C. (2013). *Qualitative Research: The Essential Guide to Theory and Practice*. Routledge.
- Sánchez, M. E. T., & Cervantes, R. J. M. (2016). Generalized eta squared for multiple comparisons on between-groups designs. *Psicothema*, 28(3), 340-345.
- Schaakxs, R., Comijs, H. C., van der Mast, R. C., Schoevers, R. A., Beekman, A. T., & Penninx, B. W. (2017). Risk factors for depression: differential across age?. *The American Journal of Geriatric Psychiatry*, 25(9), 966-977.
- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counselling psychology. *Journal of Counselling psychology*, 57(1), 1.
- Schmider, E., Ziegler, M., Danay, E., Beyer, L., & Bühner, M. (2010). *Is it really robust?*. *Methodology*. Hogrefe.

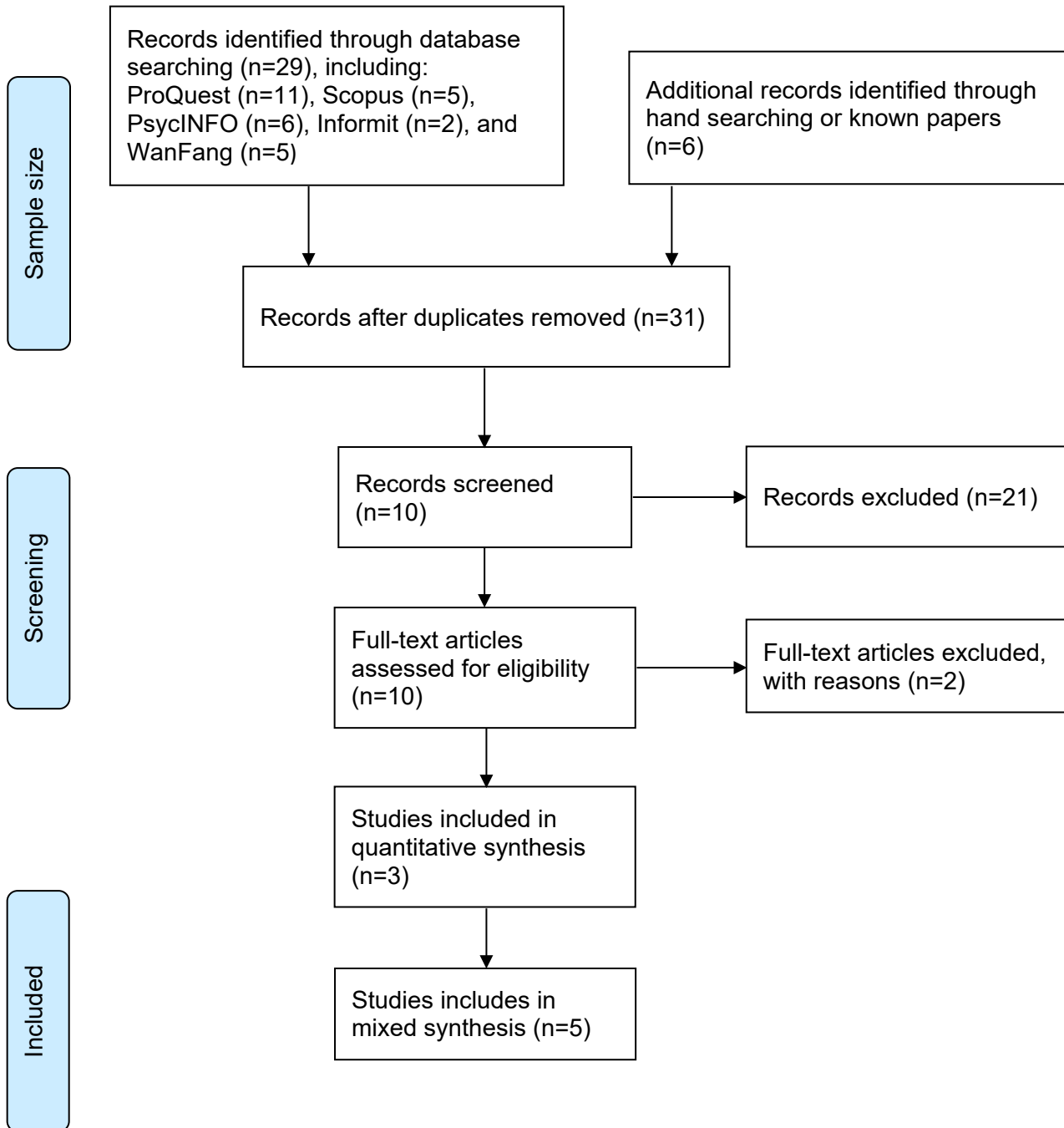
- Schneider, J., (2008). Saving Social Construction: Contributions from cultural studies. Chapter 38 in *Handbook of Constructionist Research*. Editors James A Holstien & Jaber F Gubrium. Guilford Press.
- Schneider, Z., & Whitehead, D. (2016). *Nursing and midwifery research: Methods and appraisal for evidence-based practice* (5th ed.). Elsevier.
- Schönbrodt, F. D., Wagenmakers, E. J., Zehetleitner, M., & Perugini, M. (2017). Sequential hypothesis testing with Bayes factors: Efficiently testing mean differences. *Psychological methods*, 22(2), 322.
- Schulenkorf, N., Sherry, E., and Rowe, K., (2016), Sport-for-development: an integrated literature review, *Journal of sport management*, vol. 30, no. 1, pp. 22-39.
- Schwartz, S. J., Vignoles, V. L., Brown, R., & Zagefka, H. (2014). The identity dynamics of acculturation and multiculturalism: Situating acculturation in context. *Oxford handbook of multicultural identity*, 57-92.
- Seeram, E. (2019). An Overview of Correlational Research. *Radiologic technology*, 91(2), 176-179.
- Shek, D.T.L. (1995). Marital quality and psychological well-being of married adults in a Chinese context. *The Journal of Genetic Psychology*, 156(1), 45-56.
- Shen & Lin. (2013). A Research on Marital Satisfaction: The Case of Shandong Province. *Population Research*. Vol. 37, No. 4.
- Sim, A., Cordier, R., Vaz, S., Parsons, R., & Falkmer, T. (2017). Relationship satisfaction and dyadic coping in couples with a child with autism spectrum disorder. *Journal of autism and developmental disorders*, 47(11), 3562-3573.
- Sim, A., Fristedt, S., Cordier, R., Vaz, S., Kuzminski, R., & Falkmer, T. (2019). Viewpoints on what is important to maintain relationship satisfaction in couples raising a child with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 65, 1-13.
- Siyana, A., & Vithanage, D. (2015). Cultural Validation of the Couples Satisfaction Index–32 among Sri Lankan Adults.
- Sooky, Z., Keramat, A., Sharifi, K., Dehghani, M., Tagharrobi, Z., Taebi, M., & Sadat, Z. (2014). Investigating happiness and its related factors in married women referred to health centers of shahrud city. *Iranian Red Crescent Medical Journal*, 16(9).
- Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2012). Health literacy and public health: a systematic review and integration of definitions and models. *BMC public health*, 12(1), 80.
- Stack, S., & Kposowa, A. J. (2016). Culture and suicide acceptability: A cross-national, multilevel analysis. *The Sociological Quarterly*, 57(2), 282-303.
- Statistic. (2020). *Number of monthly active WeChat users 2011-2020*. Retrieved from <https://www.statista.com/statistics/255778/number-of-active-wechat-messenger-accounts/>
- Sternberg, R., Hojjat, M., & Johnson, E. (1999). Satisfaction in close relationships. *Journal of Marriage and the Family*, 61(1), 255-256.
- Storey, J. (2018). *Cultural theory and popular culture: An introduction*. Routledge.
- Tabachnick, B., & Fidell, Linda S. (2013). *Using multivariate statistics* (6th ed.). Boston: Pearson Education.

- The Centers for Disease Control and Prevention, Learn About Mental Health. Retrieved 21 January 2020 from <https://www.cdc.gov/mentalhealth/learn/index.htm>.
- The National Statement on Ethical Conduct in Human Research*. (2007). Retrieved 12 June 2019, from the *National Health and Medical Research Council Act 1992*. Web site: <https://www.nhmrc.gov.au/about-us/publications/national-statement-ethical-conduct-human-research-2007-updated-2018>.
- The World Medical Association. (2018). Reviewed 28 January 2020. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>.
- Thomas, L., & Peterson, E. D. (2012). The value of statistical analysis plans in observational research: defining high-quality research from the start. *Jama*, 308(8), 773-774.
- Torraco, R.J., (2016). Writing Integrative Reviews of the Literature: Methods and Purposes. *International Journal of Adult Vocational Education and Technology*. Volume 7 • Issue 3 • July-September 2016
- Triandis, H. C. (2018). *Individualism and collectivism*. Routledge.
- Van de Vijver, F. J., Blommaert, J., Gkoumasi, G., & Stogianni, M. (2015). On the need to broaden the concept of ethnic identity. *International Journal of Intercultural Relations*, 46, 36-46.
- Walsh, M., Manyesso, S., Xiao, B, and O'Connor, B. (2018). Australia's population hit 25 million, newest resident likely to be young, female and Chinese. ABC World News <https://www.abc.net.au/news/2018-08-07/australia-population-hits-25-million/10077100>
- Wang, Q., Wang, D., Li, C., & Miller, R. B. (2014). Marital satisfaction and depressive symptoms among Chinese older couples. *Aging & Mental Health*, 18(1), 11-18.
- Wang, X., Xie, X., Wang, Y., Wang, P., & Lei, L. (2017). Partner phubbing and depression among married Chinese adults: The roles of relationship satisfaction and relationship length. *Personality and Individual Differences*, 110, 12-17.
- Wang & Yu, (2013). An Empirical Research on Marital Satisfaction among Chinese Couples. *Collection of Women's Studies*. No.1 Ser.No.115
- Wang, Li, & Hu. (2013). A Survey on Chinese couples' marital satisfaction and suggestions for a happier marriage. *The Chinese Journal of Human Sexuality* June, 2013 Vol. 22 No. 6. DOI: 10.3969/j.issn.1672-1993.2013.06.026.
- Ward, P. J., Lundberg, N. R., Zabriskie, R. B., & Berrett, K. (2009). Measuring marital satisfaction: A comparison of the revised dyadic adjustment scale and the satisfaction with married life scale. *Marriage & Family Review*, 45 (4), 412-429.
- Wellek, S. (2010). *Testing statistical hypotheses of equivalence and noninferiority*. Chapman and Hall/CRC.
- Wells, N. M., Evans, G. W., & Cheek, K. A. (2016). Environmental psychology. *Environmental health: From global to local*, 203.
- Weijters, B., Baumgartner, H. & Schillewaet, N. (2013). Reversed Item Bias: An Integrative Model. *Psychological Methods*, 18(3), 320-334.
- Whitehead, M. (1991). Policies and strategies to promote social equity in health. *Background document to WHO – Strategy Paper for Europe*. 2007:14.

