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**百善孝為先: Filial Piety, Academic Self-Concept, and the
Academic Achievement of Students in New Zealand.**

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Abstract

Research has long argued in favour of the influence of culture on students' learning and achievement. New Zealand, with its recent influx of migrants and rich multicultural background, is no exception to the way in which culture can implicate how students see themselves as learners. For East Asian students, the Confucian virtue of filial piety ('xiao') can be a significant motivator in their academic success. Currently, there is a lack of research on the motivational qualities of filial piety in regard to the academic self-concept of students and their subsequent achievement. This study examines the relationship between filial piety, and students' academic self-concept and academic achievement in a New Zealand intermediate school. A quantitative method of self-reporting survey was used to assess filial piety and academic self-concept from a cohort of 43 students, and was collated in conjunction with their academic achievements in Literacy (English) and Numeracy (mathematics). Regression analysis is used to examine the relationships across the variables. Results indicate that filial piety does not have a significant impact on students' academic self-concept and their subsequent academic achievement. However, there is a consistent, positive, and significant correlation between participants' academic self-concept across both achievement areas. These findings suggest that students' academic self-concept can play a key role in their levels of academic achievement, and that school and home effort should focus more on encouraging the positive self-perceptions of students of all cultures within New Zealand. While filial piety does not have a statistically significant impact on students' academic self-concept and academic achievement in this study, future research is recommended with a larger sample in order to derive results that have greater representation of the New Zealand population.

Acknowledgements

“Turning stone into jade.”

“雕石成璧”

“Diāo shíchéng bì”

- *Chinese Proverb (Fung, 2014, p.1)*

This Chinese proverb refers to the meticulous carving of a piece of stone to create a jade amulet. The metaphor echoes the endeavours of past generations of the Chinese New Zealand community to create a better life from often harsh and sometimes unforgiving environments.

It speaks of the ability of people to use what is at hand to bring into existence something more precious than the original.

獻給我的家人

感謝你們無止境的付出，支持，與愛

獻給我的父親

感謝您辛苦耕耘，給予我們安穩的生活及學習環境

您是我人生中的好榜樣

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您是最要好的玩伴

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List of Defining Terms

In research, it is important that terms are clearly defined in order to eliminate any misunderstanding the reader may have based on a differing definition.

For the purpose of this study, the most frequently used terms are operationally defined as the following:

Culture: Refers to a shared way of life, including knowledge, beliefs, values, and norms of behaviour for a group of socially interacting people.

Ethnicity: Refers to an individual's self-perception and affiliation with a particular ethnic group or groups.

Filial Piety: The emotional and material support children express to their parents, including, love, respect, and attendance to their needs, deference, and compliance to their wishes.

Dual Filial Piety Model: Filial piety consisting of two elements: reciprocal filial piety and authoritarian filial piety.

Reciprocal Filial Piety: Characterized by reciprocity and natural intimate affection between children and their parents, by showing respect, caring for and attending to their parents.

Authoritarian Filial Piety: Characterized by submission to hierarchical authority and the suppression of self-autonomy. Children may sacrifice their own wishes in order to comply with parents' wishes, and feel obligated to maintain the family reputation.

Self-Concept: The perception of an individual's attitudes, feelings and knowledge about their own abilities, skills, appearance, and social acceptability.

Academic Self-Concept: A domain-specific self-concept that refers to students' knowledge and perception about their own competency and ability within achievement situations.

Academic Achievement: A student's achievement record as measured in the areas of Numeracy and Literacy from the academic records of the participating school.

Chapter One: Introduction

“If the ultimate goal of school is to educate young people to become responsible and critically thinking citizens who can succeed in life, understanding factors that stimulate them to become active agents in their own learning is critical.”

- *Gilman, Huebner, and Furlong (2009, p.1)*

According to the Organization for Economic Cooperation and Development (OECD, 2016), educational and academic outcome can be an influential factor for success within our contemporary knowledge-based global economy. Indeed, children and young people who succeed academically are found to have a myriad of positive future educational and lifelong influencing outcomes, including engagement with their school (Arachambault, Janosz, Fallu, Pagani, 2009), the pursuit for higher education (Park, Mahoney, Smart, & Smyth, 2013), occupational placement (Kuncel, Hazlett, & Ones, 2004), earnings attainment (Kuncel, Crede, & Thomas, 2005), community and pro-social participation (Lyubomirsky, King, & Diener, 2005), and overall enhanced physical and mental health and wellbeing (Battle & Lewis, 2002; Farooq, Chaudhry, Shafiq, & Berhanu, 2011).

Conversely, a poor academic outcome is associated with low academic self-efficacy (Caprara et al., 2008), higher school drop-out rates (Christenson & Thurlow, 2004; Finn, Gerber, & Boyd-Zaharias, 2005), an increase in depression and anxiety, and an increase in adolescent delinquency (Institute for Higher Education; 2005; Soenens & Vansteenkiste, 2005). Evidently, the benefits of academic success in the positive lifelong development and welfare of an individual across many different contexts cannot be overlooked.

Culture, Perception of Self and Achievement

In considering the multitude of benefits academic success brings, some groups of students appear to be achieving considerably better than others. Most notably, results from international achievement tests show that students from East Asia continue to outperform their counterparts in North America, and other Western nations (Martin, Mullis, Foy, & Stanco, 2012; Mullis, Martin, Foy, & Arora, 2012). Similarly, in New Zealand, Asian students are the second highest percentage of students performing above the national standards in reading, writing, and mathematics (Ministry of Education, 2015). The success of East Asian students in these assessments has attracted international attention in terms of the cultural traits that may support student academic achievement (Fang, Grant, Xu, Stronge, &

Ward, 2013). Indeed, studies have found that the cultural influence of Confucian values may be attributed to these students' achievement success (Farooq et al., 2011; Lee & Mok, 2008; Mok, 2010).

Officially a bicultural nation, New Zealand provides a unique cultural backdrop for this research, with indigenous Māori as the first settlers, followed by early British settlement, European migration, and a small number of Asian settlers during the 1800s (Ward & Masgoret, 2008). Since that time, migration policy changes in the 1980s further accelerated Asian migration activity, with the population growth increasing at 240% over the last 10 years (Tan & Singh, 2015). Among the four million people currently living in New Zealand, 12% are from an Asian country, including China, Hong Kong, Korea, Japan, Singapore, and Taiwan (Statistics New Zealand, 2013).

Although the Asian population is one of the fastest growing in New Zealand, few studies focus on this community, and little is known about Asian immigrant families and their children's learning and achievement within the country (Liao, 2007; Wong, 2015). Currently, research on Asian immigrant students' educational experiences below tertiary education level is scarce (Ho, Au, Bedford, & Cooper, 2003). Most available research on Asian immigrants has been conducted in the United States, Canada and Australia, and this has limited transferability to the New Zealand context (Gilby, 2012). Therefore, developing an understanding of the cultural contexts of education is important for both educators and researchers, particularly when examining student achievement across ethnicities. For East Asian students, it is important to consider how collectivism and other culture-specific worldviews on education may affect their self-perception as learners and their prospects of academic achievement.

It must be acknowledged that there is much more variability among the different cultures encompassed by the East Asian label, and even more variability among individuals within those cultures (Grant & Ray, 2010; Qin, Li, Rana & Han, 2011). The psychological processes that will be described in this review may exist for many individuals, albeit in varying degrees and depending on the context. For brevity purposes, this study may refer to the dichotomies of culture and psychological phenomena in order to highlight broad patterns by which to identify the influence of culture on an individual, the self, and academic achievement.

Culture and ethnicity. Various studies have substantiated the influence of culture on education and student achievement (Fang et al., 2013; Farooq et al., 2011). These scholars claim that cultural values and beliefs, as advocated and touted by the wider society, have a significant impact on the educational ideals of an educational institution, and this is often expressed in each culture's distinctive way of learning and achievement (Farooq et al., 2011).

In discussing culture and ethnicity, distinctions must be made to clarify the difference between these terms. The following operational definitions serve as a frame of reference for the language used in this study. 'Culture' is defined as "a shared way of life for a group of socially interacting people" (Johnson & Johnson, 2002, p. 3). This includes shared knowledge, values, beliefs, and the norms of behaviour passed down from one generation to the next through the process of socialisation and enculturation. Cultural values in academic domains, therefore, refer to frameworks of expectations, attitudes, values, beliefs, and practices regarding how to successfully learn and achieve (McInerney, Walker & Liem, 2011).

'Ethnicity' is defined in this study as an individual's self-perception and affiliation with a particular ethnic group or groups (Betancourt & Lopez, 1993). For this study, ethnicity is measured by self-identification with either an Asian or non-Asian ethnicity. This avoids the assumption that individuals descending from a particular country will necessarily identify themselves with that country's particular ethnic group; instead, individuals may self-identify with a different ethnicity.

Individualism and collectivism. Societies instil in their members a characteristic pattern of behaviours, responsibilities, beliefs, values, and goals that differ from other cultures (Heine, 2001). In particular, people from individualistic and collectivistic cultures place a different emphasis on their role within the family, community, and society (Chong, 2007). Such perceptions can exert a pervasive influence on individuals' underlying psychological processes of cognition and self-representation in educational settings. Countries such as China, Japan, Korea, and other East Asian countries, although each culturally distinct from one another in many ways, share a number of cultural elements that provide a theoretically meaningful contrast with the more individualistic Western culture (Tam, 2016).

Western culture is characterised as individualistic and the Western self as egocentric,

independent, autonomous, and unique (Markus & Kitayama, 1991). Within the Western culture, other individuals, as opposed to the family, are seen as vital in terms of social comparison and self-validation (Kitayama & Markus, 2000). In the academic context, students are motivated to undertake actions that allow for the expression of one's important self-defining inner attributes (Heine, Lehman, Markus & Kitayama, 1999). Thus, educational goals and achievement are often an expression of individual wishes and goals of personal accomplishments. Academic success may therefore be heavily attributed to the self-enhancing, self-serving, affirmation of one's positive traits (Geertz, 1975; Markus & Kitayama, 1991).

In contrast, the East Asian culture is defined as collectivist and the Eastern model of self is interconnected with others as an integral part of a context (Triandis, 1997). This interdependence is shaped by the common Confucian heritage of East Asians, which emphasises the value of maintaining interpersonal harmony, and other individuals serve as the locus for thought, motivation, and action (Chao & Tseng, 2002). In order to achieve interpersonal and social harmony, the actions of individuals need to correspond with the duties and obligations as prescribed by their role within their society. Members from the collectivist society value interpersonal relationships more highly than individual pursuits, and feel obligated to fulfil the needs, expectations, and duties within their in-group; a social group to which a person most strongly identifies as being a member, such as their family (Markus & Kitayama, 1991; Triandis, 1989).

This is in line with the Confucian cultural tradition of filial piety, also known as family centrality; wherein families, parents and children each have their own role to play and obligations to fulfil (Chao & Tseng, 2002). Parents tend to believe that educating and taking care of their children is their duty, whilst children are expected to respect and obey their parents, and the success or failure of their children is a direct reflection on the parents themselves (Huang & Gove, 2012; Stankov, 2010). East Asian parents are often actively involved in their children's learning, hopeful that their children will have better lives than themselves (Shin, 2012, 2013). These parents often endeavour to promote their children's academic achievements, and these children, in turn, obey their parents and try to meet their expectations, ascribing their success to their parents' support.

A review of literature has found such views result in cultural variations in the definition of achievement, motivations underlying achievement, and the factors that predict

achievement success (Chao, 2000; Chow & Chu, 2007; Hui, Sun, Chow, & Chu, 2011). In academic situations, the high motivation of East Asian students to achieve often stems from a desire to fulfil parental and social expectations, and success is perceived as a fulfilment of social obligations and harmony (Kanagawa, Cross, & Markus, 2001). For example, many individuals and families in South Korea believe that it is a parent's role to further their children's educational progress, and in turn the child feels a sense of indebtedness towards their parents' investment and sacrifice, and strives for academic excellence (Kim & Park, 2006).

Furthermore, "saving face" (that is, to uphold one's reputation), and avoiding shame or embarrassment are also great incentives for East Asian students' high academic achievement (Wong et al., 2005; Yeh & Huang, 1996). From a collectivist perspective, shame and embarrassment experienced by the individual also brings shame for their social group by association, such as the family and parents (Chong, 2007). Therefore, saving face is as important for the individual as much as it is for the group, and students are often motivated to avoid academic failure because of the possibility of experiencing embarrassing or shameful outcomes. A study by Zusho, Pintrich, and Cortina (2005) found that the fear of failure elicited a strong motivation to succeed amongst a group of Asian-American students, whereas Anglo-American students are motivated more by their level of self-efficacy. Overall, for an East Asian student, group goals frequently take precedence over personal goals, and their behaviours and performances are often adjusted and accommodated for in preventing losing face and making their family proud (Choi & Kwon, 2012).

In addition to the goal to fulfil duties and obligations in order to maintain social connectedness and interpersonal harmony, other social and economic reasons must also be considered. In most East Asian countries, a lack of natural resources means that these countries need to build a well-educated work force in order to be able to compete in the increasingly demanding global market (Kim & Park, 2006; Stankov, 2010). Hence, educational meritocracy has become paramount for a student's future economic and social success, significantly impacting on their entry into prestigious educational institutions, their choice of occupation, and subsequent social status, income, and marriage (Ahn & Baek, 2013; Bond et al., 2007). As a result, these students understand at a young age that "performance counts" and their beliefs about the relationship between success in education and throughout life can highly influence their performance at school (Phelps, 2005).

Gaps in Research

Currently, over one third of New Zealand's population are children and young people (Reid & Rootham, 2016). East Asian children and young people make up just under a quarter of this population; increasing from 66,000 in 2001, to 115,000 in 2013, and this number is predicted to rise further. The high number of Asian immigrants is partly due to greater economic opportunities, political and religious freedoms, and better educational opportunities for children and young people (Tan, 2010).

Despite this growing population, there is a lack of research focus on East Asian immigrant families and students' educational experiences in New Zealand, particularly with pre-adolescent intermediate school students, with the majority of current research originated from overseas (McInerney, 2008). Information currently available has largely focused on either early childhood children (Liao, 2007), or international university students, and Chinese students enrolling in English language learning centres (Ho et al., 2003).

Furthermore, families, especially parents, serve as a critical socialisation agent in shaping students' beliefs regarding achievement and motivation (Chen & Wong, 2014), and few studies have investigated the role of family and its impact within a cultural context (Chao & Tseng, 2002). Research suggests that students' educational beliefs relevant to academic achievement are passed down through an internalisation process imbedded and promoted in the family system, ultimately creating a positive impact on their achievement success (Marchant, Paulson, & Rothlisberg, 2001). Although the amount of research on parental involvement in education for intermediate school students has increased exponentially in the last few years, results are often conflicting. While some research has demonstrated a positive association between parental involvement with adolescents' academic outcomes (Catsambis, 2001; Hill et al., 2004), other research has found parental involvement to be unrelated to achievement (Driessen, Smit, & Sleegers, 2005). In light of these findings, this study aims to increase the knowledge of the academic self-concept and the achievement of students in intermediate schools.

With regard to filial piety, although scholars have recognised its importance in governing the interpersonal relationships within East Asian societies, it is necessary to further investigate how filial piety may impact students' academic motivation and subsequent achievement (Yeh, 2003; Yeh & Bedford, 2003, 2004). Beside the social norm and cultural belief in filial piety, academic self-concept provides a complementary lens for understanding

the psychological processes motivating the academic performance of East Asian students. Despite past research (Chow & Chu, 2007) showing that filial piety is positively related to learning motivation in adolescents, the mechanism of how filial piety influences academic achievement remains under-researched.

As the number of Asian immigrant families and their children continue to rise in New Zealand, it becomes more important to examine how the educational values and behaviours they bring may affect how they see themselves and their subsequent academic performances. This study aims to provide insights into understanding students' unique educational experiences from a cultural perspective, and to encourage schools and educators to develop culturally appropriate skills and competencies for these students' needs. Thus, it attempts to address this research gap by examining filial piety as a cultural construct that may promote or facilitate the development of students' academic self-concept and achievement within a New Zealand context.

Research Aims

Given that current research shows the potential impact filial piety has on East Asian students' learning and achievement characteristics, this research aims to examine the relationship between filial piety, academic self-concept and its subsequent effect on academic achievement in a sample of students in New Zealand. Underpinned by the theoretical foundations of Yeh's (2003) Dual Filial Piety Model, this allows the researcher to examine students' filial piety from both a traditional and modernised perspective, and the ways in which different types of filial piety may differentially impact on their academic self-concept and subsequent achievement. As East Asians are one of the fastest growing ethnic groups in New Zealand, it is anticipated that findings from this research will be useful for schools with a high representation of Asian students.

Overview of Thesis

This thesis is presented in eight chapters. Following the Introduction, Chapter Two provides an overview of the theoretical frameworks that underpins this thesis. Next, Chapters Three and Four provides a review of the literature on the construct of academic self-concept and filial piety. Chapter Five explains the methodology that enables the research hypotheses to be answered. The results of the study are presented in Chapter Six, followed by a discussion of these results in relation to prior research in Chapter Seven. Finally, this thesis

concludes by drawing attention to the study's strengths, limitations and practical implications.

Literature Review

Chapter Two: Theoretical Framework

“A theory that denies that thoughts can regulate actions does not lend itself readily to the explanation of complex human behavior.”

- Albert Bandura (1986, p. 15)

This study is based on two conceptual frameworks; the social cognitive theory, and the self-determination theory. Exploring contextual aspects of a student's environment was an important component of this study. Given that internal processes and external behaviours are influenced by contextual and human interactions, it is important to draw from these frameworks and to examine the processes involved in the way students perceive themselves in relation to their family and school, and how this may affect their academic achievement. In considering the complexity of such interaction, no one framework can effectively explain the entire process; it is therefore necessary to draw key themes from each of these frameworks to encompass all the elements of this study. These frameworks are amongst the most influential frameworks and have been widely used to investigate a variety of achievement outcomes for children and young people (Wu, 2013).

Social Cognitive Theory

Albert Bandura's (Bandura, 1986, 1997, 2001) triadic model of interaction postulates an interrelation between an individual's internal thoughts, external behaviour and their environment (see Figure 1 below). This interrelation can influence an individual's construction of knowledge of the world and themselves, the goals they set, and the courses of action they take in response to those influences.

Within an achievement context, students' experience, either directly or vicarious, with their peers, teachers or families, help them to develop performance standards, which they use to evaluate their own behaviour (Hergenhahn & Osmon, 2007). Bandura (1989, 1991) has highlighted that family, especially parents, play an important role in influencing the way students perceive learning and achievement, their perceptions of themselves as learners, their achievement-related behaviours, and subsequent achievement (Gruman, Harachi, Abbott, Catalano, & Fleming, 2008; Wu, 2013). Previous research has shown parental responses to positively increase students' levels of perceived confidence and competency in achieving

higher grades, and their likelihood to persevere more under challenging academic conditions (Bandura, 2006; Caraway, Tucker, Reinke, & Hall, 2003; Zajacova, Lynch, & Espenshade, 2005). Evidently, the magnitude of students' achievement outcomes can be greatly influenced by their parents and teachers, especially because as adolescents, they may be particularly sensitive to and easily swayed by their social environment (Lieber & Yu, 2003). Hence, examining students' thoughts, feelings, and perceptions in relation to their immediate environment helps to explore and understand the achievement behaviour that leads to their achievement success.

In considering a student's academic achievement, research that considers multiple contexts, such as home and school, allows for an examination of how culture influences the way they negotiate and internalise academic-related values, goals, and norms that impacts on their pro-learning behaviour and subsequent achievement (Nolen, Horn, Ward, & Childers, 2011). This is important considering the multicultural context of New Zealand, and the relatively high academic achievement of East Asian students as being attributed to the strong family support towards these students (Chao & Tseng, 2002). All of which points to the relevancy and applicability of the social cognitive theory as the framework for this study in examining the way a student's cultural disposition toward certain practices develops, as seen in the filial relationships (Gresalfi, 2009).

