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When east meets west: Filial modes and family functioning in second-generation Chinese-Americans

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WHEN EAST MEETS WEST: FILIAL MODES AND FAMILY FUNCTIONING IN SECOND-GENERATION CHINESE-AMERICANS

BY

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Abstract

Due to the global trend of population aging and the growing issue of elder care, research on filial norms are being conducted around the world (e.g., Lowenstein & Daatland, 2006). The current study is the first to examine filial piety in a sample of second-generation Chinese-Americans and added to the filial piety literature in four ways. First, the study confirmed both the two-factor structure of the Dual Filial Piety Scale (DFPS) with second-generation Chinese-Americans using a confirmatory factor analysis, with four items representing Reciprocal Filial Piety (RFP) and four items representing Authoritarian Filial Piety (AFP). Second, the study confirmed the identified four modes of filial interaction as conceptualized by Yeh and Bedford (2004): Absolute/Balanced (high RFP and AFP), Reciprocal (high RFP and low AFP), Authoritarian (low RFP and high AFP), and Non-Filial (low RFP and AFP). However, the study did not replicate Yeh and Bedford's (2004) findings regarding differences in the four types of parent-child conflict amongst the four identified filial modes, where the Non-Filial mode did not have significantly different Demands Conflict with Desires (DCD) and Unreasonable Behavior (UB) type of parent-child conflict when compared to the other filial modes; the Balanced mode did not have significantly different DCD and UB types of parent-child conflict than the Reciprocal mode; and the Balanced mode did not report the lowest level of all four parent-child conflicts. Third, the study found significant differences in family functioning among the four identified filial modes. Fourth, this study found that a person's mode of filial interaction and family functioning can be captured by their early memories. These findings highlight the importance of considering the concurrent influence of RFP and AFP to assess an individual's overall family functioning.

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Chapter I

Introduction

Due to the global trend of population aging and the growing issue of elder care, research interest in parent-child relations is on the rise (e.g., Glass et al., 2013; North & Fiske, 2015). Investigations into filial norms on adult children's support of their elder parents are being conducted around the world to address the public financial burden of elder care (e.g., Gans et al., 2009; Lowenstein & Daatland, 2006). Filial piety specifies moral norms relating to how a child should care for their parents (Yeh, 1999). By adopting an indigenous psychology approach, Yeh and Bedford (2003) integrated Chinese philosophical, historical, and social trends to construct the Dual Filial Piety Model (DFPM), which conceptualized two dimensions of filial aspects underlying parent-child relations: Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP). Bedford and Yeh (2019) utilized the DFPM to re-conceptualize filial piety from its previous definition as a set of Chinese culture-specific norms, to a contextualized personality construct that is represented by a pair of culturally sensitive psychological schemas of the parent-child interaction. The contextualized personality approach to filial piety focuses first on the parent-child interaction as the core context for examining the underlying filial motivations. Instead of focusing on individuals' beliefs and attitudes (the surface content), this approach shifts the focus to the underlying psychological mechanisms or principles (the deep structure) that connects individuals to their environment through the context of the parent-child relationship (Bedford & Yeh, 2021).

Past filial research indicates that RFP generally has beneficial effects on one's family and psychosocial functioning, whereas AFP often relates to harmful effects (Yeh

& Bedford, 2003, 2004). More specifically, research findings generally found that RFP was positively, and AFP was negatively, related to one's family and psychosocial functioning (e.g., Jen et al., 2019; Leung et al., 2010; Li et al., 2014; Wang et al., 2019). A consensus has emerged suggesting RFP supports stronger intergenerational relations than AFP (Yeh, 2009), which has influenced government policies in eldercare to emphasize enhancing high levels of RFP and low levels of AFP (Bedford & Yeh, 2021; Taiwan Ministry of Education, 2011). However, other evidence has challenged this consensus. Some research has found AFP to be positively linked to family cohesion, quality of family life (Chen et al., 2016), and life satisfaction (Yan & Chen, 2018). Furthermore, one study identified four filial modes[1] of functioning and found that individuals who had high levels of both RFP and AFP (referred to as the Absolute/Balanced mode) reported significantly less parent-child conflict than individuals who had high levels of RFP and low levels of AFP (referred to as the Reciprocal mode; Yeh & Bedford, 2004). Not only does this finding challenge the consensus in the literature suggesting the merits of high RFP and low AFP, but it also highlights the importance of examining how the dual filial dimensions concurrently influence one's family functioning. However, no study thus far has tested the identified filial modes further to examine the differences in family functioning between the different filial modes.

Additionally, researchers have found that although there are variations in the endorsement of the dual filial dimensions among different Chinese societies (Taiwan,

[1] The terms filial modes, types, and clusters are used interchangeably throughout this study.

Hong Kong, & China; Yeh et al., 2013), AFP is more likely to vary due to the influence of societal and political contextual factors than RFP (Chan et al., 2012; Chow, 2006). However, Chinese-American samples have largely been neglected in existing dual filial piety research with the exception of one dissertation study by Lee in 2013, which did not report validating the Dual Filial Piety Scale (DFPS) before utilizing it with Chinese-American samples. Validation of the DFPS is needed to ensure that the DFPS is applicable to the Chinese-American populations.

The aim of the current study was threefold. This study first examined the applicability of the DFPS with a sample of second-generation Chinese-American adults through a confirmatory factor analysis. Once the factors of the DFPS have been identified, the second aim of the study was to then run a hierarchical cluster analysis to identify the different filial modes of functioning to examine Yeh and Bedford's (2004) findings regarding differences in parent-child conflict among the identified filial modes. Lastly, this study extended the filial piety research by examining various components of family functioning (i.e., family cohesion, flexibility, communication, and satisfaction) to better understand the differences in family functioning among the identified filial modes. The findings may not only clarify whether the DFPM is applicable within a Chinese-American sample, but it may also shed light to the psychological differences between different filial modes within the family context.

Chapter II

Review of the Literature

This section will first provide an overview about how Confucian philosophies influenced the conceptualization of filial piety during different stages of China's development. The focus will then shift to how the changing conceptualization of filial piety resulted in the development of different filial piety measures. Next, a focused discussion on filial research will be presented to highlight the conflicting research findings that ultimately contributed to the development of the Dual Filial Piety Model (DFPM). The conceptualization of the DFPM will be discussed with an emphasis on the two-factor structure of the DFPM: Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP). Research findings pertaining to the dual factors will be presented, and the re-conceptualization of the DFPM as a contextualized personality construct will be introduced. The conceptualization of different filial modes will then be discussed, highlighting the limitations and gaps in current dual filial piety research. Finally, inconsistencies and gaps in the dual filial piety literature will be examined to emphasize how Chinese-American samples have been neglected in dual filial research, which ultimately provides the foundation for the current study's research question.

The History of Filial Piety

Early conceptualization of filial piety in psychology literature began several decades ago and defined filial piety as a set of values, norms, and practices regarding how children should behave towards their parents (e.g., Ho and Lee, 1974). Filial piety was built upon the foundation of ancestor worship, where it was commonly believed that if ancestors received the appropriate sacrifices, the ancestors would protect the dynasty

and provide guidance towards important governmental decisions (Hsu, 1975). Emperors and heads of families both incorporated this belief, where the head of a family ruled over his relatives just as the emperor ruled over his subjects. Thus, individual family units believed that appropriate ancestor worship would protect and guide the family unit under the leadership of the head of the family. Both kinship systems and role relations in the Chinese society were built upon the basic premise of ancestor worship and family role hierarchy.

Confucius (551-479 BCE) redefined the filial obligations of ancestor worship by emphasizing that filial obligations should highlight family, virtue, and orderly social relations (Bi & D'Agostino, 2004). Confucius abridged prevailing beliefs of ancestor worship into a practical philosophy called the Way of Humanity, which specified two ethical principles that should guide social interactions: *Favoring the Intimate* and *Respecting the Superior* (Hwang, 1987).

The principle of *Favoring the Intimate* was the dominant practice of filial piety during the Pre-Chin Era (521-221 BCE), which ensures preferential treatment of one's kin (Hwang, 1987). Confucius believed that natural affection and the principle of reciprocity were the main motivations behind parent-child interactions, which emphasized that children have a fundamental obligation to repay their parents for giving them life and raising them (Hsu, 1975). As a result, children were often motivated by parental affection to return the care they received from their parents by performing filial duties such as looking after their parents in their old age and being respectful to them (Yeh, 2003).

The practice of filial piety shifted to the principle of *Respecting the Superior* between the Han dynasty to the end of the Qing dynasty (206 BCE – 1911 AD). This shift occurred due to the country's need to strengthen political sovereignty where patriarchal parental authority was a representation of the emperor's absolute authority (Miao, 2015). During this period, filial piety specified that the person in the superior position (i.e., greater hierarchical standing) had the authority to make decisions for those who were in the inferior position to ensure family solidarity and prosperity (Hwang, 1987). This principle required suppression of self-autonomy and absolute submission to hierarchical authority. Not only did this principle justify absolute parental authority over their children, where children were taught to discount self-needs to satisfy parental desires (Yeh, 2003), it also, by extension, gave authority to any individual of an elder generation over those who were junior (Hwang, 2012).

After World War II, Chinese societies began to go through social change, marketization, and political reform. As a result, Chinese scholars in Confucian societies noticed the trend towards smaller families, increased geographic mobility of workers, and a growing number of women in the workplace, which prompted scholars to question how these changes impacted the structure of social relationships (Yang et al., 1989). Researchers debated on the impact societal modernization has on one's psychological well-being and intergenerational relationships (Sung, 1995). Some even wondered about the potential harmful effects of filial beliefs in the new modern context (Yeh, 1999), where exposure to the Western ideologies of independence and freedom resulted in internal conflict between being filial according to traditional beliefs, and being modern, agentic, and self-responsive (Ho, 1996).

Conceptualizing and Measuring Filial Piety

Early psychology researchers investigating whether filial beliefs and attitudes were waning with the modernization of Chinese societies began to conceptualize filial piety as a static set of beliefs or attitudes and practices grounded in traditional Chinese norms (Bedford & Yeh, 2021). David Ho was the first researcher to develop a filial piety measure (Ho & Yu, 1974), and he identified filial attitudes that correlated with traditional parental attitudes such as protection, neglect, control, and harshness. Filial attitudes were found to be most prevalent among individuals from low socio-economic status and low education backgrounds (Ho, 1994). Furthermore, the endorsement of traditional filial attitudes was found to be less for fathers than they were for grandfathers (Ho & Kang, 1984), leading to the conclusion that filial piety was waning with modernization and industrialization.

Further supporting this conceptualization of filial piety, early researchers found a positive relationship between filial piety and cognitive conservatism (Ho, 1996), as well as a positive relationship between filial piety and Neuroticism, and a negative relationship between filial piety and Openness (Zhang & Bond, 1998). This led to the postulation that modern Chinese individuals who endorsed filial piety and were exposed to Western ideologies of independence and freedom may experience emotional conflict. There was also evidence suggesting that these personality characteristics carried over into parenting attitudes, where filial piety was found to be correlated with parenting attitudes that emphasized obedience, moral correctness, impulse control, and indebtedness, as well as lower cognitive complexity and higher rigidity in their children (Ho, 1996). In addition, individuals who endorsed filial piety tended to be passive, superstitious,

authoritarian, dogmatic, fatalistic, uncritical, conformist, and demonstrated lower verbal fluency, creativity, self-expression, and independence (Ho, 1987; Liu & Lin, 1988). As a result, researchers concluded that from a contemporary psychological perspective, endorsement of filial piety appeared to have a predominantly and consistently negative impact on human development (Ho, 1994). These studies equated filial piety with Chinese cultural norms and traditions, which focused on hierarchical authority ranking in the family and cognitive conservatism, leading researchers to conclude that filial beliefs may be diminishing in modern societies.

However, some researchers began to question this conceptualization of filial piety as a static set of traditional Chinese norms by examining the relationship between filial piety and interpersonal factors. Researchers analyzed Confucian's Book of Rites to further examine the relation between filial piety and family cohesion, where they found that if caring for one's parents is experienced as a burden or as a requirement of an imposed norm, then the act does not qualify as filial piety (Cheung et al., 1994). This analysis re-conceptualized filial piety to be based on the development of empathy that emphasizes an affective component, rather than based on rational choice or normative socialization. While considering previous research highlighting a decrease in filial piety with modernization (e.g., Ho 1994), these researchers argued that because of normative characteristics of filial piety diminishing due to modernization, the affective component of filial piety may be playing a bigger role regarding family cohesion.

Researchers adopting this new conceptualization of filial piety to examine family cohesion found that filial piety supported love, harmony, warmth, and close family ties, leading them to believe that filial piety may have a beneficial effect on interpersonal

relationships and personal growth (Ishii-Kuntz, 1997; Sung, 1995; Yang, 1988). Furthermore, a qualitative study which analyzed interviews with people to investigate how modern Chinese people perceived and enacted filial beliefs found two orthogonal factors: filial behavior and filial emotion (Sung, 1990; 1995). Filial behavior emphasized repayment, sacrifice, and responsibility, whereas filial emotion highlighted love, respect, and family harmony. In their study, participants who endorsed filial emotions also had stronger intergenerational relationships, leading to the conclusion that although the values underlying filial piety may not have changed, the behaviors used to practice filial piety have shifted. Another study further supported this finding, where old and young participants both rated obedience as the least filial concern and respect as the highest, despite both holding strong beliefs about filial piety (Yue & Ng, 1999). Thus, in contrast to earlier research, these studies demonstrated that filial values were not waning, and that the mutual interdependence of family members continued to remain strong despite social and political changes.

Research then adopted a historical approach to expand on the conceptualization of filial piety by examining how filial piety may have evolved over time (Yeh, 1999). Taking into consideration the two Confucian philosophies highlighted earlier, stages of the conceptual development of filial piety were identified and linked to historical sociopolitical conditions that matched both the affective and authoritarian element highlighted by Sung (1990). Specifically, the *Favoring the Intimate* philosophy during the Pre-Chin era conceptualized affection and reciprocity as the underlying motivations of filial piety, where obligations were understood to be reciprocal and not based on family and societal hierarchy. The *Respecting the Superior* philosophy during the Han to

the Qing dynasty conceptualized obligation and obedience as underlying filial piety, where the practice of filial requirements became stricter and failure to submit to superiors or violation of filial duties resulted in severe punishment (Bedford & Yeh, 2021). The integration of these two philosophies not only helped make sense of the previous divergent findings, but it also led to a new way of understanding filial piety. Specifically, with modern political, social, and economic development, a new type of filial piety may be emerging to adapt to societal change; where some attributes of filial piety remain crucial to people's everyday lives, others may be gradually eroding at a conceptualization level (Yeh, 2003). To further support this new conceptualization of filial piety, a study in Taiwan found that although passive obedience and submissive aspects of filial piety were decreasing, active affective aspects of filial piety such as caring for parents were strengthening (Yeh, 1997).

The Dual Filial Piety Model

To overcome the conflicting findings from previous filial research, Yeh and Bedford (2003) adopted the indigenous psychology approach to integrate Chinese political, historical, and social trends to construct a model of filial piety that represents the dual reciprocal and authoritarian filial aspects underlying parent-child relations, called the Dual Filial Piety Model (DFPM). The indigenous psychology approach purposefully incorporates the cultural perspective into both theoretical construction and conceptual development, allowing it to create and apply theories, concepts, tools, and methods that represent local structures and processes (Yang, 2006). As previously mentioned, Confucian philosophies regarding filial piety differed and were highlighted in different stages of China's development, where the pre-Chin Era focused on reciprocal

affection and the Han to the Qing dynasties emphasized family role hierarchy (Hamilton, 1990). The DFPM conceptualized filial piety as being represented by two higher-order factors that corresponded to the two stages of historical development of filial piety: reciprocity and authoritarianism. The Dual Filial Piety scale (DFPS) was developed to encompass these two filial factors: Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP; Yeh & Bedford, 2003).

The DFPS was validated and used to investigate the correlation of the two factors with attitudes, behaviors, affects, cognitions, and personality traits (Yeh & Bedford, 2003). AFP was found to have a significant positive correlation with Neuroticism and a significant negative correlation with Openness, supporting the findings from Zhang and Bond (1998). However, RFP had the opposite relationship with these two personality traits, where RFP was found to have a significant negative correlation with Neuroticism and a significant positive correlation with Openness. This finding suggests that it is important to consider the two dynamic aspects of filial piety to gather a complete understanding of the role of filial piety in modern Chinese societies, as previous definitions of filial piety focused solely on authoritarian norms, values, and practices may be conceptually incomplete, potentially skewing the implications of filial piety. In summary, early filial research described filial piety as unidimensional and focused on authoritarian/hierarchical aspects that highlighted obedience, self-suppression, and sacrifice, whereas later studies that incorporated philosophical, historical, and phenomenological aspects of filial piety demonstrated a multidimensional approach by integrating the affective and relational dimension into the previous conceptualization of filial piety.

Reciprocal Filial Piety (RFP) is rooted in intimacy and the quality of the parent-child relationship, where it is developed out of genuine affection resulting from long-term positive interactions with one's parents (Bedford & Yeh, 2019). RFP is demonstrated through reciprocating the parent's effort and sacrifice by emotionally, physically, financially, and/or spiritually caring for one's parents out of genuine gratitude. RFP generally manifests in terms of a child's voluntary behaviors to support their parents to express care and love for them. Research has found that RFP tends to be positively associated with a higher socio-economic status, higher levels of education, a greater prevalence in women than men, greater interpersonal skills (e.g., empathy and self-disclosure), better psychosocial adjustment and emotional support of parents (Yeh et al., 2009), more positive intergenerational relationships (Lawrence et al., 1992), greater cognitive flexibility and mental well-being (Jen et al., 2019), higher life satisfaction (Wong et al., 2010), and greater degrees of openness, agreeableness, and extroversion (Yeh & Bedford, 2003).

Authoritarian Filial Piety (AFP) entails suppressing one's own wishes to comply with the demands of one's parents due to their seniority in the family role hierarchy. Based on this hierarchy, obedience to role obligations is required and parents are role models who represent absolute authority during their children's socialization and development. AFP is rooted in the hierarchical nature of the parent-child relationship and is developed through carrying out moral filial obligations based on social roles. AFP is also fostered through children's normative reactions towards satisfying their parental expectations and demands, where maintaining the family reputation and continuing the family lineage are important filial duties taught to children to practice (Bedford & Yeh,

2019). Research has found that AFP tends to be positively associated with a lower socio-economic status, lower levels of education, a greater prevalence in men more so than women, more traditional conservative attitudes (e.g., submission to authority and male superiority), greater maladaptation (e.g., neurotic personality traits, depression, and anxiety), higher levels of personal stress (Yeh, 2006), lower levels of self-esteem and cognitive flexibility (Jen et al., 2019), and higher levels of interpersonal difficulties (Wang et al., 2019).

Yeh and Bedford's (2003) conceptualization of filial piety being represented by the dual filial dimensions, RFP and AFP, was vital in explaining the divergent findings from previous research, in which some researchers found a negative impact of filial piety and postulated that filial piety was waning with modernization (Ho, 1994; 1996; Liu & Lin, 1988; Zhang & Bond, 1998), whereas other researchers found that filial piety had beneficial effect on personal growth and interpersonal relationships, suggesting that filial piety remained stable despite social change (Ishii-Kuntz, 1997; Yang, 1988). Thus, utilizing the lens of the DFPM explains that the early research findings do not diverge, but instead represent different dimensions of filial piety.

Both RFP and AFP form two intertwined aspects of Chinese filial piety grounded in historical development of the concept and are not mutually exclusive, but instead co-exist within an individual. These two dimensions may simultaneously function to varying degrees depending on the circumstances in which the individual is in (Yeh & Bedford, 2004). For example, they can both promote intergenerational support: AFP by regulating behaviors so that the minimum social expectations for the family role of the child are met, and RFP by accumulating affection and gratitude from positive parent-child

interactions (Bedford & Yeh, 2019). Furthermore, both RFP and AFP tend to reduce parent-adolescent conflict at the family level through different mechanisms: RFP tends to promote the usage of reconciliation, whereas AFP tends to promote the usage of inhibition (Yeh, 2009). This illustrates that although the behaviors underlying the two filial dimensions serve the same functions of sustaining family solidarity to promote elder care and intergenerational support, the underlying filial motivation can differ based on the individual's parent-child relationship.