- Wicherts, J. M., Veldkamp, C. L., Augusteijn, H. E., Bakker, M., Van Aert, R., & Van Assen, M. A. (2016). Degrees of freedom in planning, running, analyzing, and reporting psychological studies: A checklist to avoid p-hacking. *Frontiers in psychology*, 7, 1832.
- Wiesing, U., & Parsa-Parsi, R. (2016). The World Medical Association Launches A Revision of the Declaration of Geneva. *Bioethics*, 30(3), 140.
- Williamson, H. C., Ju, X., Bradbury, T. N., Karney, B. R., Fang, X., & Liu, X. (2012). Communication Behavior and Relationship Satisfaction among American and Chinese Newlywed Couples. *Journal of Family Psychology*, 26(3), 308-315. doi:10.1037/a0027752
- Wong, S., & Goodwin, R. (2009). Experiencing marital satisfaction across three cultures: A qualitative study. *Journal of Social and Personal Relationships*, 26(8), 1011-1028
- World Health Organization. (2018). Retrieved 12 June, 2019, from the Mental health: strengthening our response. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>.
- World Health Organization. (2011). *Global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level. Report by the Secretariat*. Geneva: World Health Organization.
- Xiang, Y-T., Yu, X., Sartorius, N., Ungvari, G. S. & Chiu, H. F. K. (2012). Mental Health in China: Challenges and progress. *The Lancet*, 380(9855), 1715-6. doi:10.1016/s0140-6736(11)60893-3.
- Xiong, W., & Phillips, M. R. (2016). Translated and annotated version of the 2015-2020 National Mental Health Work Plan of the People's Republic of China. *Shanghai archives of psychiatry*, 28(1), 4.
- Yang, H. C., & Schuler, T. A. (2009). Marital quality and survivorship: slowed recovery for breast cancer patients in distressed relationships. *Cancer*, 115(1), 217-228.
- Yang, Y. & Ran, J. (2011). *886 cases of outpatient psychiatric survey (Doctoral dissertation)*. Retrieved from <http://www.cnki.com.cn/Article/CJFDTotat-CQYX201117017.htm>.
- Yangcheng Evening News. (2009). Marriages with strong women and weak men are doomed to fail? Retrieved August 6, 2009, from <http://www.checheng.net/news/jiayuanqinggan/2009-08-06/22414.html>.
- Yao. (2009). Evolution of marriage concept in the 17th year of new China (1949-1966). *Journal of capital normal university (social science edition)*, 2009(5), 10-14.
- Yeung, P. (2014). SPSS survival manual. A step by step guide to data analysis using IBM SPSS [Book Review]. *Aotearoa New Zealand Social Work*, 26(4), 92.
- Yu, Y. (2011). Reconstruction of gender role in marriage: Processes among Chinese immigrant wives. *Journal of Comparative Family Studies*, 42(5), 651-668.
- Zhang, H. (2015). Wives' Relative Income and Marital Quality in Urban China: Gender Role Attitudes as a Moderator. *Journal of Comparative Family Studies*, 46(2), 203-220
- Zhang, J. (2010). Marriage and suicide among Chinese rural young women. *Social Forces*, 89(1), 311-326.
- Zhang. (2010). Subjectivity, Civil Society, Publicity – Three Important Concepts in the History of Chinese thought since the Reform and Opening-up. *Social sciences*, 2010(6), 101-107.

Appendices

Appendix 2.1 PRISMA 2009 flow diagram



Appendix 2.2 Quantitative studies reporting correlations and associations

Authors & Date	Q1: Source population or area	Q2 The method of selection of participant and the eligible population well described	Q3: Inclusion and exclusion criteria explicit and appropriate	Q4: Selection bias minimised	Q5: Confounding factors identified and controlled	Q6: Outcome measures and procedures reliable	Q7: Outcome measurements complete	Q8: Follow-up time meaningful	Q9: Multiple explanatory variables considered in the analysis	Q10: Analytical methods appropriate	Q11: Findings generalizable to source population
Zhang (2015)	++	++	++	++	+	++	++	++	++	++	NA
Hiew et al. (2015)	++	++	++	++	++	++	++	++	++	++	NA
Chi et al. (2013)	++	++	++	++	++	++	++	++	++	++	++
WANG & YU (2013)	++	++	++	++	++	++	++	++	++	++	++
Qian & Qian (2015)	++	++	++	++	++	++	++	++	++	++	NA
Shen & Lin (2013)	++	++	NA	NA	NA	-	++	+	++	++	NA
Wang, Li & Hu (2013)	++	++	NR	NA	NA	++	++	++	++	++	NA

According to the National Institute for Health and Care Excellence (2012):

++ Indicates that for that particular aspect of the study design, the study has been designed or conducted in such a way as to minimise the risk of bias.

+ Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that particular aspect of study design.

- Should be reserved for those aspects of the study design in which significant sources of bias may persist.

NR = Not reported

NA = Not applicable

Appendix 2.3 Evaluation tool for “mixed methods” study designs

Author & Date	Q1: Study evaluative overview	Q2: Study and context setting	Q3: Study and context sample	Q4: Study and context outcome measurement	Q5: Ethics	Q6: Group comparability	Q7: Qualitative data collection and analysis	Q8: Policy and practice implications	Q9: Other comments (e.g., number of references used)
Halford et al. (2018)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hiew et al. (2015)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Halford et al. (2018)	Y	Y	Y	Y	Y	Y	Y	Y	Y

Y = Yes; N = No; CD = cannot determine; NA = Not applicable; NR = Not reported (Critical Appraisal Skills Programme, 2018)

Appendix 2.4 Summary table

Authors & year/ setting	Title	Study aims/ purpose	Study design/ methodology	Setting and sample	Main findings	Strengths and limitations	Relevance to research
Qian & Qian (2015) Mainland China	Work, Family, and Gendered Happiness Among Married People in Urban China.	Explore the effects of work and family roles, and couple dynamics on individual happiness among the young and middle-aged married.	Quantitative. Correlational study design. To test hypotheses, the study pool nationally representative data from the Chinese General Social Surveys (CGSS).	The sample includes 4,312 men (46%) and 5,133 women (54%), in mainland China.	<p>1. The results demonstrate that gender roles remain strictly defined in urban China, in which the husband plays the breadwinner role and the wife assumes the homemaker role.</p> <p>2. The results suggest that it is the double burden and stress of living with, or caring for, ageing parents and children that reduces subjective wellbeing among 30-49-year-old married people.</p> <p>3. There is a significant gender difference in the effect of non-employment on happiness.</p>	<p>Dropping 10 observations with missing data on the dependent variable results in a pooled sample of 9,445.</p> <p>The analytic sample includes currently married men and women aged 30-49 living in urban China, because the legal retirement age is 60 for men and 50 for women under most circumstances in China (Ding et al. 2009).</p>	<p>1. The traditional gender role divide between husband and wife within the family persists in contemporary China.</p> <p>2. Economic characteristics are important determinants of happiness for married Chinese people.</p> <p>3. The impact of the living environment on happiness is important for marital satisfaction.</p> <p>4. Future research should focus more on gender differences in the association between subjective wellbeing and other factors such as marital status, socioeconomic status, and life course.</p> <p>5. Additionally, there is no</p>

Authors & year/ setting	Title	Study aims/ purpose	Study design/ methodology	Setting and sample	Main findings	Strengths and limitations	Relevance to research
							significant gender difference in odds of being happy, controlling for all other variables.
Halford, et al. (2018) Australia	Relationship standards and relationship satisfaction in Chinese, Western, and intercultural couples living in Australia and Hong Kong, China	Investigated how acculturation might moderate these standards or moderate the association of standards with couple relationship satisfaction.	Mixed Method, interview and questionnaire, Likert scale. The Chinese-Western Intercultural Couple Standards Scale-Hong Kong Version (CWICSS-HK).	197 married mainland Chinese couples (n=91 couples) and Australia (n=106 couples)	1.Cultural differences between Westerners and Chinese on Couple Bond and Family Responsibility standards for those residing in a Western country and those residing in China. 2. Chinese women living in Australian endorsed traditional Chinese values of Family Responsibility more than Chinese women living in China. 3. We found little support for the proposition that a relationship standard has a stronger association with satisfaction when that standard reflects the majority culture where the couple lives.	1. The migrants in the current sample were all first-generation migrants. 2. Our samples were predominantly young and highly educated and had migrated by choice, and the generalizability to less well-educated migrants or to those forced to migrate (e.g., refugees from war zones) is questionable. 3. culturally hyper-diverse in Australia	1.Australia and mainland China exist cultural differences regarding Couple Bond and Family Responsibility. 2. Chinese women living in Australian endorsed traditional Chinese values of Family Responsibility more than Chinese women living in China. 3.couple who has same or similar couple standard are more likely have a higher marital satisfaction. 4. culturally hyper-diverse in Australia should be taken into account.

Authors & year/ setting	Title	Study aims/ purpose	Study design/ methodology	Setting and sample	Main findings	Strengths and limitations	Relevance to research
Wang & Yu, (2013) Mainland China	An Empirical Research on Marital Satisfaction among Chinese Couples	This study aims to assess the level and determinants of marital satisfaction among Chinese married couples	Quantitative. Correlation statistics; questionnaires; Likert Scale: The Chinese General Social Survey (CGSS 2006).	Recruited 3208 participants in mainland China from 20 major cities.	1. The level of marital satisfaction of Chinese couples is generally high. 2. Marital satisfaction has been jointly influenced by individuals' demographic factors, number of children, premarital cohabitation, interaction and desire of marital alternatives.	Cross-sectional design could not give more evidence regarding the reasons of average high-level marital satisfaction.	1. The level of marital satisfaction of Chinese couples is generally high in mainland China. 2. Marital satisfaction has been jointly influenced by individual's demographic factors, number of children, premarital cohabitation, interaction and desire of marital alternatives.
Chi et al. (2013) Mainland China	Similarity of Relationship Standards, Couple Communication Patterns, and Marital Satisfaction Among Chinese Couples.	The study examined partners' degree of similarity in relationship standards as a proximal couple-oriented characteristic potentially related to marital satisfaction.	Quantitative. Correlation statistics; questionnaires; Likert scales. The Inventory of General Relationship Standards (IGRS); The Communication Patterns Questionnaire (CPQ); and the Dyadic Adjustment Scale (DAS).	772 Chinese couples in northeast China	1. Individuals tend to be paired with a spouse whose basic relationship standard are similar to their own. 2. Greater similarity between some of the partners' relationship standards (e.g., "share value," "try to change partner") was associated with greater marital satisfaction. 3. couple similarity in standards affects marital satisfaction indirectly through couple communication patterns	The hypothesized temporal sequence of the variables in the model is tentative given the cross-sectional design.	Greater similarity between some of the partners' relationship standards (e.g., "share value," "try to change partner" "communication way") was associated with greater marital satisfaction.