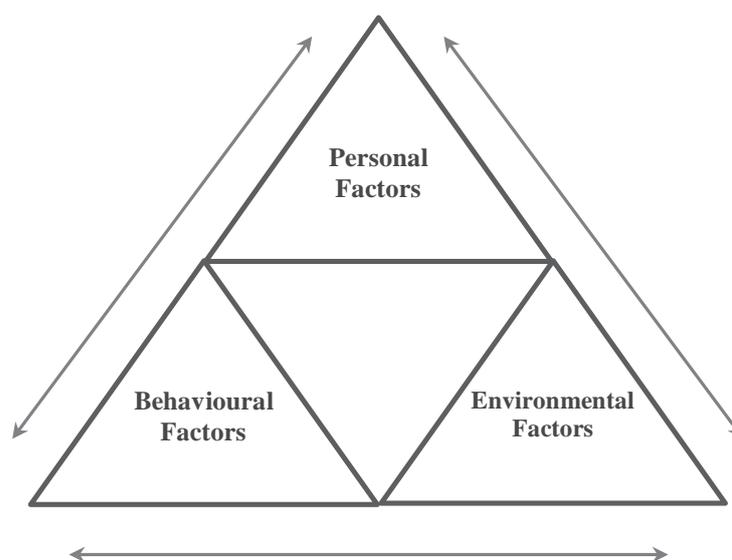


Figure 1. Bandura's triadic model of interaction (Bandura, 1997, p.6).

Academic Motivation: Self-Determination Approach

Besides the social cognitive environment that can influence a student's academic self-concept and achievement, academic motivation provides a complementary lens for understanding the psychological processes of what motivates a student to achieve. Motivation can be defined as, "What gets people going, keeps them going, and helps them finish tasks." (Pintrich, 2003, p.104). Motivation in educational setting can impact on students' academic performances in school, academic engagement and persistence, help-seeking behaviours, and the choice of activities (Meece, Anderman, & Anderman, 2006; Schunk, Pintrich, & Meece, 2008). By examining the motivational characteristics of students from diverse backgrounds, this may assist the study in understanding some common aspects of academic behaviour and attitudes.

One perspective pertinent for this study is Deci and Ryan's (1985, 1991, 2000) Self-Determination Theory. This theory postulates that students' extent of and types of motivation can greatly influence their level of self-determination and subsequent achievement outcomes (Vallerand & Ratelle, 2002). According to Deci and Ryan (2000), students can have different motivational orientations that underlie their academic attitudes and achievement goal setting (see Figure 2 below). These motivational orientations can be dichotomised into intrinsic and extrinsic motivation; a student may be intrinsically motivated because they enjoy completing their homework or they are interested in mastering a specific skill. A student who performs an academic activity to satisfy external demands, such as rewards and praises, or to avoid failure, is described as extrinsically motivated (Vallerand & Ratelle, 2002).

These motivational orientations can be situated along a self-determination continuum, with external regulation representing a complete lack of self-determined motivation, and intrinsic motivation representing the fullest type of self-determined motivation (Ryan & Deci, 2009). To imitate this shift from external regulation to intrinsic motivation for a student, internalisation and integration of values may be required. Internalisation is the process of individuals adopting a value or regulation, and integrating this as their own, thus creating their own sense of self (Deci & Ryan, 2002; Ryan, Connell & Grolnick, 1992).

Deci and Ryan (1991) emphasises that the quality of relatedness to others is a major influence on the processes of internalisation. A student is more likely to adopt achievement-related values and practices as their own when conveyed and reinforced by adults with whom they feel positively connected, most likely teachers or parents. With external reinforcements,

Chapter Three: Academic Self-Concept

“People who regard themselves as highly efficacious act, think, and feel differently from those who perceive themselves as inefficacious. They produce their own future, rather than simply foretell it.”

- Albert Bandura (1986, p. 395)

This chapter reviews research on the conceptualisation of academic self-concept, and its relationship with students’ academic achievement. Factors that can affect students’ academic self-concept and subsequent achievement are also discussed. In considering the cultural influences that may affect a student’s perception to learning and achievement, an operational definition of academic self-concept for this study is presented.

Self-Concept

Self-concept is generally defined as an individual’s perception of self (Shavelson, Hubner, & Stanton, 1976), and these perceptions are formed through and influenced by experiences with one’s environment, such as from their significant others (Marsh & Shavelson, 1985).

Self-concept is composed of many dimensions, domains and interactions (Trautwein, Ludtke, Koller, & Baumert, 2006). As illustrated in Figure 3, Shavelson, Hubner, and Stanton (1976) conceptualise self-concept as “organised, multi-faceted, hierarchical, stable, developmental, evaluative, and differentiable” (p. 411). Subsequent research supports this definition and differentiates self-concept into academic and non-academic domains, where the non-academic domains includes a person’s belief about his/her abilities in social, emotional, physical and athletic settings, and the academic domain includes beliefs of educational settings (Goetz, Cronjaeger, Frenzel, Ludtke, & Hall, 2010; Schunk, Pintrich, & Meece, 2010). These scholars propose that academic and non-academic self-concepts are independent of each other, such that changes in academic self-concept will not impact non-academic self-concept, and vice versa. Indeed, recent research findings have shown that there is a strong, positive relationship between academic self-concept and academic achievement (Erkman, Caner, Sartz, Borkan, & Sahan, 2010; Ireson & Hallam, 2009; Marsh & Craven, 2006; Marsh, Hau, Artelt, Baumert, & Peschar, 2006; Sanchez & Roda, 2003; Wilson, Siegle, McCoach, Little, & Reis, 2014). These findings point to the importance of domain-specificity when examining individual’s self-concept in the context of their academic achievement,

hence, students' academic self-concept will be the focus for this research.

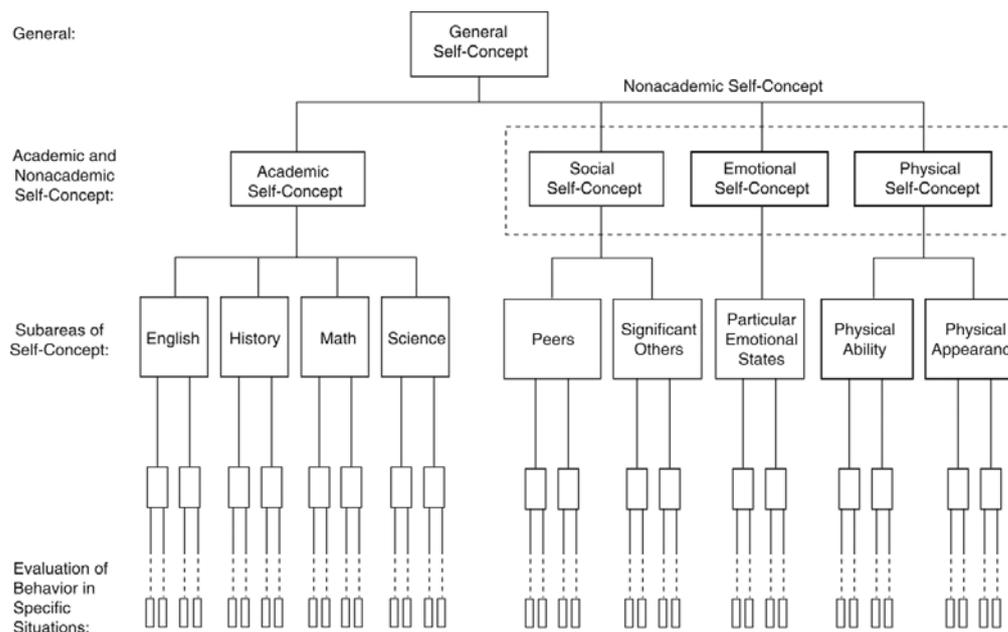


Figure 3. The multidimensional and hierarchical construct of self-concept. Sourced from Shavelson, Hubner, & Stanton (1976, p.413).

Academic Self-Concept

Academic self-concept is a domain-specific self-concept that refers to an individual's knowledge and perception of their competency and ability in achievement situations (Trautwein et al., 2006). A positive academic self-concept has been found to have beneficial effects on a broad range of academic outcomes, including an increase in the level of academic achievement (Areepattamannil & Freeman, 2008; Ghazvini, 2011; Marsh, 2007; Marsh et al., 2006; Yara, 2010), effort (Cokley & Patel, 2007), engagement (Marsh, Trautwein, Ludtke, Koller, & Baumert, 2005), and persistence in classroom activities (Marsh, 2005), even after controlling for factors such as previous achievement histories (Marsh et al., 2008; Marsh, Hau, & Kong, 2002; Valentine Dubois, & Cooper., 2004). This positive academic self-concept effects may persist into future educational aspirations (Ahmavaara & Houston, 2007; Wouters, Germeijs, Colpin, & Verschueren, 2011), employment outcomes (Luthans & Youssef, 2007), and lifelong health and wellbeing (OECD, 2013).

Reciprocal relationship. Longitudinal studies suggest that the relationship between students' academic self-concept and academic achievement is mutually reinforcing, where enhancing a student's academic self-concept can lead to their improved academic achievement, and long-term gain of academic achievement can also help them to form and

maintain a positive academic self-concept (Huang, 2011; Marsh & Martin, 2011; Marsh & Seaton, 2013). Results from meta-analyses have shown consistent support for this reciprocal relationship, where academic self-concept plays a mediating role in relation to academic achievement (Pinxten, Marsh, De Fraine, Van Den Noortgate, & Van Damme, 2014), whereas non-academic domains of self-concept have less influence on students' achievement success (Marsh & Craven, 2006). While findings in most cross-cultural studies are in support of this positive, reciprocal relationship (Marsh & Craven, 2006; Marsh & Hau, 2004; Marsh et al., 2002; Salili, Chiu, & Lai, 2001), Marsh and Martin (2011) cautioned against the assumption of the generalisability of such reciprocal relationship, as many of the research has come from Western and industrialised countries.

This relationship is consistent with the social cognitive perspective, where a student's academic self-concept typically interacts with their social environment in a mutually reinforcing manner (Cohen, Garcia, Purdie-Vaughns, Apfel, & Bruzustoski, 2009; Marsh, 2007). The way in which students interpret their academic-related experiences may shape their academic self-concept, and continue to inform their learning-related behaviours and efforts (Marsh & Craven, 2006). For example, a student who has a negative academic self-concept (for example, "I am a poor student") due to academic failure may be perceptually biased toward environmental feedback (for example, teacher remarks, peer attitudes, or larger cultural messages) that reinforce that identity, and be less likely to incorporate schema-discordant feedback (for example, about the promise of success). Conversely, as a student experiences academic success, a positive academic self-concept is reinforced, which in turn may strengthen their motivation, drive, and increase their subsequent academic accomplishments (Green et al., 2012; Yeung, Rhonda, Craven, & Kaur, 2012).

Domain-specificity. In the revised academic self-concept model (see Figure 4 below), the strong, positive correlation between academic self-concept and achievement is posited to be domain specific (Marsh & Seaton, 2013). Here, specific types of academic self-concept, (for example, numerical and verbal subjects, such as Mathematics and English) may be more predictive of students' academic achievement than the more general academic self-concept (Choi, 2005; Marsh & Craven, 2006; Marsh & O'Mara, 2008; Valentine et al., 2004). A meta-analysis has found a significant relationship between students' mathematics and verbal self-concept and their subsequent academic performance in those areas (Möller, Pohlmann, Koller, & Marsh, 2009). These findings suggest that when examining the relationship

between students' academic self-concept and academic achievement, focusing on domain-specific academic self-concept (such as mathematics and verbal self-concepts), may be more predictive of academic achievement as opposed to the general academic self-concept. However, other research has shown a positive reciprocal relationship with academic achievement with a general measure of students' overall academic self-concept (Erten & Burden, 2014; Guay et al., 2003; Guay, Ratelle, Roy, & Litalien, 2010). This has led to some authors speculating that both global and domain-specific academic self-concept may positively influence on students' academic achievement (Guay et al., 2010).

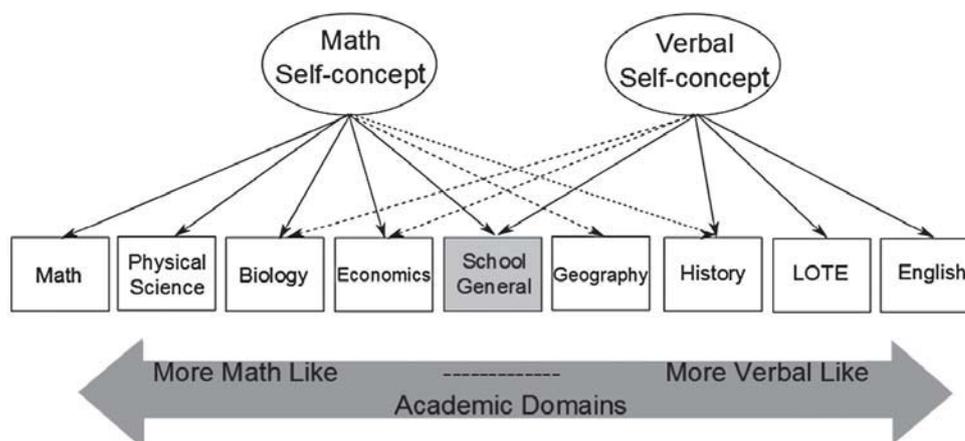


Figure 4. The Marsh/Shavelson revised theoretical model of the structure of academic self-concept. Adapted from Marsh (2007).

Development of and influences on academic self-concept. Academic self-concept can vary as students grow and develop, and move through their grades (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002; Liu & Wang, 2005). During the intermediate school years, adolescents become more dependent on peer groups and begin to formulate their self-concept and self-understanding based on the influence of others (Magnuson & Berger, 2009). However, studies on the relationship between academic self-concept development and achievement remain inconsistent (Huang, 2011). While early study found that the relations between students' academic self-concept and academic achievement were influenced by their developmental trajectories (Hansford & Hattie, 1982), Valentine and colleagues (2004) suggests that this was not a statistically significant factor. Overall, empirical findings concerning changes and no changes in students' academic self-concept are mixed.

In addition to the developmental trajectories that can influence a students' academic self-concept, other factors should also be considered (Laryea, Saani, Dawson-Brew, 2014); including gender (Nagy et al., 2008, 2010), age (Chang, McBride-Chang, Stewart & Au,

2003), family socioeconomic status (Aktop, 2010), parent education level (Eamon, 2005), family support (Chohan & Khan, 2010), and class and teacher-related variables (Cavas, 2010; Pehlivan, 2010). For example, research on the effects of gender on students' academic self-concept and their subsequent achievement indicates male students to show higher academic self-concept than their female counterparts, especially in mathematics, whilst female students have a higher verbal self-concept (Nagy et al., 2008, 2010; Schilling, Sparfeldt, & Rost, 2006).

Operational definition of academic self-concept. To measure academic self-concept, it must firstly be defined. Researches have focused on defining academic self-concept as a student's perception of their academic ability and competency as a key aspect (Marsh & Craven, 2006; Marsh & Hau, 2003; Shavelson & Bolus, 1982). For instance, Marsh and his colleagues' Self-Description Questionnaires included items that assess whether students feel that they are good in their school subjects, and whether schoolwork is easy for them (Marsh, Parker, & Barnes, 1985; Marsh et al., 2005, 2006; Marsh, Relich, & Smith, 1983). Similar approaches have been adopted by Battle (1981) and Piers and Harris (1964), which all included items that evaluate whether students feel that they are smart or is performing well in their schoolwork.

In addition to the emphasis on competence, these scholars also studied students' enjoyment and willingness to work hard in their academic subjects when assessing students' academic self-concept (Hau & Salili, 1991, 1996; Liu, Wang, & Parkins, 2005; Marsh, 1999; Marsh et al., 2002, 2005, 2006). For instance, the Self-Description Questionnaires includes an item that assesses whether students enjoy doing school work, whilst Battle (1981) included items that evaluate whether students usually quit when schoolwork is too hard, and whether they feel like quitting school. This willingness to work hard and commitment to achievement may be an important aspect to most East Asian students' academic self-concept, more so than their Western counterparts, due to influences by Confucianism. Confucianism places great emphasis on effort and will-power in a student's pursuit of academic achievement (Tam, 2016). Such beliefs may have an influence on students' cognitions and self-definitions in relation to their academic learning and achievement. Therefore, to capture the 'total' meaning of the construct of academic self-concept, consideration of both the universal as well as cultural-specific meanings of the construct is necessary. In considering the cultural influence on students' perception of learning and achievement, it seems

appropriate to conceptualise academic self-concept as having two components. Thus, academic self-concept in this study is operationally defined as a student's perceived academic competence; and their commitment to, and involvement and interest in achievement, as measured by self-ratings of academic confidence and academic effort (Liu et al., 2005; Liu & Wang, 2005, 2008).

Summary of Self Research

Overall, a student's academic self-concept can significantly impact on their academic performance and subsequent achievement. This relationship has found to be reciprocal and domain-specific, and can be influenced by various factors such as gender, age and developmental trajectories. Given the importance of academic self-concept to academic achievement, it is worthwhile to more closely examine this variable in the New Zealand context. To conceptualise academic self-concept that will encapsulate both universal and cultural-specific meanings, it is operationally defined as having two components, namely; students perceived academic competence as measured via academic confidence, and their commitment to, and willingness to achieve, as measured via academic effort.

Chapter Four: Filial Piety

“Filial Piety is the foundation of all virtues.”

“百善孝為先”

“Bǎi shànxiào wèi xiān”

- *Chinese proverb*

This chapter discusses the achievement success of East Asian learners from a cultural context. Given the strong interdependence between an East Asian student’s sense of self and their family, this chapter will focus on one specific cultural concept; filial piety, and the way in which its conceptualisation contributes to the learning and achievement of East Asian students. Specifically, the impact of filial piety on students’ academic self-concept and subsequent achievement will be examined in two ways: as an obligation and a value and expectation. Finally, in response to the modernisation, immigration and acculturation of our contemporary society, a modern conceptualisation of filial piety will be discussed.

Filial Piety and Family

Confucius (551BC - 489BC) was a revered Chinese philosopher, whose doctrines and teachings of human virtue have influenced the education system and citizens of many East Asian nations, including Japan, Korea, Singapore, and Taiwan (Tam, 2016). While some regional differences may exist, the value system from Confucianism is still likely to be a dominant feature of these societies and may continue to influence the learning environment of students from these parts of the world (Phillipson, 2013; Tan & Yates, 2011).

Within the family and family relationship, one distinctive feature of the East Asian culture is the centrality of the relationship between parents and their children. The most predominant value relating to this family relationship was filial piety (*xiao*); a concept traditionally regarded as *the* cardinal virtue that serves to define the ideal relationship between parent and child, and the family structure (Lieber, Nihira, & Mink, 2004). As practiced in the family, filial piety refers to the emotional and material support children provide to their parents, including respect, love, attendance to their needs, compliance to their wishes, and memorialisation of ancestors (Chen & Wong, 2014). In return, the parents consider the welfare and future of their children of supreme importance. Filial piety emphasises the mutual support and interdependence between family members, where each family member usually feels a strong sense of responsibility and obligation to the family, and

individual success enhances group prestige and status (Liu, Yeh, Wu, Liu, & Yang, 2015). Failure, on the other hand, brings collective disgrace, shame and loss of face (Chao & Tseng, 2002). Overall, the central importance of the family to an East Asian students' identity, values, beliefs, actions and behaviour cannot be understated, and students' social goals are often associated with those such as pleasing parents, repaying parents for their upbringing and honouring one's family (Liu et al., 2015).

Confucius' philosophy on filial piety is extensive, and a full examination of the extent of its influences on all aspects of an East Asian individual's life is beyond the scope of this research. Hence, this review will focus on the key values as instilled through filial piety and its influence specifically on the parent-child relationship and students' perception of learning and achievement that enables academic achievement.

Filial Piety and Achievement

Education is an aspect highly valued within the concept of filial piety (Huang & Gove, 2012). While factors influencing students' ability to succeed academically are many, including gender, socioeconomic status, and teacher-specific variables (Eamon, 2005; Phillipson & Phillipson, 2012; Phillipson & Tse, 2007), the concept of filial piety can be of particular importance to most East Asian families (Marginson, 2011; Shin, 2012).