Dual Filial Piety as a Contextualized Personality Construct

Bedford and Yeh (2019; 2021) argue that filial piety research in Chinese societies has progressed to the point where it can provide a solid structure for research that addresses intergenerational relations in other cultures. They utilized the DFPM to re-conceptualize filial piety from its previous definition as a set of Chinese culture-specific norms, to a contextualized personality construct that is represented by a pair of culturally sensitive psychological schemas (RFP and AFP) underlying parent-child relations. According to Heller et al. (2007), contextualized personality refers to the "stable patterns of thoughts, feelings, and behaviors that occur repeatedly within a given context" (p. 1229). The contextualized personality construct captures the idea that personality manifests in different ways across various contexts and social roles. Personality is expressed in terms of the goals, motivations, and traits that emerge from the individual's interaction with the environment, where they correspond to particular sociocultural contexts. As a result, these goals and motivations are personality characteristics that are inseparable from the context that they are in (Nasby & Read, 1997).

The contextualized personality approach to the DFPM focuses first on parent-child interactions as the core context to understand one's underlying filial motivations. This re-conceptualization of filial piety allows it to break free from the cultural shackles that limits its application to only Chinese societies. Since this new conceptualization of filial piety focuses on the parent-child interaction as the core context of examination and not on the cultural content, it has the potential for application in any cultural context since parent-child relationships are found in every culture (Bedford & Yeh, 2019). In addition, research suggests that social roles allow people to satisfy the fundamental needs of interpersonal relatedness and social belonging (Roberts, 2006). As a contextualized personality construct, the DFPM addresses these two psychological needs at the individual level through the social role of the parent-child context. The RFP dimension fulfills the psychological need for interpersonal relatedness between two individuals within the context of the parent-child relationship, where it generally manifests in children who express love and affection through the voluntary act of supporting and caring for their parents. The AFP dimension fulfills the psychological need for social belonging and collective identity, where children are socialized and encouraged to carry out the duties of their child role to satisfy parental demands or expectations (Bedford & Yeh, 2019).

Dual Filial Piety Research

There now exists an extensive amount of research that empirically validated and applied the DFPM, where many researchers have utilized one or both dimensions of the DFPM in their investigations. Studies examined the effects of the dual aspect of filial piety on a range of topics, including family functioning (Li et al., 2014), parent-child

conflict (Yeh & Bedford, 2004), interpersonal conflict (Wang et al., 2019), social competence (Leung et al., 2010), cognitive flexibility (Jen et al., 2019), mental well-being (Chen et al., 2018), personality traits (Yeh & Bedford, 2003), and many more.

Although RFP is generally found to be related to more beneficial outcomes, whereas AFP often related to harmful outcomes, some studies have found AFP to improve quality of family life, increase family cohesion (Chen et al., 2016), and life satisfaction (Yan & Chen, 2018). However, the relationship between AFP and life satisfaction remains inconsistent, where some studies found a negative association (Leung et al., 2010; Sun et al., 2019), others have found positive associations (Yan & Chen, 2018) or non-significant relationships (Chen, 2014). Since both RFP and AFP form two intertwined aspects of Chinese filial piety that is grounded in historical development of the concept, both filial dimensions co-exist within an individual and may simultaneously function to varying degrees depending on the context (Yeh & Bedford, 2004). As previously mentioned, although both RFP and AFP can promote intergenerational support, their underlying filial motivations may differ. Thus, it is likely that the varying degrees of the dual filial beliefs may concurrently influence whether one perceives their life as satisfactory.

Dual Filial Piety Research in Chinese Societies

Many researchers have utilized one or both dimensions of the DFPM in Chinese societies. The dual filial dimensions have been empirically supported in Hong Kong (Leung et al., 2010), Taiwan (Yeh, 2009), and China (Jin et al., 2011). A study then utilized the DFPM to examine the functions and implications of contemporary filial piety in three Chinese societies: Hong Kong, Taiwan, and China (Yeh et al., 2013).

Differentiated results were found between the three Chinese societies. Although levels of RFP were found to remain similar across cultures, AFP appears more likely to vary due to the influence of societal and political contextual factors (Chan et al., 2012; Chow, 2006). This finding illustrated the significance of the dual filial dimensions and its association with daily life in contemporary Chinese societies. Despite the three Chinese societies sharing similar Confucian cultural values, they differed drastically in terms of their sociopolitical structures and modernization over the last century.

As previously mentioned, China's imperial rulers emphasized authoritarian deference and moralism to consolidate their power between the Han dynasty to the end of the Qing dynasty (206 BCE – 1911 AD). China then became a totalitarian communist country in 1949 that emphasized ultimate loyalty to the nation, leading to communist ideologies that rejected parental authority and any forms of role hierarchy (Chow, 1991). Communist leaders initially tried to ensure the centrality of the state by eradicating Confucian beliefs, where official statements of objection to filial values were introduced during the Cultural Revolution from 1966 to 1976 to mobilize the young population to rebel against their parents (An, 2009; Yeh et al., 2013). During this period, intergenerational solidarity was severely jeopardized and since state welfare services were not in place, this eventually led to an elder-care crisis in China due to the aging population (Xu, 2001). The Chinese government then switched tactics and tried to emphasize reciprocal filial piety by implementing the Family Support Agreement in the mid-1980s. The Family Support Agreement was a voluntary contract concerning parental provisions between older parents and adult children that was monitored by the government. Although filial ethics and motivation were emphasized to garner voluntary

compliance of the Family Support Agreement, violations of the agreement resulted in legal prosecution (Chou, 2011). Additionally, the 1980 Marriage Law gave parents the permission to demand payment from their children if they cannot provide for themselves (Qi, 2015). To complicate this further, the pace of modernization in China differed between urban and rural areas, resulting in a lack of consensus regarding the definition of filial piety. Thus, contemporary filial piety in China can be more accurately described as utilizing filial piety to promote governmental policies. However, policies such as the abovementioned utilized authoritarian tactics to implement reciprocal beliefs of filial piety, which were found to erode affection and spontaneity in the practice of filial piety in China (Chou, 2011).

Taiwan, after losing the civil war to the Chinese Communist Party in 1949, was ruled by the Kuomintang as a single-party state under martial law until 1990 (Yeh et al., 2013). Unlike China, which experienced a radical disruption of traditional Chinese culture and viewed traditional filial values as feudal remnants to be eliminated (Whyte, 2004), Taiwan experienced a gradual process of economic development and political democratization. The Chinese Culture Renaissance Movement was initiated by the Taiwanese government in 1967 to mobilize Taiwan against the Chinese Communist Party's suppression of filial practices and to preserve traditional Confucian values in modern society. The Chinese Culture Renaissance Movement shifted the focus of filial piety from parental authority and family role hierarchy to intergenerational affection that highlights family harmony, mutual affection, and intimacy as the core filial beliefs. Since then, officials in Taiwan have started to shift away from population aging policies that focused on institutional care and moved toward policies that focused on enhancing RFP

over AFP. In 2020, National Grandparents Day was implemented with the goal of facilitating mutual understanding in daily intergenerational interactions (Bedford & Yeh, 2019). Unlike China, which relied on authoritarian tactics to enforce reciprocal filial beliefs to address elder-care, Taiwan incorporated affection-based strategies in its policies to promote intergenerational solidarity.

Hong Kong, a territory of China, was colonized by Britain from 1842 to 1997, leading to the spread Western ideologies of freedom and independence all throughout Hong Kong. When Hong Kong was returned to China in 1997, citizens of Hong Kong continued to favor Western ideologies over the communist values of the Chinese Communist Party. Unlike China, which tried to eliminate traditional filial beliefs in its governmental policies, the British colonialism did not advocate any policies to eliminate traditional Confucian values. As a result, Hong Kong citizens developed a bicultural self-identity under the co-existence of socialization processes in both school and family (Ng et al., 2007). Although research has shown that filial piety has gradually declined in Hong Kong (Lee & Kwok, 2005; Ng et al., 2002), research also indicates that Hong Kong Chinese individuals interpret their filial behaviors as an affection-based repayment towards their parents' caretaking rather than due to a sense of obligation and obedience (Wong & Chau, 2006). Thus, like Taiwan, Hong Kong individuals' filial beliefs emphasize more on RFP qualities than AFP.

Contrary to some researchers believing that westernization and modernization would erode filial piety in Chinese societies (i.e., Ho, 1994), research has found that filial piety, especially RFP, continues to remain strong among all three Chinese societies (China, Taiwan, Hong Kong) despite the diverse sociopolitical developments (Ng et al.,

2002; Wong & Chau, 2006; Yeh, 2009; Yeh et al., 2012; 2013). The essence of filial piety has shifted from parental authority and absolute submission to mutual affection and support in the parent-child relationship in Taiwan and Hong Kong. Despite some researchers doubting the survival of filial piety under Chinese communism (Chow, 1991; Whyte, 1997), filial piety continues to remain important in China as well. Research utilizing the DFPM in Chinese societies found that the dual filial dimensions serve distinctive functions that not only corresponds to salient psychological implications at the individual level, but also reflects the influence of societal and political contextual factors (Yeh et al., 2013).

Cross-Cultural Dual Filial Piety Research

The majority of dual filial research has been conducted using samples from Chinese societies (e.g., Jin et al., 2011; Leung et al., 2010; Li et al., 2014; Yeh, 2009; Yeh et al., 2013). However, researchers have recently started to examine filial piety in other cultures as well. For example, researchers have successfully translated the DFPS and analyzed its psychometric qualities in Malaysian samples (Tan et al., 2019), Vietnamese samples (Ha et al., 2020), and Polish samples (Różycka-Tran et al., 2021a). These studies confirmed the two-factor structure of the DFPM and found expected correlations in line with past studies (Sun et al., 2016), supporting Bedford and Yeh's (2019) conceptualization that the dual filial dimensions of the DFPM can be applied cross-culturally. Furthermore, other researchers have also conducted a confirmatory factor analysis (CFA) on the two-factor structure of the DFPM using both Polish and Vietnamese samples, which found that the dual filial factors were applicable in samples from both countries (Różycka-Tran et al., 2021b). This finding suggests that the DFPS

may be applicable in both collectivist and individualist cultures, providing further support that the DFPM may be applied cross-culturally.

Dual Filial Piety Research in Chinese-Americans

Chinese-Americans have largely been neglected in existing dual filial piety research, with the exception of one dissertation study (Lee, 2013), which did not report validating the DFPS before utilizing it with the Chinese-American sample. Without validating the DFPS with Chinese-American samples, it remains unclear whether the DFPS is applicable to Chinese-Americans. However, findings from cross-cultural filial research (e.g., Różycka-Tran et al., 2021a, 2021b) suggests that the dual filial factors of the DFPM may be applicable in Chinese-American samples as well.

There have been conflicting research findings as to whether Chinese-Americans are collectively or individualistically oriented. Previous studies have found that Chinese-Americans exhibited strong collectivist values (Chiou, 2001; Edara, 2016; Hofstede, 1980; Oyserman et al., 2002; Sivadas et al., 2008) and that Chinese-Americans' dominant cultural orientation of collectivism continues to be deeply rooted in Confucian values (Triandis & Gelfand, 2012). However, some researchers argue that rapid economic development, adherence to the dominant cultural value of individualism, and interaction with the majority group might make immigrant groups such as Chinese-Americans more individualistically oriented (Chiou, 2001; Tsai, 2000). However, since the findings from Różycka-Tran et al.'s study (2021b) suggest that the dual filial factors of the DFPM are applicable in both collectivist (Vietnamese) and individualist (Poland) cultures, it is likely that the dual filial factors will also be found in the Chinese-American population, regardless of their collectivistic/individualistic orientation.

In a current study that has not yet been published, the two-factor structure of the DFPS was found in a sample of Americans (O. Bedford, personal communication, December 13, 2021[2]). The sample consisted of 500 US citizens, in which 75% identified as Caucasian and 25% identified as People of Color. The purpose of the study was to reduce the number of problematic items of the DFPS that have been consistently found to reflect traditional Chinese norms instead of tapping into underlying filial motivations (O. Bedford, personal communication, December 13, 2021). The identified problematic items of the DFPS included three AFP related items (AFP 2: "*Let my income be handled by my parents before marriage*;" AFP 7: "*Have at least one son for succession of the family name*;" and AFP 8: "*Live with the husband's parents when married*"), as well as three RFP related items (RFP 2: "*Talk frequently with my parents to understand their thoughts and feelings*;" RFP 5: "*Support my parents' livelihood to make their lives more comfortable*;" and RFP 8: "*Take the initiative to assist my parents when they are busy*"). Furthermore, the two-factor structure of the shortened 10-item version of the DFPS was establish with a sample of Asian-American women as well (O. Bedford, personal communication, February 17, 2022). In addition to previously mentioned cross-cultural filial findings (i.e., Ha et al., 2020; Różycka-Tran et al., 2021a, 2021b; Tan et al., 2019), these findings further support Bedford and Yeh's (2019) conceptualization of the DFPM as a contextualized personality construct, which focused on the parent-child relationship as the core context for examining underlying filial motivations. Since parent- child

[2] Personal communication with Dr. Olwen Bedford, one of the primary filial piety researchers who developed the DFPS alongside Dr. Kuang-Hui Yeh.

relationships exist in every culture, the dual factor structure of the DFPM is likely to be found in Chinese-Americans as well.

As previously mentioned, although different Chinese societies endorsed different filial beliefs (i.e., Yeh et al., 2013), filial piety continue to remain prevalent throughout Hong Kong, Taiwan, and China despite different sociopolitical influences. Furthermore, despite the British colonization of Hong Kong, filial beliefs were not eliminated, contrary to researchers who doubted the survival of filial piety due to democratization, modernization, and exposure to Western ideologies of freedom and independence (i.e., Ho, 1994). Thus, similar to how Chinese individuals reported different filial beliefs in Hong Kong, Taiwan, and China, it is also likely that Chinese-Americans may vary in their filial beliefs as well, especially given the strong influence of Western ideologies. However, perhaps similar to the findings in Hong Kong, it is likely that Western values will not eliminate filial piety for Chinese-Americans as well. Instead, Western values may become integrated into their bicultural identity as Chinese-Americans and influence what filial piety means to them.

Filial Modes of the Dual Filial Piety Model

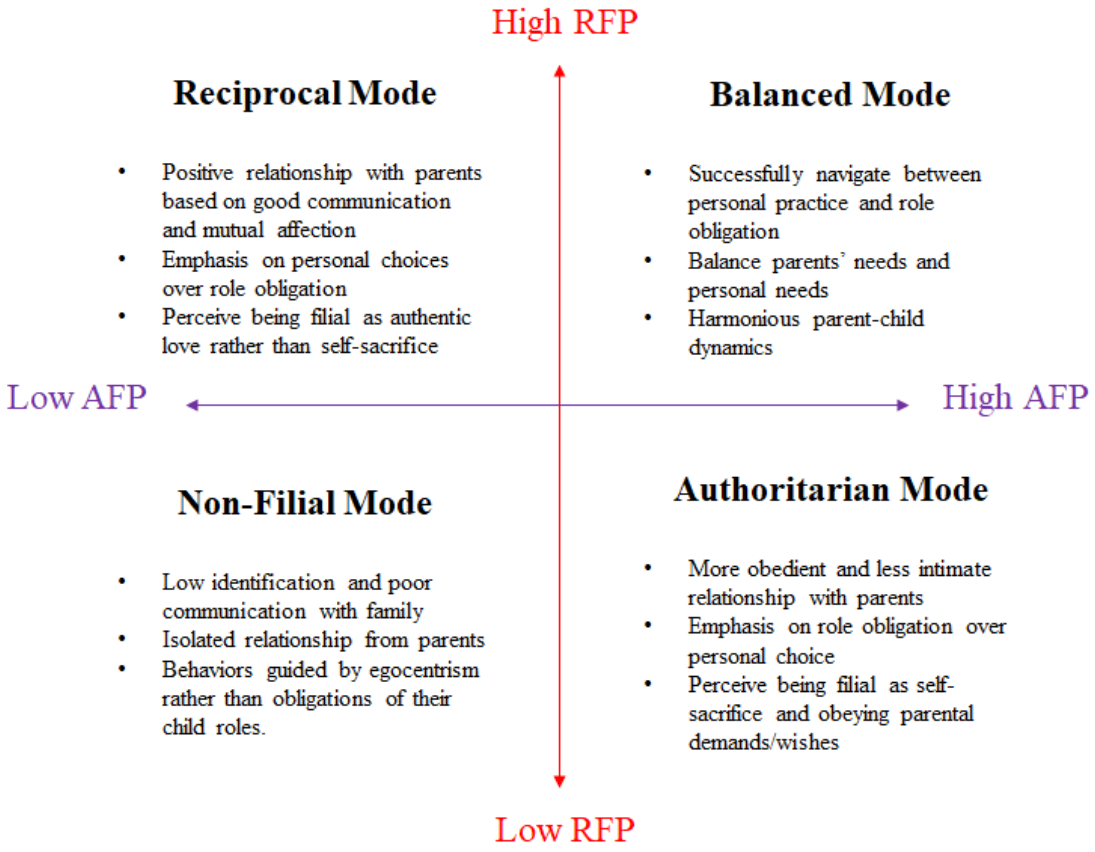
A consensus has emerged suggesting RFP supports stronger intergenerational relations than AFP (Yeh, 2009), which have subsequently influenced government and social messaging. For example, officials in Taiwan are beginning to move away from population aging policies that focus on intuitional care due to its focus on solutions that enhance RFP to address the growing issue of elder care (i.e., highlighting RFP beliefs as the core family value in school curriculum; Taiwan Ministry of Education, 2011).

Government policies such as the abovementioned emphasize the importance of enhancing high levels of RFP and low levels of AFP.

However, Yeh and Bedford's (2004) study challenged this consensus by highlighting that the DFPM identified four possible modes of filial interaction (see Figure 1 below): Absolute mode (high levels of both RFP and AFP), Reciprocal mode (high levels of RFP and low levels of AFP), Authoritarian mode (low levels of RFP and high levels of AFP), and Non-Filial mode (low levels of both RFP and AFP). This study analyzed six types of parent-child conflict identified by Yeh (1995): Demands Conflict with Desire (giving up personal desire to comply with parental demand), Unreasonable Behavior (the behavior may result in conflict if the individual complains or resists), Demand Exceeds Ability (individual is not capable of meeting parental expectations), Role Conflict (filial obligations conflict with other role obligations), Interparental Dispute (conflict between parents forcing the individual to choose sides), and Immoral Demands (unethical and inappropriate parental demands). The study found that among six origins of parent-child conflicts, the most reported type of conflict among the four identified filial types were Demands Conflict with Desires, with Non-Filial individuals reporting the most and Absolute (which was later renamed as "Balanced;' Bedford & Yeh, 2019) individuals reporting the least. Reciprocals and Authoritarian individuals were in the middle. Additionally, the study also found that Reciprocal and Balanced individuals utilized reframing and compromise solution strategies significantly more than Authoritarian and Non-Filial types. Reframing is used to re-organize conflict situations into a new context so that both parties maintain their goals and neither needs to sacrifice any desires, while compromise is used to find a middle ground in which both sides make

Figure 1

Four Modes of Filial Interactions based on the Dual Filial Piety Model (DFPM)



Note. The *Balanced mode* corresponds to the *Absolute mode* in a previous study (Yeh & Bedford, 2004).

sacrifices to reach a resolution (Yeh, 1995). However, despite both Balanced and Reciprocal individuals reporting similar usage of both reframing and compromise solution strategies, Balanced individuals reported significantly less parent-child conflict than Reciprocal individuals. Thus, despite a consensus in literature suggesting the merits of high levels of RFP and low levels of AFP, this study contends that high levels of both filial dimensions may relate to less parent-child conflict.