Authors & year/ setting	Title	Study aims/ purpose	Study design/ methodology	Setting and sample	Main findings	Strengths and limitations	Relevance to research
Zhang, (2015) Mainland China	Wives' Relative Income and Marital Quality in Urban China: Gender Role Attitudes as a Moderator	This study tested for the presence of an independence effect or an income effect but has been generally inconclusive.	Quantitative. Correlation statistics; questionnaires; Likert scales. Marital Happiness	1,124 married urban women were recruited from one primary school in Beijing, China.	1. Wives' relative income had a negative impact on their marital happiness and a positive impact on marital instability. 2. Higher-earning wives, in particular, reported higher educational attainment than equal-earning and lower-earning wives.	1. The persistence of the wives' income advantage is unclear because of the cross-sectional data; therefore, the impact of wives' relative income fluctuations on marital quality cannot be obtained from this study. 2. The findings from this study cannot be generalised as the wives were approached through a convenience school-based sampling method in urban Beijing.	1. Wives' relative income had a negative impact on their marital satisfaction and a positive impact on marital instability. 2. Marital satisfaction changed when traditional gender roles changed.
Hiew et al. (2016) Australia	Communication and Relationship Satisfaction in Chinese, Western, and Intercultural Chinese-Western Couples.	Aim of the study to test cultural differences in communication among Western couples, Chinese couples, and Chinese-Western intercultural couples in Brisbane, Australia.	Mixed methods. Completed a wide range of self-reporting cultural orientation measures on relationship satisfaction, and stability standards. Individual interviews on their relationships and four video-recorded discussions. The Couples Satisfaction Index (CSI)	66 Western couples, 372 Australian Chinese couples, and 108 Chinese-Western intercultural couples in Brisbane, Australia.	Relationship satisfaction was associated with low rates of negative behaviours and high rates of most positive behaviours.	The main limitation was to detect true differences in marital satisfaction as authors adjusted the Type I error rate (false positive).	1. This article will fit into the research problem as the authors found that Chinese couples had the lowest marital satisfaction compared to Western couples, while intercultural couples were intermediate between the other groups. 2. Intercultural couples in being in

Authors & year/ setting	Title	Study aims/ purpose	Study design/ methodology	Setting and sample	Main findings	Strengths and limitations	Relevance to research
							<p>the middle is an indication that marital satisfaction could be affected by different cultures and societies.</p> <p>3. This foundation provides a basis for comparing marital satisfaction between Chinese couples in China and Chinese couples in Australia.</p>
Hiew et al. (2015) Australia	Relationship Standards and Satisfaction in Chinese, Western, and Intercultural Chinese-Western Couples in Australia.	The aims of this study were to investigate similarities and differences in Chinese and Western partners' relationship standards, and the association of these standards with relationship satisfaction in Chinese, Western, and intercultural Chinese-	Mixed methods. Interviews and answering questionnaire items in a systematic way irrespective of their content. The survey included: The CWICSS; The Couples Satisfaction Index; and Kansas Marital Satisfaction Scale.	246 participants in Brisbane, Australia of European ancestry (Western couple group; n=66; Chinese couple group; n=72; Intercultural couples n=108).	<p>1. Relationship satisfaction was associated with being Western rather than Chinese, and there were no gender differences. Collapsed across genders, Chinese couples reported the lowest satisfaction (M=119.1, SD=21.1), and Western couples the highest (M=138.3, SD=21.0).</p> <p>2. Chinese couples reported the lowest satisfaction compared with intercultural couples and Western couples.</p>	<p>1. The conclusions are limited by the collection of cross-sectional data within one country.</p> <p>2. Chinese who choose to live in Australia are likely to identify more strongly with Western culture and values than Chinese who choose to live in Chinese-majority countries.</p> <p>3. The Chinese community in Australia is quite heterogeneous with respect to where they lived before coming to</p>	<p>1. Agreement on family responsibilities is a potentially important influence on relationship satisfaction.</p> <p>2. Chinese couples reported the lowest satisfaction compared with intercultural couples and Western couples.</p>

Authors & year/ setting	Title	Study aims/ purpose	Study design/ methodology	Setting and sample	Main findings	Strengths and limitations	Relevance to research
		Western couples.				Australia. 4. The conclusions are also limited by the use of a Western relationship satisfaction measure.	
Halford et al. (2018) Australia	Indirect Couple Communication and Relationship Satisfaction in Chinese, Western, and Chinese-Western intercultural couples.	This study aims to assess if indirect communication could affect the relationships of Chinese couples, or Chinese-Western intercultural couples.	Mixed methods. Face-to-face interviews and correlation analysis. Couples Satisfaction Index.	238 participants (Inter-culture participants; n=102; Chinese couple group; n=72; Western couple group; n=64) recruited to examine influences on relationship satisfaction among Western, Chinese, and Chinese-Western intercultural couples.	This study highlights the importance of observational couple research, as this study found that much of the speculation about intimate Chinese communication was not reflected in observed intimate couple communication.	The indirect communication coding system used in This study was new, and there is only limited evidence for its validity. The codes used were derived from theory about what constitutes indirect Chinese communication, by following guidance from expert cultural informants, and by observing what Chinese participants did in their interactions.	This article is related to this research as 1. 1.Different ways of expression resulting from a diversity of culture background. 2. These findings support that Chinese couples are likely to communicate with their partner in an indirect way; however, there is not a strong association between indirect communication and couple relationship satisfaction for Chinese couples.

Appendix 3.1 QR code



Appendix 3.2 CSI-32 questionnaire

1. Are you over 18 years?

Yes/No

2. Gender

Female/Male/Other/Prefer not to say

3. Numbers of years in a stable long-term relationship.

Less than a year/2-5 years/5-10 years/more than 10 years

4. Could you please identify your ethnicity?

Australia/Chinese

Chinese

Other

5. Where do you normally live?

Mainland China/Hongkong/Taiwan/Australia/other/ Prefer not to say

(If you are live in Australia, please fill the next question, Q-6; If not, please skip it and start with Q-7)

6. How many years have you live in Australia?

Less than a year/2-5 years/5-10 years/more than 10 years

7. Please indicate the degree of happiness, all things considered, of your relationship.

Extremely Unhappy 1	Fairly Unhappy 2	A Little Unhappy 3	Happy 4	Very Happy 5	Extremely Happy 6	Perfect 7
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8. Most people have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Disagree	Almost Always Disagree	Frequently Disagree	Occasionally Disagree	Almost Always Agree	Always Agree
Amount of time spent together	1	2	3	4	5	6
Making major decisions	1	2	3	4	5	6
Demonstrations of affection	1	2	3	4	5	6

	Never	Rarely	Occasio nally	More often than not	Most of the time	All the time
In general, how often do you think that things between you and your partner are going well?	1	2	3	4	5	6
How often do you wish you hadn't gotten into this relationship?	1	2	3	4	5	6

	Not at all TRUE	A little TRUE	Some- what TRUE	Mostly TRUE	Almost Completely TRUE	Completely TRUE
I still feel a strong connection with my partner	1	2	3	4	5	6
If I had my life to live over, I would marry (or live with / date) the same person	1	2	3	4	5	6
Our relationship is strong	1	2	3	4	5	6
I sometimes wonder if there is someone else out there for me	6	5	4	3	2	1
My relationship with my partner makes me happy	1	2	3	4	5	6
I have a warm and comfortable relationship with my partner	1	2	3	4	5	6
I can't imagine ending my relationship with my partner	1	2	3	4	5	6
I feel that I can confide in my partner about virtually anything	1	2	3	4	5	6
I have had second thoughts about this relationship recently	6	5	4	3	2	1
For me, my partner is the perfect romantic partner	1	2	3	4	5	6
I really feel like <u>part of a team</u> with my partner	1	2	3	4	5	6
I cannot imagine another person making me as happy as my partner does	1	2	3	4	5	6

	Not at all	A little	Some- what	Mostly	Almost Completely	Completely
How rewarding is your relationship with your partner?	1	2	3	4	5	6
How well does your partner meet your needs?	1	2	3	4	5	6
To what extent has your relationship met your original expectations?	1	2	3	4	5	6
In general, how satisfied are you with your relationship?	1	2	3	4	5	6

9. How good is your relationship compared to most?

Worse than all others (Extremely bad)	1	2	3	4	5	6	Better than all others (Extremely good)
--	---	---	---	---	---	---	--

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
Do you enjoy your partner's company?	1	2	3	4	5	6
How often do you and your partner have fun together?	1	2	3	4	5	6

10. For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.

BORING	1	2	3	4	5	6	INTERESTING
BAD	1	2	3	4	5	6	GOOD
EMPTY	1	2	3	4	5	6	FULL
LONELY	1	2	3	4	5	6	FRIENDLY
FRAGILE	1	2	3	4	5	6	STURDY
DISCOURAGING	1	2	3	4	5	6	HOPEFUL
MISERABLE	1	2	3	4	5	6	ENJOYABLE

Appendix 3.3 Timeline

Master Project Timeline												
Calendar Months	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Phase 1: Conceptual Phase												
Problem identification												
Literature review												
Formulating hypotheses												
Phase 2: Design/Planning Phase												
Research design												
Sampling Plan												
Data collection plan												
Ethics procedures												
Phase 3: Empirical Phase												
Collection of Data												
Data preparation												
Phase 4: Analytic Phase												
Data analysis												
Interpretation of results												
Phase 5: Dissemination Phase												
Presentations/Reports												
Utilization of findings												

Appendix 3.4 Checklist for Reporting Results of Internet E-Surveys (CHERRIES)

Checklist for Reporting Results of Internet E-Surveys (CHERRIES)		
Item Category	Checklist Item	Explanation
Design		
	Describe survey design	Describe target population, sample frame. Is the sample a convenience sample? (In “open” surveys this is most likely.)
IRB (Institutional Review Board) approval and informed consent process		
	IRB approval	Mention whether the study has been approved by an IRB.
	Informed consent	Describe the informed consent process. Where were the participants told the length of time of the survey, which data were stored and where and for how long, who the investigator was, and the purpose of the study?
	Data protection	If any personal information was collected or stored, describe what mechanisms were used to protect unauthorized access.
Development and pre-testing		
	Development and testing	State how the survey was developed, including whether the usability and technical functionality of the electronic questionnaire had been tested before fielding the questionnaire.
Recruitment process and description of the sample having access to the questionnaire		
	Open survey versus closed survey	An “open survey” is a survey open for each visitor of a site, while a closed survey is only open to a sample which the investigator knows (password-protected survey).
	Contact mode	Indicate whether or not the initial contact with the potential participants was made on the Internet. (Investigators may also send out questionnaires by mail and allow for Web-based data entry.)

	Checklist for Reporting Results of Internet E-Surveys (CHERRIES)	
Item Category	Checklist Item	Explanation
	Advertising the survey	How/where was the survey announced or advertised? Some examples are offline media (newspapers), or online (mailing lists – If yes, which ones?) or banner ads (Where were these banner ads posted and what did they look like?). It is important to know the wording of the announcement as it will heavily influence who chooses to participate. Ideally the survey announcement should be published as an appendix.
Survey administration		
	Web/E-mail	State the type of e-survey (eg, one posted on a Web site, or one sent out through e-mail). If it is an e-mail survey, were the responses entered manually into a database, or was there an automatic method for capturing responses?
	Context	Describe the Web site (for mailing list/newsgroup) in which the survey was posted. What is the Web site about, who is visiting it, what are visitors normally looking for? Discuss to what degree the content of the Web site could pre-select the sample or influence the results. For example, a survey about vaccination on an anti-immunization Web site will have different results from a Web survey conducted on a government Web site
	Mandatory/voluntary	Was it a mandatory survey to be filled in by every visitor who wanted to enter the Web site, or was it a voluntary survey?
	Incentives	Were any incentives offered (eg, monetary, prizes, or non-monetary incentives such as an offer to provide the survey results)?
	Time/Date	In what timeframe were the data collected?
	Randomization of items or questionnaires	To prevent biases items can be randomized or alternated.
	Adaptive questioning	Use adaptive questioning (certain items, or only conditionally displayed based on responses to other items) to reduce number and complexity of the questions.
	Number of Items	What was the number of questionnaire items per page? The number of items is an important factor for the completion rate.

Checklist for Reporting Results of Internet E-Surveys (CHERRIES)		
Item Category	Checklist Item	Explanation
	Number of screens (pages)	Over how many pages was the questionnaire distributed? The number of items is an important factor for the completion rate.
	Completeness check	It is technically possible to do consistency or completeness checks before the questionnaire is submitted. Was this done, and if “yes”, how (usually JavaScript)? An alternative is to check for completeness after the questionnaire has been submitted (and highlight mandatory items). If this has been done, it should be reported. All items should provide a non-response option such as “not applicable” or “rather not say”, and selection of one response option should be enforced.
	Review step	State whether respondents were able to review and change their answers (eg, through a Back button or a Review step which displays a summary of the responses and asks the respondents if they are correct).
Response rates		
	Unique site visitor	If you provide view rates or participation rates, you need to define how you determined a unique visitor. There are different techniques available, based on IP addresses or cookies or both.
	View rate (Ratio of unique survey visitors/unique site visitors)	Requires counting unique visitors to the first page of the survey, divided by the number of unique site visitors (not page views!). It is not unusual to have view rates of less than 0.1 % if the survey is voluntary.
	Participation rate (Ratio of unique visitors who agreed to participate/unique first survey page visitors)	Count the unique number of people who filled in the first survey page (or agreed to participate, for example by checking a checkbox), divided by visitors who visit the first page of the survey (or the informed consents page, if present). This can also be called “recruitment” rate.