The influence of filial piety on a student's academic self-concept and subsequent academic achievement can be explained via two main ways. Firstly, filial piety can stem from an obligation from the children that it is within their duty to achieve academic success in order to repay for their parent's upbringing. Secondly, filial piety can be perceived as students' internalisation and integration of parental values and expectations of the importance of high academic achievement that encourages them to achieve.

An obligation. Filial piety considers family as the centre of an individual's life and everyday existence; and within the academic context, students' educational practices and achievement is a family process for many East Asian families (Huang & Gove, 2012, 2015). As previously, discussed, filial piety comprises affective and behavioural principles of how parents and children should interact with each other within a family (Huang & Gove, 2012). These principles describe the obligations and responsibilities of parents to love and care for their children, and help them build their academic success (Chen & Ho, 2012). It is within the parents' role to show their love by offering possible financial, material, and psychological

supporting for achievement, while the children return love by respecting and caring for them, and by obeying to their wishes, and strive for academic excellence (Yeh & Bedford, 2003).

Hence, the academic achievement of East Asian students is often driven by a strong sense of filial obligation to work hard to achieve academic success to meet parental expectations, and to honour and repay their parents' investment and sacrifices involved in their education and upbringing (Tao & Hong, 2000). Several studies have shown that Chinese learners regard attaining academic achievement as their most important duty (Chan, 2008; Chan & Rao, 2009; King, McInerney, & Watkins, 2010, 2013; Wang, Slaney, & Rice, 2007); this along with respecting for the authority of parents, and the willingness to make sacrifices for the family and their parents, was associated with a higher level of academic motivation and subsequent high achievement (Chow & Chu, 2007; Fuligini & Zhang, 2004).

Similarly, findings from diverse immigrant families also share a common sense of family obligation that partially accounts for their significant level of academic motivation and achievement than students with native-born parents (Fuligni, Witkow, & Garcias, 2005; Tseng, 2004). In New Zealand, even though most studies conducted has been focusing on filial piety in older East Asian immigrants, and less so on those of younger generations, it has been speculated that the younger East Asian generation keeps to some of the traditional formalities, showing higher levels of filial obedience to their parents (Ng, Loong, Liu, & Weatherall, 2000). This suggests that elements of filial piety may still play an important part in the lives of many East Asian students living in New Zealand.

Value and expectations. The educational values and expectations as advocated by filial piety can shape parents' behaviour, disciplinary actions, and interactions with their children (Chen & Ho, 2012). These parenting practices enable the transference and internalisation of parental values and beliefs in relation to achievement to their children. Parental influence on their children's academic achievement may start as early as the kindergarten years (Froiland, Peterson, & Davidson, 2013), with positive effects on students' academic success continue into young adulthood (Faas, Benson, & Kaestle, 2013; Gordon & Cui, 2012). Research has found that filial piety variables, as related to the importance of education, positive attitudes towards school, and beliefs regarding effort, are crucial contributing factors to East Asian students' academic success (Hsin & Xie, 2014; Yamamoto & Holloway, 2010).

Parental expectations have two important functions in their children's academic achievement. First, it can act as a predictor of achievement success. Research demonstrates a positive relationship between parental expectations and children's academic achievement, where the higher the parent's predicted or anticipated academic attainment, the higher their children's academic achievement (Goldenberg, Gallimore, Reese, & Garnier, 2001; Neuenschwander, Vida, Garrett, & Eccles, 2007; Stern, 2007). Conversely, lower parental expectations lead to lower achievement (Phillipson & Phillipson, 2007). This association was found to be stronger for intermediate and secondary school students than when they were very young or much older (Ji, Jiao, & Jing, 1993).

East Asian parents generally set high standards for their children's academic performance, and instil in them the values and beliefs of the importance of high academic achievement (Child Trends Data Bank, 2015). These have been found to be a significant predictor in East Asian students' high academic achievement (Chao, 2000). Similarly, research shows East Asian immigrant parents in New Zealand place much more value on their children's academic performance and see high academic attainment as a catapult for future economic and social success (Guo, 2005; Hedges, 2003; Liao, 2007). These parents may continue to uphold their Confucian cultural values, and pursue academic learning for their children, while Western parents tend to follow play and child-centered teaching techniques (Simpson & Turner, 2000). High parental expectations also encourage greater parental involvement and investment in their children's education, such as monitoring homework (Hill & Tyson, 2009), employing tutors (Kim & Sherraden, 2011), and controlling and restricting their children's after-school activities (Witkow & Fuligni, 2011), which all contribute to East Asian students' academic successes.

Secondly, parental expectation can impact on a student's subjective interpretation of their academic self-concept and subsequent academic performance (Phillipson & Phillipson, 2012; Yamamoto & Holloway, 2010). Filial piety's emphasis on family-connectedness means East Asian learners rely a great deal on their families to strengthen their perceptions of themselves, particularly in relation to academic achievement (Hsin & Xie, 2014; Li & Yue, 2004). From as early as the primary school years, East Asian parents encourage their children to believe that they can succeed in life through persistent effort and hard work (Fong & Yuen, 2015). Therefore, parental involvement in children's learning may increase their academic self-concept (see conceptual model in Figure 5); as such involvement is perceived as a

supportive resource that encourages them to feel that they can achieve (Chen, & Ho, 2012). The feeling that one is socially and emotionally connected to their family, are crucial factors facilitating East Asian learners' internalisation of parental achievement values and expectations (Jeyne, 2005), fuelling their confidence in spending time and effort on their academic work and exercising their academic skills, ensuring a high level of achievement (Yuen et al., 2010). However, the importance of parental support towards students' education is not unique to East Asia (Kim & Park, 2005). Similarly, socialisation practices and emphasis on achievement in Finland closely parallel those values found in East Asia, which may be partially responsible for Finnish students' achievement success (Helgesen & Kim, 2002).

Overall, the close-knit connections between children and their parents as postulated in filial piety can influence on East Asian students' academic performances. East Asian students can strive for academic achievement to repay their parents for the love, care and support they have received. It also underpins the process of mediation where children may internalise much of their parents' values and expectations that influence their own motivation and attitudes toward school ultimately creating a lasting positive impact on their academic success.

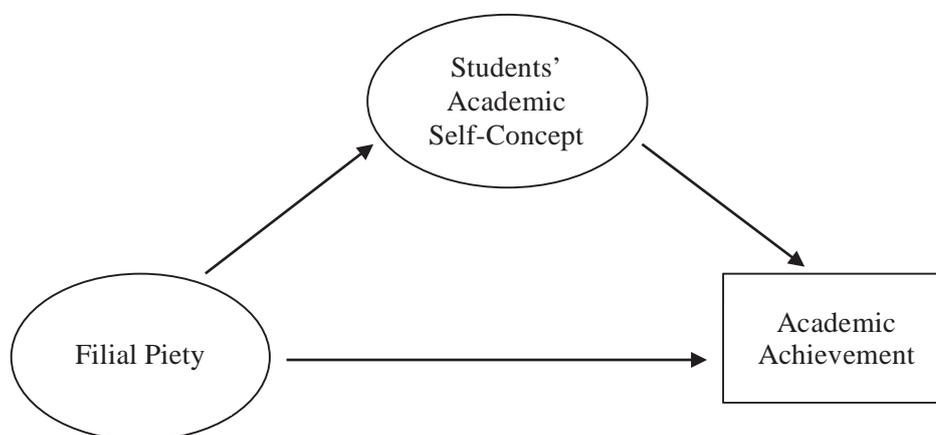


Figure 5. Conceptualisation of the relationship between filial piety on students' academic self-concept and subsequent achievement.

Filial Piety, Modernisation and Immigration

Despite such traditions, filial piety has become a complex and constantly evolving concept for individuals of East Asian nations due to rapid economic expansions and pressures of modern life (Li, Hodgetts, Ho, & Stolte, 2010). Although research indicate that filial beliefs and practices remain salient and important to today's East Asian societies, these

values are changing as a function of globalisation and modernisation in these nations (Chen, Wu & Yeh, 2016; Cheung & Kwan, 2009; Chow, 2001; Lan, 2002; Liu, Li & Huang, 2011; Yeh & Bedford, 2003). The values of self-expression, freedom, and individuality that characterise Western society have gradually become common among the younger generations of East Asian students (Liu, 2013).

Changes in filial belief can be particularly noticeable for East Asian immigrants migrating to a Western society, as Western values, beliefs and cultural practices often differ from those of Eastern cultures (Lieber et al., 2004). A process unique to immigration that needs to be considered for students and families of immigrant backgrounds is acculturation. This refers to “the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members.” (Berry, 2005, p. 698). The literature suggests that acculturation can be a selective process; while some East Asian families may choose to become more acculturated and align their child-rearing practices with those of Western practices, other parents may wish to continue to respect their cultural roots and practice their cultural traditions without the wholesale adoption of Western practices (Lan, 2002; Liu et al., 2000). The younger generations tend to acculturate to the norms, values, and language of the adoptive culture more quickly than older generations (Gee, Liu, & Ng, 2002), and becomes further removed from their traditional Asian beliefs and practices with each immigrant generation (Phinney, Horenczyk, Liebkind, & Vedder, 2001). Other factors such as gender, the length of residence, and the number of generations residing in the host society have all been shown to impact the process of acculturation (Dow, 2010; Lieber et al., 2004).

Overall, the processes of acculturation that affects an immigrant student’s extent of internalisation and integration of Eastern and Western achievement values and beliefs can differ between individuals. New Zealand provides an interesting exploratory case for investigating filial piety among immigrant Asian populations. Therefore, a modern conceptualisation of filial piety that has evolved in the lives of East Asian individuals and families will be used in this study.

Duality of Filial Piety

In response to the changing beliefs and practices of filial piety, Yeh (2003) has developed a dual filial piety model based on the mixed characteristics of modernity and tradition in the present East Asian society. This model includes two filial factors: reciprocal filial piety and authoritarian filial piety.

Reciprocal filial piety is defined as the affection-based gratitude and respect children have for their parents' efforts and sacrifices in raising and caring for them (Yeh, Yi, Tsao, & Wan, 2013). Reciprocal filial piety behaviours include respecting and attending to one's parents, caring for them when they are elderly, and honouring them when they pass away. In contrast, authoritarian filial piety refers to the relationship hierarchies and role obligations that expect the unquestioning obedience of children to absolute parental authority, including their demands and expectations. Authoritarian filial piety behaviour includes subjugating one's own wishes to those of one's parents, and feeling obligated to maintain the reputation of the family (Yeh et al., 2013).

Given the strong role of family membership within the Confucian cultural context, cultural values related to learning and achievement may be more easily influenced by the quality of parent-child relationships and parental practices. Research suggests certain types of parent-child relationships or interaction patterns can strengthen or restrain a child's internalisation of their parent's beliefs (Gonzalez-Pienda et al., 2002; Marchant et al., 2001). Students who perceive a stronger connectedness to their parents are more likely to internalise the educational values held within the family (Asakawa & Csikszentmihalyi, 2000).

Reciprocal and authoritarian filial piety reflect contrasting parent-child relationships and have differing effects on children's academic self-concept and subsequent achievement. These types of filial piety may indicate the quality of the parent-child relationship that strengthen or weaken a student's internalisation of their parents' values, and subsequently influence their own academic beliefs and academic achievement. Chen and Ho (2012) found that for students who rated high in reciprocal filial piety, perceived parental involvement is linked to positive academic outcomes via increased academic self-concept. A child with high reciprocal filial piety is more likely to perceive the parent-child relationship as a close-knit bond based on mutual love and care. This enables their greater readiness to internalise their parents' values as their own (for example, their motivation and attitude to school), due to trust and respect. High parental aspirations and expectations are thus perceived by the

students as care and support, and a sign of parents' confidence in their abilities. This in turn motivates the student to succeed in school.

Conversely, there is no internalisation of parental values and expectations for students who rated high in authoritarian filial piety (Chen & Ho, 2012). Since the parent-child relationship in authoritarian filial piety is a connection based on obligation and hierarchy, these students may simply obey their parents' requests due to parental authority without making positive interpretation of the parental involvement (Yeh, 2006). Thus, authoritarian filial piety may contribute little to their academic beliefs and academic achievement. For these students, high parental expectations and aspirations are interpreted as interfering with learning, indicating worry and concern on the part of the parents, which then burdens and pressures the students, undermining their academic success (Liu, 2013). In contrast, therefore, authoritarian filial piety may lack the emotional and effective bonding to constitute a positive academic self-concept that motivates a child to succeed academically.

Overall, East Asian students' academic excellence may be a socialisation outcome that is strongly related to their close-knit connections with their parents. Filial piety is a Confucian practice that shows such a close connection.

Intermediate School Context

In considering the effects of filial piety on an East Asian student's academic self-concept and subsequent academic performance, early adolescence and entry into intermediate school also reflects change at multiple levels, including biological and cognitive growth, social development and the renegotiation of parent-adolescent relationships (Grolnick, Price, Beiswenger, & Sauck, 2007; Keating, 2004). These developmental and contextual changes have inevitable effect on a student's academic self-concept that may impacts on their learning and achievement.

Early adolescence is marked by dramatic development of the conceptualisation of the self as an autonomous and efficacious individual. In conjunction with this, increase in adolescents' cognitive growth allows them to consider multiple dimensions of problems simultaneously (Keating, 2004), anticipate consequences of their actions (Halpern-Felsher, & Cauffman, 2001), and to learn from their success and failures (Byrnes, Miller, & Reynolds, 1999). These abilities enable them to play a more active role in their education and

educational decisions, such as increased ability to make subjects decisions and forming achievement goals and aspirations, thereby requiring less direct parental involvement (Hill & Tyson, 2009). Thus, parent-adolescent relationships undergo a transformation and renegotiation as the relationship becomes less hierarchical and is characterised more by bidirectional communication (Collins & Laursen, 2004; Steinberg & Silk, 2002).

School-specific changes may also impact on students' self-understanding, and further undermine the parent's ability to be effectively involved in the education of their adolescent. As students transition from primary to intermediate schools, they are introduced to a larger social comparison group, a greater emphasis on grades and competition, and an overall larger, less personal environment (Britner & Pajares, 2006). This shift often result in many early adolescents struggling to re-establish their sense of self, and re-evaluating their academic self-beliefs (Bandura, 1997). Moreover, intermediate schools often consist of more complex bureaucratic school system, with many more teachers and curricular choices, making it difficult for teachers and parents to develop and maintain productive relationships with each other (Hill & Chao, 2009; Hill & Taylor, 2004). In consideration of such changes, the amount and type of parent involvement in their children's education is reduced, and becomes more indirect in the form of academic socialisation (Hill & Tyson, 2009; Seginer, 2006). This may entail parents communicating their expectations for education through linking schoolwork to current events, fostering educational and occupational aspirations, and discussing learning strategies with their children.

Overall, the early adolescent is a critical time to examine how shifts in their immediate environment and developmental milestones enable changes to their perceptions of themselves as a student and a family member, and whether such influences impact on their academic achievement.

Summary of Literature Review

While a student's academic self-concept can have a profound effect on their subsequent academic achievement; culture can mediate this process. The cultural values, beliefs and norms of practices can have a considerable impact on how students perceive themselves as learners and their academic achievement. For most East Asian students, the significance of the parent-child relationship, as depicted by notions of filial piety, can highly impact on their extent of internalising and integrating the values of achievement success, and

in doing so, fulfils their filial duty to repay for their parent's upbringing. These filial beliefs and understanding of the self can change as students grow and develop, and as they transition from primary to intermediate school.

Given the relationship between filial piety, academic self-concept and students' academic achievement, this study seeks to examine the predictive value of these variables on a group of intermediate school students to address the notable gaps in the existing literature on academic self-concept. Existing research on academic self-concept and its effect on students' academic achievement largely focuses on Western participants in Western contexts. The absence of any specific New Zealand research investigating these concepts create a necessity to begin such exploration and examine their influence on students' achievement. Based on the current literature on academic self-concept, it is possible that East Asian students' academic self-concept could be influenced by their Confucian cultural and familial values. Therefore, examining specific elements crucial within the Confucian philosophy will help us to better understand how they are influential to East Asian students' academic performance. In drawing upon the above arguments, the following hypotheses (H) are identified as needing investigation:

H₁: "Students' level of filial piety has a positive relationship with their academic self-concept and academic achievement"

H₂: "Ethnicity has an influence between filial piety and academic achievement"

H₃: "Students with high filial piety will be positively related to their academic self-concept"

H₄: "Students with high filial piety will be positively related to their academic achievement"

H₅: "Students' academic self-concept has a positive relationship with their academic achievement"

In order to test these hypotheses, it is important to identify a student population and compare their level of filial piety belief and academic self-concept against their academic achievement. The method used to collect this information is discussed in more detail in the next chapter.

Chapter Five: Methodology

“Is it not pleasant to learn with a constant perseverance and application?”

“學而時習之，不亦說乎？”

“Xué ér shí xí zhī, bù yì shuō hū?”

- Confucius

To explore the relationship between filial piety, academic self-concept, and academic achievement, a group of students attending a school in New Zealand was recruited. This follows the current trend of including students' cultural influences in the conceptualisation of academic self-concept and academic achievement, and addresses the current lack of research on this topic.

A cross-sectional quasi-experimental framework was selected and considered to be an effective means of determining the relationship between the independent variables: filial piety, academic self-concept, and the dependent variable: academic achievement.

Research Design and Rationale

Studies have shown that culture has a profound impact on an individual's values, beliefs, and behaviour (Phillipson, 2013). With the recent influx of Asian migrants, New Zealand provides an ideal setting within which to raise awareness and to conduct further research on the influence of culture on students' academic self-concept and achievement. Given the paucity of research on Auckland's ethnically diverse Asian population, this research aims to extend the scope of the literature towards the New Zealand student population.

While the theory of filial piety is of Chinese origin, it is not exclusive to nor a unique feature of the Chinese culture and East Asian countries. Instead, research shows that filial piety (defined in its simplest form as love and respect for one's parents), is present in all cultures, albeit to differing extents and with varying forms of expression (Gallois et al., 1996; Poškaitė, 2014). Hence, the concept of filial piety is transferable to individuals from diverse cultural backgrounds, including those of Western ethnicities.

A quantitative research methodology was employed given the majority of the literature to date that examines constructs of filial piety, academic self-concept, and academic achievement has used a quantitative methodology of self-reported surveys (Chen, 2015; Chen

& Ho, 2012; Chen & Wong, 2014, 2015; Hui et al., 2011). These surveys often consist of various scales of filial piety and academic self-concept, and participants' responses are analysed against their academic achievement. Furthermore, a particular aim of this study has been to determine a relationship between the filial piety of New Zealand students and their academic self-concept and achievement, and as such, a quantitative method allows these constructs to be objectively measured and controlled for (Williams, 2007). Finally, this methodology was specifically requested by participating schools in order to minimise student-school disruption and associated staff administrative burdens.

Data was collected using a self-reporting survey. The survey was created using two pre-existing closed-ended item scales designed to address constructs of filial piety and academic self-concept. Participants answered questions regarding their perceptions of themselves as students and family members. Data collected was analysed using Statistical Package for the Social Sciences (SPSS) software package (IBM Statistics Version 23). This software was chosen because it simplifies the analytical process as it prepares, organizes, and formats the data with greater accuracy and precision.

Research Design

Survey methodology. The survey was constructed based on extensive research and a review of the available scales in measuring filial piety and academic self-concept. The scales selected, in collaboration with the researcher's supervisors, were deemed to be the most appropriate in addressing the aims and research questions of this study. The survey would be distributed in hard copies. Research suggests surveys administered on paper are much more likely to yield higher response rates in comparison to other forms such as online surveys (Manfreda, Bosnjak, Berzelak, Haas, & Vehovar, 2008). Face-to-face survey administration often creates greater encouragement as the researcher can gently motivate individuals to participate and/or to continue completing a survey, which is much harder to achieve online (Sax, Gilmartin, & Bryant, 2003).