Based on these findings, researchers contend that the DFPM also allows a more nuanced examination of the psychological mechanisms underlying the social behaviors and affective reactions associated with filial piety (Bedford & Yeh, 2019, 2021). Rather than designating people as either filial or un-filial, the DFPM provides a comprehensive framework for understanding the personal practice of filial piety based on the interaction between the dual filial dimensions. The DFPM identifies four possible modes of filial operations (Yeh & Bedford, 2004): Absolute/Balanced mode, Reciprocal mode, Authoritarian mode, and Non-Filial mode. Individuals with an Absolute/Balanced mode of filial operations have high levels of both RFP and AFP. Balanced individuals are conceptualized as being able to successfully navigate their personal choices/desires and their role obligations, which leads to a more harmonious parent-child dynamic that highlights a deep and intimate relationship with their parents (Bedford & Yeh, 2019). Balanced individuals can successfully combine and/or balance their own needs with their parents' demands/wishes.

Individuals with a Reciprocal mode of filial operations have high levels of RFP and low levels of AFP. Reciprocal individuals have a positive relationship with their parents based on good communication and mutual affection. Reciprocal individuals

emphasize personal choices over role obligations, where they perceive being filial as a type of authentic love rather than self-sacrifice. However, they are also likely to feel anxious about others' criticisms and doubts towards their personalized filial behaviors (i.e., being criticized for moving out to live with spouse instead of taking care of aging parents).

Individuals with an Authoritarian mode of filial operations have low levels of RFP and high levels of AFP. Authoritarian individuals have a more obedient and less intimate relationship with their parents. Authoritarian individuals focus more on role obligations, as they perceive filial piety as self-sacrifice, self-suppression, and being obedient towards their parents' demands/wishes. Authoritarian individuals are likely to find it difficult to satisfy their parents' needs and may feel stressed due to the intense pressure of needing to meet their parents' demands/wishes (i.e., obeying parents' demands to pursue a medical career despite having no personal interest in the field).

Individuals with a Non-Filial mode of filial operations have low levels of both RFP and AFP. Non-Filial individuals have low identification with their family and may deviate away from carrying out the obligations of their child roles. Non-Filial individuals may isolate themselves from their parents and their behaviors towards them may be guided by egocentrism rather than filial piety.

Limitations of Filial Typology Research

Filial typology research is extremely limited in the current literature. Aside from Yeh and Bedford's (2004) study, there does not appear to be any additional research that further examined the identified filial typologies. Additionally, there are also some crucial limitations regarding the grouping methodology of the study.

Yeh and Bedford (2004) conceptualized that individuals may differ regarding the extent to which they subscribe to each of the dual filial dimensions. Based on this conceptualization, they proposed the four filial modes that were highlighted in the previous section (Absolute/Balanced, Reciprocal, Authoritarian, and Non-Filial). The grouping method employed by Yeh and Bedford was based on the mean split approach: individuals who scored above the mean for both RFP (M = 25.40) and AFP (M = 12.80) were designated as Absolute/Balanced; individuals who scored above the mean for RFP and below the mean for AFP were designated as Reciprocal; individuals who scored below the mean for RFP and above the mean for AFP were designated as Authoritarian; and individuals who scored below the mean for both RFP and AFP were designated as Non-Filial.

Although grouping individuals based on mean split makes the results easier to communicate to a lay audience, there are some notable issues with this grouping criterion. First, mean split distorts the meaning of high and low, where scores just-above or just-below the mean becomes arbitrarily grouped as high and low. For example, individuals who scored 25.50 on RFP were grouped as high RFP and individuals who scored 25.30 on RFP were grouped as low RFP when the mean is 25.40. This suggests that these individuals fell into different groups, despite scoring similarly on RFP. The mean split approach raises the issue where individuals who scored similarly may have been designated into completely different groups, whereas individuals whose scores were more varied may have been designated into the same group (i.e., individuals who scored 25.50 and 35.50 were both designated as high RFP despite having a 10-point difference in RFP levels). Second, the mean split approach lacks statistical basis since it is a top-

down process that is not conceptually data driven and the cut-off values are not theoretical in nature. As a result, it may be difficult to attribute significantly distinctive theoretical meaning to the values, such as the examples highlighted above.

Research has also argued that the hierarchical clustering approach may be a statistically more robust method in grouping individuals (Garcia et al., 2015). The study found that the hierarchical clustering approach generated profiles that were more distinctive and were more homogeneous compared to methods like the median split approach, which becomes arbitrarily grouped as high and low in a similar fashion to the mean split approach. Hierarchical cluster analysis begins with the correlation matrix in which all clusters and unclustered variables are tried in all possible pairs, where the pair producing the highest average intercorrelation within the trial cluster is designated as the new cluster. Hierarchical cluster analysis can be perceived as a bottom-up procedure that is data-driven, in which it proceeds by first sequentially joining similar participants on variables of interest into tighter and less inclusive clusters, before joining those smaller clusters into larger, more inclusive clusters until all variables are clustered into a single group (Bridges, 1966). K-means cluster analysis can then be implemented to allocate participants to a profile/cluster most like theirs (Kormi-Nouri et al., 2015; MacDonald & Kormi-Nouri, 2013). Unlike the mean split approach, hierarchical cluster analysis reduces the arbitrariness for individuals who scored similarly and allows researcher to attribute significantly distinctive theoretical meaning to the values by conceptually examining how the values are clustered. Thus, the hierarchical clustering approach may be a more statistically robust grouping method to identify the filial modes conceptualized by Yeh and Bedford (2004).

Furthermore, if the conceptualization of the four filial modes of operation (Absolute/Balanced, Reciprocal, Authoritarian, and Non-Filial) is accurate, it raises a methodological question regarding dual filial research that examined the dual filial dimensions as separate variables and/or added the sum of the two filial dimensions to represent an overall score for filial piety. Studies that found the dual filial dimensions to be distinctly related to one's psychosocial functioning by examining RFP and AFP as separate variables do not capture how the dual filial dimensions as a whole impact one's psychosocial functioning. Therefore, it remains unclear whether one's psychological functioning is impacted by the concurrent influence between one's RFP and AFP. The following section will provide an in-depth discussion about how distinct dual filial findings may only apply to individuals with a Reciprocal or Authoritarian mode of filial operations, leaving unanswered how these findings apply to individuals with a Balanced or Non-Filial mode of filial operations.

Distinct Dual Filial Findings

Empirical research has consistently found that RFP and AFP have distinct implications on family, social, and individual functioning. For example, studies have found that RFP is related to higher levels of family functioning (Li et al., 2014), social competence, (Leung et al., 2010), self-esteem, mental wellness, cognitive flexibility (Jen et al., 2019), perspective-taking, openness, and lower levels of neuroticism (Yeh & Bedford, 2003), whereas AFP, in contrast, was conversely related. The distinct findings that resulted from these studies suggest that when RFP and AFP are analyzed together as separate variables, there are distinct implications regarding the two filial dimensions. However, according to the DFPM, the dual dimensions of filial piety are not in

opposition and are not mutually exclusive, but instead represent two co-existing elements of filial beliefs that are interrelated to varying degrees within every individual (Bedford & Yeh, 2019). In other words, the dual filial dimensions may interact and concurrently influence one's overall functioning. Dual filial research that looks at the two filial dimensions as separate variables may not capture the concurrent influence of the dual filial beliefs, but instead provide findings that may only be applicable to individuals who are designated as either Reciprocal (high levels of RFP and low levels of AFP) or Authoritarian (low levels of RFP and high levels of AFP). For example, since RFP and AFP are conversely related to neuroticism (Yeh & Bedford, 2003), this suggest that high levels of RFP and low levels of AFP (Reciprocal individuals) both relate to lower levels of neuroticism, and low levels of RFP and high levels of AFP (Authoritarian individuals) both relate to higher levels of neuroticism. Distinct filial research findings such as the abovementioned example may not be applicable to individuals with high levels of both RFP and AFP (Balanced individuals) or individuals with low levels of both RFP and AFP (Non-Filial individuals), considering that individuals with high levels of RFP may also have high levels of AFP and individuals with low levels of RFP may also have low levels of AFP. For example, the findings highlighting the negative relationship between RFP and neuroticism does not take into consideration the individual's AFP levels. Similarly, the findings highlighting the positive relationship between AFP and neuroticism does not provide any information regarding the individual's RFP levels. Thus, the distinct findings in dual filial research raises the question regarding how the dual filial dimensions concurrently inform one's overall psychosocial functioning, especially for individuals

who may have high levels of both filial beliefs (Balanced mode) and individuals who may have low levels of both filial beliefs (Non-Filial mode).

Although the DFPM analyzes the parent-child relationship as the core context for investigating underlying filial motivations or principles (Bedford & Yeh, 2019) and previous filial typology research examined the differences in parent-child conflict between the identified filial types, no study to date has tested the identified filial modes further. Since parent-child relationships can be conceptualized as a component of one's overall family functioning, this next section will provide an in-depth discussion of the findings regarding family functioning (Li et al., 2014) to identify the gaps in the literature that can be addressed by adopting the filial typology approach conceptualized by Yeh and Bedford (2004).

Dual Filial Piety and Family Functioning

A study examining the relationships of family socioeconomic status, dual filial piety, and parent-adolescent conflict on family functioning found that RFP and family socioeconomic status had a positive influence on family functioning, whereas AFP and parent-adolescent conflict had a negative influence on family functioning (Li et al., 2014). Family functioning encompassed five components of the family dynamic: *communication* (the frequency and nature of family interactions), *mutuality* (mutual concern and support among the family), *parental concern* (parents' supportive behaviors), *parental control* (parents' harsh behaviors), and *conflict* (conflicting behaviors within the family; Shek, 2002). Family functioning has been examined by many researchers to understand how it influences individuals' psychosocial outcomes, such as anxiety, psychosocial adjustment, and externalizing behavior (Hughes et al.,

2008; Low & Stocker, 2005; Rabaglietti et al., 2012). Since the DFPM focuses on the parent-child context for examination of filial beliefs, and the parent-child relationship is embedded within the family context, it is reasonable to assume that filial beliefs may impact one's family functioning.

Since the development of RFP stems from parent-child relationships that are built on the motivation of mutual understanding and affection (Chen et al., 2016), high RFP individuals are likely to have positive communication, mutual relationships, and support from their parents, which reduces the likelihood of parent-child conflict and parental control. This is supported by the positive relationship between RFP and *communication*, *mutuality*, and *parental concern*, as well as the negative relationship between RFP and *parental control* and *conflict* (Li et al., 2014).

In contrast, the development of AFP stems from parent-child relationships that emphasize family hierarchy, role obligation, and submission to parental authority (Yeh et al., 2013). High AFP individuals are likely to have less communication and mutuality in their family dynamic due to the hierarchical nature of their parent-child relationship, which suggests a high degree of parental control that may result in more conflict, especially when the individual expresses desires to increase their sense of independence and autonomy as they mature (e.g., Wong et al., 2010). This is supported by the findings that, in comparison to RFP, AFP related to lower levels of *communication* and *mutuality*, with higher levels of *parental control*, and a non-significant relationship with *conflict* and *parental concern*. Thus, RFP and AFP were found to have an inverse relationship with communication, mutuality, and parental control. High levels RFP and low levels of AFP both related to higher levels of *communication*, *mutuality*, and lower levels of *parental*

control. In contrast, low levels of RFP and high levels of AFP both related to lower levels of *communication*, *mutuality*, and higher levels of *parental control*.

These findings imply that Reciprocal (high levels of RFP and low levels of AFP) and Authoritarian (low levels of RFP and high levels of AFP) individuals vary in family functioning. Reciprocal individuals are likely to have higher family functioning since the foundation of their parent-child relationship is built on mutual support, understanding and affection, which may relate to less parent-child conflict and parental control. Authoritarian individuals are likely to have lower family functioning since their hierarchical parent-child relationship encourages submission, obedience, and self-suppression, highlighting parental control and a lack of parental support that may relate to more parent-child conflict and less mutuality. However, these findings do not address how high or low levels of both filial dimensions impact one's overall family functioning. Since the dual filial dimensions are not mutually exclusive, both filial dimensions may simultaneously impact one's family functioning. Therefore, previous filial piety research (e.g., Chen et al., 2016; Li et al., 2014; Wong et al., 2010) do not address the underlying dynamics of how RFP and AFP may concurrently influence one's family functioning. For example, the findings that RFP was positively related to family functioning do not shed any light regarding the individual's AFP levels. It remains unclear whether these individuals have high or low levels of AFP, considering that individuals with high levels of RFP may also have either high or low levels of AFP. Similarly, since AFP was found to be negatively correlated with family functioning, this finding does not necessarily provide any information regarding the individual's RFP levels, considering that individuals with high levels of AFP may also have high levels of RFP. Thus, what

remains unclear is whether family functioning differs for Balanced (high levels of both RFP and AFP) and Non-Filial (low levels of both RFP and AFP) individuals.

Balanced individuals are conceptualized as being able to successfully navigate between their needs and their parental demands, which leads to a more harmonious parent-child dynamic (Bedford & Yeh, 2019, 2021). This highlights high levels of family functioning that emphasizes good communication, mutuality, and parental support, with lower levels of parent-child conflict and parental control. This corresponds to the finding that Balanced individuals experienced lowest levels of parent-child conflict (Yeh & Bedford, 2004). However, this potentially complicates Li et al.'s (2014) finding regarding how high levels of AFP results in lower levels of family functioning.

Non-Filial individuals are conceptualized as having low identification with their child role and with their parents, leading to more egocentric and avoidant behaviors that may negatively impact their family dynamics. In conjunction with the finding that Non-Filial individuals reported the most parent-child conflict (Yeh & Bedford, 2004), this suggests that low levels of RFP and AFP may relate to low family functioning., which also conflicts with Li et al.'s (2014) finding where low levels of AFP relate to higher family functioning. However, the current research findings are insufficient in addressing how high or low levels of both filial dimensions may concurrently influence one's family functioning.

As previously mentioned, AFP can sometimes relate to higher levels of family cohesion, quality of family life (Chen et al., 2016), and life satisfaction (Yan & Chen, 2018). The inconsistent findings between AFP and life satisfaction (Chen, 2014; Leung et al., 2010; Sun et al., 2019; Yan & Chen, 2018) may be due to the concurrent influence

between levels of RFP and AFP. It is likely that RFP and AFP are not mutually exclusive and are both equally important in determining one's overall family functioning and life satisfaction. By adopting the filial typology approach to examine the differences in family functioning between the identified filial modes, the findings may not only clarify how the dual filial beliefs interact to influence one's overall family functioning, but it may also shed light as to whether the effects of either filial dimensions may be dependent on the level of the other. However, no study has further examined the modes of filial piety to better understand how the identified filial modes differ in other aspects of family functioning beyond parent-child conflict.

Lack of Consensus on Generational Statuses

There is a lack of consensus regarding the age requirement for immigrant individuals to be classified as first-generation or 1.5-generation: Hurh (1990) defined individuals who immigrated to the United States after the age of 16 to be first-generation, whereas individuals who immigrated between the ages of 11 to 16 are considered 1.5 generation; Rumbaut and Ima (1988) classified individuals who immigrated to the United States after the age of 12 to be first-generation, whereas individuals who immigrated before the age of 12 are considered 1.5-generation; and Kim et al. (2003) broadly defined individuals who immigrated to the United States as adults to be first-generation, whereas those who immigrated as a child or adolescent would be considered 1.5-generation. Due to the lack of consensus, in addition to the wide variation of first-generation categories (e.g., first-generation, 1.5 generation, 1.75 generation, etcetera), this study will only gather data from second-generation Chinese-American participants (i.e., participants who

are born in the United States from Chinese parent(s) from either Hong Kong, Taiwan, or China) to reduce sampling variability and ensure sample homogeneity.

Summary of the Literature

It is evident in the existing literature that filial piety continues to remain prevalent in many Chinese societies like Hong Kong, Taiwan, and China, albeit differing in what being filial entails due to the influence of sociopolitical factors (Yeh et al., 2013). Researchers are also beginning to branch out filial research to other non-Chinese societies in hopes of addressing the issue of elder-care due to population aging (e.g., Ha et al., 2020; Różycka-Tran et al., 2021b; Tan et al., 2019). The re-conceptualization of dual filial piety as a contextualized personality construct contends that the dual filial piety model focuses first on the parent-child interaction as the core context for examining underlying filial motivations or principles and is therefore applicable cross-culturally since parent-child relationships exist in every culture (Bedford & Yeh, 2019; 2021). However, the cross-cultural application of the DFPM is still in its infancy.

Additionally, filial typology research is also similarly underexplored, despite its methodological implications towards previous dual filial research that examined the dual filial dimensions as separate variables and/or summed up the values of the dual filial dimensions as a generalized score for filial piety. Questions remain as to whether the dual filial dimensions concurrently influence one's family functioning. Since previous research has shown that the dual filial factors of the DFPM is applicable in individualistic and collectivist societies alike (e.g., Różycka-Tran et al., 2021b), it is reasonable to assume that the DFPM may also be applicable to Chinese-American individuals as well, whom have been largely neglected in previous filial research.

Lastly, due to the lack of consensus in generational statuses, this study aims to gather data from specifically second-generation Chinese-Americans to reduce sampling variability and to ensure sample homogeneity. Overall, this study aims to address the abovementioned gaps in filial piety research by further examining the filial modes identified by Yeh and Bedford (2004) with a second-generation Chinese-American sample.

Chapter III

Statement of the Problem

Due to the global trend of population aging and the growing issue of elder care, research interest in parent-child relations is on the rise (e.g., Glass et al., 2013; North & Fiske, 2015). Investigations into filial norms are being conducted around the world (e.g., Lowenstein & Daatland, 2006). Bedford and Yeh (2019) utilized the Dual Filial Piety Model (DFPM) to represent a pair of culturally sensitive psychological schemas underlying parent-child relations: Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP). The DFPM focuses on the universal construct of the parent-child interaction as the core context for examining the underlying filial motivations or principles (Bedford & Yeh, 2019). Variations in the endorsement of the dual filial dimensions were found among three Chinese societies: Hong Kong, Taiwan, and China (Yeh et al., 2013). Compared to RFP, AFP appears more likely to vary due to the influence of societal and political contextual factors (Chan et al., 2012; Chow, 2006). However, Chinese-American samples have largely been neglected in existing dual filial piety research with the exception of one dissertation study (Lee, 2013), which did not report validating the Dual Filial Piety Scale (DFPS) before utilizing it with Chinese-American samples.

Past research indicates that RFP generally has a beneficial effect on one's family and psychosocial functioning, whereas AFP often has a harmful effect (e.g., Yeh & Bedford, 2003, 2004). In fact, research often found distinct findings where RFP was positively and AFP was negatively related to one's family and psychosocial functioning (i.e., Jen et al., 2019; Leung et al., 2010; Li et al., 2014). A consensus has emerged suggesting RFP supports stronger intergenerational relations than AFP (Yeh, 2009),

which influenced government policies in eldercare to focus on solutions that enhance high levels of RFP and low levels of AFP (Taiwan Ministry of Education, 2011). However, other evidence has challenged this consensus. Some research has found AFP to be positively linked with family cohesion, quality of family life (Chen et al., 2016), and life satisfaction (Yan & Chen, 2018). Additionally, a study which identified four filial modes found significant differences in parent-child conflict between the four filial modes in a Taiwanese sample of junior and high school students (Yeh & Bedford, 2004). Specifically, individuals high on RFP and AFP (referred to as Absolute/Balanced) reported significantly less parent-child conflict than individuals high on both RFP and low on AFP (referred to as Reciprocal). Not only does this finding challenge the consensus in the literature suggesting the merits of high RFP and low AFP, but it also suggests that the findings from studies that analyzed the dual filial dimensions as separate variables may reflect an incomplete understanding and only apply to individuals with high levels of one filial dimension and low on the other. Since the DFPM represents two coexisting fundamental components of filial piety that are interrelated and present in every individual to varying degrees (Yeh & Bedford, 2004), it is likely that the dual filial dimensions may concurrently influence one's overall functioning. Considering Li et al.'s (2014) findings that high RFP and low AFP relates to higher family functioning, and low RFP and high AFP relates to lower family functioning, it is unclear how family functioning is impacted for individuals with high or low levels of both filial dimensions. However, no study to date has further examined the differences in family functioning among the identified filial modes.