Checklist for Reporting Results of Internet E-Surveys (CHERRIES)		
Item Category	Checklist Item	Explanation
	Completion rate (Ratio of users who finished the survey/users who agreed to participate)	The number of people submitting the last questionnaire page, divided by the number of people who agreed to participate (or submitted the first survey page). This is only relevant if there is a separate “informed consent” page or if the survey goes over several pages. This is a measure for attrition. Note that “completion” can involve leaving questionnaire items blank. This is not a measure for how completely questionnaires were filled in. (If you need a measure for this, use the word “completeness rate”.)
Preventing multiple entries from the same individual		
	Cookies used	Indicate whether cookies were used to assign a unique user identifier to each client computer. If so, mention the page on which the cookie was set and read, and how long the cookie was valid. Were duplicate entries avoided by preventing users’ access to the survey twice; or were duplicate database entries having the same user ID eliminated before analysis? In the latter case, which entries were kept for analysis (eg, the first entry or the most recent)?
	IP check	Indicate whether the IP address of the client computer was used to identify potential duplicate entries from the same user. If so, mention the period of time for which no two entries from the same IP address were allowed (eg, 24 hours). Were duplicate entries avoided by preventing users with the same IP address access to the survey twice; or were duplicate database entries having the same IP address within a given period of time eliminated before analysis? If the latter, which entries were kept for analysis (eg, the first entry or the most recent)?
	Log file analysis	Indicate whether other techniques to analyse the log file for identification of multiple entries were used. If so, please describe.
	Registration	In “closed” (non-open) surveys, users need to login first and it is easier to prevent duplicate entries from the same user. Describe how this was done. For example, was the survey never displayed a second time once the user had filled it in, or was the username stored together with the survey results and later eliminated? If the latter, which entries were kept for analysis (eg, the first entry or the most recent)?

	Checklist for Reporting Results of Internet E-Surveys (CHERRIES)	
Item Category	Checklist Item	Explanation
Analysis		
	Handling of incomplete questionnaires	Were only completed questionnaires analysed? Were questionnaires which terminated early (where, for example, users did not go through all questionnaire pages) also analysed?
	Questionnaires submitted with an atypical timestamp	Some investigators may measure the time people needed to fill in a questionnaire and exclude questionnaires that were submitted too soon. Specify the timeframe that was used as a cut-off point and describe how this point was determined.
	Statistical correction	Indicate whether any methods such as weighting of items or propensity scores have been used to adjust for the non-representative sample; if so, please describe the methods.

Appendix 3.5 Ethical approval from Flinders University Social and Behavioural Research Ethics Committee (Project no. 8353) in Australia

CONDITIONAL APPROVAL RESPONSE

For Review by SBREC Chair between Meetings

Submission Instructions	Note
a) <u>Submit</u> a single PDF version of your conditional approval response (including all attachments) to the SBREC Executive Officer at human.researchethics@flinders.edu.au .	<u>Response time</u> Committee response will be emailed to you in ~10 working days
b) You <u>do not</u> need to: – submit an amended version of your application; or – submit a hard-copy as well as electronic copy	<u>Need Help?</u> If you would like to talk to someone about how to respond to the conditional approval notice, feel free to call one of the Executive Officers (Ms Andrea Mather – 8201-3116 or Ms Rae Tyler – 8201-7938)

Section A Project Information

Project No. **8353**

Project Title
Identifying the differences in Martial satisfaction between Chinese Couples and Australia Chinese Couples

Principal Researcher
Miss Wen Yang

Email address: **yang0630@flinders.edu.au**

Telephone No. **+61 8 82013354**

Section B Response to Committee

- 1 a) Project Outline (item C1a) The Sub-Committee notes that the project outline refers to comparison of cultural beliefs, however the questionnaire does not provide or seeks this information. Please explain how this information will be sought?

b) The Sub-Committee also notes, there is a reference to 'relationship norms of Australia', yet there is no indication in the proposed study design that this will be investigated. There is also a reference to 'measuring changes', which can imply a longitudinal study. The SubCommittee notes this research study is looking at differences and not changes. The Sub-Committee recommends re-writing this section to better reflect the nature of the proposed research study.

Researcher's response

- a) Beliefs about relationships and support in function of relationship are measured using the questionnaire. we want to determine if those participants living in China answer differently to those Chinese living in Australia. Which could indicate the influence of culture or exposure to a new culture on their relationship beliefs and functioning.
- b) In this case, 'measuring changes' refers to the difference between participants from the same cultural background but living in different countries. This would provide a comparison between those living in Australia or China and the influences this may have on their ideas and believes on how their relationship functions.

2 2. Research Objectives (item C1c)

	Research Objective 1: The Sub-Committee notes the research objectives presented already assumes there is a difference of marital satisfaction between Chinese couples and Australia-Chinese couples. The Sub-Committee recommends 'investigate if there are differences or similarities in marital satisfaction reported by Chinese couples and Australian-Chinese couples. Please comment/discuss.
	Research Objective 2: The Sub-Committee recommends re-wording RO2 – The SubCommittee notes there is a suggested pre-determined assumption. Please comment/discuss.
	Research Objective 3: It is unclear to the Sub-Committee how the survey can yield the information as recorded under RO3. Please comment/discuss.

Researcher's response

Research Objective 1: investigate if there are differences or similarities in marital satisfaction reported by Chinese couples and Australian-Chinese couples

Research Objective 2: To measure the correlations and significance of the possible differences of marital satisfaction between Chinese couple and Australia Chinese couple

Research Objective 3: To identify the positive influence of some of the factors of family relationships on family functioning. We will remove this objective.

3	<p>a) Please provide clarification how the web-based link will be provided to participants. How will the link to the survey be distributed/made available via WeChat.</p> <p>b) The Sub-Committee notes that as Zoosk is an online dating site it is not appropriate that it be used to recruit participants. Please comment/discuss.</p> <p>c) Are the researchers requesting WeChat to recruit potential participants for this research study (ie, 3rd party organisation)? How will potential participants be informed about this survey?</p> <p>d) Is snowball sampling recruitment process to be used for this research study? If yes, please explain specifically how the process will operate, how people will be approached and how respondents can indicate their willingness to be involved. Rather than requesting that participants provide details of other potential participants (referral method) the Sub-Committee advises that it would be preferable if information packs are given to potential participants who can distribute the information to other respondents who may be interested. This would protect the privacy of potential participants and allow those interested to contact the researcher directly.</p> <p>e) Please identify any other 'Australian/Chinese social media sites' to be used in this research study.</p> <p>Online Recruitment (For Information) Please note that personal websites and social media pages (eg, Facebook, Twitter, Tumblr etc) for recruitment will not be approved by the Social and Behavioural Research Ethics Committee. Researchers can, however, establish professional websites and social media pages for recruitment. A researcher should note on these pages that they are a Flinders University researcher, and state that they have approval for the study from, eg., the 'Flinders University Social and Behavioural Research Ethics Committee'. Researchers can set up these pages without requiring permission from the University, as long as a human research ethics committee has approved this recruitment approach and text for the particular</p>
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	<p>study.</p> <p>Please note that researchers can also have their approved recruitment advertisement listed on the University's Participate in Research Studies webpage. Faculty contact details for posting are listed on that page. If an advertisement will be placed on this web page, please submit a copy of the advertisement text for review.</p>
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Researcher's response

a) Our link will be provided by WeChat Official Account-Exploring Marital Satisfaction. This is an account that already exists on WeChat where people can go to discuss their marital problems. The research will post a link on this official account with link to the survey.

Thanks for bringing this to our attention. We will not use Zoosk.

c) Yes, the researchers request WeChat Official Account-Exploring Marital Satisfaction to recruit potential participants for this research.

WeChat Official Account-Exploring Marital Satisfaction can post announcement on that platform, then public can easily inform access this survey online. However, it is not a third party research recruiting service.

d) Snowball sampling recruitment process will not be used for this research. However, Participants may share the study information packs including our Letter of Introduction and Information Sheet to potential participants who can distribute the information to other respondents who may be interested.

e) No, most of the Chinese whatever which country do they live, use WeChat. Therefore, we prefer use WeChat Official Account-Exploring Marital Satisfaction as the one way to recruit our participants for this research.

4	<p>a) Email Text (item D4d) and Information Given to Participants (item D5) The Sub-Committee notes that both email texts provided (ie, email text for the Australia Zoosk Website owners and participants at the beginning of the survey) do not mention a particular interest in Chinese couples and/or Australian-Chinese couples. Please clarify and comment.</p> <p>b) See point 3.b above. If relevant, please explain how Australia Zoosk Website owners, and potential participants will receive appropriate participant documentation? The Sub-Committee advises that it is important that respondents are provided with all relevant information (ie, Letter of Introduction and Information Sheet) beforehand to ensure that informed consent can be obtained (see section 2.2.6 under General Requirements for Consent in the National Statement on Ethical Conduct in Human Research Please provide the text/script for the email to WeChat requesting the survey link to be uploaded to their site.</p> <p>c) Please explain how WeChat website owners and potential participants will receive appropriate participant documentation (ie, Letter of Introduction and Information Sheet).</p>
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Researcher's response

a) Australia Zoosk Website will not be used in this research as it not suitable. The survey will be set up so that those participants who identify and a script will be used on the websites and social media sites to explain the purpose of the research and instructions for the participants. This is stated below:

Dear Users

My name is Wen Yang. I am a Master student from Flinders University in South Australia. I am interested in researching relationship satisfaction between different groups of people. If you are Chinese or an Australia/Chinese person, we would like you to participate in a short 15 minutes survey. The survey will ask people over the age of 18 about their relationship satisfaction. This research has ethics approval from Flinders University ethic number 8353 my principal supervisor is Dr Yvonne Parry from Flinders University please contact her on 61 08 82013354 if you have any concerns about the research you wish to discuss. Or contact the ethics office at flinders university +61 (0) 8 8201 3116 (Mon – Fri) or email human.researchethics@flinders.edu.au

[Link to letter of information](#)

[Link to survey](#)

b) Australia Zoosk Website won't be used in this research.

c) We will email the WeChat Official Account-Exploring Marital Satisfaction's owner to ask for permission. Letter of Introduction and Information Sheet will be sent to potential participants automatically.

5	Letter of Introduction (Attachment) Please provide a Letter of Introduction to ensure that that informed consent can be obtained, ensuring it is based on the template available from the Guidelines, Forms and Item 7.1 - Project 8353 Page 14 Templates webpage (see section 2.2.6 under General Requirements for Consent in the National Statement on Ethical Conduct in Human Research Please note: the Letter of Introduction needs to be written (and signed) by the student's supervisor for student projects.
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Researcher's response

LETTER OF INTRODUCTION
members of public

Dear Sir/Madam

This letter is to introduce Miss Wen Yang who is a Master student in the College of Nursing & Health Sciences at Flinders University.

She is undertaking a master's research project leading to the production of a thesis or other publications on the subject of exploring marital satisfaction between Chinese and Australian/Chinese couples.