The survey was divided into three main sections. The first section collected participants' demographic information, including their name, age, gender, year level at school, ethnicity, length of residency, and family member composition at home. The second section collected participants' perceptions of themselves as a family member, and their attitudes and behaviour towards their parents. The final section collected participants' perceptions of

themselves as a school student, and towards their academic achievement and schoolwork. Apart from the demographic information section, all items were closed-ended, Likert-scale questions. This helped to streamline the questions in order to reduce participant response fatigue due to writing demands, and allowed data to be more easily analysed. A copy of the survey is provided in Appendix A.

Setting

This study was originally planned to be conducted in a decile 10 school catering for students aged 11 to 14 (School A). However, due to last-minute logistical constraints, School A could not follow through with the study. A substitute school, School B, with comparable age and ethnic composition, was recruited. All subsequent data collection and analysis were responses collected from participants in School B only, with the number of participants being lower than anticipated.

School B is a decile 10 co-educational intermediate school in Auckland, with approximately 1,200 students currently enrolled in Years 7 to 8. According to the Education Review Office report (ERO), over half of the school roll is of New Zealand European ethnicity, and a sizeable East Asian student population of approximately 25%, consisting of mostly Korean and Chinese students (ERO, 2015). The school has general teaching classrooms and specialised classrooms such as technology rooms, art studios, and music rooms. Staff and programmes are specifically allocated to accommodate for the schooling and pastoral care needs for students of different nationalities and cultures, such as the English for Speakers of Other Languages programmes, and the international office (ERO, 2015).

Participants

Convenience sampling was used in this research, and School B was selected due to practicality and accessibility. School B expressed interest in participating, which allowed for more efficient communication and greater school buy-in, with the researcher situated at close proximity. It was anticipated that up to 60 students would be involved in the research. This choice in the number of participants was made in order to provide meaningful quantitative analysis. Furthermore, as this research was exploratory, the aim was to collect enough data to establish a possible correlation between the variables. However, this was not possible due to a low rate of parent consent forms being returned, with a total of 43 participants eventually recruited. Following discussions with the researcher's supervisors, it was deemed a

reasonable number for the purpose of a Master's thesis. Additionally, time was limited, with a constraint to complete the research within one year.

Inclusion criteria. The initial criteria for inclusion in this study were for intermediate school students of East Asian ethnicities. The criteria for ethnically "Asian" were identified via the school's enrolment information as "Asian", including, but not limited to Chinese, Korean, Japanese, and Taiwanese students. Due to the low East Asian participant response rate, these criteria were later expanded to include students from any ethnicity willing to participate. Hence, the final cohort consisted of participants from other ethnicities too, including New Zealand European, Māori, and Pacific Islanders.

Ethical Considerations

The sample participants for this study were children under 15 years-old, considered to be a "vulnerable group" (Massey University, 2015). Attention was given in creating and modifying the survey question to minimise the risk of harm for them. A particular item was: "Attend parents' funeral no matter how far away I live." Due to the sensitive nature of the topics such as deaths and funerals, this phrase had the potential to cause emotional distress to the participants. Hence, it was rephrased as "I would attend an important family gathering if my parents asked me no matter how far away I lived", which carried a similar meaning in relation to the importance of attending to parents' needs without referring to death and dying. Moreover, participants were clearly informed that no question in the survey was compulsory to answer, and they were encouraged to talk to a school counsellor should they experience any emotional distress after completing the survey.

A student pastoral care advisor from Massey University was consulted to ensure that filial piety was presented in a culturally sensitive manner in the survey. The advisor stated that conducting the survey in English may confuse and cause stress for Asian students for whom English is most often a second language. Great care was taken to ensure clear instructions and an extensive explanation of the survey's purpose was provided in order to maximise participants' understanding and to minimise potential stress for them. For Māori and Pacific Island participants, the researcher's secondary supervisor provided support to ensure the survey was culturally sensitive to them.

This study was reviewed and approved by the Massey University Human Ethics Committee; Northern, Application 16/25. See Appendix B for approval letter. Additional ethics amendments were applied for and will be further discussed in later sections.

Recruitment

A meeting was held between the School B principal, the research liaison staff, and the researcher to discuss the nature of the research, the participatory procedure, and any benefits the research may provide to the school. Potential concerns for the project were also raised, and means by which to address them were also extensively discussed. Broad efforts were made to involve the principal in the planning and development of this research; including the logistical processes of data distribution and collection, and ways to collate survey responses with participants' academic achievement. Following this meeting, the written consent of the school to conduct research with the students and to access their achievement record database was obtained. The researcher then provided the school with parent and student consent forms, with the school responsible for identifying participants and sending the forms home with the students. The school information and consent form are provided in Appendix C, and consent form for access to participants' achievement record is provided in Appendix D.

Due to the low number of returned consent forms, the researcher decided to encourage participation by using incentives. In this case, participants could enter a draw to win one of five Westfield gift vouchers. See Appendix E for the Ethics Amendment approval letters. Parent and student consent forms were also updated to include these changes, see Appendix F and G for finalised versions. Literature shows that research protocols that include incentives, specifically in a monetary form, exerts a greater positive influence on individuals' participation decisions than those without an incentive feature (Fan & Yan, 2010; Hohwü et al., 2013). The researcher also attended the school assembly to present her research and to distribute consent forms. All additional attempts to encourage participation yielded approximately 30 more responses within a recruitment span of eight weeks.

Instruments

Dual Filial Piety Scale. Yeh's (2003) Dual Filial Piety Scale (DFPS) was used to measure students' beliefs about filial piety, that is, how they believe they should treat their parents. The scale consists of 16 items on a 6-point Likert scale. Participants respond by indicating how important they thought it was to act in accordance with the scale's statements;

from 1 (extremely unimportant) to 6 (extremely important). See Appendix H for the author's permission to use the scale.

Within the scale, eight items, in odd numbers; assessed participants' reciprocal filial piety beliefs, for example, "I am thankful to my parents for raising me." The other eight items, in even numbers; assessed participants' authoritarian filial piety beliefs, for example, "I would ignore promises to friends in order to obey my parents."

Instructions and item statements were modified slightly as the original form was developed for use by adult respondents, and were hence unsuitable for students (Chen, Chiu, & Wang, 2015). Apart from item 13 that was rephrased due to concerns of causing potential emotional distress for the participants, other items were rephrased to better reflect the participants' reading age. For example; "I am *grateful* to my parents for raising me" was rephrased to, "I am *thankful* to my parents for raising me", and "I would take the initiative to assist my parents when they are busy" was rephrased to, "I would help my parents when they are busy without them asking first."

Some items were rephrased to reflect the developmental stages of participants. These include, "I will let my *income* be *handled* by my parents before marriage." was rephrased to: "*When I get a job*, I will let my parents *look after* my money"; "I will avoid getting married to someone my parents dislike" was rephrased to, "*If and when I get married*, I will avoid marrying someone my parents dislike", and, "A wife will live with the husband's parents when a couple is married" was rephrased to, "If and when I get married, I will live with my husband or wife's parents."

Items rephrased for grammatical reasons were, "*Be* concerned about my parents' health" was rephrased to, "*I am* concerned about my parents' health", "*I will take* my parents' suggestion even when I do not agree with them" was rephrased to, "*I listen* to my parents' suggestions even when I do not agree with them", and "*Give up* my aspirations to meet my parents' expectations" was rephrased to, "*I would* give up my aspirations to meet my parents' expectations."

Other items were rephrased for a combination of the reasons outlined above, for example, "I will have at least one son for the succession of the family name" was rephrased to, "*If and when I get married*, I will have at least one son to *carry on* the family name."

Crosschecking was conducted by the researcher and her supervisors to ensure the content validity of the rephrased items.

Development of the DFPS. This scale was initially developed as a 50-item scale with four filial piety factors based on historical content analysis of various Confucian classics, analects, and quotations on filial piety (Yang, 1999; Yang, Yeh, & Huang, 1989). Confirmatory factor analysis extracted two distinctive super factors: reciprocity and authoritarianism, which became the fundamental values underlying the current filial piety concept (Yeh, 1997). The DFPS is one of the most widely used tools for measuring filial piety in the contemporary context with research conducted across China (Yeh et al., 2013), Taiwan (Chen & Ho, 2012), and Hong Kong (Chen, 2015; Hui et al., 2011), with intermediate and secondary school students (Chen & Ho, 2012; Chow & Chu, 2007; Hui et al., 2011), and university students (Chen, 2015; Chen & Ho, 2012).

Scoring. The scale takes approximately five to 10 minutes to complete. Participants' scores are totalled to provide an overall filial piety score, and two subscale scores of reciprocal and authoritarian filial piety. The range of the sum of each aspect of filial piety is from 8 to 48. The mean scores for each subscale are calculated by totalling the scores from their respective items and dividing by eight. Individuals with a mean score over 3.5 (28 sum score) are slightly high, 4.5 (36 sum score) are moderately high, and 5.5 (44 sum score) is extremely high within the respective subscales. Participants who scored high on both filial piety measures were designated as *absolute filial types*. Those who scored high on reciprocal and low on authoritarian filial piety were designated as *reciprocal types*. Those who scored high on authoritarian and low on reciprocal filial piety were designated as *authoritarian types*, and those who scored below the mean on both measures were designated as *non-filial types*.

Psychometric properties. The DFPS has been empirically supported as a valid measure used to investigate filial beliefs across countries (Yeh, 2009; Yeh & Bedford, 2003). Past research has reported satisfactory validity and reliability of the scale (Chen et al., 2016; Yeh et al., 2013). Internal consistency analysis for this study has yielded Cronbach's alpha at $\alpha = 0.839$ for overall filial piety scale, reciprocal filial piety subscale at $\alpha = 0.853$, and authoritarian filial piety subscale at $\alpha = 0.728$, showing reasonable internal consistency. Overall, the DFPS shows satisfactory validity and reliability properties in its ability to measure both the overall and dual nature of filial piety. Its brevity makes it well suited for the

participants of this study, and its domains adequately correlate with the current definition of filial piety.

Academic Self-Concept Scale. The Academic Self-Concept Scale (ASCS) as developed by Liu and Wang (2005) was used to measure students' academic self-concept; how they feel about their schoolwork and their academic ability. The scale consists of 19 items on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). See Appendix I for the author's permission to use the scale.

The ASCS comprises two subscales: academic confidence (nine items) and academic effort (10 items). The academic confidence subscale assessed students' feelings and perceptions about their academic competence, for example, "I am good in most of my school subjects." The academic effort subscale assessed students' commitment to, involvement and interest in schoolwork, for example, "I study hard for my tests." No alterations were made to these items. The scale included both negatively- and positively-worded items arranged randomly to minimise response bias of acquiescence and social desirability, where participants respond favourably or unfavourably to all items.

Development of the ASCS. The ASCS was developed with reference to Battle's (1981) *Academic Self-esteem Subscale*, Marsh, Relich and Smith's (1983) *School Subjects Self-Concept Scale*, and Quek's (1988) *Academic Self-Concept Scale*. The original ASCS comprised of a total of 20 items with two 10-item subscales, however previous research discovered that one item had an unacceptably low factor loading while establishing the psychometric properties of the scale, thus the item was excluded, resulting in the finalised 19 items (Liu et al., 2005).

The scale has been used with a range of participants, from primary (Tan & Yates, 2007), secondary (Liu & Wang, 2008) to university students (Kirmizi, 2015; Liu et al., 2005; Matovu, 2012, 2014) across a number of countries, including Taiwan (Liu, 2009, 2010), Singapore (Liu & Wang, 2005; Liu et al., 2005), Vietnam (Yorke, 2013), Thailand (Kaba & Talek, 2015) and Malaysia (Matovu, 2012).

Scoring. The scale takes approximately five to 10 minutes to complete. It is scored by averaging the responses; mean scores are calculated for overall academic self-concept and the two subscales for each participant. The mean score for overall academic self-concept is

calculated by summing the scores from all items and dividing by 19. The range of the sum for the subscales is 9 to 81 for academic confidence, and 10 to 90 for academic effort. The mean scores for each subscale are calculated by totalling the scores from their respective items and dividing by nine for academic confidence, and by 10 for academic effort. Participants' mean scores were used for data analyses, with the higher the mean score, the higher the overall academic self-concept, academic confidence, and academic effort.

Psychometric properties. Previous empirical research shows satisfactory validity and reliability for ASCS (Liu et al., 2005; Liu & Wang, 2008). A validation analysis for this study shows that the Cronbach's alpha coefficients for ASCS and its sub-constructs of academic confidence and academic effort had satisfactory internal consistencies at $\alpha = 0.888$, 0.779, and 0.793, respectively.

Overall, the ASCS is an appropriate measure for use in this study as it has been modified and deemed appropriate for the developmental age of the sample population, and has demonstrated sufficient psychometric strength for a valid and reliable measure (Liu et al., 2005; Liu & Wang, 2008). Furthermore, the scale's relatively small number of items and straightforward response requirement made it easy to administer, and minimised the amount of effort required for participants to complete the survey.

Academic Achievement

Academic achievement was operationalised via school records in the subject areas of Literacy (English) and Numeracy (mathematics). School B's achievement records were reported according to the e-assessment Tools for Teaching and learning (e-asTTle) reporting guideline (Ministry of Education, 2012). The e-asTTle is a standardised assessment tool used in New Zealand schools for assessing and reporting student performance in reading, writing and mathematics. Reporting of students' achievement is criterion-referenced to the National Standard Achievement Levels one to six (Turner, Rubie-Davis, & Webber, 2015). For Year 7 to 8 students, their achievements are categorized according to Achievement Levels three to five, and are grouped into three performance bands of Beginning, Proficient, or Advanced (B, P, A) in relation to their Achievement level (Ministry of Education, 2013). This record allows teachers to determine whether or not students' achievement is above the National Standard, at the Standard, below the Standard, or well below the Standard. For example, a Year 7 student performing at an Achievement level of "4B" (level 4, Beginning) is reported to be performing

At the Standard. Table 1 provides the overall Achievement Levels for Year 7 to 8 students, and how they are coded in SPSS.

Table 1.
Year 7 and 8 Students' National Standard Achievement Level and their Categorical Output for SPSS.

National Standard Achievement Level	3B	3P	3A	4B	4P	4A	5B+
Year 7	Well Below	Below	Below	At	At	Above	Above
SPSS Input	1	2		3		4	
Year 8	Well Below	Well Below	Below	Below	At	At	Above
SPSS Input	1		2		3		4

The National Standard Achievement Level between Year 7 and Year 8 can overlap and create confusion during SPSS input, for example a Year 7 student with an achievement level of 4B is considered to be performing “At” their level as is another who is achieving at 4P. Hence, when reporting students’ achievement, results were coded with the same number in order to ensure the statistics were easier to interpret.

Procedure

Data collection. Once all consent forms from participants were collected, the survey was distributed. Before responding to any of the survey items, participants would read a passage of information re-stating the purpose of the research and conditions of participation, emphasising voluntary consent, and research anonymity and confidentiality. To reduce social desirability bias, it was emphasised to the participants that there were no right or wrong answers to the survey questions, and their responses were unique to their perceptions and experiences. Finally, in consideration of the potential language barrier in participants for whom English is their second language, they were encouraged to ask for help and clarification from their peers and teachers. Due to class scheduling conflicts, the time and setting in which participants completed their survey varied during the school hours. For example, some participants completed their survey at a designated classroom, while others completed it in their own classroom. Once all surveys were completed, they were matched with their academic achievement in Literacy and Numeracy subjects. These were then returned to the researcher for analysis.

Chapter Six: Results

“Live and learn”

“活到老 學到老”

“Huó dào lǎo xué dào lǎo”

- *Chinese proverb*

Data Analyses

Raw data from the surveys were entered into SPSS for analysis. Each respondent was allocated a coded numerical value for data entry and subsequent statistical analyses. Categorical variables were entered on a nominal scale, such as participants' demographic information in *male/female* responses. Subjective ratings, from the DFPS and ASCS, were entered as the actual value rated on their respective 6-point and 4-point Likert scales. Participants' academic achievements were entered on a nominal scale from 1 to 4 in their respective Well Below, Below, At, and Above. For the ASCS, negatively scaled items 2, 4, 7, 9, 11, 13, 15, 16, and 19 were re-coded in reverse in order to calculate a meaningful total, and then used in subsequent analyses, for example, participants who answered “4” in item 2 were reverse-scored to 1. After all data were entered and reverse-coded, they were computed into mean scores. This included the DFPS, and subscales of reciprocal and authoritarian filial piety, and the ASCS, and subscales of academic confidence and academic effort.

All participant responses on the ASCS and DFPS were screened for outliers, normality, and missing data. Analyses showed scores for all scales were normally distributed. Missing data on participants' surveys for a particular scale resulted in responses for that measure being excluded from subsequent analyses.

A number of analyses were conducted in order to test the study hypotheses. Firstly, Bivariate Pearson's product-moment correlation coefficient (r) analyses were used to examine the strength and direction of the relationship between participants' filial piety, academic self-concept and academic achievement. Next, Standard and Hierarchical multiple regression analyses were conducted to determine the amount of variance in academic achievement that could be explained by filial piety and academic self-concept.

Participants

Descriptive statistics were used in order to examine the demographic profile of participants. An overview of the demographic analysis of participants is presented in Table 2. There were a total of 43 responses to the survey. The majority of respondents were female (84%). The mean age of participants was 11 years old ($M = 11.67$), with over half in Year 7 (63%). Just under half of participants were of New Zealand European ethnicity (49%), and a quarter of them were of East Asian ethnicity (25%). For those respondents who were not born in New Zealand (49%), the length of residence ranged from between 6 to 11 years with a mean of 7.5 years ($SD = 3.3$). Due to the small sample size, statistical power was a concern for the majority of the analyses.

Table 2.
Demographic Information of Participants

		Frequency	%
Year Level	7	27	63%
	8	16	37%
Age	11	19	44%
	12	19	44%
	13	5	12%
Gender	Male	7	16%
	Female	36	84%
Ethnicities	New Zealand European	21	49%
	European	3	7%
	Chinese	7	16%
	Taiwanese	1	2%
	Korean	3	7%
	Indian	2	5%
	Māori	2	5%
	Pacific Island	1	2%
Family Composition*	Other	3	7%
	Parents	42	97%
	Siblings	37	86%
	Grandparents	6	14%
	Others	1	2%
Musical Instrument	Yes	20	47%
	No	23	53%
Sports Participation	Yes	32	74%
	No	11	26%
Extra Support	Yes	14	33%
	No	29	67%
Cultural Pride	Yes	43	100%
	No	0	0%

*Due to the nature of participants having multiple family members living in the same house, these figures will overlap and not provide a sum of 100%.

The mean scores and standard deviations of filial piety, academic self-concept and academic achievement scale and subscales by year level are shown in Table 3.

Table 3.
Filial Piety, Academic Self-Concept, and Academic Achievement Mean Scores and Standard Deviations

	Year 7		Year 8	
	Mean	SD	Mean	SD
Reciprocal Filial Piety	4.94	0.74	5.07	0.56
Authoritarian Filial Piety	3.87	0.83	3.67	0.57
Overall Filial Piety	4.41	0.70	4.37	0.42
Academic Confidence Subscale	3.08	0.49	3.11	0.41
Academic Effort Subscale	3.10	0.45	3.18	0.53
Overall Academic Self-Concept	3.08	0.44	3.14	0.45
Literacy Achievement	3.00	0.88	3.43	0.63
Numeracy Achievement	2.48	0.97	3.25	0.68

For filial piety, the mean scores for overall filial piety and authoritarian filial piety score were higher for Year 7 students ($M = 3.87$, $SD = 0.83$; $M = 4.41$, $SD = 0.70$) than Year 8 ($M = 3.67$, $SD = 0.57$; $M = 4.37$, $SD = 0.42$), with the exception of reciprocal filial piety (Year 7: $M = 4.94$, $SD = 0.74$, Year 8: $M = 5.07$, $SD = 0.56$).

For academic self-concept, Year 8 participants had higher mean scores in their academic self-concept ($M = 3.14$, $SD = 0.45$) and subscales (Academic Confidence: $M = 3.11$, $SD = 0.41$; Academic Effort: $M = 3.18$, $SD = 0.53$) in comparison to Year 7 participants (Academic Self-Concept Total: $M = 3.08$, $SD = 0.44$; Academic Confidence: $M = 3.06$, $SD = 0.49$; Academic Effort: $M = 3.10$, $SD = 0.45$; Literacy: $M = 3.00$, $SD = 0.88$; Numeracy: $M = 2.48$, $SD = 0.97$).