The aim of the current study was threefold. The first phase of the study used confirmatory factor analysis (CFA) to examine the Dual Filial Piety Scale (DFPS) with a sample of Chinese-American adults. Różycka-Tran et al. (2021b) conducted a CFA on the two-factor model of the DFPS using both Polish and Vietnamese samples, which found that the dual filial factors were applicable in samples from both countries, suggesting that the DFPS may be applicable in both collectivist and individualist cultures. In addition, since various studies validated and utilized the DFPS across different Chinese societies (Yeh et al., 2013), it is likely that the dual filial factors will be identified in a Chinese-American sample as well. Furthermore, the two-factor structure of the DFPS was established with a sample of Americans, as well as a sample of Asian-American women in two current studies that are yet to be published (O. Bedford, personal communication, December 13, 2021; February 17, 2022). However, if the two factors were not identified or if multiple factors were identified instead, the hypotheses will be modified accordingly to proceed with the study. Due to the lack of consensus in generational statuses, in addition to the wide variation of first-generation categories (e.g., 1st generation, 1.5 generation, 1.75 generation, etcetera), this study only gathered data from second-generation Chinese-American participants (Chinese participants born in the United States to Chinese parent(s) from either Hong Kong, Taiwan, or China) to reduce sampling variability and to ensure sample homogeneity.

The second phase of the study used a second-generation Chinese-American sample to establish the filial modes that were proposed by Yeh and Bedford's (2004) study. However, unlike Yeh and Bedford (2004) who grouped the filial modes based on mean split approach, this study used hierarchical clustering analysis to establish the filial

modes, which provides a more statistically robust classification analysis in identifying the conceptualized four filial modes. If the hierarchical cluster analysis were to yield less than or more than four filial clusters, the hypotheses would have been modified accordingly to proceed with the study. K-means cluster analysis was then run to identify how the clusters were formed. Once the clusters were identified, this study then re-examined Yeh and Bedford's (2004) findings regarding parent-child conflict by analyzing whether there are statistically significant differences in parent-child conflicts between the identified filial modes. Since researchers have found that two of the six types of parent-child conflict (Interparental Dispute and Immoral Demands) among the four filial modes were not significant due to not enough conflict occurring relating to these two domains (Yeh, 1995; Yeh & Bedford, 2004), this study assessed only four of the six types of parent-child conflict: Demands Conflict with Desire (DCD), Unreasonable Behavior (UB), Demand Exceeds Ability (DEA), and Role Conflict (RC). In accordance with Yeh and Bedford's (2004) findings, it was hypothesized that Non-Filial individuals will report significantly higher levels of DCD and UB than Reciprocal, Authoritarian, and Balanced individuals, whereas Balanced individuals will report lower levels of DCD, DEA, RC, and UB type of parent-child conflict than the Reciprocal, Authoritarian, and Non-Filial individuals. Additionally, Balanced individuals will report significantly less DCD and UB type of parent-child conflict than Reciprocal individuals.

The third phase of the study expanded on Yeh and Bedford's (2004) findings by utilizing the Family Adaptability and Cohesion Evaluation Scale – Short Form (FACES-IV-SF; Priest et al., 2020) to examine differences in family functioning among the identified filial clusters. The FACES-IV-SF was created from the original FACES-IV

measure (Olson, 2011). The original FACES-IV measure consists of 62 items developed to capture the balance and unbalanced levels of cohesion and flexibility in one's family, as well as one's family communication and family satisfaction. Although the FACES-IV is a reliable and valid measure of family functioning, its length limits its utility and uptake in research and clinical settings, leading to the development of the short form (Priest et al., 2020). Survey length research has shown that when surveys are long, participants are less likely to complete or begin surveys (Galesic & Bosnjak, 2009). Furthermore, the answers provided at the end of long surveys tend to be answered more quickly and have more uniformity in their responses (i.e., Galesic & Bosnjak, 2009), resulting in poorer measurement accuracy (Rolstad et al., 2011). Thus, this study utilized the FACES-IV-SF to examine individuals' level of *Family Cohesion*, which assesses how enmeshed and/or disengaged one's family is; *Family Flexibility*, which assesses how rigid and/or chaotic one's family is; *Family Communication*, which captures the quality of communication with one's family; and *Family Satisfaction*, which captures the degree to which one is satisfied with their family dynamics. This study aimed to statistically compare the differences in family functioning among the identified filial modes. Since previous research found that Non-Filial individuals reported the highest amount of parent-child conflict and Balanced individuals reported the least amount of parent-child conflict (Yeh & Bedford, 2004), it was hypothesized that Non-Filial individuals will report significantly lower levels of family cohesion, flexibility, communication, and satisfaction than Reciprocal, Authoritarian, and Balanced individuals, whereas Balanced individuals will report the highest level of family cohesion, flexibility, communication, and satisfaction than Reciprocal, Authoritarian, and Non-Filial individuals. The findings

may not only clarify whether the DFPM is applicable within a Chinese-American sample, but it may also provide new insight regarding how different filial modes may experience different levels of family functioning.

Variable List

Independent Variable

Modes of Filial Piety – Dual Filial Piety Scale. Filial modes were operationalized by both the Reciprocal Filial Piety subscale (RFPS) and the Authoritarian Filial Piety subscale (AFPS) through self-report ratings of the Dual Filial Piety Scale (DFPS, Yeh & Bedford, 2003). Higher scores on the RFPS indicated higher levels of Reciprocal Filial Piety (RFP) and higher scores on the AFPS indicated higher levels of Authoritarian Filial Piety (AFP). In Phase One, a confirmatory factor analysis was used to determine whether filial piety is a unified construct that is represented by the two-factor structure of the DFPS (RFP and AFP). In Phase Two, the two-factor structure of the DFPS (RFP and AFP) was measured as a continuous variable to categorize the filial modes through hierarchical cluster analysis and the identified categories were consequently used in hypotheses testing for Phase Two and Phase Three.

Dependent Variable

Phase Two:

Types of Parent-child Conflict. Types of parent-child conflict were operationalized by the Origin subscale of the Parent-child Interaction Scale (PIS; Yeh, 1999), which were subdivided into four types of parent-child conflict: Demands Conflict with Desire (DCD), Demand Exceeds Ability (DEA), Role Conflict (RC), and Unreasonable Behavior (UB). Higher scores on the corresponding type of parent-child

conflict indicated higher degrees of that particular type of parent-child conflict. Each participant received a continuous score for each type of parent-child conflict with each parent (e.g., one score for their mother/mother-figure and one score for their father/father-figure) and their mean scores were used in hypotheses testing.

Phase Three:

Family Cohesion. Family cohesion was operationalized by the Cohesion Ratio between the Balanced Cohesion subscale and the average of both the Unbalanced Disengaged subscale and the Unbalanced Enmeshed subscale of the Family Adaptability and Cohesion Evaluation Scale Version IV – Short Form (FACES IV-SF, Priest, 2020). Higher Cohesion Ratio scores (i.e., scores above one) indicated a more balanced and healthy level of family cohesion, whereas lower Cohesion Ratio scores (i.e., scores below one) indicated a more unbalanced and unhealthy level of family cohesion. The Cohesion Ratio was measured as a continuous variable and their ratio scores were used in hypotheses testing.

Family Flexibility. Family flexibility was operationalized by the Flexibility Ratio between the Balanced Flexibility subscale and the average of both the Unbalanced Rigid subscale and the Unbalanced Chaotic subscale of the FACES IV-SF. Higher Flexibility Ratio scores (e.g., scores above one) indicated a more balanced and healthy level of family flexibility, whereas lower Flexibility Ratio scores (e.g., scores below one) indicated a more unbalanced and unhealthy level of family flexibility. The Flexibility Ratio was measured as a continuous variable and their ratio scores were used in hypotheses testing.

Family Communication. Family communication was operationalized by the Family Communication subscale of the FACES IV-SF. Higher scores on the Family Communication subscale indicated higher degrees of family communication. The Family Communication subscale was measured as a continuous variable and their sum scores were used in hypotheses testing.

Family Satisfaction. Family satisfaction was operationalized by the Family Satisfaction subscale of the FACES IV-SF. Higher scores on the Family Satisfaction subscale indicated higher degrees of family satisfaction. The Family Satisfaction subscale was measured as a continuous variable and their sum scores were used in hypotheses testing.

Potential Covariates

Based on previous literature (Bedford & Yeh, 2019), self-reported age, sex, level of education, and income were examined as potential covariates.

Hypotheses

In a sample of second-generation Chinese-Americans adults located in the United States, it was hypothesized that:

Phase 1: Confirming the two-factor structure of the Dual Filial Piety Scale.

H1. Confirmatory factor analysis would identify a significant two-factor structure of the Dual Filial Piety Scale (DFPS): Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP).

Phase 2: Identifying filial modes via cluster analysis, then examining levels of parent-child conflict among the identified Filial Modes.

H2. Hierarchical cluster analysis would identify four distinctly significant filial modes.

H3. Non-Filial mode, as operationalized by low levels of RFP and AFP, would report significantly higher levels of Demands Conflict with Desire (DCD) and Unreasonable Behavior (UB) type of parent-child conflict than the Reciprocal (high levels of RFP and low levels of AFP), Authoritarian (low levels of RFP and high levels of AFP), and Balanced mode (high levels of both RFP and AFP).

H4. Balanced mode, as operationalized by high levels of RFP and AFP, would report significantly lower levels of DCD and UB type of parent-child conflict than the Reciprocal mode.

H5. Balanced mode would report the lowest level of DCD, UB, Demand Exceeds Ability (DEA), and Role Conflict (RC) type of parent-child conflict compared to the Reciprocal, Authoritarian, and Non-Filial mode.

Phase 3: Examining levels of Family Functioning among the identified Filial Modes

H6. Non-Filial mode would report significantly lower levels of Family Functioning (as operationalized by lower Family Cohesion ratio scores, lower Family Flexibility ratio scores, lower scores on the Family Communication subscale, and lower scores on the Family Satisfaction subscale) than Reciprocal, Authoritarian, and Balanced mode.

H7. Balanced mode would report significantly higher levels of Family Functioning (as operationalized by higher Family Cohesion ratio scores, higher Family Flexibility ratio scores, higher scores on the Family Communication subscale, and higher scores on the Family Satisfaction subscale) than Reciprocal, Authoritarian, and Non-Filial mode.

Exploratory Research Question. A thematic analysis would capture the themes of filial piety based on the narratives of participants' early memories and how they influenced the family functioning of second-generation Chinese-Americans.

Chapter IV

Methods

Participants

Recruitment and eligibility

The study specifically recruited second-generation Chinese-American participants for all three phases of this study. Due to the lack of consensus in generational statuses, in addition to the wide variation of first-generation categories (e.g., 1st generation, 1.5 generation, 1.75 generation, etcetera), second-generation Chinese-American participants were selected to reduce sampling variability and to ensure sample homogeneity. In this study, second-generation Chinese-American was defined as American born Chinese individuals who have at least one Chinese immigrant parent who was born in either China, Hong Kong, or Taiwan. Participants who reported that their parent(s) are ethnically Chinese but were born outside of China, Taiwan, or Hong Kong (i.e., Vietnamese-Chinese, Malaysian-Chinese, etc.) were excluded. Since previous filial research were mainly conducted using Chinese samples from Hong Kong, Taiwan, and China, this study specifically focused on Chinese-American individuals born to Chinese immigrant parent(s) from either China, Taiwan, or Hong Kong. Additionally, to be eligible to participate, participants were required to be over the age of 18, be fluent in English, and should have been located within the United States of America at the time of participation.

Participants were recruited through Amazon Mechanical Turk (MTurk) and snowball sampling through postings on social media (i.e., Facebook groups) and word-by-mouth. Phase One collected data from 102 participants through Amazon Mturk; Phase

Two collected data from 82 participants through Amazon MTurk and 94 participants through snowball sampling; and lastly, Phase Three collected data from 151 participants through Amazon MTurk and 49 participants through snowball sampling. The following section is broken down into these three phases.

Demographics

Phase One. For the sample in Phase One (N = 102), the age of participants ranged from 18 to 78 years. The sample was comprised of 49 female, 51 male participants, and two participants selected "Prefer not to say." For the household income range, seven participants reported earning less than $15,000, 14 participants reported earning $15,000 to $40,000, 40 participants reported earning $40,000 to $100,000, 34 participants reported earning $100,000 and above, and 7 participants selected "No Answer." For level of education, two participants selected Elementary/Middle school, seven participants selected High School, 60 participants selected University/College Degree, 32 participants selected Post-Graduate (Post-University) Degree, and one participant selected "No Answer." Table 1 contains select demographic data for Phase One participants.

Phase Two. For the sample in Phase Two (N = 176), the age of participants ranged from 19 to 74 years. The sample was comprised of 85 female, 89 male participants, and two participants selected "Prefer not to say." For the household income range, seven participants reported earning less than $15,000, 15 participants reported earning $15,000 to $40,000, 81 participants reported earning $40,000 to $100,000, 68 participants reported earning $100,000 and above, four participants selected "No Answer," and one participant had missing value. For level of education, five participants selected High School, 110 participants selected University/College Degree, and 61

Table 1

Phase One - Select Demographic Characteristics

Variable	*n*	*M* (*SD*) or %
Age*	102	37.24 (10.58)
Biological sex		
Male	51	50.0
Female	49	48.0
Prefer not to say	2	2.0
Household Income Range		
Under $15,000	7	6.9
$15,000 - $40,000	14	13.7
$40,000 - $100,000	40	39.2
$100,000 and above	34	33.3
No Answer	7	6.9
Level of Education		
Elementary/Middle School	2	2.0
High school	7	6.9
University/College Degree	60	58.8
Post-graduate (Post-University) Degree	7	31.4
No Answer	1	1.0

Note. *n* = number of participants; *M* = mean; *SD* = standard deviation.

* Participant age ranged from 18-78

participants selected Post- Graduate (Post- University) Degree. Table 2 contains select demographic data for Phase Two participants.

Phase Three. For the sample in Phase Three (N = 200), the age of participants ranged from 21 to 79 years. The sample was comprised of 91 female, 107 male participants, and two participants who selected "Prefer not to say." For the household income range, eight participants reported earning less than $15,000, 44 participants reported earning $15,000 to $40,000, 85 participants reported earning $40,000 to $100,000, 55 participants reported earning $100,000 and above, and 8 participants selected "No Answer." For level of education, three participants selected Elementary/Middle School, eight participants selected High School, 133 participants selected University/College Degree, 53 participants selected Post-Graduate (Post-University) Degree, and three participants selected "No Answer." Table 3 contains select demographic data for Phase Three participants.

Measures

Screening Questionnaire

There were seven screening questions participants needed to correctly answer to proceed with the study. The questions inquired about the participant's age, ethnicity, Asian ethnicity, and place of birth, as well as the participant's parent(s)' ethnicity, Asian ethnicity, and place of birth. If the participant chose responses that indicated they do not meet the study's definition of second-generation Chinese-American (e.g., not born in the United States; parents were not born in Hong Kong, China, or Taiwan, etc.), then the participant was redirected to the end of the survey and informed that they do not meet study eligibility. If participants successfully completed and passed all screening

Table 2

Phase Two - Select Demographic Characteristics

Variable	*n*	*M* (*SD*) or %
Age*	176	31.82 (9.61)
Biological sex		
Male	89	50.6
Female	85	48.3
Prefer not to say	2	1.1
Household Income Range		
Under $15,000	7	4.0
$15,000 - $40,000	15	8.6
$40,000 - $100,000	81	46.0
$100,000 and above	68	38.6
No Answer	4	4.0
Missing	1	0.6
Level of Education		
High school	5	2.8
University/College Degree	110	62.5
Post-graduate (Post-University) Degree	61	34.7

Note. *n* = number of participants; *M* = mean; *SD* = standard deviation.

* Participant age ranged from 19-74

Table 3

Phase Three - Select Demographic Characteristics

Variable	*n*	*M* (*SD*) or %
Age*	200	34.91 (9.02)
Biological sex		
Male	107	53.5
Female	91	45.5
Prefer not to say	2	1.0
Household Income Range		
Under $15,000	8	4.0
$15,000 - $40,000	44	22.0
$40,000 - $100,000	85	42.5
$100,000 and above	55	27.5
No Answer	8	4.0
Level of Education		
Elementary/Middle School	3	1.5
High school	8	4.0
University/College Degree	133	66.5
Post-graduate (Post-University) Degree	53	26.5
No Answer	3	1.5

Note. *n* = number of participants*; M* = mean; *SD* = standard deviation.

* Participant age ranged from 21-79

questions, then they were directed to the next section of the survey. The screening questionnaire was administered in all three phases.

Cultural Check

This study's eligibility criteria specified that participants must self-identify as Chinese or Chinese-American; however, the legitimacy of such self-identification cannot be verified through online methods. Three cultural check questions were asked after the screening questionnaire to assess if participants possessed an adequate amount of Chinese or Chinese-American cultural knowledge. The three cultural check questions were: "*In Chinese culture, what number most symbolizes 'good fortune'?*" "*In Chinese culture, what color most symbolizes 'good luck'?*" and "*In Chinese culture, what number most symbolizes 'bad luck' because it sounds like the word 'death'?*" To reduce the likelihood that participants searched for the answer on the internet, participants were only given 12 seconds to answer the cultural checks. If the participant did not provide an answer within 12 seconds or failed to provide the correct answer to the cultural check, then the participant was automatically redirected to the end of the survey and informed that they do not meet the requirements for the study. Only participants who answered all three cultural checks correctly were included in the final sample for data analysis. The cultural check was administered across all three phases of the study.

Demographics Questionnaire

Participants completed a demographics questionnaire after successfully answering the screening questionnaire and the cultural checks. The demographics questionnaire obtained information regarding sex, age, gender, ethnicity, socioeconomic status, relationship status, primary/secondary language, education level, and income. This was

used to establish sample characteristics and potential covariates in all three phases of the study.

Attention Check (Goodman, Cryder, & Cheema, 2013)

This study adopted Goodman et al.'s (2013) attention checks to gauge online participants' attention comprehension, to reduce Type II error, and to help improve statistical power. An example of an attention check item aimed to screen out random clicking is "*Research on relationships show that people, when making decisions and answering questions, prefer not to pay attention and minimize their effort as much as possible. Some studies show that over 50% of people don't carefully read questions. If you are reading this question and have read all the other questions, please select the box marked "other" and type 'Never' in the box below. Do not select 'This describes me exactly'*." Answers to the attention check questions were used as an exclusion criterion to screen out inattentive participants for the final sample for data analysis. Participants who failed any of the two attention checks were excluded in the final sample for data analysis. Two attention check items were embedded in the survey for all three phases of the study.

Filial Piety - Dual Filial Piety Scale (DFPS; Yeh & Bedford, 2003)

The DFPS is a 10-item measure that consists of two subscales: the Reciprocal Filial Piety (RFP) subscale and the Authoritarian Filial Piety (AFP) subscale. Each item was measured on a 6-point Likert-type rating scale, from 1 (Strongly Disagree) to 6 (Strongly Agree). The five odd-numbered items assessed the individual's reciprocal filial piety beliefs and focused on the voluntariness of one's care and authentic gratitude towards their parents. Sample items from the RFP subscale include "*Be grateful to my parents for raising me*" and "*Be concerned about my parents, as well as understand*

them." The five even-numbered items assessed participants' authoritarian filial beliefs and focused on the absolute priority of parental expectation and obedience to parental demands. Sample items from the AFP subscale include "*Give up my aspirations to meet my parents' expectations*" and "*Take my parents' suggestions even when I do not agree with them*." The DFPS was administered in all three phases of the study.