She would like to invite you to assist with this project by completing a questionnaire which covers certain aspects of this topic. This questionnaire should take no more than 15 minutes to complete.

Be assured that any information provided will be treated in the strictest confidence and all responses will be anonymous and none of the participants will be individually identifiable in the resulting thesis, report or other publications as it is anonymity online questionnaire. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on +61 8 82013354 or e-mail yvonne.parry@flinders.edu.au

Thank you for your attention and assistance.

Yours sincerely

Dr Yvonne K Parry

PhD, Master of Health Service Management, GradCertEdu (Higher Education), BA (Psychology & Public Policy), RN
Senior Lecturer

Deputy Chair: Social and Behavioural Research Ethics Committee (SBREC), Flinders University

Vice President: Sigma Psi Eta Chapter

Board of Directors: Australian College of Children and Young People's Nurses

Chair: Credentialling Committee Australian College of Children and Young People Nursing

International Collaboration for Community Health Nursing Research, (Member)

Visiting Scholar: Centre for Health Services Studies, University of Kent, UK

Inaugural Oceania Global Regional Council invited member: Sigma Theta Tau International

Web: <http://www.flinders.edu.au/people/yvonne.parry>

Email: yvonne.parry@flinders.edu.au

Ph: 8201 3354

Rm S260

STURT campus, FLINDERS UNIVERSITY

College of Nursing & Health Sciences

GPO Box 2100, Adelaide 5001

6	Information Sheet (Attachment) Please provide an Information Sheet to ensure that informed consent can be obtained (see section 2.2.6 under General Requirements for Consent in the National Statement on Ethical Conduct in Human Research). Please ensure it is based on the template available from the Guidelines, Forms and Templates webpage.
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Researcher's response

INFORMATION SHEET

Members of public

Identifying the differences in Marital satisfaction between Chinese Couples and Australia Chinese Couples

Researcher(s)

Miss Wen Yang

College of Nursing & Health Sciences

Flinders University
Tel: +61 8 82013354

Supervisor(s)

Dr Yvonne Parry; Dr Didy Button

College of Nursing & Health Sciences

Flinders University
Tel: +61 8 82013354

Description of the study

This study is part of the project titled Identifying the differences in Marital satisfaction between Chinese Couples and Australia/Chinese Couples. This project will investigate marital satisfaction in China and Australia. This project is supported by Flinders University, College of Nursing & Health Sciences.

Purpose of the study

This project aims to find out the differences in marital satisfaction in Chinese living in China and Chinese living in Australia.

What will I be asked to do?

You are invited to complete an online questionnaire. Participation is entirely voluntary. The interview will take about 15 minutes. The online questionnaire will be stored as a computer file password protected for 5 years.

What benefit will I gain from being involved in this study?

The sharing of your experiences will help the researchers to understand differences between people living similar background and living in different parts of the world.

Will I be identifiable by being involved in this study?

We do not need your name and you will be anonymous. All information provided will be confidential. Any identifying information will be removed, and your comments will not be linked directly to you. All information and results obtained in this study will be stored in a secure way, with access restricted to relevant researchers.

Are there any risks or discomforts if I am involved?

The researcher anticipates few risks from your involvement in this study, however, given the nature of the project, some participants could experience emotional discomfort. If any emotional discomfort is experienced please contact 1800RESPECT in Australia and please contact 114 if you are living in China for support / counselling that may be accessed free of charge by all participants. If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with the researcher. All the ethics committee at Flinders University +61 882013116.

How do I agree to participate?

Participation is voluntary. You may answer 'no comment' or refuse to answer any questions, and you are free to withdraw from the survey at any time without effect or consequences. If you agree to

participate please complete our online questionnaire, please click the link on WeChat Official Account-Exploring Marital Satisfaction.

How will I receive feedback?

On project completion, outcomes of the project will be provided to all public via WeChat Official Account-Exploring Marital Satisfaction.

Thank you for taking the time to read this information sheet, and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee in South Australia (Project number 8353). For queries regarding the ethics approval of this project, or to discuss any concerns or complaints, please contact the Executive Officer of the committee via telephone on +61 8 8201 3116 or email human.researchethics@flinders.edu.au

7	<p>Questionnaire (Attachment) The Sub-Committee suggests that some questions require review, keeping in mind that potential participants are giving their time to complete the survey, and the data collected will yield reliable and illustrative/comparable data for Australian-Chinese and Chinese- Chinese couples.</p> <p>Question 8: How good is your relationship compared to most? 'Do you enjoy your partner's company?' – Choices provided relate to frequency of 'enjoyment' (ie, never to more often). The Sub-Committee queries, 'more often' than what?</p> <p>Question 9: The Sub-Committee notes that the descriptive words and its opposite are not related, eg, discouraging – hopeful (should be: discouraged – encouraged; hopeless – hopeful). The 'numbering' section of this question is also counter-intuitive, that is 5 4 3 2 1 0 0 1 2 3 4 5 5 4 3 2 1 0 SHOULD BE 5 4 3 2 1 0 5 4 3 2 1 0 5 4 3 2 1 0 The numbering should be symmetrical. Please comment/discuss.</p>
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Researcher's response

Thank you for your suggestion. The questionnaire has been changed and is provided at the end of this application. All of the numbers have been removed to avoid confusion for the participants completing the questionnaire. However, the scoring of the questionnaire will remain consistent with the original questionnaire to conform with construct valid.

Governance Considerations

8	<p>Permissions (item D8) Please provide copies of correspondence granting permission to conduct the research from WeChat (and if relevant Zoosk website). Please ensure that all correspondence clearly outlines the specifics of what permission is being granted. If the documentation cannot be provided at the time of response to conditional approval, please confirm that it will be provided to the Sub-Committee on receipt. Please note that data collection cannot commence until all relevant permissions have been granted.</p>
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Researcher's response

Thank you for your suggestion . We can provide copies of correspondence granting permission to conduct the research from WeChat Official Account-Exploring Marital Satisfaction, which is listed in the end of this paper. The data will not be collected until all relevant permissions have been granted.

9	<p>Data Transmission Protocols (item D10a) The Sub-Committee recommends the research team use One Drive (or secure email, etc.) as the secure transmission of research data between</p>
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	members of the research team. Please confirm.
--	---

Researcher's response

Thank you. We will use one drive.

10	Data De-identification (item F10c) Please clarify whether data stored on completion of the project will be non-identifiable or re-identifiable. The Sub-Committee noted that the applicant checked both boxes. If data stored will be stored in both non-identifiable and re-identifiable format, please provide a more detailed explanation.
----	---

Researcher's response

The data will be collected use qualtrics and will be download derictely into my Flinders onedrive account.

11	Enter Committee comment here (in full)
----	--

Researcher's response

Overtyp response here

12	Enter Committee comment here (in full)
----	--

Researcher's response

Overtyp response here

13	Enter Committee comment here (in full)
----	--

Researcher's response

Overtyp response here

14	Enter Committee comment here (in full)
----	--

Researcher's response

Overtyp response here

15	Enter Committee comment here (in full)
----	--

Researcher's response


Overtyp response here

Copy and paste if there are more than 15 conditions to respond do. If there are less than 15, delete any lines not required.	
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Section C	Signatures – Student Projects ONLY
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Student Researcher

I, whose signature appears below, confirm that my supervisor has reviewed my conditional approval response before submission to the committee.

Students Full Name:	Wen Yang	Date: 3/9/2019
Students Signature:		

Student Supervisor

I, whose signature appears below, confirm that I have reviewed the conditional approval response prepared by the student researcher under my supervision.

Supervisors Full Name:	Dr Yvonne Karen PARRY	Date: 3/9/2019
Supervisors Signature:		

STAFF Projects

Please note that conditional approval responses for staff projects DO NOT need to be signed.

PLEASE NOTE: conditional approval responses will not be submitted to the Chairperson for review unless / until this form has been signed by the student's supervisor.

INFORMATION SHEET

Members of public

Researcher(s)

Miss Wen Yang

College of Nursing & Health Sciences

Flinders University

Tel: +61 8 82013354

Supervisor(s)

Dr Yvonne Parry; Dr Didy Button

College of Nursing & Health Sciences

Flinders University

Tel: +61 8 82013354

Description of the study

This study is part of the project titled Identifying the differences in Marital satisfaction between Chinese Couples and Australia/Chinese Couples. This project will investigate marital satisfaction in China and Australia. This project is supported by Flinders University, College of Nursing & Health Sciences.

Purpose of the study

This project aims to find out the differences in marital satisfaction in Chinese living in China and Chinese living in Australia.

What will I be asked to do?

You are invited to complete an online questionnaire. Participation is entirely voluntary. The interview will take about 15 minutes. The online questionnaire will be stored as a computer file password protected for 5 years.

What benefit will I gain from being involved in this study?

The sharing of your experiences will help the researchers to understand differences between people living similar background and living in different parts of the world.

inspiring
achievement

Date 13/8/2019

LETTER OF INTRODUCTION
Members of public

Dear Sir/Madam

This letter is to introduce Miss Wen Yang who is a Master student in the College of Nursing & Health Sciences at Flinders University.

She is undertaking a Master's research project leading to the production of a thesis or other publications on the subject of exploring marital satisfaction between Chinese and Australian/Chinese couples.

She would like to invite you to assist with this project by completing a questionnaire which covers certain aspects of this topic. This questionnaire should take no more than 15 minutes to complete.

Be assured that any information provided will be treated in the strictest confidence and all responses will be anonymous and none of the participants will be individually identifiable in the resulting thesis, report or other publications as it is anonymity online questionnaire. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on +61 8 82013354 or e-mail yvonne.parry@flinders.edu.au

Thank you for your attention and assistance.

Yours sincerely



Dr Yvonne K Parry

PhD, Master of Health Service Management, GradCertEdu (Higher Education), BA (Psychology & Public Policy), RN
Senior Lecturer

Deputy Chair: Social and Behavioural Research Ethics Committee (SBREC), Flinders University

Vice President: Sigma Psi Eta Chapter

Board of Directors: Australian College of Children and Young People's Nurses

Chair: Credentialling Committee Australian College of Children and Young People Nursing

International Collaboration for Community Health Nursing Research, (Member)

Visiting Scholar: Centre for Health Services Studies, University of Kent, UK

Inaugural Oceania Global Regional Council invited member: Sigma Theta Tau International

Web: <http://www.flinders.edu.au/people/yvonne.parry>

Email: yvonne.parry@flinders.edu.au

Ph: 8201 3354

Rm S260

STURT campus, FLINDERS UNIVERSITY

College of Nursing & Health Sciences

GPO Box 2100, Adelaide 5001

Will I be identifiable by being involved in this study?

We do not need your name and you will be anonymous. All information provided will be confidential. Any identifying information will be removed, and your comments will not be linked directly to you. All information and results obtained in this study will be stored in a secure way, with access restricted to relevant researchers.

Are there any risks or discomforts if I am involved?

The researcher anticipates few risks from your involvement in this study, however, given the nature of the project, some participants could experience emotional discomfort. If any emotional discomfort is experienced please contact 1800RESPECT in Australia and please contact 114 if you are living in China for support / counselling that may be accessed free of charge by all participants. If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with the researcher. All the ethics committee at Flinders University +61 882013116.

How do I agree to participate?

Participation is voluntary. You may answer 'no comment' or refuse to answer any questions, and you are free to withdraw from the survey at any time without effect or consequences. If you agree to participate please complete our online questionnaire, please click the link on WeChat Official Account-Exploring Marital Satisfaction.

How will I receive feedback?