For academic achievement, Year 8 participants had higher levels of achievement in Literacy ($M = 3.43$, $SD = 0.63$) and Numeracy ($M = 3.25$, $SD = 0.68$) than Year 7 students (Literacy: $M = 3.00$, $SD = 0.88$; Numeracy: $M = 2.48$, $SD = 0.97$).

Bivariate Correlation

To examine the strength and direction of the relationship between students' academic self-concept and their academic achievement, a bivariate Pearson's product-moment correlation coefficient (r) was calculated. Prior to calculating r , the assumption of normality, linearity, and homoscedasticity were assessed, and found to be supported. A non-significant Shapiro-Wilk (W) statistic of $P < 0.05$ indicated the normality assumption was not violated, and a normal Q-Q and detrended normal Q-Q plots for each variable confirmed they were normally distributed. Similarly, visually inspecting scatterplots of academic self-concept and academic achievement across both year levels confirmed the relationship between these variables were linear and heteroscedastic.

Academic self-concept and achievement. For Year 7 participants, analyses showed that there was a significant, positive correlation between their academic self-concept and their levels of Literacy, $r(25) = 0.68$, $p < 0.001$, and Numeracy achievement, $r(25) = 0.61$, $p = 0.001$.

Similarly, there was a significant, positive correlation between Year 8 participants' academic self-concept and their levels of Literacy, $r(14) = 0.778$, $p < 0.001$, and Numeracy achievement, $r(14) = 0.673$, $p = 0.004$.

Filial piety and achievement. Analyses showed there was a non-significant positive correlation between Year 7 students' overall filial piety and their academic achievements. Further analyses of DFPS subscales showed there was non-significant correlation between Year 7 students' reciprocal and authoritarian filial piety, and their academic achievements.

Likewise, analyses for Year 8 participants showed that there was a non-significant correlation between overall filial piety, reciprocal filial piety, and authoritarian filial piety, and their academic achievements.

Independent Sample *t*-tests

Gender and year level differences. Independent sample *t*-tests were used to examine gender and year level differences in participants' scores. Neither Shapiro-Wilk statistic was significant, indicating that the assumption of normality was not violated. Levene's tests were also non-significant, thus equal variances can be assumed. Finally, a visual inspection of the histograms of the variables further confirmed that each group scores is approximately normally distributed.

Overall analyses showed no significant difference between the gender and year level of participants' ASCS and DFPS scales and subscales scores. For gender, analyses showed female participants obtained statistically non-significant higher scores in overall academic self-concept, overall filial piety, and academic effort than their male counterparts. Male participants obtained higher scores in academic confidence than their female counterparts, albeit statistically non-significant. Across year levels, while Year 8 participants reported higher mean scores for the DFPS and ASCS and its subscales than Year 7 participants, none of them were statistically significant.

Standard Multiple Regression

A standard multiple regression analysis (MRA) was calculated to estimate the proportion of variance in participants' academic achievement that could be explained by scores obtained from the DFPS and ASCS and its subscales.

Prior to interpreting results from the MRA, several assumptions were evaluated. First, stem-and-leaf plots and boxplots indicated each variable in the regression was normally distributed, and free from univariate outliers. Second, inspection of the normal probability plot of standardized residuals, and the scatterplot of standardised residuals against standardised predicted values indicated the assumptions of normality, linearity and homoscedasticity of residuals were met. Third, Mahalanobis distance did not exceed the critical χ^2 for $df = 2$ ($\alpha = 0.001$) of 13.82 for any cases in the data file, indicating that multivariate outliers were of no concern. Finally, high tolerances for all both predictors in the regression model indicated multicollinearity would not interfere with the ability to interpret the outcome of the MRA.

For brevity purposes, Unstandardised (B) and standardised (β) regression coefficients, and squared semi-partial (or 'part') correlations (sr^2) for each predictor (academic self-concept, overall filial piety, reciprocal filial piety and authoritarian filial piety) in the regression model for Year 7 participants are presented in Table 4 at page 45, and for Year 8 participants are presented in Table 5 at page 48.

Year 7 participants.

Overall filial piety, academic self-concept and academic achievement. In combination, the overall filial piety and academic self-concept of Year 7 participants accounted for a significant regression of 49% of the variability in participants' Literacy achievement, $R^2 = 0.492$, adjusted $R^2 = 0.450$, $F(2, 24) = 11.625$, $p < 0.000$, and 39% in Numeracy achievement $R^2 = 0.390$, adjusted $R^2 = 0.339$, $F(2, 24) = 7.672$, $p = 0.002$.

Results found academic self-concept significantly predicted participants' Literacy ($p < 0.000$), and Numeracy ($p = 0.002$) achievement. Overall filial piety did not significantly predict either achievement. Overall, academic self-concept was a significant predictor for academic achievements, while overall filial piety was a non-significant predictor.

Reciprocal filial piety, academic self-concept and academic achievement. In combination, reciprocal filial piety and academic self-concept accounted for a significant regression of 39% of the variability in participants' Literacy achievement, $R^2 = 0.460$, adjusted $R^2 = 0.415$, $F(2, 24) = 10.235$, $p = 0.001$, and Numeracy achievement, $R^2 = 0.394$, adjusted $R^2 = 0.344$, $F(2, 24) = 7.814$, $p = 0.002$.

Results found academic self-concept significantly predicted participants' Literacy ($p = 0.000$) and Numeracy ($p = 0.007$) achievement. Reciprocal filial piety did not significantly predict either achievement. Overall, academic self-concept was a significant predictor for academic achievement, while reciprocal filial piety was a non-significant predictor.

Authoritarian filial piety, academic self-concept and academic achievement. In combination, authoritarian filial piety and academic self-concept accounted for a significant regression of 53% of the variability in participants' Literacy achievement, $R^2 = 0.539$, adjusted $R^2 = 0.500$, $F(2, 24) = 14.009$, $p < 0.000$, and 38% in their Numeracy achievement, $R^2 = 0.382$, adjusted $R^2 = 0.330$, $F(2, 24) = 7.409$, $p < 0.003$.

Results found academic self-concept significantly predicted participants' Literacy and Numeracy achievements ($p = 0.000$). Authoritarian filial piety did not significantly predict either achievement. Overall, academic self-concept was a significant predictor for academic achievement, while authoritarian filial piety was a non-significant predictor.

Academic confidence, academic effort and academic achievement. In combination, academic confidence and academic effort accounted for a significant regression of 53% of the variability in Year 7 participants' Literacy, $R^2 = 0.53$, adjusted $R^2 = 0.49$, $F(2, 24) = 13.54$, $p < 0.000$, and 50% in Numeracy achievement, $R^2 = 0.50$, adjusted $R^2 = 0.46$, $F(2, 24) = 12.141$, $p < 0.000$.

Unstandardised (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in the regression model are presented in Table 6. Results found that academic confidence (Literacy: $p = 0.002$; Numeracy: $p = 0.001$) and academic effort (Literacy: $p = 0.048$; Numeracy: $p = 0.033$) both significantly predicted participants' Literacy and Numeracy achievement. Overall, academic confidence and academic effort were significant predictors for both achievements.

Table 6.
Unstandardised (B) and Standardised (β) Regression Coefficients, and squared Semi-Partial Correlations (sr^2) for Each Predictor in a Regression Model Predicting Year 7 Participants' Academic Achievements, N =27 (Academic confidence and Academic effort)

	<i>B</i> [95%CI]	β	sr^2
Literacy			
Academic Confidence	0.362 [0.527, 2.115]**	0.75	0.019
Academic Effort	0.717 [-0.922, 0.830]*	-0.024	0158
Numeracy			
Academic Confidence	0.266 [0.773, 2.589]**	0.854	0.006
Academic Effort	0.407 [-1.447, 0.557]*	-0.205	0017

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, CI = confidence interval

Table 4.
Unstandardised (B) and Standardised (β) Regression Coefficients, and squared Semi-Partial Correlations (sr^2) for Each Predictor in a Regression Model Predicting Year 7 Participants' Academic Achievements, N = 27

	<i>B</i> [95%CI]	β	sr^2		<i>B</i> [95%CI]	β	sr^2
Literacy (Overall filial piety)				Numeracy (Overall filial piety)			
Academic self-concept	1.455 [0.826, 2.063]***	0.729	0.491	Academic self-concept	1.256 [0.502, 2.010]**	0.570	0.300
Overall filial piety	-0.231 [-0.621, 0.157]	-0.186	-0.032	Overall filial piety	0.201 [-0.274, 0.675]	0.144	0.019
<hr/>							
Literacy (Reciprocal filial piety)				Numeracy (Reciprocal filial piety)			
Academic self-concept	1.361 [0.667, 2.055]***	0.686	0.368	Academic self-concept	1.163 [0.346, 1.981]**	0.527	0.217
Reciprocal filial piety	-0.201 [-0.435, 0.393]	0.201	-0.000	Reciprocal filial piety	0.229 [-0.259, 0.717]	0.174	0.024
<hr/>							
Literacy (Authoritarian filial piety)				Numeracy (Authoritarian filial piety)			
Academic self-concept	1.368 [0.800, 1.936]***	0.690	0.475	Academic self-concept	1.333 [0.602, 2.064]***	0.604	0.364
Authoritarian filial piety	0.297 [-0.600, 0.006]	-0.281	-0.078	Authoritarian filial piety	0.124 [-0.266, 0.515]	0.105	0.011

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, CI = confidence interval

Year 8 participants.

Overall filial piety, academic self-concept and academic achievement. In combination, overall filial piety and academic self-concept accounted for a significant regression of 60% of the variability in participants' Literacy achievement, $R^2 = 0.605$, adjusted $R^2 = 0.544$, $F(2, 13) = 9.959$, $p = 0.002$, and 61% for the Numeracy achievement, $R^2 = 0.609$, adjusted $R^2 = 0.549$, $F(2, 13) = 10.113$, $p = 0.002$.

Results found academic self-concept significantly predicted participants' Literacy and Numeracy ($p = 0.001$) achievement. Overall filial piety did not significantly predict either achievement. Overall, academic self-concept was a significant predictor for academic achievement, while overall filial piety was a non-significant predictor.

Reciprocal filial piety, academic self-concept and academic achievement. In combination, reciprocal filial piety and academic self-concept accounted for a significant regression of 60% of the variability in participants' Literacy, $R^2 = 0.652$, adjusted $R^2 = 0.599$, $F(2, 13) = 12.203$, $p = 0.001$, and 52% in Numeracy, $R^2 = 0.519$, adjusted $R^2 = 0.445$, $F(2, 13) = 7.022$, $p = 0.009$.

Results found academic self-concept significantly predicted participants' Literacy ($p = 0.000$) and Numeracy ($p = 0.003$) achievement. Reciprocal filial piety did not significantly predict either achievement. Overall, academic self-concept was a significant predictor for academic achievement, while reciprocal filial piety was a non-significant predictor.

Authoritarian filial piety, academic self-concept and academic achievement. In combination, authoritarian filial piety and academic self-concept accounted for a significant regression of 63% of the variability in participants' Numeracy achievement, $R^2 = 0.637$, adjusted $R^2 = 0.581$, $F(2, 13) = 11.391$, $p < 0.001$, and 56% in Literacy achievement, $R^2 = 0.563$, adjusted $R^2 = 0.496$, $F(2, 13) = 8.379$, $p = 0.005$.

Results found academic self-concept significantly predicted students' Literacy ($p = 0.001$) and Numeracy ($p = 0.002$) achievement. Authoritarian filial piety did not significantly predict students' either achievement. Overall, academic self-concept was a significant predictor for academic achievements, while authoritarian filial piety was a non-significant predictor.

Academic confidence, academic effort and academic achievement. In combination, academic confidence and academic effort accounted for a significant regression of 61% of the variability in participants' Literacy achievement, $R^2 = 0.612$, adjusted $R^2 = 0.55$, $F(2, 13) = 10.239$, $p = 0.002$, and 63% in Numeracy achievement, $R^2 = 0.635$, adjusted $R^2 = 0.579$, $F(2, 13) = 11.307$, $p = 0.001$.

Unstandardised (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in the regression model are presented in Table 7. Results found that academic confidence (Literacy: $p = 0.044$; Numeracy: $p = 0.025$) and academic effort (Literacy: $p = 0.045$; Numeracy: $p = 0.024$) both significantly predicted participants' Literacy and Numeracy achievement. Overall, academic confidence and academic effort were significant predictors for both achievements.

Table 7.
Unstandardised (B) and Standardised (β) Regression Coefficients, and squared Semi-Partial Correlations (sr^2) for Each Predictor in a Regression Model Predicting Year 8 Participants' Academic Achievements, $N = 16$ (Academic confidence and Academic Effort)

	B [95% CI]	β	sr^2
Literacy			
Academic Confidence	0.337 [-0.618, 1.971]*	0.213	0.017
Academic Effort	0.702 [-0.028, 1.433]*	0.608	0.129
Numeracy			
Academic Confidence	0.588 [-0.618, 1.293]*	0.635	0.045
Academic Effort	0.462 [-0.028, 1.433]*	0.682	0.048

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, CI = confidence interval

Table 5.

Unstandardised (B) and Standardised (β) Regression Coefficients, and squared Semi-Partial Correlations (sr^2) for Each Predictor in a Regression Model Predicting Year 8 Participants' Academic Achievements, N = 16

	B [95%CI]	β	sr^2		B [95%CI]	β	sr^2
Literacy (Overall filial piety)				Numeracy (Overall filial piety)			
Academic self-concept	1.090 [0.561, 1.619]**	0.780	0.602	Academic self-concept	1.083 [0.512, 1.655]**	0.714	0.504
Overall filial piety	0.035 [-0.532, 0.603]	0.024	0.00	Overall filial piety	0.645 [0.032, 1.258]	0.040	0.155
<hr/>							
Literacy (Reciprocal filial piety)				Numeracy (Reciprocal filial piety)			
Academic self-concept	1.116 [0.620, 1.612]**	0.798	0.632	Academic self-concept	1.059 [0.426, 1.692]**	0.698	0.483
Reciprocal filial piety	0.249 [-0.152, 0.651]	0.220	0.048	Reciprocal filial piety	0.318 [-0.196, 0.831]	0.258	0.066
<hr/>							
Literacy (Authoritarian filial piety)				Numeracy (Authoritarian filial piety)			
Academic self-concept	1.072 [0.566, 1.578]**	0.767	0.585	Academic self-concept	1.052 [0.450, 1.654]**	0.693	0.229
Authoritarian filial piety	-0.200 [-0.602, 0.202]	-0.180	-0.032	Authoritarian filial piety	0.401 [-0.078, 0.879]	0.332	0.012

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, CI = confidence interval

Hierarchical Multiple Regression

To calculate the proportion of variance in participants' academic achievement that could be accounted for by filial piety, beyond that already accounted for by academic self-concept, hierarchical multiple regression analysis (HMRA) was employed. This was calculated for overall filial piety and its subscales, and overall academic self-concept with participants' Literacy and Numeracy achievement each on two separate occasions in order to simplify the analyses process.

Before interpreting the results of the HMRA, numerous assumptions were tested. The Shapiro-Wilk statistic indicated the variables were normally distributed, and inspections of the normal probability plot of standardized predicted values indicated the assumptions of linearity and homoscedasticity were met. Finally, Mahalanobis distance did not exceed the critical χ^2 for $df = 2$ (at $\alpha = 0.001$) of 13.82 for any cases in the data file, indicating that multivariate outliers were of no concern.

For brevity purposes, Unstandardised (B) and Standardised (β) regression coefficients, and squared semi-partial (or 'part') correlations (sr^2) for each predictor on each step of the HMRA are reported in Table 8 for Year 7 participants at page 52, and in Table 9 for Year 8 participants at page 55.

Year 7 participants.

Overall filial piety, academic self-concept and academic achievement. For Literacy achievement, at step 1, academic self-concept accounted for a significant 46% of the variance in participants' Literacy achievement, $R^2 = 0.460$, adjusted $R^2 = 0.438$, $F(1, 25) = 21.303$, $p < 0.000$. At step 2, overall filial piety was added to the regression equation, and accounted for an additional non-significant 3% of the variance on Literacy achievement, $\Delta R^2 = 0.032$, $\Delta F = (1, 24) = 1.512$, $p = 0.231$. In combination, the two models contributed a total of 49% to students' Literacy achievement.

For Numeracy achievement, at step 1, academic self-concept accounted for a significant 37% of the variance in participants' Numeracy Achievement, $R^2 = 0.371$, adjusted $R^2 = 0.345$, $F(1, 25) = 14.723$, $p < 0.001$. At step 2, overall filial piety was added to the regression equation, and accounted for an additional non-significant 2% of the variance in Numeracy achievement, $\Delta R^2 = 0.039$, $\Delta F = (1, 24) = 0.019$, $p = 0.392$. In combination, the two models contributed a total of 39% to participants' Numeracy achievement.

Overall, the final models show that overall filial piety had no statistically significant effects on participants' academic achievement, above and beyond the effects of academic self-concept.

Reciprocal filial piety, academic self-concept and academic achievement. For Literacy achievement, at step 1, academic self-concept accounted for a significant 46% of the variance in participants' Literacy achievement, $R^2 = 0.460$, adjusted $R^2 = 0.438$, $F(1, 25) = 21.303$, $p = 0.000$. At step 2, reciprocal filial piety was added to the regression equation, and accounted for no additional variance on Literacy achievement, $\Delta R^2 = 0.000$, $\Delta F(1, 24) = 0.010$, $p = 0.919$.

For Numeracy achievement, at step 1, academic self-concept accounted for a significant 37% of the variance in participants' Numeracy achievement, $R^2 = 0.371$, adjusted $R^2 = 0.345$, $F(1, 25) = 14.723$, $p < 0.001$. At step 2, reciprocal filial piety was added to the regression equation, accounting for an additional non-significant 2% of the variance on Numeracy achievement, $\Delta R^2 = 0.024$, $\Delta F(1, 24) = 0.0941$, $p = 0.342$. In combination, the two models contributed a total of 39% to students' Numeracy achievement.

Overall, the final models show that reciprocal filial piety had no statistically significant effect on participants' academic achievement, above and beyond the effects of academic self-concept.

Authoritarian filial piety, academic self-concept and academic achievement. For Literacy achievement, at step 1, academic self-concept accounted for a significant 46% of the variance in participants' Literacy achievement, $R^2 = 0.460$, adjusted $R^2 = 0.438$, $F(1, 25) = 21.303$, $p < 0.000$. At step 2, authoritarian filial piety was added to the regression equation, and accounted for a non-significant decrease of 8% of the variance on Literacy achievement, $\Delta R^2 = 0.079$, $\Delta F(1, 24) = 4.086$, $p = 0.055$. In combination, the two models contributed a total of 54% to students' Literacy achievement, and authoritarian filial piety had a statistically non-significant decrease in their Literacy achievement.

For Numeracy achievement, at step 1, academic self-concept accounted for a significant 37% of the variance in participants' Numeracy achievement, $R^2 = 0.371$, adjusted $R^2 = 0.345$, $F(1, 25) = 14.723$, $p < 0.001$. At step 2, authoritarian filial piety was added to the regression equation, and accounted for an additional non-significant 1% of the variance on

Numeracy achievement, $\Delta R^2 = 0.011$, $\Delta F(1, 24) = 0.382$, $p = 0.518$. In combination, the two models contributed a total of 38% to students' Numeracy achievement.

Overall, the final models show that authoritarian filial piety had no statistically significant effect on participants' academic achievement, above and beyond the effects of academic self-concept.