The DFPS has been empirically supported as a valid measure used to investigate filial beliefs across countries, where past research has reported satisfactory validity and reliability of the scale using Taiwanese adolescents and parents (Chen et al., 2016; Yeh et al., 2013), and demonstrated good model fit in a sample of Taiwanese college students and senior high school students (Yeh et al., 2007), as well as in a sample of adults in Taiwan and Hong Kong (Yeh et al., 2013). A study using 455 Taiwanese university students from three Taiwanese universities reported a Cronbach's alpha of .88 for the RFP subscale and .77 for the AFP subscales (Jen et al., 2019). Furthermore, a study using 573 Vietnamese students from ages 18 to 25 reported a Cronbach's alpha of .88 for the RFP subscale and .84 for the AFP subscale (Ha et al., 2020). In the present samples of second-generation Chinese-Americans, the internal reliability for the RFP subscale ranged from acceptable to good in each phase, with Cronbach's alpha of .86, .74, and .83, respectively. There was good internal reliability for the AFP subscale at each phase, with Cronbach's alpha of .82, .84, and .83, respectively.

Parent-child Conflict – Parent-child Interaction Scale (PIS; Yeh, 1999)

This study utilized the 12-item Origin subscale of the PIS, which reflects six types of parent-child conflict: Demands Conflict with Desire (DCD), Demand Exceeds Ability (DEA), Unreasonable Behavior (UB), Role Conflict (RC), Interparental Dispute (IND),

and Immoral Demands (IMD). All items were rated on a 5-point Likert-type rating scale from 0 (Not Agree at All) to 4 (Agree the Most). Each type of parent-child conflict is represented by two items. Participants were provided two sets to answer, one set for their mother/mother-figure, and one set for their father/father-figure. Example items include "*My father's requirements differ from the goal I want to obtain*" (DCD item) and "*My mother's requirements conflict with my other role requires, e.g., as a friend or a student*" (RC item). Though data pertaining to IND and IMD were collected, it was removed from analyses in accordance with past research indicating lack of participant endorsement regarding these two types of conflicts (Yeh, 1995; Yeh & Bedford, 2004). As there are only two items assessing each type of parent-child conflict, the restrictive assumptions for Cronbach's alpha could not be tested. As such, a correlation was run for each set of questions for each parent/parent-figure. For the father set, there was a strong correlation at the .01 significance level for DCD, DEA, UB, and RC, with correlations of .51, .60, .62, and .72, respectively. For the mother set, there was a strong correlation at the .01 significance level for DCD, DEA, UB, and RC, with correlations of .58, .75, .67, and .71, respectively. The PIS was only administered in Phase Two of the study.

Family Adaptability and Cohesion Evaluation Scale IV – Short Form (FACES IV-SF; Priest, 2020)

The FACES IV-SF is a 24-item measure that assesses various aspects of family functioning across eight subscales. Items were rated on a 5-point Likert-type rating scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

Family Cohesion was measured by obtaining a ratio score consisting of responses from three self-reported questions of the Balanced Cohesion subscale, the three self-

reported questions of the Unbalanced Disengaged subscale, and the three self-reported questions of the Unbalanced Enmeshed subscale. Sample items from the Balanced Cohesion subscale are "*Family members are supportive of each other during difficult times*" and "*Family members feel very close to each other*." Sample items from the Unbalanced Disengaged subscale are "*We get along better with people outside our family than inside*" and "*Family members seem to avoid contact with each other when at home*." Sample items from the Unbalanced Enmeshed subscale are "*Family members are too dependent on each other*" and "*We resent family members doing things outside the family*." Family cohesion was then interpreted based on the Balanced/Unbalanced ratio score, with higher scores (i.e., a ratio score above 1) representing a more balanced and healthy level of family cohesion, and lower score (i.e., a ratio score below 1) representing a more unbalanced and unhealthy level of family cohesion.

Family flexibility was measured by obtaining a ratio score consisting of responses from the three self-reported questions of the Balanced Flexibility subscale, the three self-reported questions of the Unbalanced Rigid subscale, and the three self-reported questions of the Unbalanced Chaotic subscale. Sample items from the Balanced Flexibility subscale are "*My family is able to adjust to change when necessary*" and "*When problems arise, we compromise*." Sample items from the Unbalanced Rigid subscale are "*There are clear consequences when a family member does something wrong*" and "*It is important to follow the rules in our family*." Sample items from the Unbalanced Chaotic subscale are "*Our family feels hectic and disorganized*" and "*We never seem to get organized in our family*." Family flexibility was then interpreted based on the Balanced/Unbalanced ratio score, with higher scores (i.e., a ratio score above 1)

representing a more balanced and healthy level of family flexibility, and lower scores (i.e., a ratio score below 1) representing a more unbalanced and unhealthy level of family flexibility.

Family communication was measured by the three self-reported questions of the Family Communication subscale. Sample items measuring family communication are "*Family members can calmly discuss problems with each other*" and "*Family members try to understand each other's feelings*." Family communication was then interpreted based on the sum score on the Family Communication subscale, with higher scores representing healthier levels of family communication.

Family satisfaction was measured by the three self-reported questions of the Family Satisfaction subscale and rated on a 5-point Likert-type scale from 1 (Very Dissatisfied) to 5 (Extremely Satisfied). Sample items measuring family satisfaction are "*How satisfied are you with the quality of communication between family members*" and "*How satisfied are you with your family's ability to resolve conflict*." Family satisfaction was then interpreted based on the sum score of the Family Satisfaction subscale, with higher scores representing higher levels of family satisfaction.

The FACES IV-SF was created from the original FACES IV scale (Olson, 2011) to address its limitation in utility and uptake in research due to the length of the original FACES IV measure (Priest et al., 2020). Previous research of the FACES IV-SF has reported a Cronbach's alpha coefficient of .83 for the Balanced Cohesion subscale, .82 for Balanced Flexibility subscale, .79 for Unbalanced Disengaged subscale, .63 for Unbalanced Enmeshed subscale, .76 for Unbalanced Rigid subscale, .80 for Unbalanced Chaotic subscale, .89 for Family Communication subscale, and .93 for family satisfaction

(Priest, 2020). In the present sample of second-generation Chinese-Americans, the internal reliability for each scale ranged from acceptable to good and were as follows: .71 for the Balanced Cohesion subscale, .72 for the Unbalanced Enmeshed subscale, .75 for the Unbalanced Disengaged subscale, .69 for the Balanced Flexibility subscale, .77 for the Unbalanced Rigid subscale, .81 for the Unbalanced Chaotic subscale, .70 for the Family Communication subscale, and .87 for the Family Satisfaction subscale. The FACES IV-SF was only administered for Phase Three of the study.

Modified Version of the Early Memory Test (EMT; Mayman, 1968)

The EMT asked participants to provide their earliest memories, their second earliest memories, their earliest memories of their mother/mother-figure, and their earliest memories of their father/father-figure. For this study, participants were additionally asked to provide a memory of a recent conflict with their parent(s)/parent-figure(s), and how they have or have not resolved that conflict. Participants were then asked to describe each of the memories to the best of their ability, emphasizing their mood, feeling, and their impressions of themselves and others. Prior researchers using the EMT reported inter-rater correlations of .76 and .94 (Shedler et al., 1993). The modified version of the EMT was only administered in Phase Three of the study.

Procedures

Phase One

Participants were recruited through Amazon MTurk. Participants completed an informed consent to begin the study. The informed consent specified that the participants must be second-generation Chinese-Americans with parents who were born in either Hong Kong, Taiwan, or China to participate in the study. The informed consent also

specified that to receive compensation, the participant must complete the study in full. Participants then completed the screening questionnaire and the cultural check items to ensure that the participants are second-generation Chinese-Americans. Failure to correctly answer the screening questions or cultural checks immediately directed participants to the end of the survey, preventing them from completing the survey in full due to not meeting the requirements of the study. Participants who passed the screening and checks were then directed to complete the demographics section, which included two embedded attention check items. Participants who failed either attention checks were removed from the study for assumptions of insufficient attention. Lastly, participants completed the 10-item Dual Filial Piety Scale (DFPS; Yeh & Bedford, 2004) about their parents. After completing all the measures, participants were provided with a debrief form about the study and compensated with $0.50 through Amazon MTurk. Phase One of the study took participants approximately 5 to 10 minutes to complete.

Phase Two

Like Phase One, participants in Phase Two of the study first completed the informed consent before beginning the study. Participants then completed the screening questionnaire and cultural checks following the above-mentioned guidelines. Participants who successfully completed the screening questionnaire and cultural checks were then allowed to proceed to the demographics section. Participants who failed one or more attention checks were removed from data analysis. Lastly, participants completed the 10-item DFPS and two sets of the 12-item Parent-Interaction Scale (PIS; Yeh, 1999), one set per parent/parent-figure (i.e., one set for mother/mother-figure and one set for father/father-figure). After completing all the measures, the participants were provided

with a debrief form about the study and compensated $0.75 through Amazon MTurk. Phase Two of the study took participants approximately 10 to 15 minutes to complete.

Due to the strict criteria required for eligibility in the study, snowball sampling was also implemented to expand this study's recruitment. Participants recruited through snowball sampling were given the option to participate in a raffle for a chance to win one of two $25 Amazon gift cards as compensation for their participation. Participants who opted for the raffle were instructed to provide their e-mail address, which was then stored in a separate password-protected file that was deleted when the data collection was completed, and the raffle was drawn.

Phase Three

Participants in Phase Three of the study followed the same procedure as Phase One and Two, specifically regarding the informed consent, screening questionnaire, cultural checks, demographics section, attention checks, and the DFPS. After completing the DFPS, participants were asked to complete the 24-question of the Family Adaptability and Cohesion Evaluation Scale IV – Short Form (FACES IV-SF; Priest, 2020). Afterwards, participants were asked to provide narrative data based on the instructions of the modified version of the Early Memory Test (EMT). After completing all the measures, the participants were provided with a debrief form about the study and compensated with $3.00 through Amazon MTurk. Participants who failed the cultural checks or failed one or more attention checks were removed from data analysis. Phase Three of the study took approximately 20-30 minutes to complete.

As in Phase Two, snowball sampling was also implemented in Phase Three to expand this study's recruitment. Participants recruited through snowball sampling for

Phase Three were given the option to participate in a raffle for a chance to win one of four $50 Amazon gift cards as compensation for their participation. Participants who opted for the raffle were instructed to provide their e-mail address, which was then stored in a separate password-protected file that was deleted when the data collection was completed, and the raffle was drawn.

Data Analytic Plan

Main Analyses

Prior to conducting hypotheses testing, the data were examined for missing values and addressed. Afterwards, the reliability of all the measures and their component subscales were calculated. Demographic variables, such as sex, age, income, and education were examined using bivariate correlations and independent t-tests to identify any covariates for all three phases of the study. Each measure was evaluated for significant relationship among demographic variables and any demographic variables found to be significant on any measure were considered as covariates. Distribution of the data was then examined for normality through an examination of skewness and kurtosis, as well as using a histogram to visually inspect the data. Homogeneity of variance was examined through an analysis of homoscedasticity by utilizing a scatter plot. Bivariate correlations were run between variables to test for multicollinearity. Lastly, multivariate and extreme outliers were identified and removed accordingly (if needed).

For Phase One of the study, Hypothesis 1 was tested following Bentler (1995) by using AMOS software (Statistic Solutions, 2019) to perform a confirmatory factor analysis (CFA) of the DFPS with 102 second-generation Chinese-American participants (10 subjects per parameter). Goodness of fit was determined by examining four fit

indices, including Chi-square (CMIN), the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The chi-square goodness of fit test was used to evaluate whether the model departed significantly from one that fits exactly to the data (Kline, 2016) and a non-significant Chi-square indicated that the model had a good model fit. The CFI is a non-normed fit index that accounts for model complexity/parsimony in their computation and compared the fit of the model against that of a null or independence model (Schumacker & Lomax, 2016). CFI values above .90 indicated an acceptable fitting model (e.g., Whittaker, 2016), whereas values above .95 indicated a superior fit (Byrne, 2010). The RMSEA is a parsimony-adjusted index that can be considered an 'absolute fit index,' in which a value of 0 with a small confidence interval difference indicated 'best fit', whereas values above 0 with a larger confidence interval difference indicated worse fit (Kline, 2016). RMSEA values less than .05 suggested 'good fit,' values less than .08 suggested 'adequate fit,' and values above .10 suggested poor fit (Browne & Cudeck, 1992; Fabrigar et al., 1999; Steiger, 1989). The SRMR is an absolute measure of fit that is defined as an index of the average standardized residuals between the observed and the hypothesized covariance matrices (Chen, 2007). SRMR indicated acceptable fit when it produced a value of less than .10 and a value lower than .05 indicated a good fit (Kline, 2011; Hu & Bentler, 1999; Schermelleh-Engel & Moosbrugger, 2003; Lacobucci, 2010). In sum, if multiple indices indicate good fit, then the model is likely to fit the sample (Schreiber et al., 2006). Thus, to determine how well the dual filial factors fit the sample, each of these statistics was assessed and reported. Lastly, step-by-step efforts to improve model fit were reported and the final accepted model was identified.

For Phase Two of the study, Hypothesis 2 was tested following Dolnicar et al. (2014) by running a hierarchical cluster analysis with 176 second-generation Chinese-American participants (70 participants per number of variables). The hierarchical cluster analysis began with the correlation matrix in which all clusters and unclustered variables were analyzed in all possible pairs to identify the pairs that produced the highest average intercorrelation and chosen as a new cluster. The hierarchical cluster analysis proceeded sequentially from tighter less inclusive clusters, to larger, more inclusive clusters. This process was continued until all variables were clustered into a single group (Bridges, 1966). K-means cluster analysis was then implemented to allocate participants to a profile/cluster most similar to theirs (Kormi-Nouri et al., 2015; MacDonald & Kormi-Nouri, 2013). The identified clusters were examined to conceptually analyze how the clusters were formed, which was then be used to test Hypotheses 2 to 5 by running a MANCOVA with SPSS to examine the differences in parent-child conflict among the identified clusters.

For Phase Three of the study, Hypotheses 6 and 7 were tested by first running a K-means cluster analysis to assign participants into the number of clusters identified in Phase Two's hierarchical cluster analysis. Afterwards, a MANCOVA was conducted with SPSS to examine the differences in family cohesion, family flexibility, family communication, and family satisfaction between the identified clusters with 200 second-generation Chinese-American participants. Based on G*power analysis, Phase Three conducted a MANCOVA with 200 second-generation Chinese-American participants.

Exploratory Analyses

This study examined the early memories of second-generation Chinese-Americans to explore whether their early memory narratives captured themes related to filial piety and family functioning. Participants' early memory narratives were analyzed using Thematic Analysis (Braun & Clarke, 2008). Participants' early memory narratives were first read without coding to familiarize and develop a more thorough understanding of the narrative data while generating an initial list of potential ideas and themes. A small portion of each early memory narrative was then coded to identify segments of the narratives that were deemed interesting and/or relevant to this study's area of focus. Initial codes were then sorted into main and sub-themes. They were then thoroughly reviewed to ensure that similar overarching themes were combined, and that there were clear distinctions between themes. Lastly, main themes and sub-themes were then named, defined, and analyzed. This exploratory process was conducted by the primary researcher without another coder to establish reliability and thus, the results may be subjected to the primary researcher's biases.

Chapter V

Results

This section will review preliminary analyses for each phase of the study, including treatment of missing data, participant exclusion, descriptive statistics for the measures, tests of univariate and multivariate normality, and covariate analyses. Additionally, the main analyses for Hypotheses 1 through 7 and exploratory analyses are described.

Preliminary Analyses

Missing Data

No missing values were found in the final data set for the main measures for all three phases of the current study. The "forced-choice" answering option on the Qualtrics survey platform was used to ensure that participants were required to respond to each item as they proceeded through the study protocol. Missing values were found in some demographics variables and were addressed appropriately (e.g., assigned 999 to identify it as missing data).

Excluded Protocols

For Phase One, 1926 total participants were recruited via Amazon Mechanical Turk (MTurk). Due to the strict eligibility criteria for the study, 1803 participants were removed due to failing either the screening questionnaire or the cultural/attention checks. An additional 17 participants were removed due to duplicated IP addresses. The resulting sample size was 102 participants for Phase One.

For Phase Two, 1700 participants were recruited via Amazon MTurk and 195 participants were recruited via snowball sampling. As in Phase One, 1598 participants

from Amazon MTurk and 101 participants from snowball sampling were removed due to failing either the screening questionnaire or the cultural/attention checks. An additional 20 participants from Amazon MTurk were removed due to duplicated IP addresses. The resulting sample size was 82 participants from Amazon MTurk and 94 participants from snowball sampling, totaling 176 participants for Phase Two.

For Phase Three, 2409 participants were recruited via Amazon MTurk and 71 participants were recruited via snowball sampling. As in Phase One and Two, 2214 participants from Amazon MTurk and 22 participants from snowball sampling were removed due to failing either the screening questionnaire or the cultural/attention checks. An additional 44 participants from Amazon MTurk were removed due to duplicated IP addresses. The resulting sample size was 151 participants from Amazon MTurk and 49 participants from snowball sampling, totaling 200 participants for Phase Three.

Descriptive Statistics

Data analyses were conducted using SPSS Version 26 and the confirmatory factor analysis (CFA) was conducted using AMOS Version 22. Descriptive statistics were explored for all measures before conducting the hypotheses testing.

For Phase One, box plots were used to examine the data for outliers and although some outliers were found, they were retained in the analyses due to not meeting criteria to be classified as extreme outliers. The “extreme” classification was determined based on the parameters of Tukey’s fences, where extreme outliers were classified as those that fell below or above the first or third quartiles -/+ 1.5* Interquartile range (IQR). Data were then examined for normality through evaluation of skewness and kurtosis as well as visual examination of histogram plots. Research proposed that a skewness absolute value

greater than 2.1 and a kurtosis absolute value greater than 7.1 indicated a significant departure from normality (West et al., 1995). Skewness and kurtosis for all variables in Phase One were within the normal range. The internal reliability for the Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP) subscales of the Dual Filial Piety Scale (DFPS) were checked and all items were retained due to having good/acceptable internal reliability. Descriptive and reliability statistics for Phase One are shown below in Table 4.

For Phase Two, data were first examined for outliers by calculating the Mahalanobis' distance, where scores above the critical value (22.46) were identified as multivariate outliers. Two participants were identified as multivariate outliers and removed accordingly. The box plots were then used to identify extreme outliers and no extreme outliers were found. Skewness and kurtosis were then assessed for all variables and were within the normal range. The internal reliability for RFPS and AFPS of the DFPS were checked and all items were retained due to having good/acceptable internal reliability. As Demands Conflict Desire (DCD), Demand Exceeds Ability (DEA), Unreasonable Behavior (UB) and Role Conflict (RC) are two-item measures, Cronbach's alpha cannot be tested due to its restrictive assumptions. Therefore, Pearson's correlations were run to assess the correlation between the individual items that comprised each measure for each parent. Descriptive and reliability statistics after removal of outliers for Phase Two are shown below in Table 5.

For Phase Three, data were first examined for multivariate outliers by calculating the Mahalanobis' distance, where scores above the critical value (22.46) were identified as multivariate outliers. Five participants were identified as multivariate outliers and

Table 4

Phase One - Descriptive Statistics of Study Variables

Variable	*n*	*α*	*M (SD)*	*Skew (SE)*	*Kurtosis (SE)*
1. RFP	102	.86	26.66 (3.36)	-0.73 (0.24)	-0.60 (0.47)
2. AFP	102	.85	17.81 (5.36)	-0.03 (0.24)	-0.62 (0.47)

Note. *n* = number of participants; *α* = Cronbach's alpha; *M* = mean; *SD* = standard deviation; *SE* = standard error; RFP = Reciprocal Filial Piety; AFP = Authoritarian Filial Piety.