On project completion, outcomes of the project will be provided to all public via WeChat Official Account-Exploring Marital Satisfaction.

Thank you for taking the time to read this information sheet, and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee in South Australia (Project number 8353). For queries regarding the ethics approval of this project, or to discuss any concerns or complaints, please contact the Executive Officer of the committee via telephone on +61 8 8201 3116 or email human.researchethics@flinders.edu.au

探索婚姻微信公众号

The WeChat Official Account-Exploring Marital Satisfaction

LETTERS OF COOPERATION

Date: 13/8/2019

Re: Letter of Cooperation for the College of Nursing & Health Sciences in Flinders University

Dear Wen Yang

This letter confirms that I, as an authorized representative of WeChat Official Account-Exploring Marital Satisfaction, allow you and Dr Yvonne Parry access to conduct study-related activities at the listed sites, as outlined below.

- **Research Site(s):** WeChat Official Account, Tencent,
- **Study Purpose:**

Research Objective 1: investigate if there are differences or similarities in marital satisfaction reported by Chinese couples and Australian-Chinese couples

Research Objective 2: To measure the correlations and significance of the differences of marital satisfaction between Chinese couple and Australia Chinese couple

- **Study Activities:** Recruitment information will be posted via WeChat Official Account-Exploring Marital and identify participants for this research. The participants will take 15 mins to complete an online survey.
- **Data Management:** We do not need participants' name and they will be anonymous. Any identifying information will be removed, and participant's comments will not be linked directly to participant. All information and results obtained in this study will be stored in a secure way, with access restricted to relevant researchers.

地址: 广东省湛江市坡头区鸡咀路 809 号
电话: +86 18820706126

探索婚姻微信公众号

The WeChat Official Account-Exploring Marital Satisfaction

I understand that this site's participation will only take place during the study's active the College of Nursing & Health Sciences in Flinders University approval period. All study-related activities must cease if College of Nursing & Health Sciences approval expires or is suspended. I understand that participation will be voluntary; WeChat Official Account-Exploring Marital Satisfaction's user will not be penalized or rewarded for their participation.

If I have any concerns related to this project, I will contact Wen Yang. For queries regarding the ethics approval of this project, or to discuss any concerns, I may contact the Executive Officer of the committee via telephone on +61 8 8201 3116 or email human.researchethics@flinders.edu.au

Regards,



Signature

Yu Qiu

Full Name

13/08/2019

Date Signed

Director of WeChat Official Account-Exploring
Marital Satisfaction

Job T

地址：广东省湛江市坡头区鸡咀路 809 号
电话：+86 18820706126

1. Are you over 18 years?

Yes/No

2. Gender

Female/Male/Other/Prefer not to say

3. Numbers of years in a stable long-term relationship.

4. Could you please identify your ethnicity?

Australia/Chinese

Chinese

Australian

Other

5. Where do you normally live?

Mainland China/Hongkong/Taiwan/Australia/other/ Prefer not to say

(If you are live in Australia, please fill the next question, Q-6; If not, please skip it and start with

Q-7)

6. How many years have you live in Australia?

7. Please indicate the degree of happiness, all things considered, of your relationship.

Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect
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8. Most people have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Disagree	Almost Always Disagree	Frequently Disagree	Occasionally Disagree	Almost Always Agree	Always Agree
Amount of time spent together						
Making major decisions						

Demonstrations of affection						
-----------------------------	--	--	--	--	--	--

	Never	Rarely	Occasionally	More often than not	Most of the time	All the time
In general, how often do you think that things between you and your partner are going well?						
How often do you wish you hadn't gotten into this relationship?						

	Not at all TRUE	A little TRUE	Somewhat TRUE	Mostly TRUE	Almost Completely TRUE	Completely TRUE
I still feel a strong connection with my partner						
If I had my life to live over, I would marry (or live with / date) the same person						
Our relationship is strong						
I sometimes wonder if there is someone else out there for me						
My relationship with my partner makes me happy						
I have a warm and comfortable relationship with my partner						
I can't imagine ending my relationship with my partner						
I feel that I can confide in my partner about virtually anything						
I have had second thoughts about this relationship recently						
For me, my partner is the perfect romantic partner						
I really feel like <u>part of a team</u> with my partner						
I cannot imagine another person making me as happy as my partner does						

	Not at all	A little	Somewhat	Mostly	Almost Completely	Completely
--	------------	----------	----------	--------	-------------------	------------

How rewarding is your relationship with your partner?						
How well does your partner meet your needs?						
To what extent has your relationship met your original expectations?						
In general, how satisfied are you with your relationship?						

9. How good is your relationship compared to most?

Worse than all others (Extremely bad)						Better than all others (Extremely good)
--	--	--	--	--	--	--

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
Do you enjoy your partner's company?						
How often do you and your partner have fun together?						

10. For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.

BORING						INTERESTING
BAD						GOOD
EMPTY						FULL
LONELY						FRIENDLY
FRAGILE						STURDY
DISCOURAGING						HOPEFUL
MISERABLE						ENJOYABLE

Funk, J.L., & Rogge, R.D. (2007). Testing the Ruler with Item Response Theory: Increasing Precision of Measurement for Relationship Satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, 21, 572-583.

Appendix 3.6 Ethical approval from the Ethics Committee of the First Affiliated Hospital of Chongqing Medical University in Chongqing (Project no. 2019 Ethics Review No. 026) in China

中国夫妇与澳大利亚中国夫妇夫妻关系满意度比较

相关性与分析

研究方案

项目负责人： 阳文

所在单位科室： 澳大利亚弗林德斯大学（科学与护理学院）

联系电话：(澳大利亚) +61 416-965-866

(中国) +86 134-3601-4925

项目执行时间： 2019 年 4 月至 2020 年 4 月

研究背景

根据 Robles 等人(2014 年) 分析了过去 50 年间，全球发表的 126 篇文章表明：婚姻满意度与身体健康、心理健康紧密相关，同时有利于延长人的寿命。这一研究结果具有普遍意义，该 126 篇论文涉 72, 000 个样本，涉及巴西、加拿大、中国、芬兰、德国、香港、以色列、荷兰、瑞典、英国和美国在内的发达及发展中国家。但是，超过 95%的研究是在发达国家进行的（Robles 等人，2014 年）。自九十年代起，在中国能用英文检索到与婚姻有关的心理健康问题的研究，只有三项。自 1990 年以来，中国的精神问题迅速增加，专家估计 2020 年有 1.73 亿人患有精神疾病（Xiang 等人，2012 年）。物质满意度是影响健康结果的主要因素，如焦虑和抑郁（Richmond & Roehner, 2016 年）。Yang 和 Ran（2011）分析了重庆市精神病院的八百八十三名门诊心理咨询患者，发现婚姻问题是他们心理健康的主要潜在因素。Ma 和 Wang（2013）分析了精神病医院 1903 名门诊心理服务人员，发现婚姻问题是访问心理咨询师的主要原因，而这是成人的 5 大咨询原因之一。另外，魏周（2009）分析了近 20 年来 2983 名门诊病人的案例，强调心理咨询的主要原因是婚姻问题。因此，对于精神卫生中心医院来说，中国夫妇的婚姻满意度造成的心理咨询问题，可能大大增加门诊工作量。

重要的是，中国传统的婚姻观念一直存在到今天。这种传统文化促进了新一代人在适当的年龄结婚；否则，谁将成为道德审判的对象（张，2015）。本研究旨在比较长时期暴露在两种不同文化规范中的中国婚姻满意度，以确定这种文化是否会影响婚姻满意度。

二、研究目的与意义

本研究的目的是确定“健康的文化决定因素”对婚姻满意度的影响。

- 确定中国夫妇和澳大利亚中国夫妇的婚姻满意度差异。
- 测量中国夫妇和澳大利亚中国夫妇婚姻满意度差异的相关性和意义。
- 确定家庭关系的某些因素对家庭功能的积极和消极影响

研究意义：

世界卫生组织（世卫组织，2018 年）指出，每个成员国都应出台新政策，即信息、证据和研究是 2020 年前适当的精神卫生政策、规划和评估的关键组成部分。通过研究产生新的知识，使政策和行动以证据和最佳做法为基础，及时和相关的信息或监测框架的可用性使实施的行动得以监测，并使服务提供的改进得以发现（世卫组织，2018 年）。考虑到与国际同步，中国政府于 2015 年推出了《国家精神卫生工作计划》，中国政府寻求为公众提供更好的精神卫生保健，这种保健的质量需要以符合国际原则的方式进行（NMHWP，2015 年）。由于政府鼓励从不同角度改善心理健康问题，因此，婚姻满意度作为主要的心理咨询原因，应该从不同的角度予以研究（Yang & Ran 2011；&Wang，2013；Wei & Zhou，2009）。

过去的研究表明，夫妻关系的质量取决于一系列社会经济、个人和环境因素。但是，过去半个世纪，这一领域的研究只在社会经济或生物领域之间进行的（Robles 等人，2014 年；Brand 等人，2017 年）。和文化环境有关的研究，未被发现（Newton 等人，2014 年；Wells 等人，2016 年）。由于没有证据支持环境可以作为改善婚姻满意度，因此改善文化和环境的策略还没有得以在中国推广。

本研究的重点是了解文化因素对婚姻满意度的影响，这将降低我国精神病院因婚姻问题引起的心理咨询率。它基于一个名为“健康方法的文化决定因素”的理论，旨在通过提高婚姻满意度来实现心理健康，并强调在护理期间对患者的婚姻问题的认识（Lai，2010 年）。这一点很重要，因为本研究的结果将提供有关如何通过提高对夫妇的满意度来改善心理健康的见解和信息。如果这一目标得以实现，积极的文化信仰可以在护理过程中得到广泛的推广。此外，请所有护理专业提高对婚姻问题相关精神障碍的认识，并提供有效的文化干预策略，以促进精神健康、预防精神障碍、护理和恢复与夫妻关系相关的精神障碍患者。

一、实施方案

样本

该样本量为 5315 名参与者中的 200 名参与者，以达到功率分析的样本量（Funk 等人，2007 年）。功率分析建立在反映研究变量之间关系强度的效应大小概念的基础上（Polit&Beck，2017 年，第 285 页）。除了重要的正式测试外，效应大小的估计也将作为探索性研究的一部分，使用调整后的平均值和结果的基线标准偏差进行计算。（菲尔德，2009 年，第 69-70 页）。

数据收集

互联网数据采集，该数据采集方法的响应率为 10%（Callegaro，2017 年）。本研究中的数据收集过程为自我报告法（Polit&Beck，2017 年，第 323 页）。本自填问卷采用序数计量和名义计量两种方法收集描述性统计数据。普通问题将使用由 Funk 和 Rogge（2007）设计的国际婚姻满意度指数，确定中国夫妇和澳大利亚中国夫妇的婚姻满意度差异。参与者将被要求使用 Likert 量表来表示他们认为在他们的关系中存在的幸福程度，这个量表将突出参与者对他们关系满意度的信念。

针对目标二，确定了中国夫妇与澳大利亚中国夫妇婚姻满意度差异的相关性和显著性。名义上的问题包括：性别、文化信仰（种族）和年数作为确定对关系满意度影响的附加变量。在本研究中，不同变量对于确定定义关系满意度的不同变量之间的关系至关重要（Salkind，2014 年，第 82 页）。

为了解决目标三：家庭关系的某些因素对家庭功能的积极影响，问卷中包括一些关于满意度的评分问题。分析的结果和发现将突出关系满意度对家庭功能的积极或消极影响，进而影响心理和身体健康，同时评估文化的不同影响。