Table 8.
Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr^2) for Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Year 7 Participants' Academic Achievements, $N = 27$

	<i>B</i> [95% CI]	β	sr^2	Numeracy (Overall filial piety)	<i>B</i> [95% CI]	β	sr^2
Literacy (Overall filial piety)							
Step 1				Step 1			
Academic self-concept	1.345 [0.745, 1.945]***	0.678	0.459	Academic self-concept	1.343 [0.622, 2.063]***	0.609	0.370
Step 2				Step 2			
Academic self-concept	1.345 [0.826, 2.063]***	0.729	0.491	Academic self-concept	1.256 [0.502, 2.010]***	0.570	0.300
Overall filial piety	-0.232 [-0.621, 0.157]	-0.186	-0.032	Overall filial piety	0.201 [-0.274, 0.675]	0.144	0.019
Literacy (Reciprocal filial piety)							
Step 1				Step 1			
Academic self-concept	1.345 [0.745, 1.945]***	0.678	0.459	Academic self-concept	1.343 [0.622, 2.063]***	0.609	0.370
Step 2				Step 2			
Academic self-concept	1.361 [0.667, 2.055]***	0.686	0.368	Academic self-concept	1.163 [0.346, 1.981]***	0.527	0.217
Reciprocal filial piety	-0.021 [-0.435, 0.393]	-0.017	-0.000	Reciprocal filial piety	0.229 [-0.259, 0.717]	0.174	0.024
Literacy (Authoritarian filial piety)							
Step 1				Step 1			
Academic self-concept	1.345 [0.745, 1.945]***	0.678	0.459	Academic self-concept	1.343 [0.622, 2.063]***	0.609	0.453
Step 2				Step 2			
Academic self-concept	1.368 [0.800, 1.936]***	0.690	0.475	Academic self-concept	1.333 [0.602, 2.064]***	0.604	0.365
Authoritarian filial piety	-0.297 [-0.600, 0.006]	-0.281	-0.078	Authoritarian filial piety	0.124 [-0.266, 0.515]	0.105	0.011

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, CI = confidence interval

Year 8 participants.

Overall filial piety, academic self-concept and academic achievement. For Literacy achievement, at step 1, academic self-concept accounted for a significant 60% of the variance in participants' Literacy achievement, $R^2 = 0.605$, adjusted $R^2 = 0.576$, $F(1, 14) = 21.401$, $p = 0.000$. At step 2, overall filial piety was added to the regression equation, and accounted for no additional variance on participants' Literacy achievement, $\Delta R^2 = 0.001$, $\Delta F = (1, 13) = 0.018$, $p = 0.895$. In combination, the two models contributed a total of 60% to students' Literacy achievement.

For Numeracy achievement, at step 1, academic self-concept accounted for a significant 45% of the variance in participants' Numeracy achievement, $R^2 = 0.453$, adjusted $R^2 = 0.414$, $F(1, 14) = 11.609$, $p = 0.004$. At step 2, overall filial piety was added to the regression equation, and accounted for an additional 1.5% non-significant variance on participants' Numeracy achievement, $\Delta R^2 = 0.015$, $\Delta F = (1, 13) = 5.164$, $p = 0.401$. In combination, the two models contributed a total of 46.5% to participants' Numeracy achievement.

Overall, the final models show that participants' overall filial piety had no statistically significant effect on their academic achievement, above and beyond the effects of academic self-concept.

Reciprocal filial piety, academic self-concept and academic achievement. For Literacy achievement, at step 1, academic self-concept accounted for a significant 60% of the variance in participants' Literacy achievement, $R^2 = 0.605$, adjusted $R^2 = 0.576$, $F(1, 14) = 21.401$, $p = 0.000$. At step 2, reciprocal filial piety was added to the regression equation, and accounted for an additional 5% non-significant variance on participants' Literacy achievement, $\Delta R^2 = 0.048$, $\Delta F = (1, 13) = 1.793$, $p = 0.203$. In combination, the two models contributed a total of 65% to students' Literacy achievement.

For Numeracy achievement, at step 1, academic self-concept accounted for a significant 45% of the variance in participants' Numeracy achievement, $R^2 = 0.453$, adjusted $R^2 = 0.414$, $F(1, 14) = 11.609$, $p = 0.004$. At step 2, reciprocal filial piety was added to the regression equation, and accounted for an additional 7% non-significant variance on participants' Numeracy achievement, $\Delta R^2 = 0.066$, $\Delta F = (1, 13) = 1.785$, $p = 0.204$. In

combination, the two models contributed a total of 51% to students' Numeracy achievement.

Overall, the final models show that participants' reciprocal filial piety had no statistically significant effect on their academic achievement, above and beyond the effects of academic self-concept.

Authoritarian filial piety, academic self-concept and academic achievement. For Literacy achievement, at step 1, academic self-concept accounted for a significant 60% of the variance in participants' Literacy achievement, $R^2 = 0.605$, adjusted $R^2 = 0.576$, $F(1, 14) = 21.401$, $p = 0.000$. At step 2, authoritarian filial piety was added to the regression equation, and accounted for an additional 3% non-significant variance on participants' Literacy achievement, $\Delta R^2 = 0.032$, $\Delta F = (1, 13) = 1.151$, $p = 0.303$. In combination, the two models contributed a total of 63% to students' Literacy achievement.

For Numeracy achievement, at step 1, academic self-concept accounted for a significant 45% of the variance in participants' Numeracy achievement, $R^2 = 0.453$, adjusted $R^2 = 0.414$, $F(1, 14) = 11.609$, $p = 0.004$. At step 2, authoritarian filial piety was added to the regression equation, and accounted for an additional 11% non-significant variance on participants' Numeracy achievement, $\Delta R^2 = 0.110$, $\Delta F = (1, 13) = 3.269$, $p = 0.094$. In combination, the two models contributed a total of 56% to students' Numeracy achievement.

Overall, the final models show that participants' Authoritarian filial piety had no statistically significant effect on their academic achievement, above and beyond the effects of academic self-concept.

Table 9.
Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr^2) for Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Year 8 Participants' Academic Achievements, $N = 16$

	<i>B</i> [95% CI]	β	sr^2		<i>B</i> [95% CI]	β	sr^2
Literacy (Overall filial piety)							
Step 1				Step 1			
Academic self-concept	1.087 [0.583, 1.591]***	0.778	0.605	Academic self-concept	1.022 [0.379, 1.665]**	0.673	0.453
Step 2				Step 2			
Academic self-concept	1.090 [0.561, 1.619]***	0.767	0.585	Academic self-concept	1.083 [0.512, 1.655]**	0.714	0.504
Overall filial piety	0.035 [-0.532, 0.603]	0.220	-0.032	Overall filial piety	0.645 [0.032, 1.258]	0.396	0.015
Literacy (Reciprocal filial piety)							
Step 1				Step 1			
Academic self-concept	1.087 [0.583, 1.591]***	0.778	0.605	Academic self-concept	1.022 [0.379, 1.665]**	0.673	0.453
Step 2				Step 2			
Academic self-concept	1.116 [0.620, 1.612]***	0.798	0.632	Academic self-concept	1.059 [0.426, 1.692]**	0.698	0.483
Reciprocal filial piety	0.249 [-0.153, 0.651]	0.220	0.048	Reciprocal filial piety	0.318 [-0.196, 0.831]	0.258	0.066
Literacy (Authoritarian filial piety)							
Step 1				Step 1			
Academic self-concept	1.087 [0.583, 1.591]***	0.778	0.605	Academic self-concept	1.022 [0.379, 1.665]**	0.673	0.453
Step 2				Step 2			
Academic self-concept	1.072 [0.566, 1.578]***	0.767	0.585	Academic self-concept	1.052 [0.450, 1.654]**	0.693	0.479
Authoritarian filial piety	-0.200 [-0.602, 0.202]	0.220	-0.032	Authoritarian filial piety	0.401 [-0.078, 0.879]	0.332	0.109

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, CI = confidence interval

Summary of Results

In summary, data in this study demonstrate that participants' overall filial piety and its sub-constructs of reciprocal and authoritarian filial piety showed no statistically significant correlation on their academic achievement across both year levels. However, MRA and HMRA analyses showed that academic self-concept has a statistically significant positive correlation on participants' academic achievement, and accounts for the most significant achievement variance in both Literacy and Numeracy subjects across both year levels. Specifically, both sub-constructs of the ASCS; academic confidence and academic effort had a significant effect on participants' academic self-concept and subsequent achievements.

Chapter Seven: Discussion

“Education is, at least, the endeavour to get people to do things they could not previously do, to understand things they did not previously understand, and perhaps, to become the people they did not expect to become.”

- Sockett (1988, p.195)

The relationship between filial piety, academic self-concept and academic achievement is complex. In this study, forty-three participants were recruited to respond to surveys related to their filial piety beliefs and academic self-concept. Correlation and bivariate analyses were used to calculate participants' responses. Analysis of the data indicate that:

H₁: “Students’ level of filial piety has a positive relationship with their academic self-concept and subsequent achievement”, is not supported;

H₂: “Ethnicity has an influence between filial piety and academic achievement”, is not supported;

H₃: “Students with high filial piety will be positively related to their academic self-concept”, is not supported;

H₄: “Students with high filial piety will be positively related to their academic achievement”, is not supported;

and H₅: “Students’ academic self-concept has a positive relationship with their academic achievement”, is supported.

This chapter discusses the major findings from the statistical analyses in depth. These include the relationship between filial piety, academic self-concept and academic achievement, the relationship between academic self-concept and achievement, as well as gender and age differences.

Filial piety, Academic Self-Concept and Academic Achievement

The study first hypothesise that filial piety has a positive effect on a student’s academic self-concept and their subsequent academic achievement. Analyses show that filial piety, as an overall construct and its sub-constructs, does not have a statistically significant effect on students’ academic self-concept and achievement across all year levels. This

suggests that in this study, filial piety, as a cultural value, is not a significant predictor of academic self-concept and subsequent academic performance. This finding is in contrast to previous research (Chen, 2015; Chen & Ho, 2012; Chow & Chu, 2007; Hui et al., 2011), where filial piety has a strong contribution to students' perceived academic competence, motivation, and their academic achievement.

While filial piety is found to have made no statistically significant difference to students' academic self-concept and achievement, data showed that all students, regardless of year levels, reported higher levels of reciprocal filial piety (Year 7: $M = 4.94$; Year 8 $M = 5.07$) than authoritarian filial piety (Year 7: $M = 3.87$; Year 8: $M = 3.67$). This is consistent with Yeh's (2003) conceptualisation of the duality of filial piety, where the parent-child relation is differentiated as the obedience and absolute submission to parental authority of authoritarian filial piety, and the affection-based gratitude that is the reciprocal filial piety (Chen et al., 2016; Jin, Zou, & Yu, 2011; Liu et al., 2011; Yeh, 1997; Yeh & Bedford, 2003). It supports these researchers' argument that processes of modernisation and democratisation may have sought a change of individuals' filial piety belief from absolute submission and parental authority, to mutual affection and equality in the parent-child relationship (Yeh et al., 2013). This finding may reflect New Zealand's prevailing values and beliefs on democracy and equality, as indicated by participants' perception of a mutual parent-child interaction and relatedness (Hansen, 1986; Thrupp, 2007; Trevor-Roberts, Ashkanasy, & Kennedy, 2003).

The lack of significant relationship of filial piety on students' academic self-concept and achievement may be attributed to several reasons, namely, the perception of academic achievement as an individualistic pursuit, the sample characteristics, the possible influences from acculturation and developmental trajectories, and the survey item phrasings.

To begin with, previous research suggests that individuals tend to perceive their achievement in the academic domain as an individualistic pursuit (Chirkov, 2009; Wang & Li, 2003). These scholars highlighted that learning virtues, such as diligence, endurance, perseverance, and concentration, are expected from the individual through the exercise of personal agency (Li, 2012). Parental value orientations in this domain may therefore focus on the individual self and on the cultivation of autonomy and personal responsibility for academic success (Wang & Li, 2003). Thus, the value orientation that East Asian immigrant parents convey to their children may comprise an emphasis on autonomy and self-orientation

in the achievement domain, and an emphasis on connectedness and other orientation in the relationship domain (Wang & Li, 2003). Previous research has found that Asian American parents tend to promote the development of an autonomous self in their child's achievement domain, and the Confucian value of interdependence and interconnectedness has been found to manifest itself in the relationship domains of their lives (Koh, Shao, & Wang, 2009; Pye, 2000). Therefore, although notions of filial piety are found in this research, because it may be emphasised more in the relationship domain, the academic self-concept may be less influenced by it.

Next, the demographic profile of the sample population reveals that just under half of the participants ($n = 21$; 49%) are of New Zealand European ethnicity. When this is considered in conjunction with the predominately individualistic orientation that typically characterises the Western society and its individuals (Fagenson-Eland, Ensher, & Warner, 2004; Hofstede, 2001; Kemmelmeier et al., 2003), this finding is consistent with the notion that filial piety is unlikely to correlate with students' academic self-concept and achievement. Traditional East Asian societies endorse a strongly hierarchical (vertical) structure, and encourage collectivistic values, particularly in the domain of family, while modern New Zealand society is classified as predominately horizontally individualistic in orientation (Paton, Bajek, Okada, & McIvor, 2010; Zhang, 2007). As part of the cultural integration process, immigrant parents may also adopt some values of the host culture, such as independence and self-reliance (Koh et al., 2009). Hence, results from this study may imply that some of these immigrant East Asian students have assimilated the values of the dominate culture (Buki, Ma, Strom, & Strom, 2003).

Furthermore, a survey item asking participants to report how long they have lived in New Zealand for; found that most East Asian participants in this study were either born in New Zealand or have been living in the country from a young age (oldest at two years-old). Hence, it may be likely that they have adopted the individualistic values and beliefs prevalent in the New Zealand society. This is consistent with previous research indicating that the process of acculturation can impact on the values, beliefs and practices of Asian immigrants in becoming more assimilated with their host culture (Cokley & Patel, 2007; Phinney et al., 2001), and be less likely to be influenced by their parents' achievement expectations (Hwang, 1999; Jones, Lee, & Zhang, 2003). Acculturation may therefore partially explain why a significant relationship was not found in this study. Moreover, as only 25% of the sample

population have identified themselves as being of East Asian ethnicity, it is likely that results from this study are not representative of the general population.

Developmental factors may also affect children's extent of filial belief. Previous research suggests that the influence of developmental factors can contribute to children's changing perceptions of filial piety (Jin et al., 2011; Liu et al., 2000; Yeh et al., 2013). Other studies such as de Bruyn, Dekovic, and Meijnen (2003) and Eccles and Harold (1996) focusing on early adolescents have found that as children grow older, family becomes less influential on their learning and achievement. The emergence of the home environment as a minor predictor for early adolescents' academic self-concept may be attributed in part to their increasing desire for physical and psychological autonomy as part of their developmental trajectories (Liu & Wang, 2008). Considering the possibilities of such a need, it is possible that these participants are beginning to spend less time with their family, leading to less recognition of family influence on their academic self-concept that impact on their level of academic achievement.

Consistent with the developmental factors that may impact on students' extent of filial belief, studies have found that the effects of students' intrinsic motivations for positive academic outcomes tend to decrease with age, while the effects of their extrinsic motivation either decreases or remains practically ineffective (Lepper, Copus, & Lyengar, 2005; Otis, Grouzet, & Pelletier, 2005). Hence, the effect of their intrinsic and extrinsic motivations that may arise from parental values in terms of filial piety and academic achievement may subside when these students become older (Liu et al., 2000). This is further exacerbated when these students have been living in New Zealand; a mostly individualistic society, where increasing individuation and identity formation in the developing child may considerably undermine its effectiveness. For example, a study by Cheung and Kwan (2009) has found that filial piety is lower among children living in a city with a high degree of, or more advanced, modernisation. Other studies also found that younger generations' adherence to filial commitments are often weaker than their older counterparts (Chen et al., 2016; Li et al., 2010; Liu et al., 2011).

Lastly, closer examination of the items in the academic self-concept survey reveals that most of them use words such as "I" or "me", that is, how the individual feels about and perceives their academic performance without references to their families or parents (Cokley & Patel, 2007). Thus, academic self-concept, as operationalised by the ASCS, is primarily an

individualistic psychological construct, it therefore makes sense that it would be positively related to New Zealand's predominately Western individualistic culture and values. Given that the Asian culture is more collectivistic than individualistic, one might argue that if the scale gave more weight to items focusing on family or group perceptions rather than individual feelings and perceptions, a positive relationship with filial piety may have emerged (Cokley & Patel, 2007).

Overall, while this study has chosen filial piety as a main contributing factor in influencing students' academic self-concept and achievement under the assumption of its cross-cultural applicability (Gallois et al., 1996; Poškaitė, 2014), the findings suggests the contrary. This is consistent with the literature from many Chinese scholars, who argue that filial piety is more indigenous than universal, suggesting that there is no real conceptual equivalent in non-Confucian cultures, as shown in the findings of Ho (1996); Hsieh (1967); Yeh and Yang (1989), and Zhang and Bond (1998).

Academic Self-Concept and Academic Achievement

The study next hypothesise that academic self-concept has a positive correlation with students' academic achievement. Consistent with previous research, this study suggests a significant, positive relationship between students' academic self-concept and academic performance (Bong & Skaalvik, 2003; Dramanu & Balarbe, 2013; Marsh & Craven, 2005; Marsh & Seaton, 2012; Matovu, 2012; Pinxten, De Fraine, Van Damme, & D'Haenens, 2010). This finding underscores the importance of how students feel about their academic capabilities as an important factor for their academic success. Furthermore, ASCS subscales showed that both academic confidence and academic effort significantly predicted participants' achievement level. This is consistent with previous research by Matovu (2012) and Kaba and Talek (2015), where students who has confidence in their academic competence will be more interested and motivated in engaging greater effort in their studies, are therefore more likely to be academically successful (Martin, Mullis, Gonzalez, & Chrostowski, 2004).

The salient contribution of the relationship between academic self-concept and students' academic achievement is understandable, as students who believe that they are academically capable and competent are more likely to engage in learning, work harder, be more persistent when facing difficulties, and subsequently excel academically (Hui, et al.,

2011). This argument corroborates with Bandura's notion, whereby students who think they are capable and can successfully accomplish academic tasks are more likely to choose to do so, and academic success, in turn, encourage them to continue working on tasks to their eventually successful conclusion, even in the face of adversity (Elliot & Dweck, 2005).

As previously discussed, the relationship between academic self-concept and academic achievement is a mutually reinforcing one (Huang 2011; Marsh & Martin, 2011; Marsh & Seaton, 2013). Although the findings of this study cannot determine the direction of the effects, ultimately, it does support the existence of an academic self-concept/achievement relationship (Liu, 2009).

Age differences. Children and young people's academic self-concept can change and develop as they grow, and transition through year levels and schools (Jacobs et al., 2002; Liu & Wang, 2005). Despite previous research indicating younger children tend to have a more positive academic self-concept regarding their academic achievement in general compared with older children (Chang et al., 2003, Pajares & Schunk, 2001; Pajares & Valiante, 2001), this study does not find such a relationship. Instead, older participants in this sample population tend to have a more positive academic self-concept than their younger counterparts, albeit statistically non-significant.

Younger students' decline in their level of academic self-concept may be attributed in part to changes occurring within their school environment (Hill & Chao, 2009; Hill & Tyson, 2009). For some students in New Zealand, Year 7 is the first year in which they transfer from a primary school to an intermediate school (New Zealand Immigration, 2016). These students are more likely to face challenges associated with a larger social comparison network, establishing themselves, and finding their own niche (Carr, 2015; Liu & Wang, 2005; McCartney & Phillips, 2011). Subsequently, their academic self-concept drops in response to these challenges. In time, as these students settle in to this new environment and become accustomed to the challenges and expectations of higher education, their situation may improve, and thus their academic self-concept may again increase (Hill & Tyson, 2009). Previous studies have attested to such explanation, and have found that students' self-concept tend to decline immediately following school transitions, but recovered the year after (Cole et al., 2001; Eccles et al., 1993; Spinath & Spinath, 2005; Watt, 2004).