Table 5

Phase Two - Descriptive Statistics of Study Variables

Variable	*n*	*α* / *r*	*M (SD)*	*Skew (SE)*	*Kurtosis (SE)*
1. RFP	174	.75	20.59 (2.76)	-0.77 (0.18)	0.23 (0.37)
2. AFP	174	.84	14.90 (4.39)	-0.42 (0.18)	-0.42 (0.37)
3. DCD (Total)[b]	174	NA	4.06 (1.80)	-0.30 (0.18)	-0.09 (0.37)
3a. DCD (F)[a]	174	.51*	4.13 (2.07)	-0.11 (0.18)	-0.59 (0.37)
3b. DCD (M)[a]	174	.58*	3.99 (2.08)	-0.20 (0.18)	-0.45 (0.37)
4. DEA (Total)[b]	174	NA	3.53 (2.03)	-0.22 (0.18)	-0.82 (0.37)
4a. DEA (F)[a]	174	.60*	3.55 (2.27)	-0.01 (0.18)	-0.86 (0.37)
4b. DEA (M)[a]	174	.75*	3.51 (2.23)	-0.08 (0.18)	-0.93 (0.37)
5. UB (Total)[b]	174	NA	3.52 (1.85)	-0.30 (0.18)	-0.44 (0.37)
5a. UB (F)[a]	174	.62*	3.56 (2.19)	-0.07 (0.18)	-0.64 (0.37)
5b. UB (M)[a]	174	.67*	3.48 (2.16)	-0.14 (0.18)	-0.91 (0.37)
6. RC (Total)[b]	174	NA	3.71 (2.08)	-0.12 (0.18)	-0.66 (0.37)
6a. RC (F)[a]	174	.72*	3.71 (2.39)	0.02 (0.18)	-0.94 (0.37)
6b. RC (M)[a]	174	.71*	3.72 (2.20)	-0.15 (0.18)	-0.69 (0.37)

Note. *n* = number of participants; *α* = Cronbach's alpha; *r* = Pearson's correlation; *M* = mean; *SD* = standard deviation; *SE* = standard error; RFP = Reciprocal Filial Piety; AFP = Authoritarian Filial Piety; DCD = Demands Conflict with Desire; DEA = Demand Exceeds Ability; UB = Unreasonable Behavior; RC = Role Conflict, (F) = Father, (M) = Mother.

[a]DCD, DEA, UB, and RC are two-item measures, which cannot test the restrictive assumptions for Cronbach's alpha. Therefore, Pearson Correlation Coefficients were reported instead.

[b]DCD (Total), DEA (Total), UB (Total), and RC (Total) are calculated by the average score of the participants' responses for both parents.

*$p < .01$

removed accordingly. The box plots were then assessed to identify extreme outliers and three participants were identified as extreme outliers across two measure variables (e.g., Family Cohesion and Family Flexibility) and removed accordingly. Although further descriptive statistics reported additional extreme outliers for Family Flexibility, they were retained due to not overlapping with other measure variables and to prevent any further reduction in the study's statistical power. The internal reliability for all composite measures were checked, and all items were retained due to having good/acceptable internal reliability. Descriptive and reliability statistics after removal of outliers for Phase Three are shown below in Table 6.

Analysis of Potential Covariates

Based on previous filial piety research, the following variables were tested as potential covariates for the main study variables of Phase Two and Three: age, sex, level of education, and income. Phase One was not included in covariate testing to prevent overfitting.

For Phase Two, the main study variables were as follows: Reciprocal Filial Piety (RFP), as measured by the Reciprocal Filial Piety Subscale (RFPS); Authoritarian Filial Piety (AFP), as measured by the Authoritarian Filial Piety Subscale (AFPS); Demands Conflict with Desire Total, as measured by the mean of the Demands Conflict Desire Subscale (DCD) for both parents; Demand Exceeds Ability Total, as measured by the mean of the Demand Exceeds Ability Subscale (DEA) for both parents; Role Conflict Total, as measured by the mean of the Role Conflict Subscale (RC) for both parents; and Unreasonable Behavior Total, as measured by the mean of the Unreasonable Behavior Subscale (UB) for both parents.

Table 6

Phase Three - Descriptive Statistics of Study Variables

Variable	*n*	*α*	*M (SD)*	*Skew (SE)*	*Kurtosis (SE)*
1. RFP	192	.78	20.38 (2.63)	-0.70 (0.18)	1.11 (0.35)
2. AFP	192	.83	16.11 (4.42)	-0.55 (0.18)	-0.08 (0.35)
3. Family Communication	192	.70	11.27 (2.28)	-0.83 (0.18)	0.83 (0.35)
4. Family Satisfaction	192	.87	10.61 (2.79)	-0.88 (0.18)	0.55 (0.35)
5. Family Cohesion[a]	192	NA	1.62 (0.44)	1.62 (0.18)	2.70 (0.35)
5a. Balanced Cohesion	192	.71	11.78 (2.16)	-0.97 (0.18)	1.50 (0.35)
5b. Unbalanced Enmeshed	192	.72	10.16 (2.72)	-0.40 (0.18)	-0.39 (0.35)
5c. Unbalanced Disengaged	192	.75	10.17 (2.83)	-0.31 (0.18)	-0.80 (0.35)
6. Family Flexibility[a]	192	NA	1.13 (0.39)	1.54 (0.18)	3.18 (0.35)
6a. Balanced Flexibility	192	.69	10.90 (2.32)	-1.09 (0.18)	1.43 (0.35)
6b. Unbalanced Rigid	192	.77	10.76 (2.41)	-0.70 (0.18)	0.03 (0.35)
6c. Unbalanced Chaotic	192	.81	9.69 (3.05)	-0.35 (0.18)	-0.61 (0.35)

Note. *n* = number of participants; *α* = Cronbach's alpha; *M* = mean; *SD* = standard deviation; *SE* = standard error; RFP = Reciprocal Filial Piety; AFP = Authoritarian Filial Piety.

[a]Family Cohesion and Family Flexibility are ratio scores calculated by three separate sub-variables and the internal reliability are reported for the individual sub-variables.

For Phase Three, the main study variables were as follows: RFP, AFP, Family Cohesion, as measured by the ratio score between the Balanced Cohesion subscale and the average between the Unbalanced Enmeshed subscale and the Unbalanced Disengaged subscale; Family Flexibility, as measured by the ratio score between the Balanced Flexibility subscale and the average between the Unbalanced Rigid subscale and the Unbalanced Chaotic subscale; Family Satisfaction, as measured by the sum score of the Family Satisfaction subscale; and Family Communication, as measured by the sum score of the Family Communication subscale.

The correlation between the proposed covariates and the main study variables were calculated using Pearson's and Spearman's correlations for the two phases and reported in Tables 7 and 8, respectively. Independent samples *t*-tests were conducted to evaluate the relationship between sex and the main study variables for the two phases and reported in Tables 9 and 10, respectively.

Age. For Phase Two, no significant correlations were found between age and the main study variables, therefore age was not included as a covariate in any of the analyses for Phase Two.

For Phase Three, there was a small but significant positive correlation between age and Family Cohesion ($r(192) = .17$, $p = .02$), as well as between age and Family Flexibility ($r(192) = .15$, $p = .04$), such that participants higher in age demonstrated significantly higher levels of Family Cohesion and Family Flexibility. Therefore, age was included as a covariate in the analyses for Phase Three.

Sex. For Phase Two, there was a significant difference between males and females on the AFPS, $t(170) = 2.42$, $p = .02$. That is, males ($M = 15.71$, $SD = 4.08$)

Table 7

Phase Two - Pearson's and Spearman's Correlation Coefficients: Relationships between Proposed Covariates and Main Study Variables

Variables	Age[a] (*n* = 165)	Income[b] (*n* = 169)	Education[b] (*n* = 174)
1. RFP	.01	.27**	.13
2. AFP	.05	-.13	-.23**
3. DCD	-.02	-.09	.02
4. DEA	-.03	-.15	.01
5. RC	-.04	-.04	.09
6. UB	.00	-.03	.06

Note. *n* = number of participants; RFP = Reciprocal Filial Piety; AFP = Authoritarian Filial Piety; DCD = Demands Conflict with Desire; DEA = Demand Exceeds Ability; RC = Role Conflict; UB = Unreasonable Behavior.

[a]Pearson's correlation results.

[b]Spearman's correlation results.

$^{**}p < .01$

Table 8

Phase Three - Pearson's and Spearman's Correlation Coefficients: Relationships between Proposed Covariates and Main Study Variables

Variables	Age[a] (*n* = 192)	Income[b] (*n* = 184)	Education[b] (*n* = 190)
1. RFP	.07	.14	-.06
2. AFP	-.12	-.09	.24**
3. Family Cohesion	.17*	-.04	-.14*
4. Family Flexibility	.15*	-.03	-.10
5. Family Communication	.04	-.07	.12
6. Family Satisfaction	-.01	-.10	.16*

Note. *n* = number of participants; RFP = Reciprocal Filial Piety; AFP = Authoritarian Filial Piety.

[a]Pearson's correlation results.

[b]Spearman's correlation results.

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

Table 9

Phase Two - Independent Samples t-Tests: Relationships between Sex and Main Study Variables

Variables	Male (n = 89) M (SD)	Female (n = 83) M (SD)	t	df	p
1. RFP	20.44 (2.73)	20.76 (2.82)	-0.76	170.00	.45
2. AFP*	15.71 (4.08)	14.11 (4.57)	2.42	170.00	.02
3. DCD*	3.79 (1.78)	4.39 (1.79)	-2.20	170.00	.03
4. DEA*	3.85 (1.88)	3.22 (2.14)	2.06	170.00	.04
5. RC	3.87 (1.97)	3.58 (2.20)	0.92	170.00	.36
6. UB	3.53 (1.82)	3.52 (1.90)	0.04	167.88	.97

Note. n = number of participants, M = mean; SD = standard deviation; RFP = Reciprocal Filial Piety; AFP = Authoritarian Filial Piety; DCD = Demands Conflict with Desire; DEA = Demand Exceeds Ability; UB = Unreasonable Behavior; RC = Role Conflict.

*$p < .05$

Table 10

Phase Three - Independent Samples T-Test: Relationships between Sex and Main Study Variables

	Variables	Male (n = 103) M (SD)	Female (n = 87) M (SD)	t	df	p
1.	RFP	20.21 (2.40)	20.61 (2.86)	-1.02	169.48	.31
2.	AFP	16.44 (4.47)	15.80 (4.33)	0.99	188.00	.33
3.	Family Cohesion	1.22 (0.40)	1.27 (0.49)	-0.77	188.00	.45
4.	Family Flexibility	1.13 (0.36)	1.12 (0.43)	0.17	188.00	.87
5.	Family Communication	11.54 (1.82)	10.99 (2.65)	1.65	148.49	.10
6.	Family Satisfaction*	11.13 (2.27)	10.13 (3.15)	2.47	153.23	.02

Note. n = number of participants, M = mean; SD = standard deviation; RFP = Reciprocal Filial Piety; AFP = Authoritarian Filial Piety.

*$p < .05$

scored significantly higher than females (M = 14.11, SD = 4.57) on Authoritarian Filial Piety. There was a significant difference between males and females on DCD Total, $t(170) = -2.20$, $p = .03$. That is, females (M = 4.39, SD = 1.79) scored significantly higher than males (M = 3.79, SD = 1.78) in DCD types of parent-child conflict. There was also a significant difference between males and females on DEA Total, $t(170) = 2.06$, $p = .04$. That is, males (M = 3.85, SD = 1.88) scored significantly higher than females (M = 3.22, SD = 2.14) in DEA types of parent-child conflict. Therefore, sex was included as a covariate in the analyses for Phase Two.

For Phase Three, there was a significant difference between males and females on Family

Satisfaction, $t(153.23) = 2.47$, $p = .015$. That is males (M = 11.13, SD = 2.27) scored significantly higher than females (M = 10.13, SD = 3.15) on Family Satisfaction. Therefore, sex was included as a covariate in the analyses for Phase Three.

Level of Education. For Phase Two, there was a small but significant negative correlation for level of education and the AFPS ($r(174) = -.23$, $p = .002$) such that participants with higher levels of education demonstrated significantly lower levels of AFP. No significant correlations were found between levels of education and any of the main dependent variables, and therefore level of education was not included as a covariate in the analyses for Phase Two.

For Phase Three, there was a small but significant positive correlation between level of education and the AFPS ($r(190) = .24$, $p = .001$) such that participants with higher levels of education demonstrated significantly higher levels of AFP. There was a small but significant positive correlation between level of education and Family

Satisfaction ($r(190) = .16$, $p = .03$) such that participants with higher education demonstrated significantly higher levels of Family Satisfaction. There was also a small but significant negative correlation between level of education and Family Cohesion ($r(190) = -.14$, $p = .05$) such that participants with higher educations demonstrated significantly lower Family Cohesion. Therefore, level of education was included as a covariate in the analyses for Phase Three.

Income. For Phase Two, there was a small but significant positive effect of income on the RFPS ($r(169) = .27$, $p < .001$) such that participants with higher income demonstrated significantly higher levels of RFP. No significant correlation was found between income and any of the main dependent variables, and therefore income was not included as a covariate in the analyses for Phase Two.

For Phase Three, no significant correlation was found between income and any of the main dependent variables, and therefore income was not included as a covariate in the analyses for Phase Three.

Primary Analyses

Phase One

The confirmatory factor analysis (CFA) was performed using IBM SPSS AMOS v.27.0. Participants were 102 second-generation Chinese-American individuals and were randomly sampled to test the CFA models. The Dual Filial Piety Scale (DFPS) included five self-reported items measuring Reciprocal Filial Piety (RFP) and five self-reported items measuring Authoritarian Filial Piety (AFP). Prior to running the CFA, the underlying model (DFPS) specified two latent factors (RFP and AFP), with five specific items that were thought to comprise each latent factor.

Model Fit. The following commonly-used indices were used as benchmarks to test the model fit: a non-significant Chi-square (CMIN) indicated good model fit (Kline, 2016); a Comparative Fit Index (CFI) value above .90 indicated an acceptable fit, with values above .95 indicating superior fit (Bryne, 2010); a Root Mean Square Error of Approximation (RMSEA) value of less than .05 indicated "good fit," with values less than .8 indicating "adequate fit," and values above .10 indicating "poor fit" (Browne & Cudeck, 1992; Fabrigar et al., 1999; Steiger, 1989); and lastly, the Standardized Root Mean Square Residual (SMRS) value of less than .10 indicated acceptable fit, and values lower than .05 indicated a good fit (Kline, 2011; Hu & Bentler, 1999; Schermelleh-Engel & Moosbrugger, 2003; Lacobucci, 2010).

Initial results of the CFA did not demonstrate acceptable goodness-of-fit-indices (Model 1 in Table 11). The CFA yielded a CMIN value of 2.21 with a significant *p* value of < .001, a CFI of .91, a RMSEA value of .11, and a SMRS value of .09. Therefore, steps to improve model fit were made.

First, standardized regression weights were examined to assess the relative importance and strength of the variables in the model. No factor loading fell below .6, indicating that all the variables were relatively important, and therefore no changes were made based on the standardized regression weights.

Modification indices were then assessed to identify potential improvements to the model by suggesting specific modifications. Although covariances of error were found within the same construct (DFP_3R) and (DFP_7R), no changes were made since the final analyses of this study were conducted with SPSS where covariances of error cannot be drawn. No other covariances between error terms in the same construct were

Table 11

Phase One - Changes in Goodness-of-Fit Indices of the Dual Filial Piety Models (DFPM)

Model Changes[a]	CMIN	df	*p*	CFI	RMSEA	SRMR
Model 1	75.06	34	<.001	.91	.11	.09
Model 2	45.25	26	.01	.95	.09	.08
Model 3	26.21	19	.12	.98	.06	.06

Note. n = 102; CMIN = Chi-square; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

[a]The following is a brief description of the models:

Model 1: The initial proposed model of the Dual Filial Piety Scale (DFPS).

Model 2: The model after removing DFP_R5 due to high standardized residual covariances.

Model 3: The final accepted model after removing both DFP_R5 and DFP_A8 due to high standardized residual covariances.

identified.

Next, standardized residual covariances were assessed to indicate the degree to which observed covariance between two variables deviated from the expected covariance based on the estimated model, where standardized residual covariance greater than 2.58 suggests a poor consistency between hypothetical and the data (Bryne, 2001). As such, three areas of strain were identified: the standardized residual covariance between DFP_2A and DFP_5R was 3.15, the standardized residual covariance between DFP_8A and DFP_5R was 2.68, and the standardized residual covariance between DFP_8A and DFP_7R was 2.63. DFP_5R ("*Be concerned about my parents, as well as understand them*") was removed due to having the higher standardized residual covariance value across two items compared to DFP_8A. Model fit was then reassessed and although the fit indices improved, they did not demonstrate acceptable goodness-of-fit-indices (see Model 2 in Table 11).

The standardized residual covariances were reassessed to identify other problematic items. One area of strain was identified: the standardized residual covariance between DFP_8A and DFP_R7 was 2.85. Since removing more than 20% of the variables that comprise a latent variable may cast doubt on the underlying theoretical framework (Bhale & Bedi, 2023), DFP_8A ("*Do whatever my parents ask right away*") was selected for removal to also balance the two latent variables (RFP and AFP) with four items each. Model fit was then reassessed and model fit was significantly better according to the following goodness-of-fit indices: a CMIN value of 26.21 with a non-significant *p* value of .12, indicating good model fit; a CFI of .98, indicating a superior fit; a RMSEA value of .06, indicating a good to adequate fit; and a SMRS value of .06, indicating an

acceptable fit (see Model 3 in Table 11). The final accepted CFA model with standardized regression weights is provided in Figure 2.

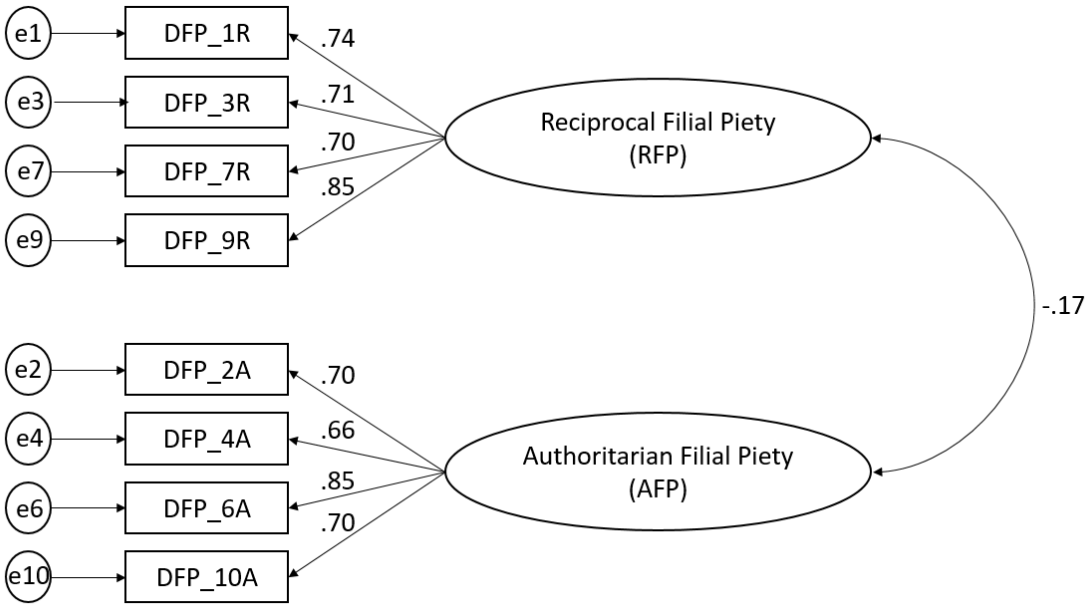
Hypothesis 1. Hypothesis 1 stated that the confirmatory factor analysis would identify a significant two-factor structure of the Dual Filial Piety Scale (DFPS). This hypothesis was supported by the findings, in that the final accepted model demonstrated acceptable to superior fit indices, where all the items significantly loaded onto their corresponding factor. This provided support that the DFPS successfully measured the two-factor construct proposed by the DFPS (Reciprocal and Authoritarian Filial Piety) in the second-generation Chinese-American samples. Thus, Hypothesis 1 was fully supported.