四、风险/获益评估

1. 获益

如果确定了目标（见上文第二），这种方法将突出参与者对他们关系满意度的信念。进一步的研究可以解决差异产生的原因，以深入理解这种现象。

如果确定了目标二（见上文第二），将使用 SPSS 分析从调查中收集的数据，以确定定义关系满意度的不同变量之间的关系。在进一步了解婚姻差异的原因之后，中国夫妇和澳大利亚中国夫妇的不同干预和策略可以提供可能提高婚姻满意度的因素。

此外，如果确定了目标 3（见上文 c-1），分析的结果和结果将突出关系满意度对家庭功能的积极影响，进而影响精神和身体健康。因此，对可能的心理健康干预的深入了解可能会为未来的研究定义，这可能对中国夫妇和澳大利亚-中国夫妇都有显著的改善。

2.风险

这是一个网上问卷调查，任何有关身份认证信息都不会被问及。属于低风险调查。整个在线问卷将持续 10-15 分钟，可能会造成一点情绪不适。为确保风险最小化，一旦参与者觉得有任何不适，可给当地精神卫生中心联系。该定量研究不涉及知情同意书。但是，项目简介会在问卷之前予以介绍。本介绍信将包括联系信息、收集数据的使用、耗时、收集数据的可访问性和投诉方式。参与者自愿参与该项调查，同时，参与者在任何时候都有资格弃权。

3.特殊人群保护：该研究不会涉及未成年，智力及行为障碍者，以及在押人员等的风险，因为问卷的第一个问题“请问您是否年满十八周岁”，便自动排出了未成年人。智力及行为障碍的人，以及在押人员，都不具备自由上网的能力，将被自动排除。

五、数据管理与统计分析计划

统计分析计划

对于数据相关性分析，SPSS 将建立婚姻满意度与其他变量之间的关系。将计算所有变量的描述性统计，以确保数据质量，并评估两组之间不同统计测试。根据 cronbach's alpha（2003）， β 的值为.8 或更多，可以获得足够的功率来检测任何已经存在的影响。频率、平均值、范围和标准偏差将根据稳定的长期关系中的性别、文化（种族）和年数进行计算。

数据管理

- 所有被采集数据将在弗林德斯大学有专人保存五年；
- 整个数据过程只能用弗林德斯大学的电脑，密码保存数据，及分析处理数据。

六、资料保密

- 任何身份认证的信息都不会被问及；
- 研究团队以外的人员无权涉及被采集信息；
- 该研究全程不会招聘其他人员，辅助研究；

七、其它说明

本研究已经通过弗林德斯大学伦理委员会认证，编号为 8353，主要导师是弗林德斯大学的 Yvonne Parry 博士。如果您对您希望讨论的研究有任何疑问，请拨打 61 08 82013354 与她联系。或联系弗林德斯大学道德办公室+61（0）8 8201 3116（周一至周五），或发送电子邮件至 human.researchethics@flinders.edu.au。

附件一

研究者信息表

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大洋洲全球区域理事会： Sigma Theta Tau International

副总裁： Sigma PSI ETA

杰出教育工作者学院：特邀会员

社区卫生护理研究国际合作：成员

Questionnaire

1. 您是否年满 18 周岁？

- Are you over 18 years?

是 Yes/否 No

2. 性别 Gender

女 Female/男 Male/其他 Other/不愿意说 Prefer not to say

3. 您们在一起多少年了？

Numbers of years in a stable long-term relationship.

小于 1 年 less than a year/2-5 年 2-5years/5-10 年 5-10 years/大于 10 年 more than 10 years

4. 请您确认您的种族

- Could you please identify your ethnicity?

澳籍华人 Australia/Chinese/中国人 Chinese/澳洲人 Australian/其它 Other

5. 请问您一般在哪里居住？

- Where do you normally live?

中国大陆 Mainland China/香港 Hongkong/台湾 Taiwan/澳洲 Australia/其它 other/ 不愿意说 Prefer not to say

如果您在澳洲居住，请回答第六个问题；如果不是，请直接回答第七个问题

(If you are live in Australia, please fill the next question, Q-6; If not, please skip it and start with Q-7.)

6. 请问您在澳洲居住了几年？

- How many years have you live in Australia?

小于 1 年 less than a year/2-5 年 2-5years/5-10 年 5-10 years/大于 10 年 more than 10

years

7. 请选择您在夫妻关系里的幸福度

- Please indicate the degree of happiness, all things considered, of your relationship.

非常不开心 Extremely Unhappy	相当不开心 Fairly Unhappy	有点不开心 A Little Unhappy	开心 Happy	很开心 Very Happy	非常开心 Extremely Happy	完美 Perfect
-------------------------------	----------------------------	------------------------------	-------------	-------------------	----------------------------	---------------

8. 大多数人在他们的关系中都有分歧。请在下面的列表中选择您和您的伴侣之间的观点认同度。

- Most people have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	同意 Always Agree	基本同意 Almost Always Agree	偶尔不同意 Occasiona lly Disagree	偶尔有分歧 Frequently Disagree	基本不一致 Almost Always Disagree	常常不一致 Always Disagree
陪伴彼此的时间 Amount of time spent together						
做的重大决定 Making major decisions						
对感情的表达 Demonstrations of affection						

	一直 All the time	大部分时间 Most of the time	往往不是 More often than not	偶尔 Occasionall y	很少 Rarely	绝不 Never
一般而言，您和您伴侣之间生活愉快吗？ In general, how often do you think that things between you and your partner are going well?						

您有多频繁的希望自己没有陷入这段感情? How often do you wish you hadn't gotten into this relationship?						
--	--	--	--	--	--	--

	完全没有 Not at all TRUE	有点 A little TRUE	稍微有点 Some- what TRUE	通常是 Mostly TRUE	几乎总是这 Almost Completel y TRUE	确实如此 Completely TRUE
我仍然和我的伴侣联系紧密 I still feel a strong connection with my partner						
如果有来生，我还是愿意和他/她相依 If I had my life to live over, I would marry (or live with / date) the same person						
我们的关系很紧密 Our relationship is strong						
我有时候想知道是否有另外一个人在等我 I sometimes wonder if there is someone else out there for me						
我与他/她的关系，使我很开心 My relationship with my partner makes me happy						
我们之间的关系温暖而舒适 I have a warm and comfortable relationship with my partner						
我无法想象和她/他结束这段关系 I can't imagine ending my relationship with my partner						
我几乎可以对我的伴侣倾诉任何事情 I feel that I can confide in my partner about virtually anything						
我最近在重新考虑我们之间的关系 I have had second thoughts about this relationship recently						
于我而言，我的伴侣是非常浪漫的 For me, my partner is the perfect romantic partner						
我觉得我和伴侣之间合作非常默契 I really feel like <u>part of a team</u> with my partner						

我无法想象有谁能像她/他一样使我快乐 I cannot imagine another person making me as happy as my partner does						
---	--	--	--	--	--	--

	一直不 Not at all	有一点 A little	稍微有 Some- what	通常是 Mostly	几乎总是 Almost Completel y	总是 Completel y
你们的关系有多值得 How rewarding is your relationship with your partner?						
您的伴侣能满足你的需求吗 How well does your partner meet your needs?						
你们的关系在多大程度上符合了您最初的期望 To what extent has your relationship met your original expectations?						
一般来说，你对你们的关系有多满意？ In general, how satisfied are you with your relationship?						

9. 与大多数人相比，你们的关系如何？

- How good is your relationship compared to most?

比其他人都糟 Worse than all others (非常糟糕 Extremely bad)	0	1	2	3	4	5	比其他人都好 Better than all others (非常好 Extremely good)
---	---	---	---	---	---	---	--

	从来没 有 Never	一个月不到一次 Less than once a month	一个月一两次 Once or twice a month	一周一两次 Once or twice a week	每天都在一起 Once a day	时刻形影不离 More often
你享受你伴侣陪伴的时光吗 Do you enjoy your partner's company?						
你们的伴侣多久才能约会一次 How often do you and your partner have fun together?						

10. 对于下面的每一项，选择最能描述你们之间关系的选项。请根据你对每一个问题的第一印象和感受来回答。

- For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.

INTERESTING 很有趣							很无聊 BORING
BAD 不好							很好 GOOD
FULL 充实							空虚 EMPTY
LONELY 孤独的							友好的 FRIENDLY
STURDY 坚定的							脆弱的 FRAGILE
DISCOURAGING 沮丧的							充满希望的 HOPEFUL
ENJOYABLE 幸福的							痛苦的 MISERABLE

Appendix 3.7 Low and negligible risk research

Please answer each question of the checklist to determine the “risk” to participants in your research project. Your answers to the questions listed will determine whether your application can be reviewed as a low/negligible risk application.

If you answer “YES” to any of the questions, it may indicate that your research is not low/negligible risk.

A “YES” answer does not immediately exclude your application from review. Any “YES” answers will be considered by the Executive Review Committee and you will be advised if your application has been accepted as a low/negligible risk application or if it has been determined that it must be referred to the next meeting of the HREC for a full review.

Low risk research is defined as research in which the only foreseeable risk is one of discomfort. Discomforts include, for example, minor side-effects of medication, the discomfort of measuring blood pressure or the anxiety induced by an interview.

Negligible risk research is defined as research in which there is no foreseeable risk of harm or discomfort; and any foreseeable risk is no more than inconvenience. Examples of inconvenience may include filling in a form, participating in a street survey, or giving up time to participate in research.

Are any of the following topics covered in part or in whole in your project?				
Research about parenting issues	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Research investigating sensitive personal issues	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Research investigating sensitive cultural issues	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Explorations of grief, death or serious/traumatic loss	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Depression, mood states, anxiety	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Gambling	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Eating disorders	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Illicit drug use	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Substance abuse	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Self-report of criminal behavior	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Any psychological disorder	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Suicide	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Gender identity	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO

Are any of the following topics covered in part or in whole in your project?				
Sexuality	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Race or ethnic identity	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Any disease or health problem	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Fertility	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Termination of pregnancy	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO

Are any of the following procedures to be used in your project?				
Use of personal data obtained from Commonwealth or State Government Department/Agency	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Use of personal data obtained from State Government Department/Agency	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Use of personal information from a non-government organization	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Deception of participants	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Concealing the purposes of the research	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Covert observation	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Audio or visual recording without consent	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Recruitment of a third party or agency	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Withholding from one group specific treatments or methods of learning, from which they may "benefit" (e.g. in medicine or teaching)	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Psychological interventions or treatments	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Administration of physical stimulation	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Invasive physical procedures	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Invasive physical procedures	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Infliction of pain	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Administration of drugs	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Administration of other substances	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Exposure to ionizing radiation	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Tissue sampling or blood taking	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Collecting body fluid	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Use of medical records where participants can be identified or linked	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Genetic testing/DNA Extraction	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Drug trials or other clinical trials	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO

Other Risks?				
Are there any potential risks to the researcher? (e.g. research conducted in unsafe environments or trouble spots)?	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Are there any potential risks to non-participants in the research, such as, participant's family members and social community? e.g. effects of biography on family and friends or infectious disease risk to the community)	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO

Does your project specifically target participants from any of the following groups?				
Suffers from a psychological disorder	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Suffering a physical vulnerability	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
People highly dependent on medical care	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Children and/or young people without parental or guardian consent	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
People whose ability to give consent is impaired	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Resident of a custodial institution	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
People unable to give free informed consent because of difficulties in understanding information provided eg. Language difficulties	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Members of a socially and/or culturally identifiable group with special social/cultural/ethnic or religious beliefs or political vulnerabilities	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Aboriginal and Torres Strait Islander Peoples	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Those in a dependent relationship with the researchers eg. Lecturer/student, doctor/patient, teacher/pupil & professional/client	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Participants are identifiable in the final report when specific consent for release has not been given	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO

Does your project involve researching in an overseas country?				
Where research is being undertaken in a politically unstable area	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Where research involves sensitive cultural/social/political/ethnic/economic or religious issues	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
Where criticism of the government and institutions may be a risk to participants and/or researchers	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO

Appendix 4.1 Descriptive statistics

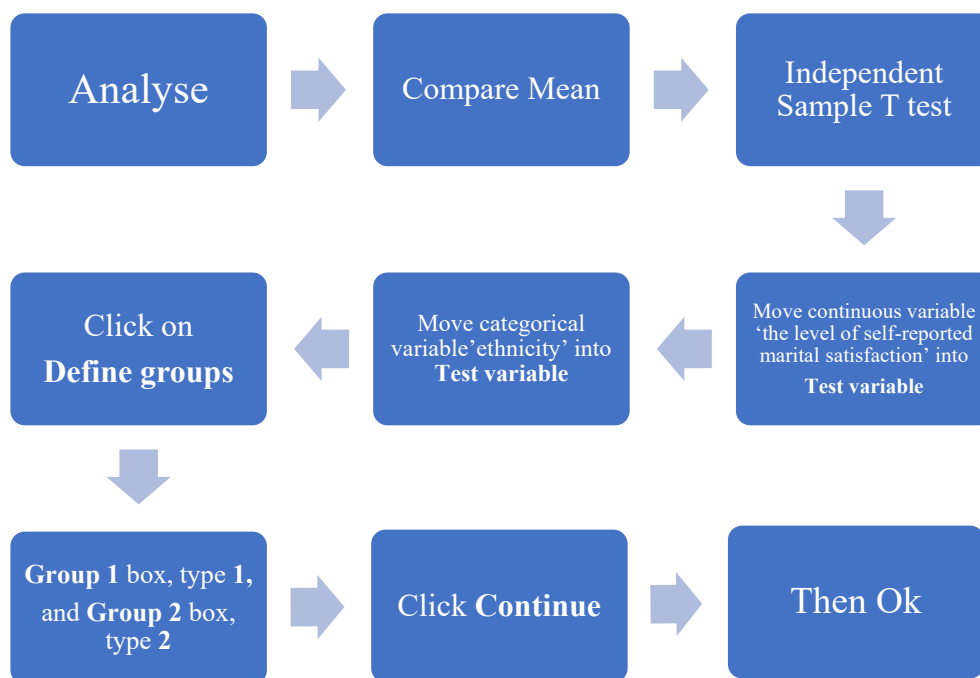
Descriptive Statistics									
	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Please indicate the degree of happiness, all things considered, of your relationship	1193	1	7	4.82	1.539	-.325	.071	-.556	.142
Amount of time spent together	1233	1	6	4.25	1.431	-.583	.070	-.611	.139
Making major decision	1233	1	6	4.53	1.381	-.784	.070	-.273	.139
Demonstrations of affection	1233	1	6	4.31	1.411	-.651	.070	-.432	.139
In general, how often do you think that things between you and your partner are going well?	1215	1	6	4.70	1.287	-1.260	.070	.696	.140
How often do you wish you hadn't gotten into this relationship?	1178	1	6	2.88	1.528	.566	.071	-.775	.142
I still feel a strong connection with my partner	1198	1	6	4.47	1.534	-.699	.071	-.547	.141
If I had my life to live over, I would marry (or live with / date) the same person	1183	1	6	4.05	1.851	-.394	.071	-1.274	.142
Our relationship is strong	1160	1	6	4.31	1.628	-.566	.072	-.864	.144
I sometimes wonder if there is someone else out there for me	1150	1	6	2.11	1.424	1.332	.072	.970	.144
My relationship with my partner makes me happy	1153	1	6	4.14	1.595	-.412	.072	-.963	.144
I have a warm and comfortable relationship with my partner	1143	1	6	4.15	1.508	-.452	.072	-.752	.145

I can't imagine ending my relationship with my partner	1137	1	6	3.80	1.816	-.218	.073	-1.379	.145
I feel that I can confide in my partner about virtually anything	1138	1	6	4.12	1.627	-.504	.073	-.870	.145
I have had second thoughts about this relationship recently	1134	1	6	1.88	1.401	1.691	.073	1.965	.145
For me, my partner is the perfect romantic partner	1125	1	6	3.20	1.735	.251	.073	-1.194	.146
I really feel like part of a team with my partner	1123	1	6	3.84	1.582	-.225	.073	-.981	.146
I cannot imagine another person making me as happy as my partner does	1117	1	6	3.68	1.771	-.101	.073	-1.320	.146
How rewarding is your relationship with your partner?	1187	1	6	4.33	1.552	-.531	.071	-.829	.142
How well does your partner meet your needs?	1165	1	6	3.97	1.416	-.469	.072	-.628	.143
To what extent has your relationship met your original expectations?	1150	1	6	3.93	1.426	-.481	.072	-.676	.144
In general, how satisfied are you with your relationship?	1144	1	6	4.05	1.425	-.496	.072	-.626	.145
How good is your relationship compared to most?	728	1	5	4.07	1.160	-1.183	.091	.625	.181
Do you enjoy your partner's company?	1191	1	6	4.34	1.325	-1.191	.071	.484	.142
How often do you and your partner have fun together?	1158	1	6	4.03	1.459	-.885	.072	-.479	.144
For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.	977	1	6	4.41	1.690	-.765	.078	-.650	.156

For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item	949	1	6	4.62	1.547	-.931	.079	-.169	.159
--	-----	---	---	------	-------	-------	------	-------	------

For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.	938	1	6	4.57	1.580	-.870	.080	-.355	.160
For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.	977	1	6	4.59	1.599	-.934	.078	-.250	.156
For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.	947	1	6	4.60	1.593	-.930	.079	-.272	.159
For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.	956	1	6	4.63	1.590	-.958	.079	-.210	.158
For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.	981	1	6	4.70	1.562	-1.039	.078	-.015	.156
Valid N (listwise)	506								

Appendix 4.2 Procedure for independent samples t-test



Appendix 4.3 Descriptive table

Descriptives

			Statistic	Std. Error
Mainland_Chinese	Mean		104.1435	2.31056
	95% Confidence Interval for Mean	Lower Bound	99.5893	
		Upper Bound	108.6978	
	5% Trimmed Mean		105.9969	
	Median		109.0000	
	Variance		1153.156	
	Std. Deviation		33.95815	
	Minimum		10.00	
	Maximum		159.00	
	Range		149.00	
	Interquartile Range		49.50	
	Skewness		-.653	.166
	Kurtosis		-.006	.330
AustraliaChinese	Mean		123.2030	1.71014
	95% Confidence Interval for Mean	Lower Bound	119.8304	
		Upper Bound	126.5757	
	5% Trimmed Mean		124.5440	
	Median		130.0000	
	Variance		576.142	
	Std. Deviation		24.00296	
	Minimum		55.00	
	Maximum		155.00	
	Range		100.00	
	Interquartile Range		31.00	
	Skewness		-.863	.173
	Kurtosis		-.383	.345

Appendix 4.4 Missing values

Statistics						
		Are you over 18 years old?	Gender	Numbers of years in a stable long-term relationship.	Could you please identify your ethnicity?	Where do you normally live?
N	Valid	1230	1229	1232	1231	1230
	Missing	5	6	3	4	5
Minimum		1	1	1	1	1
Maximum		2	4	4	4	6

Appendix 4.5 Descriptive statistics of the level of happiness

Group Statistics

	Could you please identify your ethnicity?	N	Mean	Std. Deviation	Std. Error Mean
Please indicate the degree of happiness, all things considered, of your relationship	Australia/Chinese	197	4.64	1.067	.076
	Chinese	216	3.71	1.441	.098

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
Please indicate the degree of happiness, all things considered, of your relationship	Equal variances assumed	26.157	.000	7.445	411	.000	.936	.126	.689 1.184
	Equal variances not assumed			7.546	394.686	.000	.936	.124	.692 1.180

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Mainland_Chinese_Happiness	216	52.3%	197	47.7%	413	100.0%

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Australia_Chinese_Happiness	197	47.7%	216	52.3%	413	100.0%

Descriptives

			Statistic	Std. Error
Mainland_Chinese_Happiness	Mean		3.7083	.09807
	95% Confidence Interval for Mean	Lower Bound	3.5150	
		Upper Bound	3.9016	
	5% Trimmed Mean		3.7377	
	Median		4.0000	
	Variance		2.077	
	Std. Deviation		1.44129	
	Minimum		.00	
	Maximum		6.00	
	Range		6.00	
	Interquartile Range		2.00	
	Skewness		-.136	.166
	Kurtosis		-.606	.330

Descriptives

			Statistic	Std. Error
Australia_Chinese_Happiness	Mean		4.6447	.07602
	95% Confidence Interval for Mean	Lower Bound	4.4948	
		Upper Bound	4.7946	
	5% Trimmed Mean		4.6946	
	Median		5.0000	
	Variance		1.138	
	Std. Deviation		1.06696	
	Minimum		1.00	
	Maximum		6.00	
	Range		5.00	
	Interquartile Range		1.00	
	Skewness		-.829	.173
	Kurtosis		.031	.345

Appendix 4.6 T-test of marital satisfaction

Group Statistics

		Could you please identify your ethnicity?	N	Mean	Std. Deviation	Std. Error Mean
The_Level_of_Marital_Satisfaction	Australia/Chinese		197	123.2030	24.00296	1.71014
	Mainland/Chinese		216	104.1435	33.95815	2.31056

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
The_Level_of_Marital_Satisfaction	Equal variances assumed	21.993	.000	6.529	411	.000	19.05953	2.91917		13.32117	24.79789
	Equal variances not assumed			6.630	387.514	.000	19.05953	2.87459		13.40778	24.71127

Appendix 4.7 Comparison of the means for four groups (living in Australia less than 1 year, 2-5 years, 5-10 years, and more than 10 years)

Descriptive Statistics									
	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Less_than_1_year	17	32.00	154.00	100.0000	38.22466	-.311	.550	-1.120	1.063
Two_Five	16	69.00	148.00	110.0625	24.85550	-.040	.564	-.948	1.091
Five_Ten	63	60.00	150.00	126.8413	21.59839	-1.860	.302	2.734	.595
More_Than_Ten	134	55.00	155.00	120.2761	26.10200	-.501	.209	-1.099	.416
Valid N (listwise)	0								

Group-1: Living in Australia Less than 1 year

Case Processing Summary						
	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Less_than_1_year	17	4.1%	396	95.9%	413	100.0%

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Less_than_1_year

Mean	N	Std. Deviation
100.0000	17	38.22466

```
MEANS TABLES=Two_Five
/CELLS=MEAN COUNT STDDEV.
```


Group-2: Living in Australia 2-5 years

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Two_Five	16	3.9%	397	96.1%	413	100.0%

Two_Five		
Mean	N	Std. Deviation
110.0625	16	24.85550

```
MEANS TABLES=Five_Ten
/CELLS=MEAN COUNT STDDEV.
```

Group-3: Living in Australia 5-10 years

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Five_Ten	63	15.3%	350	84.7%	413	100.0%

Two_Five		
Mean	N	Std. Deviation
110.0625	16	24.85550

```
MEANS TABLES=Five_Ten
/CELLS=MEAN COUNT STDDEV.
```

Group-4: Living in Australia more than 10 years

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
More_Than_Ten	134	32.4%	279	67.6%	413	100.0%

More_Than_Ten

Mean	N	Std. Deviation
120.2761	134	26.10200