Gender differences. Previous research of gender effects on students' academic self-concept has shown mixed and conflicting results (Marsh & Martin, 2011; Nagy, 2008, 2010). Results from this study showed that both genders have comparable overall academic self-concept. While this result supports previous research findings (De Fraine, Van Damme & Onghena, 2007; Dramanu & Balarabe, 2013; Fredricks & Eccles, 2002; Ghazvini & Khajehpour, 2011; Hossaini, 2002; Liu & Wang, 2005), it contradicts other studies (Brunner, Keller, Hornung, Reichert, & Martin, 2009; Ireson, Hallam & Plewis, 2001; Nagy et al., 2010; Pesu, Aunola, Viljaranta, & Nurmi, 2016). This gender indifference may be due in part to the fact that New Zealand is largely an egalitarian society, where equal opportunities are offered to both male and female students (Hansen, 1986; Trevor-Roberts et al., 2003). Both genders are actively encouraged to excel in their studies, and to build their careers by their parents, teachers, and the society. Considering that both genders experience equal support and guidance from home and school, it is conceivable that there is no gender effect on their overall academic self-concept.

Another important aspect to consider is that gender effects on students' academic self-concept tend to vary across countries (Liu & Wang, 2005; Marsh & Martin, 2011). This is not a surprising finding, and is, in fact, especially true in the study of gender effect, as gender refers not only to the biological sex but also to the psychological, social and cultural features and characteristics of a person that are strongly associated with the biological categories of male and female (Gilbert, 1992; Liu & Wang, 2005). As such, it is difficult to generalise the findings across countries with different cultures and different socialisation processes. While this study is unable to carry out such analysis due to the limited sample size, gender differences in students' academic self-concept, and its domain-specific perceptions and subsequent levels of achievement, warrants further investigation.

Within the academic self-concept sub-constructs, this study found that female students reported higher perceived academic effort than their male counterparts, whilst male students reported a higher perceived academic confidence than their female counterparts, albeit statistically non-significant. This finding is consistent with previous studies by Liu (1994), Liu and Wang (2005), Nagy, Trautwein, Baumert, Koller, and Garnett (2006), and Lau and Leung (1992). These scholars speculated that adolescent girls are more often concerned about being well liked, are more affected by others' opinion of them and are more eager to avoid behaviours that elicit negative reactions (Rosenberg & Simmons, 1975). Likewise, Lau and

Leung (1992) found that compared to boys, girls rate higher in their need and eagerness to conform to socially desirable behaviours, and in their zeal in pleasing their significant others, hence they are willing to exert more effort with their schoolwork.

Although inconclusive, these earlier findings taken together with this research suggests that there may be important differences between genders in the way in which both male and female students define their academic-self (Liu & Wang, 2005; Nagy et al., 2006). Results from this study suggest that the relatively high overall academic self-concept of girls is contingent upon their commitment and belief in hard work, whilst the comparable overall academic self-concept of boys is largely the result of their high level of confidence in their intelligence or ability (Liu, 1994; Liu & Wang, 2005).

Considering the lack of overall academic self-concept differences as a function of gender, future researchers may consider re-examining the way in which they operationalise academic self-concept to ensure that it is not gender or culturally biased. Burns (1982) argued that some instruments may contain scale items more appropriate for endorsement by one gender than the other, and the use of such instruments would make the interpretation of gender differences difficult.

There is also a need to explore more in-depth the content, composition and organisational structure of academic self-concept across cultures. Given that culture has an impact on a student's cognition, values and ways of responding to their perceptual world, this may also shape their understanding of what constitutes academic success, and thus shape their conceptions of academic self (Liu & Wang, 2008). Hence, a measure developed in one culture may not assess the same conceptual meaning or the totality of meaning for individuals in another culture (Liu & Wang, 2005). This is especially true for constructs such as self-concept, which is likely to have universal as well as culture-specific meanings. Consequently, there is a need for more extensive cross-cultural research into how academic self-concept may be conceptualised in different societies.

Summary of Discussion

In summary, although finding from this study did not support the hypothesis that filial piety will have a positive relationship with students' academic self-concept and subsequent achievement, academic self-concept did significantly and positively predict their academic achievement. A number of factors have been postulated to impact on students' level of filial

piety belief, namely, the effects of individualism, processes of acculturation, and other developmental factors. Gender and age were not influential factors to participants' academic self-concept development, which may be contributed to the nature of the New Zealand schooling system, and the predominately egalitarian societal belief.

There are several factors that may have contributed to a lack of significant results in this study, some of which have been discussed in this chapter. Other confounding variables may include the small sample size, the research design, and the measurement method used. These limitations and its effect on the strength of the findings will be discussed in more detail in the next chapter.

Chapter Eight: Conclusion

“There is never an end to learning”

“學,不可以已”

“Xué, bù kěyǐ yǐ”

- *Xun Zi (Chinese Confucian philosopher)*

As with any research involving human participants, there will inevitably be both contributions and limitations of the findings. This chapter discusses the strengths and limitations of this study, including the sample size, research design and the measurement method used. In consideration of these issues, recommendations for future research will be proposed. Finally, implications for educational practice within schools and for teachers, as well as an overall conclusion are provided.

Limitations

Sample size. Results from this study should be interpreted in light of a number of limitations. The small sample size used has limited the study’s statistical power, for example, to be able to detect ways in which subcomponents of filial piety may have differential effects on a student’s academic self-concept and subsequent achievement, as has been found in previous research (Chen, 2015; Chow & Chu, 2007; Fuligni & Zhang, 2004; Hui et al., 2011). Furthermore, the use of convenience sampling for this study has meant that the gender (female: 84%; male: 16%) and ethnic (New Zealand European: 49%) distribution of the sample was skewed and limited to one public government co-educational school. Hence, conclusions from the findings are constrained by the limited sample size of intermediate school students, and care should be taken when generalising findings from this research to different schools, such as private or single-sex schools, and to other student populations within New Zealand.

The low level of participation may be linked to the study’s recruitment method, timing, and the nature of data collection. Research within schools can be a labour-intensive process that requires much organisation between the school and the researcher (Behrend, Sharek, Maede & Wiebe, 2011). Fortunately, the research liaison staff member from school B was well-experienced with the process of conducting school research, and actively collaborated and assisted the researcher with the recruitment process.

Despite the researcher’s efforts to encourage participation, a low response rate meant

that the initial sample inclusion criteria needed to be expanded to include students from any other ethnicity in order to obtain a sufficient sample size for statistical analysis. It is difficult to determine why the participation rate was low even after introducing incentives. The research liaison speculated that it may have been due to a combination of the research coinciding with student and staff illness, and other school activities, resulting in parents and students feeling overwhelmed by the volume of information from the school, dissuading them from participating.

Research design. Although quantitative analysis is useful in identifying and examining trends and differences between variables, this method remains limited in its ability to explain the complexities of the relationships between neither the variables, nor the depth of experiences and perspectives of the students, as can be derived from a qualitative method (Suárez-Orozco, 2001).

The cross-sectional design of the research means the results obtained here are correlational (Sedgwick, 2014). While this was the only affordable approach in terms of both financial and time investments in a Master's research programme, these findings should be approached with caution when establishing a causal relationship between the variables within the New Zealand student population.

There are also limitations on the use of the survey itself. A major disadvantage of using the survey method for data collection is the heavy reliance on the willingness of people to participate, increasing the likelihood of self-selection bias (Wright, 2005). It is possible that a particular portion of individuals are more likely to participate than other, and that the decision to participate may reflect some inherent bias in the characteristic of the participants; thus, making the determination of correlation and causation more difficult. Furthermore, the self-reporting nature of surveys has meant that the data collected in this research may have been subject to the response bias of social desirability. There is a risk that the participants may have adjusted their responses to conform to what they thought may have been the "appropriate" response (van de Mortel, 2008). Had more participants been recruited; more data would have been available to draw from and to control for self-reported bias during data analyses.

Other external stimuli may have contributed to a response bias. At times, it was difficult to control for the time of day and setting within which participants completed their

survey. Moreover, participants were permitted to discuss the survey items with their peers and teachers. There were also occasions when the researcher could not be present to administer the surveys, reducing the opportunity for participants to clarify or further discuss particular items, or to explain when an item had perhaps been unclearly phrased (Couper, 2000). A lack of control for these external influences meant the participants may have been more inclined to respond to the survey items according to social cues or peer group conformity. This is even more likely to occur as adolescents are more easily influenced by others' opinions and judgements (Sebastian, Burnett, & Blakemore, 2008).

It is important to note that there are a variety of reasons other than filial piety that may influence a student's academic self-concept and academic achievement (DeFreitas & Rinn, 2013). Previous studies show teacher autonomy and relatedness (Strong, Torgerson, Torgerson, & Hulme, 2011), parental education level (Eamon, 2005), and family socioeconomic status (Aktop, 2010; Caro, McDonald, & Willms, 2009) are also important factors impacting students' achievement outcomes, which have not been explored in this study (Chen, 2015; Hui et al., 2011). Given that filial piety is only one of many such influences, it is likely that other confounding variables may have limited its extent of impact on participants' academic self-concept and achievement. Although the inclusion of these variables may strengthen the model presented in this study, it may also increase its complexity and reduce its predictive power, given the small sample size (Chen, 2015).

Measurement method. According to the specificity match principle (Swann, Chang-Schneider, & Larsen McClarty, 2007), self-concept in the academic domain is best measured at the subject-specific level in order to derive a stronger relationship with students' academic achievement (Huang, 2011; Valentine et al., 2004). This principle was not applied in this study. Hence, there may be a partial mismatch measurement level between academic self-concept, as measured at a general level, and achievement, measured at the subject-specific level (Choi, 2005). While this study has found a positive correlation between participants' academic self-concept and achievement using a general academic self-concept measure, its explanatory power is limited due to its lack of domain-specificity.

Next, modifications made to the scale items in this study may have limited its validity. Although rephrased items were justifiable in consideration of the potential distress the original phrasing may have caused the participants, there is a risk that the items may not have

carried the same weight and meaning as was originally intended (Dong & Xu, 2016). This hinders the scale robustness and makes findings difficult to systematically compare and analyse with other studies.

Furthermore, the conceptualisation of filial piety must consider the erosion of modernisation and Westernisation on individuals' psychosocial adjustments (Yeh et al., 2013). In New Zealand, the processes of acculturation and assimilation are likely to affect East Asian immigrant students' attitudes, beliefs and practices of filial piety, which in turn may affect the extent of its influence on their academic self-concept and achievement for the sample population (Berry, 2005). While the scale used for this study has been adapted according to the contemporary East Asian social context (Yeh, 2003), it may not have been adapted specifically for use with migrant individuals. This makes it problematic in determining the validity of the findings as being truly reflective of those who are experiencing, or have experienced, enculturation.

Finally, although the achievement measurement tool, e-asTTle, provides a range of tests for educators to assess students' achievement levels, no tests are nationally stipulated, therefore schools and teachers are often at liberty to create their own customised tests (Ministry of Education, 2013). Furthermore, not all New Zealand schools and teachers have access to e-asTTle (60%) due to insufficient or poor-quality equipment, or slow or unreliable access (Wylie & Bonne, 2014). These factors may result in an unstandardised measurement of students' academic achievement due to the variation in curricular and evaluation standards across school subjects and the schools themselves. All of which limits the generalisability of achievement records from this sample population to other schools, and the subsequent findings to other student population. Future studies need to consider the variability of tests and methods of assessment each school employs to evaluate a student's academic achievement, and their effects on the standardisation and generalisability of achievement results across New Zealand schools (Brown, 2013).

Strengths

This study extends the literature on the importance of academic self-concept as an influencing variable on New Zealand students' academic performance. The belief that one is academically capable can be highly motivational for a student; as it can increase the amount of effort and time they invest in pro-learning behaviours that enable academic success.

Furthermore, the differential emphasis of academic confidence and academic effort between male and female students suggest that there may be important gender socialisation processes underlying the development of students' academic self-beliefs. Although results from this study indicate that male and female students have a comparable overall level of academic self-concept, it is possible that they stake their 'competence' on different components of their academic self-concept (Liu, 1994). This finding has implications when considering parents' and teachers' gender-role expectations that may impact on students' formation of their perceived academic abilities and subsequent implications on their achievement (Dai, 2001).

In this study, filial piety is not demonstrated to be a significant predictor for students' academic self-concept and subsequent achievement, however, the potential for culture as a potent factor for students' academic performance as emphasised by the existing literature cannot be overlooked (Fang et al., 2013). Therefore, developing an understanding of achievement within a cultural context is critical for educators and researchers, particularly when comparing student achievement across cultures. In consideration of New Zealand's ethnic and cultural diversity, additional research will further inform our understanding of the complexity of the relationship between these concepts. Despite this being a small pilot study, some of the findings are consistent and are supported by the work of other researchers. These include the conceptualisation of filial piety as a constantly evolving cultural value (Yeh et al., 2013), as well as the possible erosion on students' extent of filial beliefs through processes of Westernisation and acculturation (Lieber et al., 2004).

Another strength in this study resides in the internal validity of the survey, as this was constructed based on an extensive review of the existing literature, and is deemed most relevant to the contemporary New Zealand context. This adds to the current body of research that emphasises on the importance of developing comprehensive and standardised assessing instruments to better capture students' perceptions and attitudes toward filial piety from both a global and a context-specific level (Dong & Xu, 2016).

Future Research

There are several issues in this study that warrant further investigation. As mentioned, this study has a limited ability in obtaining a depth of participants' experiences and perspectives using the quantitative research method. Future research could focus on using qualitative methods to critically evaluate the findings through focus groups or individual

interviews (Suarez-Orozco, 2001).

Next, the cross-sectional nature of the study has made it difficult to ascertain a plausible causation between the variables. One way to obtain a more definitive result regarding causality may be to conduct longitudinal studies. This method may aid the understanding of the short- and long-term changes to filial piety and academic self-concept, and their effects on students' achievement (Fulgini, 2001). It may also allow researchers to examine changes to students' filial belief under different circumstances, such as immigration and Westernisation, and their impact on students' academic self-concept and achievement (Lieber et al., 2004).

Next, it may be valuable to have more ethnic and cultural diversity in the sample population. As previously mentioned, many of the participants in this research identified themselves as New Zealand European, which may not reflect the entire demographic diversity that exists within New Zealand (Tan & Singh, 2015). Hence, future research needs to be conducted with a larger sample population with participants from throughout the country in order to increase sample variability and enable greater comparison. It may also be beneficial for future research to target Māori and Pacific Island students as they may hold differing concepts of family and achievement that influences their academic performance.

In consideration of the lack of subject-level specificity in the measurement of academic self-concept, future studies should consider the multidimensionality of academic self-concept, and use domain-specific academic self-concept scales that are reflective of the subject areas (Arens, Yeung, Craven, & Hasselhorn, 2011; Marsh, 2007).

Finally, filial piety, as a cultural construct, is likely to change and evolve in its meaning over time and in tandem with ongoing social change (Ting, 2009). Currently, the inconsistent measurements of filial piety have created enormous barriers in its understanding at a global level. The scale used for this study was selected as the most appropriate to capture the contemporary version of filial piety within the Auckland school context (Sung, 2010; Yang et al., 1989). Nonetheless, the standardisation of the core elements and procedures of the filial piety scale is essential to ensure psychometrically sound measures that derive more representative results of filial beliefs and practices among East Asian students worldwide (Dong & Xu, 2016).

In addition to filial piety, there is a need to further explore the factors that mediate how students perceive filial piety, academic self-concept and their academic achievement. Future studies may include an examination of the differential impact of other school- and parent-related variables on the way students perceive their learning and achievement (Phillipson, 2013). Although the survey asked participants to disclose information on their gender, extra-curricular activities and home living arrangements, it was difficult to assess how this information affected their level of filial piety and its relative effect on their academic self-concept and achievement due to the small sample population.

Implications for Practice

As the student population becomes increasingly more diverse in New Zealand, schools face growing challenges and demands to establish effective ways of promoting educational success for all students (Chen & Ho, 2012; Ell, 2011). The Findings from this study may be beneficial in increasing educators' awareness of and understanding of the relationship between filial piety, academic self-concept and students' academic achievement.

The results from this study illustrate the importance of students' formation of self-concept in relation to learning and achievement, and their subsequent academic achievement (Marsh & Martin, 2011). Students with high academic self-concept are more likely than those with low academic self-concept to be academically motivated, and more likely engage in pro-learning behaviours in order to perform well academically (Cokley et al., 2015; Huang, 2011). Educators, therefore, play a key role in enhancing and promoting a student's self-concept beliefs, and by extension, their academic achievement. Professional training and development for schools and teachers may include practical guidelines on how to promote students' sense of academic competence and confidence (Marsh & Seaton, 2013). This may include the provision of direct positive feedback that encourage, assure, and positively reinforce students' effort and ability (Chen et al., 2015; Ozgen, 2013). These words of encouragement are likely to have an impact on students' self-belief, enabling them to see themselves as academically capable, thus they may be more willing to strive to study hard in order to obtain academic success.

While the findings do not support filial piety as a significant predictor of academic self-concept and achievement, this study highlights the important of contextualising teaching and learning in a culturally sensitive manner that is unique to each student and their family.

Considering the dominance of filial piety in influencing the thoughts and behaviours of many East Asian people across a variety of contexts, parents play an important role in their children's education and achievement (Huang & Gove, 2012). For educators, it is important to note that working with the East Asian family is as critical as working with the student. In learning the East Asian family values such as filial piety, this will enable schools and teachers work more effectively with the whole family to maximise students' achievement success (Fryberg & Markus, 2007). With improved understanding, educators can adjust or personalise their teaching approaches to better establish rapport with the parents, which in turn will increase home-school partnerships, communication, and collaboration to the benefit of the student.

Conclusion

In the study of students' academic self-concept and achievement, cultural elements that may affect this relationship have often been overlooked. This research aims to incorporate one of the most influential belief systems throughout East Asian nations, that is, filial piety, and to examine its relationship with the academic self-concept and achievement of students in New Zealand. This study has found that while students' academic self-concept has a significant impact on their academic achievement, filial piety was not a significant predictor.

Due to the small sample size, the validity and generalisability of the findings in this study to New Zealand's general student population are limited, and ongoing research is required to better understand the diverse and contextualised impact of filial piety on students, especially on East Asian students in New Zealand. As the Chinese proverb states; 學, 不可以已: "There is never an ending to learning." This important notion applies to the field of research as much as to academic learning and achievement. Given the ever-changing and evolving nature that is the contemporary New Zealand society, findings from this study leave room for further research to better understand what motivates students to strive towards academic achievement in New Zealand.

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Appendices

Appendix A: Survey



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Questionnaire Survey How people see themselves at Home and at School

**Student ID/Reference Number
(if known)**

Name:



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Response Form:

Today's date:

____ / ____ / ____

1. **Year Level:** _____

2. **Age:** _____

3. **Gender:**

Male

Female

4. **Ethnicity:**

New Zealand European

European (Please specify): _____

Chinese

Taiwanese

Korean

Japanese

Indian

Māori

Pasifika/Pacific Island (Please specify): _____

Other (Please specify): _____

5. **If you were not born in New Zealand, how long have you lived in New Zealand?**

6. **Who lives at home with you (e.g. mum, dad, grandma, cousin, aunty, etc)?**

7. **Do you play a musical instrument?**

Yes

No



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8. Do you play sports (individual or team)?

- Yes
 No

9. Do you have extra support at home to do school work (e.g., a tutor)?

- Yes
 No

10. I am proud of my cultural background/heritage

- Yes
 No

Instructions:

People are different in their opinions about their **parents**. Below are 16 statements about the way people treat their parents.

Please read each statement carefully and rate its **importance** according to your own feelings using the scale from **(1)** Extremely Unimportant to **(6)** Extremely Important.

The survey is simply looking at personal opinions and **there is no right or wrong answer** for any of these statements.

You can choose not to answer any questions if you don't want to.

If at any time you feel uncomfortable or distressed after completing the survey, you should discuss this with your teacher, an adult you can trust, or your school's guidance counsellor.

Please select the number that best represents your opinion. If there is a big difference in your interaction with your father and with your mother, please choose and think of the parent with the **most** influence on you when answering **all** questions.

If at any time you have any questions, it's **okay** to ask for help from your friends or the teacher.