Phase Two

Hierarchical Cluster Analysis. A hierarchical cluster analysis was performed on 174 second-generation Chinese-American participants using Ward's method to determine the optimal number of filial clusters in the data set based on the interdependence agglomeration. This technique agglomerates each case and combines the different clusters until only one cluster remains to group individuals with a high degree of internal homogeneity (within the clusters) and external heterogeneity (between clusters). Although there are no golden standards for cluster analysis and the validation of cluster analysis depends heavily on the data set, visual inspection of the dendrogram is one of the first and most widely used methods to compare and evaluate agglomerative hierarchical clustering (Gere, 2023). As such, hierarchical cluster analysis was performed using the eight DFPS items identified in Phase One's CFA and the analysis revealed the presence of four distinct clusters based on visual examination of the dendrogram using Ward

Figure 2

Phase One - Final CFA model of the Dual Filial Piety Scale with Standardized Regression Weights



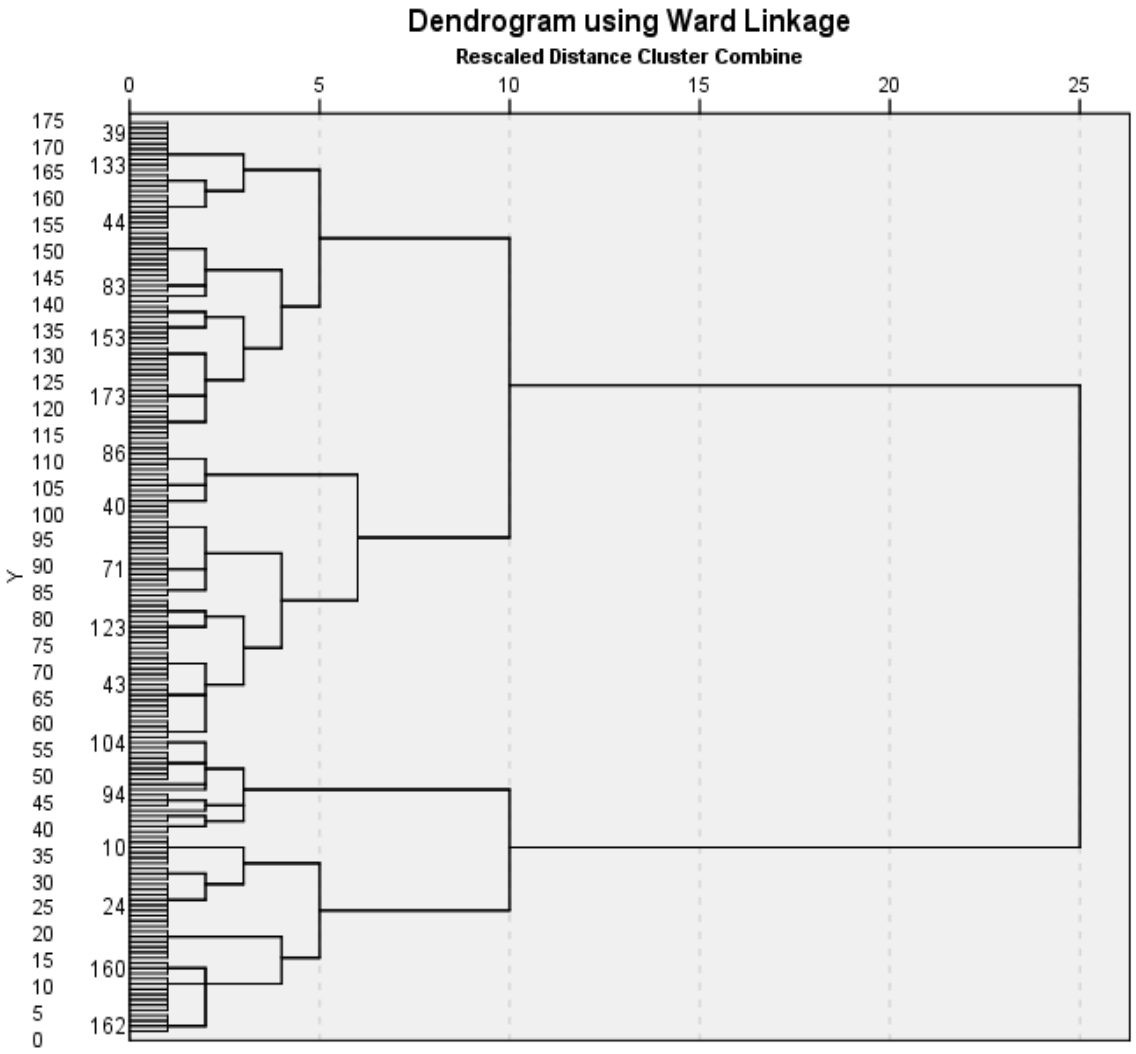
Note. *N* = 102. RFP = Reciprocal Filial Piety as measured by the Reciprocal Filial Piety Scale (RFPS); AFP = Authoritarian Filial Piety as measured by the Authoritarian Filial Piety Scale (AFPS; Yeh & Bedford, 2003); DFP_#R = Dual Filial Piety Reciprocal Item from the RFPS; DFP_#A = Dual Filial Piety Authoritarian Item from the AFPS.

Linkage, as well as based on the cutoff distance of ten from the rescaled distance cluster combined. The dendrogram of the hierarchical cluster analysis using Ward's method is provided in Figure 3.

K-Mean Clustering Analysis. K-mean clustering was utilized to partition the dataset into the previously identified number of clusters to assign each data point to the nearest cluster centroid. The centroids are then repeated recalculated based on the mean of the data points assigned to each of the four clusters until the centroids stabilize or the specified number of iterations is reached. To prevent the centroid recalculation process from terminating before the centroids stabilized, the specified number of iterations was set to 99. The final stabilized centroids represented the centers of the clusters and were used to examine how the clusters were formed. Individuals assigned to Cluster 1 scored relatively high on all the RFP and AFP items. Individuals who scored high on both RFP and AFP were conceptualized as having a Balanced mode of filial interaction (Yeh & Bedford, 2004). As such, Cluster 1 was classified as the Balanced Filial Cluster/Mode. Individuals assigned to Cluster 2 scored relatively low on all of the RFP and AFP items. Individuals who scored low on both RFP and AFP were conceptualized as having a Non-Filial mode of filial interaction. As such, Cluster 2 was classified as the Non- Filial Cluster/Mode. Individuals assigned to Cluster 3 scored relatively high on all the RFP items and relatively low on all of the AFP items. Individuals who scored high on RFP and low on AFP were conceptualized as having a Reciprocal mode of filial interaction. As such, Cluster 3 was classified as the Reciprocal Cluster/Mode. Lastly, individuals assigned to Cluster 4 scored relatively low on all the RFP items and relatively high on all the AFP items. Individuals who scored low on RFP and high on AFP were

Figure 3

Phase Two - Dendrogram using Ward Linkage from the Hierarchical Cluster Analysis of the Dual Filial Piety Scale



Note. $N = 174$. Ward's method for determining optimal numbers of groups indicated the sample was best defined as four clusters using the rescaled distance cluster combine cutoff score of ten.

conceptualized as having an Authoritarian mode of filial interaction. As such, Cluster 4 was classified as the Authoritarian Cluster/Mode. See Table 12 for the final cluster centers.

Hypothesis 2. Hypothesis 2 stated that the hierarchical cluster analysis would identify four distinctly significant filial modes, which was supported by both the hierarchical cluster analysis and the K-mean clustering analysis. The dendrogram provided by the hierarchical cluster analysis yielded four visually different clusters that gradually agglomerated into two groups, and ultimately into one group. K-mean clustering analysis further supported Hypothesis 2 by providing final cluster centers that revealed distinct patterns of responses amongst the four identified filial clusters. Analysis of the pattern of responses among the four identified filial clusters corresponded with the four modes of filial interaction conceptualized by Yeh and Bedford's (2004). Thus, Hypothesis 2 was fully supported.

Multivariate Analysis of Covariance. In order to capture differences in parent-child conflict among the identified filial clusters, a Multivariate Analysis of Covariance (MANCOVA) was run to compare group effect (the four identified filial modes: Balanced, Reciprocal, Authoritarian, and Non-Filial mode) on the four different types of parent-child conflict (Demands Conflict with Desire (DCD), Demand Exceeds Ability (DEA), Role Conflict (RC), and Unreasonable Behavior (UB)), with sex as a potential covariate to test Hypotheses 3, 4 and 5. Although Box's M was significant suggesting that there is a violation of the assumption of homogeneity of variance-covariance matrices, Box's M has been widely criticized as having little power (Cohen, 2008) and being overly sensitive to large sample sizes ($N > 30$) (Warner, 2013). However, with the

Table 12

Phase Two - K-Means Cluster Analysis - Final Cluster Centers of the Dual Filial Piety Scale

Dual Filial Piety Scale items	Cluster 1 (Balanced) (*n* = 72)	Cluster 2 (Non-Filial) (*n* = 5)	Cluster 3 (Reciprocal) (*n* = 44)	Cluster 4 (Authoritarian) (*n* = 53)
Be concerned about my parents' health.[a]	5	4	5	5
Be concerned about my parents' general well-being.[a]	5	4	6	5
Be grateful to my parents for raising me.[a]	5	2	5	4
Attend my parents' funeral no matter how far away I live.[a]	6	3	6	5
Take my parents' suggestions even when I do not agree with them.[b]	5	2	3	4
Disregard promises to friends in order to obey my parents.[b]	4	2	2	3
Give up my aspirations to meet my parents' expectations.[b]	5	2	2	4
Avoid getting married to someone my parents dislike.[b]	5	1	2	4

Note.

[a]Items from the Reciprocal Filial Piety Subscale (RFPS) of the Dual Filial Piety Scale (DFPS).

[b]Items from the Authoritarian Filial Piety Subscale (AFPS) of the DFPS.

current study's large sample size (n = 174), the MANCOVA was robust against violation of the homogeneity of variance-covariance matrices assumption. Additionally, Pillai's trace was used instead of Wilks' Lambda due to Pillai's trace being more robust to violations of assumptions such as homogeneity of variance-covariance matrices and multivariate normality. Furthermore, Pillai's trace tends to be more sensitive to small effects compared to Wilks' lambda, especially when there are small sample sizes within groups. Since the sample size of this study's groups ranged from 5 to 72, Pillai's trace is more statistically robust compared to Wilks' lambda.

There was a significant main effect of filial cluster (Pillai's trace = .34, $F(12, 498) = 5.37$, $p < .001$). The effect size statistic, partial eta squared, indicates that 11.5% of the variability in the parent-child conflict scales was associated with cluster membership. Results from Levene's test for equality of variances were not violated for the present analysis, suggesting equal variance across the four identified groups. Since the overall MANCOVA was significant, follow-up univariate ANCOVAs were examined to determine which of the parent-child conflict scales showed a significant effect of filial cluster. Three of the four scales showed significant differences (see Table 13). The effect sizes were as follows: partial eta squared ranged from .06 for UB (p = .02), .06 for RC (p = .01), and .17 for DEA (p <.001). DCD was found to have a non-significant effect of filial cluster (p = .52). Pairwise comparisons were then conducted to determine which filial clusters differed within each parent-child conflict dependent variable.

Hypothesis 3. Hypothesis 3 posited that Non-Filial individuals would report significantly higher levels of DCD and UB types of parent-child conflict than Reciprocal, Authoritarian, and Balanced individuals. Although the Non-Filial Cluster had higher

Table 13

Phase Two – MANCOVA - Tests of Between-Subjects Effects of Filial Clusters on Parent-Child Conflict

Filial Clusters	Type III Sum of Squares	df	*Mean Square*	*F*	*p*	*Partial Eta Squared*
DCD_Final	7.19	3	2.40	0.75	.52	.01
DEA_Final	119.63	3	39.88	11.75	<.001	.17
RC_Final	46.67	3	15.56	3.76	.01	.06
UB_Final	32.60	3	10.87	3.28	.02	.06

Note. DCD_Final = Demands Conflict with Desire mean for both parents; DEA_Final = Demand Exceeds Ability mean for both parents; RC_Final = Role Conflict mean for both parents; UB_Final = Unreasonable Behavior mean for both parents.

mean scores than the other three groups (see Table 14 for estimated means and standard errors), pairwise comparisons for UB show that the differences were trending significance when compared to the Reciprocal cluster (p = .09) and were not significant when compared to the Authoritarian cluster (p = .86) or the Balanced cluster (p = .64). See Table 15 for pairwise comparisons. Furthermore, filial cluster was found to have a non-significant effect on DCD. Therefore, Hypothesis 3 was not supported.

Hypothesis 4. Hypothesis 4 posited that Balanced individuals would report significantly lower levels of DCD and UB types of parent-child conflict than Reciprocal individuals. Pairwise comparisons for UB showed that the differences were not significant compared to the Reciprocal cluster (p = .19). See Table 15 for pairwise comparisons. Furthermore, filial cluster was found to have a non-significant effect on DCD. Therefore, Hypothesis 4 was not supported.

Hypothesis 5. Hypothesis 5 posited that Balanced individuals would report the lowest levels of DCD, DEA, RC and UB type of parent-child conflict compared to Reciprocal, Authoritarian, and Non-Filial individuals. Results showed that the Balanced Cluster did not have the lowest levels of DCD, UB, DEA, and RC types of parent-child conflict compared to the other three filial clusters (see Table 14). Therefore, Hypothesis 5 was not supported.

Phase Three

K-Mean Clustering Analysis. Following the same K-mean clustering procedure specified in Phase Two, 192 second-generation Chinese-American participants from Phase Three were partitioned into four clusters, as identified from Phase Two's hierarchical cluster analysis, to assign each data point to the nearest cluster centroid until

Table 14

Phase Two – MANCOVA – Estimated Marginal Means and Standard Errors – Filial Clusters on Parent-Child Conflict.

				95% Confidence Interval	
Filial Clusters	Cluster Number of Case	*M*	SE	Lower	Upper
DCD_Final	Balanced	4.21	.21	3.79	4.63
	Non-Filial	4.97	.79	3.39	6.54
	Reciprocal	3.85	.27	3.31	4.39
	Authoritarian	4.06	.25	3.57	4.54
DEA_Final	Balanced	4.07	.22	3.64	4.50
	Non-Filial	4.26	.82	2.63	5.89
	Reciprocal	2.09	.28	1.53	2.65
	Authoritarian	3.95	.25	3.45	4.45
UB_Final	Balanced	3.64	.22	3.21	4.07
	Non-Filial	5.01	.82	3.40	6.62
	Reciprocal	2.87	.28	2.32	3.43
	Authoritarian	3.76	.25	3.26	4.25
RC_Final	Balanced	4.17	.24	3.69	4.65
	Non-Filial	4.79	.91	2.99	6.58
	Reciprocal	2.92	.31	2.31	3.54
	Authoritarian	3.69	.28	3.13	4.24

Note. DCD_Final = Demands Conflict with Desire mean for both parents; DEA_Final = Demand Exceeds Ability mean for both parents; RC_Final = Role Conflict mean for both parents; UB_Final = Unreasonable Behavior mean for both parents; *M* = Means; SE = Standard Error; *n* = 72 (Balanced), 5 (Non-Filial), 44 (Reciprocal), and 53 (Authoritarian).

Table 15

Phase Two – MANCOVA – Pairwise Comparisons – Filial Clusters on Parent-Child Conflict.

	DCD_Final		DEA_Final		RC_Final		UB_Final	
	Δ*M*	*p*	Δ*M*	*p*	Δ*M*	*p*	Δ*M*	*p*
B vs R	0.35	1.00	**1.98**	**<.001**	**1.25**	**.01**	0.77	.19
B vs A	0.15	1.00	0.12	1.00	0.49	.37	-0.12	1.00
B vs N	-0.76	1.00	-0.19	1.00	-0.61	.94	-1.37	.64
R vs A	-0.21	1.00	**-1.86**	**<.001**	-0.76	.42	-0.88	.12
R vs N	-1.11	1.00	-2.17	.08	-1.86	.96	-2.14	.09
A vs N	-0.91	1.00	-0.31	1.00	-1.10	.95	-1.25	.86

Note. B = Balanced Mode (*n* = 72); R = Reciprocal Mode (*n* = 44); A = Authoritarian Mode (*n* = 53); N = Non-Filial Mode (*n* = 5); DCD_Final = Demands Conflict with Desire mean for both parents; DEA_Final = Demand Exceeds Ability mean for both parents; RC_Final = Role Conflict mean for both parents; UB_Final = Unreasonable Behavior mean for both parents; Δ*M* = Mean Difference; *p* = significance level. Significant differences ($p < .05$) are indicated in bold.

the centroids stabilized. The final stabilized centroids represented the centers of the clusters and were used to examine how the clusters were formed. Individuals assigned to Cluster 1 scored relatively low on all the RFP and AFP items. Individuals who scored low on both RFP and AFP were conceptualized as having a Non-Filial mode of filial interaction (Yeh & Bedford, 2004). As such, Cluster 1 was classified as the Non-Filial Cluster/Mode. Individuals assigned to Cluster 2 scored relatively high on the RFP items and relatively low on the AFP items. Individuals who scored high on RFP and low on AFP were conceptualized as having a Reciprocal mode of filial interaction. As such, Cluster 2 was classified as the Reciprocal Cluster/Mode. Individuals assigned to Cluster 3 scored relatively high on all the RFP and AFP items. Individuals who scored high on both RFP and AFP were conceptualized as having a Balanced mode of filial interaction. As such, Cluster 3 was classified as the Balanced Cluster/Mode. Individuals assigned to Cluster 4 scored relatively low on the RFP items and relatively high on the AFP items. Individuals who scored low on RFP and high on AFP were conceptualized as having an Authoritarian mode of filial interactions. As such, Cluster 4 was classified as the Authoritarian Cluster/Mode. See Table 16 for final cluster centers.

Multivariate Analysis of Covariance. In order to capture differences in family functioning among the identified filial clusters, a MANCOVA was run to compare the effect of cluster on the four family functioning measures, with sex, age, and level of education as potential covariates to test Hypotheses 6 and 7. As in Phase Two, Box's M was also found to be significant and Pillai's trace was used to assess the overall significance of the effects of filial clusters on family functioning. There was a significant main effect of filial clusters (Pillai's trace = .633, $F(12, 543) = 12.10$, $p < .001$). The

Table 16

Phase Three - K-Means Cluster Analysis - Final Cluster Centers of the Dual Filial Piety Scale

Dual Filial Piety Scale items	Cluster 1 (Non-Filial) (*n* = 6)	Cluster 2 (Reciprocal) (*n* = 43)	Cluster 3 (Balanced) (*n* = 56)	Cluster 4 (Authoritarian) (*n* = 87)
Be concerned about my parents' health.[a]	4	6	5	5
Be concerned about my parents' general well-being.[a]	4	6	5	5
Be grateful to my parents for raising me.[a]	3	5	5	5
Attend my parents' funeral no matter how far away I live.[a]	4	6	6	5
Take my parents' suggestions even when I do not agree with them.[b]	2	3	5	4
Disregard promises to friends in order to obey my parents.[b]	3	2	5	4
Give up my aspirations to meet my parents' expectations.[b]	2	2	5	4
Avoid getting married to someone my parents dislike.[b]	2	3	5	4

Note.

[a]Items from the Reciprocal Filial Piety Subscale (RFPS) of the Dual Filial Piety Scale (DFPS).

[b]Items from the Authoritarian Filial Piety Subscale (AFPS) of the DFPS.

effect size statistic, partial eta squared, indicates that 21.1% of the variability in the family functioning scales were associated with cluster membership.