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Circle the numbers like this:

	Extremely Unimportant	Quite Unimportant	Slightly Unimportant	Slightly Important	Quite Important	Extremely Important
1. Eat chocolate every day.	1	2	3	4	5	6

Statements

	Extremely Unimportant	Quite Unimportant	Slightly Unimportant	Slightly Important	Quite Important	Extremely Important
1. I am concerned about my parents' health.	1	2	3	4	5	6
2. I listen to my parents' suggestions even when I do not agree with them.	1	2	3	4	5	6
3. I talk frequently with my parents to understand their thoughts and feelings.	1	2	3	4	5	6
4. When I get a job, I will let my parents look after my money.	1	2	3	4	5	6
5. I am concerned about my parents' general well-being.	1	2	3	4	5	6
6. I would ignore promises to friends in order to obey my parents.	1	2	3	4	5	6
7. I am concerned about my parents, as well as understand them.	1	2	3	4	5	6

8. I would give up my aspirations to meet my parents' expectations.	1	2	3	4	5	6
9. I would support my parents' livelihood to make their lives more comfortable.	1	2	3	4	5	6
10. I would do whatever my parents asked to do right away.	1	2	3	4	5	6
11. I am thankful to my parents for raising me.	1	2	3	4	5	6
12. If and when I get married, I will avoid marrying someone my parents dislike.	1	2	3	4	5	6
13. I would attend an important family gathering if my parents asked me no matter how far away I lived.	1	2	3	4	5	6
14. If and when I get married, I will have at least one son to carry on the family name.	1	2	3	4	5	6
15. I would help my parents when they are busy without them asking first.	1	2	3	4	5	6
16. If and when I get married, I will live with my husband or wife's parents.	1	2	3	4	5	6



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Instructions:

People are different in their opinions about their **schoolwork**. Below are 19 statements about the way people think about their schoolwork.

Please read each statement carefully and rate your agreement with the statement using the scale from **(1)** Strongly Disagree to **(4)** Strongly Agree.

The survey is simply looking at personal opinions and **there is no right or wrong answers** for any of these statements.

Please select the number that **best** represents your opinion for **all** the statements.

Statements

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I can follow the lessons easily	1	2	3	4
2. I day-dream a lot in class.	1	2	3	4
3. I am able to help my classmates in their schoolwork.	1	2	3	4
4. I often do my homework without thinking.	1	2	3	4
5. If I work hard, I think I can go to University.	1	2	3	4
6. I pay attention to the teachers during lessons.	1	2	3	4
7. Most of my classmates are smarter than I am.	1	2	3	4
8. I study hard for my tests.	1	2	3	4
9. My teachers think that I do not do well in my school work.	1	2	3	4
10. I am usually interested in my school work.	1	2	3	4
11. I often forget what I have learned.	1	2	3	4
12. I will do my best to pass all the subjects.	1	2	3	4
13. I often feel like quitting school.	1	2	3	4
14. I am good in most of my school subjects.	1	2	3	4
15. I am always waiting for the lessons to end.	1	2	3	4
16. I always do poorly in tests.	1	2	3	4
17. I do not give up easily when I am faced with a difficult question in my schoolwork.	1	2	3	4
18. I am able to do better than my friends in most subjects.	1	2	3	4
19. I am not willing to put in more effort into my schoolwork.	1	2	3	4

END OF SURVEY, THANK YOU!

Appendix B: Massey University Human Ethics Committee Approval letter



Date: 14 June 2016

Dear Cindy Chia-Yi Wu

Re: Ethics Notification - **NOR 16/25 - Filial Piety, Academic Self-Concept, and the Academic Achievement of Students in New Zealand.**

Thank you for the above application that was considered by the Massey University Human Ethics Committee: **Human Ethics Northern Committee** at their meeting held on **Tuesday, 14 June, 2016.**

On behalf of the Committee I am pleased to advise you that the ethics of your application are approved.

Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely



Dr Brian Finch
Chair, Human Ethics Chairs' Committee and Director (Research Ethics)

Appendix C: School information and consent form



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INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Filial Piety, Academic Self-Concept, and the Academic Achievement of students in New Zealand

[Date]

[School]

Dear [principal]

Hello, my name is Cindy Wu. I am a graduate student at Massey University, currently studying a Masters of Educational Psychology. I am writing to seek your permission to conduct research with your students as part of my requirements for completing my studies.

Project Description

I am interested in the relationship between the way students in New Zealand perceive themselves in relation to their school (academic self-concept) and home, and how this relates to their academic achievement.

The project has an Asian focus, in that it incorporates concepts of *filial piety*, children's love and respect for their parents and its influence on their perceptions of school and their academic achievement.

This research will contribute to our understanding about students' culturally unique perception and their motivation for high academic achievement.

Project Procedure

This study will use **survey questionnaire** to collect data. Once consent is obtained, the survey with instructions on how to answer the questions will be distributed to the students. I am happy to visit the school to explain to you and/or the students more on how to complete the survey.

Details on processes of obtaining consent, and survey distribution, completion and collection will be detailed on a separate Information Sheet.

The activity is outlined below:

Session	Duration	Location	Attendance	Activity
Questionnaire.	15-20 minutes.	Students, access to stationary, and a quiet place to fill in the questionnaire.	All student participants.	Filling out the questionnaires.

To study the relationship between students' academic self-concept and their school achievement, I need your permission to access participants' achievement record in their **Literacy** and **Numeracy** subjects. A separate Consent Form will be provided.

Confidentiality and Anonymity

Only my supervisors and I will have access to any personal information collected throughout the research process. Specific permission will be obtained beforehand if identifying information is to be shared.

Student Health and Wellbeing

Students can choose not to answer any questions on the survey if they don't want to. If at any time they feel uneasy after completing the survey, they have been advised to talk to their teachers, parents, an adult they can trust, or the school's guidance counsellor.

Data storage and Destruction

I will make sure that all data from this study is kept secured at **all** times, and be destroyed after 5 years.

Future Use

Results from this research will be used for my master's thesis and may be shared at conference presentations and research publications.

Participants' Rights

Your participation is completely **voluntary**. You have the **right** to decline from participation.

If you decide to participate, you and your students have the right to:

- Withdraw from the study **before** the completing the questionnaires;
- Decline to answer **any** particular question;
- Provide information on the understanding that the school, you and your students' name will not be used unless you give permission to the researcher;
- Ask **any** questions about the study at any time;
- Be given access to a summary of the project findings when it is concluded.

Project Contacts

If you are willing to participate, please **read, complete, and return** the attached consent form to:

Cindy Wu | cindy-wu@outlook.com | Phone: 021 148 2681

If you have any questions, concerns or general comments about the conduct of this research, please feel free to contact my supervisors:

Terence Edwards | T.Edwards@massey.ac.nz | Phone: (09) 414 0800 EXT: 43526

Jhan Gavala | J.R.Gavala@massey.ac.nz | Phone: (09) 414 0800 EXT: 43099

Thank you for your consideration, and I look forward in hearing your response.

Yours sincerely,

Cindy Wu (Graduate student)

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 16/25. If you have any concerns about the conduct of this research, please contact Dr. Andrew Chrystall, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 43317, email humanethicsnorth@massey.ac.nz.



MASSEY UNIVERSITY
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 TE KURA O TE MĀTAURANGA

Filial Piety, Academic Self-Concept, and the Academic Achievement of students in New Zealand

School Consent Form

I _____ (name) _____ (position at school) of (school); have read and understood the nature of the research project and agree to participate as requested.

I agree with the following statements (please tick):

I understand that my school's participation is voluntary and that the school can withdraw before the survey stage begins.

I understand and give access to the researcher [Cindy Wu] students' achievement record in Literacy and Numeracy subjects.

I understand that my identity and that of my school and students will not be revealed.

I understand that my response and the students' response will be kept in a secure place for 5 years before being destroyed.

I understand that the findings of this research could be presented at conferences and published in academic journals.

School Signature: _____ Date: _____

Appendix D: School information and consent for access to student achievement record



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Filial Piety, Academic Self-Concept, and the Academic Achievement of students in New Zealand

[Date]

[School]

Request to Access Student Achievement Record:

Dear [principal]

Hello, my name is Cindy Wu, I am a graduate student at Massey University, currently studying a Masters of Educational Psychology. I would like to formally request your permission to access students' achievement records for students participating in my Masters study.

As we have discussed, in order to study the relationship between students' academic self-concept and their school achievement I need your permission to access participating students' achievement data in **Literacy** and **Numeracy** subjects.

Confidentiality and Anonymity

No identifying information for any individual will be used in any presentations or publications.

Participants' National Student Number (NSN) or name will be used on their surveys to match with their survey data and achievement records.

Names will be deleted once data has been matched and the respondents will be given a code number reference (1, 2, 3, 4, and so on).

Data storage and Destruction

I will make sure that **all** achievement records collected from this study are kept secured at **all** times. These will be destroyed after 5 years.

Future Use

Aggregated data will be used for my master's thesis and may be shared at conferences and in research publications. A summary of key findings will be returned to the school and a copy of the completed thesis will be made available once it has been

completed and evaluated.

Project Contacts

If you are willing to give permission for data access, please **read, complete, and return** the attached consent form to:

Cindy Wu | cindy-wu@outlook.com | Phone: 021 148 2681

If at any time should you have questions, concerns or general comments about the conduct of this research, please feel free to contact my supervisors:

Terence Edwards | T.Edwards@massey.ac.nz | Phone: (09) 414 0800 EXT: 43526

Jhan Gavala | J.R.Gavala@massey.ac.nz | Phone: (09) 414 0800 EXT: 43099

Thank you for your consideration, and I look forward in hearing your response.

Yours sincerely,

Cindy Wu (Graduate student)

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 16/25. If you have any concerns about the conduct of this research, please contact Dr. Andrew Chrystall, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 43317, email humanethicsnorth@massey.ac.nz.



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
 TE KURA O TE MĀTAURANGA

Filial Piety, Academic Self-Concept, and the Academic Achievement of students in New Zealand

Request to Access Student Achievement Record
School Consent Form

I _____ (name) _____ (position at school) of (school); have read and understood the nature of the research project and give permission to the researcher students' achievement record.

I agree with the following statements (please tick):

I understand that my school's participation is voluntary and that the school can withdraw before the survey begins.

I understand and give access to the researcher [Cindy Wu] participating students' achievement record in Literacy and Numeracy subjects.

I understand that my identity and that of my school and students will not be revealed, and that a coding system will be used to anonymize matching between student surveys and their achievement records.

I understand that the findings of this research could be presented at conferences and published in academic journals.

School Signature: _____ Date: _____

Appendix E: Ethics Amendment approval letters



MASSEY UNIVERSITY
ALBANY

9 August 2016

Ms Cindy Chia –Yi Wu
College of Humanities and Social Sciences
Massey University
Albany

Dear Cindy

HUMAN ETHICS APPROVAL APPLICATION – NOR 16/25

Filial Piety, Academic Self-Concept, and the Academic Achievement of Students in New Zealand.

Thank you for your documentation of 9 August 2016, seeking a variation to your protocol MUHECN : NOR 16/25 approved on 14 June 2016 by the Massey University Human Ethics Committee: Northern.

Your variation in participant recruitment has been approved.

Approval is for three years. If this project has not been completed within three years of the date on the original approval letter, a re-approval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Dr Lily George
Acting Chair
Human Ethics Committee: Northern

Cc Mr Terence Edwards and Mr Jhanitra Gavala
College of Humanities and Social Sciences
Massey University
Auckland Campus

Te Kunenga
ki Pūrehuroa

Research Ethics Office
Private Bag 102 904, Auckland, 0745, New Zealand Telephone +64 9 414 0800 ex 43279 humanethicsnorth@massey.ac.nz



MASSEY UNIVERSITY
ALBANY

24 August 2016

Ms Cindy Chia –Yi Wu
College of Humanities and Social Sciences
Massey University
Albany

Dear Cindy

HUMAN ETHICS APPROVAL APPLICATION – NOR 16/25
Filial Piety, Academic Self-Concept, and the Academic Achievement of Students in New Zealand.

Thank you for your documentation of 24 August 2016, seeking a variation to your protocol MUHECN :
NOR 16/25 approved on 14 June 2016 by the Massey University Human Ethics Committee: Northern.

Your variation in recruitment strategy has been approved.

Approval is for three years. If this project has not been completed within three years of the date on the original approval letter, a re-approval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Dr Lily George
Acting Chair
Human Ethics Committee: Northern

Cc Mr Terence Edwards and Mr Jhanitra Gavala
College of Humanities and Social Sciences
Massey University
Auckland Campus

Appendix F: Parent information and consent form



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Filial Piety, Academic Self-Concept, and the Academic Achievement of students in New Zealand

Dear Parents/Caregivers

Hello, my name is Cindy Wu. I am a graduate student at Massey University, doing a Masters of Educational Psychology. I would like to warmly invite your child to participate in an important research project. There is also a chance for your child to **win a GIFT VOUCHER as thanks for helping me with my project.**

Project Description

I am interested in the way young people see themselves as students and as members in their family, and how this is related to their school achievement.

This project has an Asian focus, where I am interested in the way students' culture and ethnicity, may affect how they see themselves as family members and as students, and their school grades.

I am looking for student participants from a variety of ethnic backgrounds with **basic** English ability.

Project Procedure

If your child chooses to participate he or she will complete a survey during school hours. The survey contains questions in areas of how students interact with their family members at home, and how they feel towards their school work. Your child will also be entered to win **A GIFT VOUCHER.**

This should take between **15-20** minutes to complete. I am willing to visit the school to explain more to the students on how to complete the survey.

Responses to the survey will be reviewed alongside student achievement data in literacy (English) and numeracy (Math) subjects held by the school. This will allow me to see if there is a relationship between how students see themselves and their school achievement.

Confidentiality and Anonymity

Only my supervisors and I will have access to any personal information collected throughout the research process.

Once any identifying information is removed, results from the survey will be used for my master's thesis and may be shared at professional presentations and in research publications. A summary of the findings will be provided to the school and the school will make this available to all participants.

Student Health and Wellbeing

Students can choose not to answer any questions on the survey if they don't want to. If at any time they feel uneasy after completing the survey, they have been advised to talk to their teachers, parents, an adult they can trust, or the school's guidance counsellor.

Data storage and Destruction

Information from this study will be kept secured at **all** times, and be destroyed after 5 years.

Participant's Rights

You are under **no** obligation to accept this invitation. If you allow your child to participate you and the child have the right to:

- Withdraw from the study before completing and submitting the survey;
- Decline to answer any particular question;
- Provide information on the understanding that the school, you and your child's name will not be used unless you give permission to the researcher;
- Ask **any** questions about the study at any time.
- Be given access to a summary of the project findings once it is finished.

If you allow your child to participate, please **read, complete, and return** the attached consent form to:

[Your child's class teacher]

Project Contacts

If you have **any** questions, concerns or general comments about the conduct of this research, please feel free to contact me or my supervisors:

Cindy Wu | cindy-wu@outlook.com | Phone: 021 148 2681

Terence Edwards | T.Edwards@massey.ac.nz | Phone: (09) 414 0800 EXT: 43526

Jhan Gavala | J.R.Gavala@massey.ac.nz | Phone: (09) 414 0800 EXT: 43099

Thank you for your time, and I look forward in hearing your response.

Yours sincerely,

Cindy Wu (Graduate student)

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 16/25. If you have any concerns about the conduct of this research, please contact Dr. Andrew Chrystall, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 43317, email humanethicsnorth@massey.ac.nz.



MASSEY UNIVERSITY
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Filial Piety, Academic Self-Concept, and the Academic Achievement of students in New Zealand

Parent/Caregiver Consent Form

I _____ (full name) parent/guardian of
 _____ (child name) have read and
 understood the nature of the research project and agree to allow the child to participate as
 requested.

I agree with the following statements (please tick):

I understand that my child's participation is voluntary and can withdraw from the study at any time.

I understand that my identity, the identity of the child under my care, and that of the school will not be revealed.

I understand and give access to the researcher [Cindy Wu] the child's achievement record in Literacy and Numeracy subjects.

I understand that my response and the response of the child under my care will be kept in a secure place for 5 years before being destroyed.

I understand that findings from this research could be used for presentations and research publications.

Parent/Caregiver Signature: _____ Date: _____

Appendix G: Student information and consent form



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

How People see themselves at Home and at School in New Zealand

Dear student

Hi, my name is Cindy Wu, I am a student at Massey University. I would like to invite you to help me with a project I am working on, **and a chance to win SOME COOL PRICES!**

I am interested in the way you see yourself as a student and as a member of your family, and how this affects your studies and school experiences.

If you agree to help me in this study, you will complete a survey during school time. This survey will ask you questions about how you see yourself as a student in school and as a family member at home. **You will also be in to a draw to win 1 of 5 \$40.00 GIFT VOUCHERS.**

The survey will take about **15 to 20** minutes to finish. I can visit your class at the school to explain more on how to answer the survey if needed.

Your answers to the survey will be looked at together with your school grades in English and Math subjects. This will help me to see if there is a relationship between how students see themselves and their school grades.

My teachers at the university and I will be the **only** people to see your achievement data and survey answers. These will **not** be shared with anyone else.

I will **always** ask for your permission **first** if I need to share your individual information with other people.

The survey results will be used for presentations and for publishing into journal articles. There will be **no** identifying information about you individually in any presentations or publications.

You can choose not to answer some questions if you don't want to.

If at any time you feel uncomfortable or distressed after completing the survey, you should discuss this with your teacher, parents, an adult you can trust, or your school's guidance counsellor.

To get involved, please **read, complete, and return** the attached consent form to:

[Your Class Teacher]

If at any time you have any questions or comments about my research, you can talk to your teacher or the principal, and they can contact me if needed.

Thank you and I look forward to you participating in this important project! 😊

Cindy Wu (Graduate Student)

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 16/25. If you have any concerns about the conduct of this research, please contact Dr. Andrew Chrystall, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 43317, email humanethicsnorth@massey.ac.nz.



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

How People see themselves at Home and at School in New Zealand

Student Consent Form

I _____ (full name) have read and agree to participate in the research.

Please read and tick the following statements to indicate your agreement to participate in the project (please tick):

I understand what this project is about and agree to participate in the project.

I give permission to Cindy Wu to access my achievement data at school in Literacy (English) and Numeracy (Math) subjects.

I understand that findings from the survey can be used for presentations or journal articles.

I understand that my name and my school's name will not be used.

I understand that I can withdraw my participation at any time before completing the survey.

Student Signature: _____ Date: _____

Appendix H: Author's permission to use the Dual Filial Piety Scale

Scale Use Consent Form

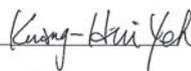
I, Cindy Wu, request for the authorization of using the Dual Filial Piety Scale (DFPS) developed by Professor Kuang-Hui Yeh, Institute of Ethnology, Academia Sinica, for the purpose of _____

_____, and will be using this scale only with the approval of Professor Yeh. The said scale will only be used for the purpose of academic writing solely. If the said scale is used as a tool of measurement in my research or publications, the source of this scale will be cited.

Moreover, I agree to send Professor Yeh a copy of research paper(s) published using the said scale for the purpose of reference in his teaching and research.

Signature of the User:  Date: 11/03/2016

Signature of the User: _____ Date: _____

Signature of the Scale Composer:  Date: 12/03/2016

Appendix I: Author's permission to use the Academic Self-Concept Scale

outlook.live.com

 Reply |
  Delete |
  Junk |
  ...

Permission to use Academic self concept scale



Shalu SANSANWAL (TE)

Mon 16/05/2016 21:25

To: cindy-wu@outlook.com

Scales

Documents



2005 APER-Liu Wang A...
83 KB



2005 BJEP_Liu Wang Par...
191 KB



2007 JoE Liu Wang Aca...
1 MB



2008 CP273 Liu Wang H...
260 KB

 Show all 4 attachments (2 MB) |
  Download all |
 Save all to OneDrive - Personal

Dear Cindy,

I am Shalu Sansanwal, the Research Associate of Dr. Liu.

She is happy to give you the permission to use the Academic Self Concept Scale for the purpose of your research.

Kindly find attached the some of the papers and the Scale for your reference.

Best of luck for your Research.

Kind Regards,
Shallu

National Institute of Education (Singapore) <http://www.nie.edu.sg>

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