Results from Levene's test (see Table 17) for equality of variances was violated for three of the four family functioning measures in the present analysis, suggesting equal variance across the four identified groups for only Family Satisfaction ($p = .09$). Since homogeneity of variance has been violated and sample size across groups are unequal, Welch's MANOVA was used since it does not assume equal variances across groups by calculating the adjusted degrees of freedom to account for the inequality and thereby maintaining the Type I error rate more accurately. As a result, Welch's MANOVA is generally robust to violations of homogeneity of variances and is suitable for use with unequal sample sizes. Since SPSS does not have a built-in option for Welch's MANOVA, separate Welch's ANOVAs for each dependent variable were run. It is important to note that by running separate Welch's ANOVA, the results may not be as parsimonious as a single MANOVA, which will be further discussed in this study's limitation section. The results from the separate Welch's ANOVAs (see Table 18) indicated that there were statistically significant differences between the means of the filial clusters being compared, considering the possibility of unequal variances among the groups for all four family functioning dependent variables. All four of the family functioning variables showed significant differences (see Table 19). The effect sizes were as follows: partial eta squared ranged from .10 for Family Flexibility ($p < .001$), .18 for Family Cohesion ($p < .001$), .31 for Family Communication ($p < .001$), and .36 for Family Satisfaction ($p < .001$). Pairwise comparisons were then examined to determine which filial clusters differed within each family functioning dependent variable.

Table 17

Phase Three - Levene's Test of Equality of Error Variances for the Dependent Variables

Variables	*F*	df_1	df_2	*p*
Family Cohesion	5.84	7	181	<.001
Family Flexibility	8.38	7	181	<.001
Family Communication	4.25	7	181	<.001
Family Satisfaction	1.59	7	181	.14

Table 18

Phase Three – Welch's ANOVA – Robust Tests of Equality of Means

	Asymptotically *F* Distributed	df_1	df_2	*p*
Family Cohesion	8.92	3	22.32	<.001
Family Flexibility	4.73	3	21.86	.011
Communication	28.78	3	22.79	< .001
Satisfaction	29.67	3	22.75	< .001

Table 19

Phase Three – MANCOVA - Tests of Between-Subjects Effects of Filial Clusters on Family Functioning

Filial Clusters	Type III Sum of Squares	df	*Mean Square*	*F*	*p*	*Partial Eta Squared*
Family Cohesion	5.93	3	1.98	12.88	<.001	.18
Family Flexibility	2.58	3	0.86	6.81	<.001	.10
Family Communication	287.56	3	95.85	27.00	<.001	.31
Family Satisfaction	488.70	3	162.90	34.61	<.001	.36

Hypothesis 6. Hypothesis 6 posited that Non-Filial individuals would report significantly lower levels of family functioning, as operationalized by lower family cohesion ratio scores, lower family flexibility ratio scores, lower family communication scores, and lower family satisfaction scores than Reciprocal, Authoritarian, and Balanced individuals. Although the Non- Filial Cluster had lower mean scores than the other three groups (see Table 20 for estimated means and standard errors), some of the differences were not significant. For Family Cohesion, pairwise comparison indicated that the Non-Filial cluster had a significant negative mean difference compared to the Reciprocal cluster ($p = .01$), but was not significantly different compared to the Authoritarian cluster ($p = 1.00$) and the Balanced cluster ($p = 1.00$). For Family Flexibility, pairwise comparison indicated that the Non-Filial cluster had a significant negative mean difference compared to the Reciprocal cluster ($p = .01$), but was not significantly different compared to the Authoritarian cluster ($p = .69$) and the Balanced cluster ($p = .37$). For Family Communication, pairwise comparison indicated that the Non-Filial cluster had a significant negative mean difference compared to the Reciprocal cluster ($p = .003$), the Authoritarian cluster ($p < .001$), and the Balanced cluster ($p < .001$). Lastly, for Family Satisfaction, pairwise comparison indicated that the Non-Filial cluster had a significant negative mean difference compared to the Authoritarian cluster ($p < .001$) and the Balanced cluster ($p < .001$), but was not significantly different compared to the Reciprocal cluster ($p = .13$). See Table 21 for pairwise comparisons. Therefore, Hypothesis 6 was only partially supported.

Hypothesis 7. Hypothesis 7 posited that Balanced individuals would report significantly higher levels of family functioning (as operationalized by higher family

Table 20

Phase Three – MANCOVA – Estimated Marginal Means and Standard Error - Filial Clusters on Family Functioning.

Filial Clusters	Cluster Number of Case	M	SE	95% Confidence Interval Lower	Upper
Family Cohesion	Balanced	1.17	.05	1.06	1.27
	Reciprocal	1.58	.06	1.46	1.70
	Authoritarian	1.14	.04	1.06	1.23
	Non-Filial	1.00	.18	0.65	1.34
Family Flexibility	Balanced	1.11	.05	1.01	1.20
	Reciprocal	1.33	.06	1.21	1.44
	Authoritarian	1.05	.04	0.98	1.13
	Non-Filial	0.79	.16	0.48	1.11
Family Communication	Balanced	12.77	.26	12.26	13.28
	Reciprocal	9.93	.30	9.34	10.51
	Authoritarian	11.24	.20	10.84	11.65
	Non-Filial	6.71	.85	5.04	8.38
Family Satisfaction	Balanced	12.24	.30	11.65	12.82
	Reciprocal	8.20	.34	7.53	8.88
	Authoritarian	11.08	.24	10.61	11.54
	Non-Filial	5.81	.98	3.89	7.73

Note. n = 56 (Balanced), 43 (Reciprocal), 87 (Authoritarian), and 6 (Non-Filial); M = Mean; SE = Standard Error.

Table 21

Phase Three – Pairwise Comparison – Filial Clusters on Family Functioning.

	Family Cohesion		Family Flexibility		Family Communication		Family Satisfaction	
	Δ*M*	*p*	Δ*M*	*p*	Δ*M*	*p*	Δ*M*	*p*
B vs R	**-0.42**	**<.001**	**-0.22**	**.03**	**2.84**	**<.001**	**4.04**	**<.001**
B vs A	0.02	1.00	0.05	1.00	**1.53**	**<.001**	**1.16**	**.01**
B vs N	0.17	1.00	0.31	.37	**6.06**	**<.001**	**1.02**	**<.001**
R vs A	**0.44**	**<.001**	**0.27**	**.001**	**-1.32**	**.00**	**-2.88**	**<.001**
R vs N	**0.59**	**.01**	**0.53**	**.01**	**3.22**	**.00**	2.39	.13
A vs N	0.15	1.00	0.26	.69	**4.53**	**<.001**	**5.27**	**<.001**

Note. B = Balanced Mode (*n* = 56); R = Reciprocal Mode (*n* = 43); A = Authoritarian Mode (*n* = 87); N = Non-Filial Mode (*n* = 6); Δ*M* = Mean Difference; *p* = significance level. Significant differences ($p < .05$) are indicated in bold.

cohesion ratio scores, higher family flexibility ratio scores, higher scores on the Family Communication subscale, and higher scores on the Family Satisfaction subscale) than Reciprocal, Authoritarian, and Non-Filial individuals. For Family Cohesion, pairwise comparison indicated that the Balanced cluster had a significant negative mean difference compared to the Reciprocal cluster ($p < .001$) but was not significantly different compared to the Authoritarian cluster ($p = 1.00$) and the Non-Filial cluster ($p = 1.00$). For Family Flexibility, pairwise comparison indicated that the Balanced cluster had a significant negative mean difference compared to the Reciprocal cluster ($p = .03$) but was not significantly different compared to the Authoritarian cluster ($p = 1.00$) and the Non-Filial cluster ($p = .37$). For Family Communication, pairwise comparison indicated that the Balanced cluster had a significant positive mean difference compared to the Reciprocal cluster ($p < .001$), the Authoritarian cluster ($p < .001$), and the Non-Filial cluster ($p < .001$). Lastly, for Family Satisfaction, pairwise comparison indicated that the Balanced cluster had a significant positive mean difference compared to the Reciprocal cluster ($p < .001$), the Authoritarian cluster ($p = .01$), and the Non-Filial cluster ($p < .001$). See Table 21 for pairwise comparisons. Therefore, Hypothesis 7 was only partially supported.

Exploratory Analysis. A thematic analysis was used following Braun and Clarke's (2008) 6-phase guide to conducting a theoretical thematic analysis to capture themes of filial piety and family functioning based on the narratives of participants' early memories. A theoretical thematic analysis provides a more detailed analysis of some aspects of the data that are driven by this study's area of interest: filial piety and family functioning. For the exploratory analysis, 99 participants in Phase Three were removed

due to either not answering the early memory prompts correctly (i.e., providing incomprehensible responses that do not follow the early memory prompts), using AI generated responses (checked with AI detection software), or providing copy-and-pasted memories, all of which would have reduced the efficacy of the thematic analysis. Overall, early memories from 101 participants were included in the exploratory analysis.

The first phase focused on reading through the early memories without coding to gain familiarity with the breadth and depth of the data. During the first phase, initial ideas are marked with an emphasis on this study's theoretical interest: filial piety and family functioning.

The second phase focused on extracting meaningful data and coding an initial list of ideas to organize the information into meaningful groups/themes that are theory-driven. The extracted data also included some of the surrounding data to ensure that the context is not lost (Bryman, 2001). The initial list of ideas served as the foundation for the formation of potential themes. Therefore, this phase of the analysis extracted any data that referred to one's family functioning/dynamics and attitudes/feelings toward one's parent(s).

The third phase focused on collating the initial list of codes and re-focusing the analysis at the broader level of themes by sorting the different codes into separate themes or by combining codes into an overarching theme. This resulted in the formation of main themes (i.e., filial mode and family functioning) and sub-themes (i.e., quality of parent-child relationship, emphasis of needs, cohesiveness, flexibility within the family dynamics, quality of communication, and overall satisfaction).

The fourth phase focused on refining the themes by assessing their internal homogeneity and external heterogeneity (Patton, 1990), where some themes cohere together meaningfully (i.e., filial piety and attitudes toward parent(s)), while other themes have clear and identifiable distinctions (i.e., relationship quality versus quality of communication). Themes that did not fit were either reworked to create a new but relevant theme or discarded entirely due to not fitting the theoretical framework of the current exploratory analysis.

The fifth phase focused on defining and naming the themes to further refine the themes based on the current theoretical focus of the exploratory analysis. The following themes were successfully named and accepted for final analysis: filial type, quality of family functioning, quality of parent-child relationship, emphasis of needs, level of family cohesion, level of family flexibility, quality of family communication, and overall family satisfaction.

The sixth and final phase focused on analyzing the early memories through the lens of filial piety and family functioning. Each participant's early memories were analyzed and assigned a mode of filial operation (i.e., Balanced, Reciprocal, Authoritarian, or Non-Filial), quality of parent-child relationship (negative, neutral, or positive), an emphasis of needs (individual, parental, integrated or unmet), level of cohesion and flexibility within the family dynamics (low, moderate, or high), quality of family communication (negative or positive), and overall satisfaction (low, moderate, or high).

Data related to one's family dynamics were extracted and analyzed to capture the individual's level of family cohesion, family flexibility, quality of family communication,

overall family satisfaction, quality of parent-child relationship, and emphasis of individual and/or parental needs. Final thematic maps were drawn to illustrate the final main themes (Filial Mode and Family Functioning) and sub-themes (Quality of Parent-Child Relationship, Emphasis on Individual and/or Parental needs, Family Cohesion, Family Flexibility, Quality of Family Communication, and Overall Family Satisfaction). Overall, the thematic analysis of the early memories successfully captured themes of filial piety and family functioning, where different filial modes were found to vary in terms of family functioning. Data extractions and final coding examples are shown below in Tables 22 – 25, and the corresponding final thematic maps are shown below in Figure 4 – 7 for each filial mode (Balanced, Reciprocal, Authoritarian, and Non-Filial), respectively.

Summary

In sum, results in Phase One indicated that the Dual Filial Piety Scale (DFPS) was applicable to the second-generation Chinese-American sample of this study. Although the 10- item measure of the Dual Filial Piety Scale (DFPS) had poor goodness-of-fit indices, the goodness-of-fit was successfully improved with the removal of two items based on their standardized residual covariances: DFP_5R ("*Be concerned about my parents, as well as understand them*") and DFP_8A ("*Do whatever my parents ask right away*"). Therefore, the two-factor structure of the DFPS was best captured by the remaining eight items (four items from the Reciprocal Filial Piety Subscale (RFPS) and four items from the Authoritarian Filial Piety Subscale (AFPS)). Thus, Hypothesis 1 was fully supported.

For Phase Two, the hierarchical cluster analysis confirmed the four filial modes conceptualized by Yeh and Bedford (2004). The final cluster centers provided by the K-

Table 22

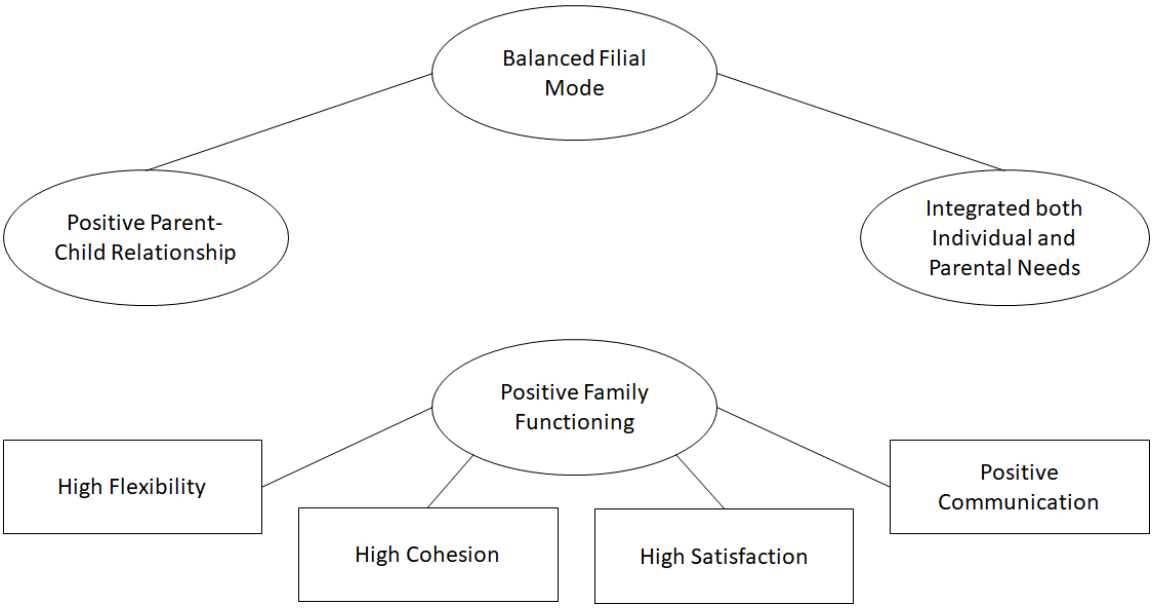
Example of Data Extraction and Final Coding – Balanced Filial Mode

Data Extract	Final Coding
1. She's an amazing woman and I'm so happy she's my mother. She never has an unkind word for me and makes me feel so special in my life and everything I did and do.	1a. Happy towards mother (Positive Parent-Child Relationship) 1b. Feeling special in life (High Satisfaction)
2. (Conflict was) schooling. What was I good at and enjoyed versus what they thought I should focus on. Eventually it came down to it being my choice and they understood that…eventually they decided they would support me with whatever I wanted to do.	2a. Had choice (High Flexibility) 2b. Receptive and compromising parents (Positive Communication) 2c. Unconditional support (High Cohesion) 2d. Emphasis on both individual and parental needs (Balanced Filial Mode)
3. (Conflict) was resolved and my parents supported me then and now with my career and family life, and I'm so thankful for that. They might not have agreed with me but I know they have my back.	3a. Thankful to parents (Positive Parent-Child Relationship) 3b. Healthy compromise between individual needs and parental demands (Balanced Filial mode)

Note. Final coding: Balanced Filial mode, positive parent-child relationship, high family cohesion, high family flexibility, positive family communication, high family satisfaction, and positive family functioning.

Figure 4

Final Thematic Map for Balanced Filial Mode



Note. Main Themes (Ovals): Balanced Filial Mode and Positive Family Functioning; Sub-Themes (Rectangles): High Flexibility, High Cohesion, High Satisfaction, and Positive Communication.

Table 23

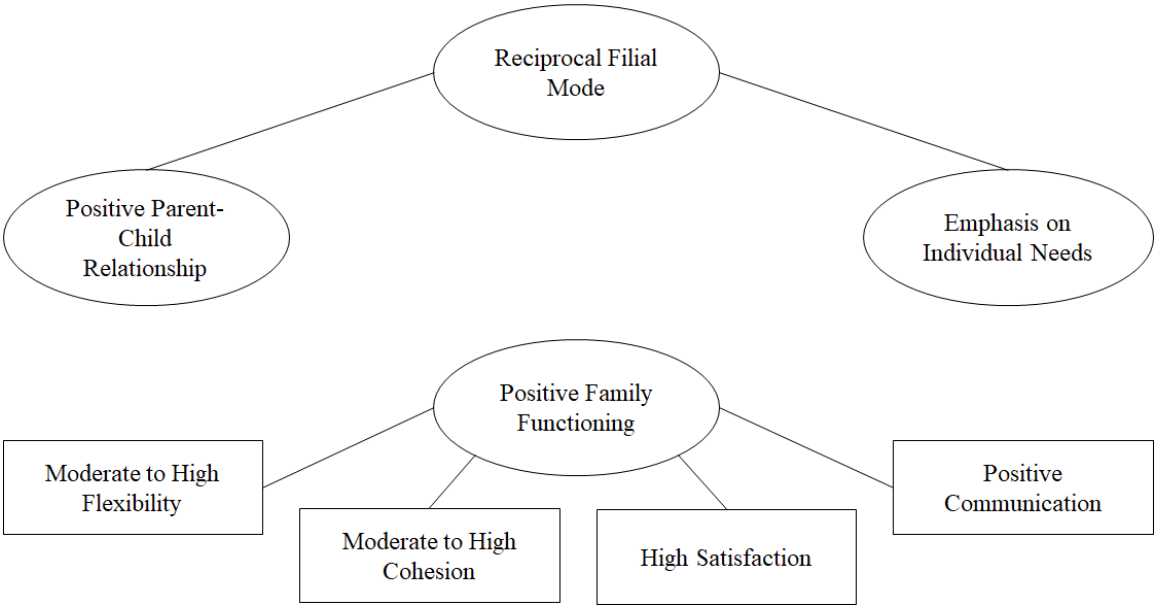
Example of Data Extraction and Final Coding – Reciprocal Mode

Data Extract	Final Coding
1. She showed me the recipes and we both worked together to make the dumpling... It was a very positive experience overall and I feel confident that I can make the dish myself next time.	1a. Worked together to make dumplings (High Cohesion) 1b. Glad for opportunity (High Satisfaction)
2. My father showed me early on that he would always be there for me no matter what and I can always count on him…My earliest memory was when mom took me to school and prepared lunch for me. That was when I actually formed the concept of having a mom who loves me unconditionally and will always take care of me no matter what.	2a. Unconditional love from parents (Positive Parent-Child Relationship) 2b. Patient and kind father, loving mother (High Satisfaction) 2c. Always there for him/her (High Flexibility)
3. My parents did not approve and fully supported the major that I was going to choose in college…We got into some arguments back and forth….I went ahead with my decision against my parents' disapproval but I think it was the best decision for me…Even though there was some conflict at the beginning…as of now, they have come to accept it now	3a. Against parents' disapproval (Emphasis on Individual Needs) 3b. Disagreed initially but come to accept decision (Moderate to High Cohesion and Flexibility, Positive Communication)

Note. Final coding: Reciprocal mode, positive parent-child relationship, moderate to high family cohesion and family flexibility, positive family communication, high family satisfaction, and positive family functioning.

Figure 5

Final Thematic Map for Reciprocal Filial Mode



Note. Main Themes (Ovals): Reciprocal Filial Mode and Positive Family Functioning; Sub-Themes (Rectangles): Moderate to High Flexibility, Moderate to High Cohesion, High Satisfaction, and Positive Communication.

Table 24

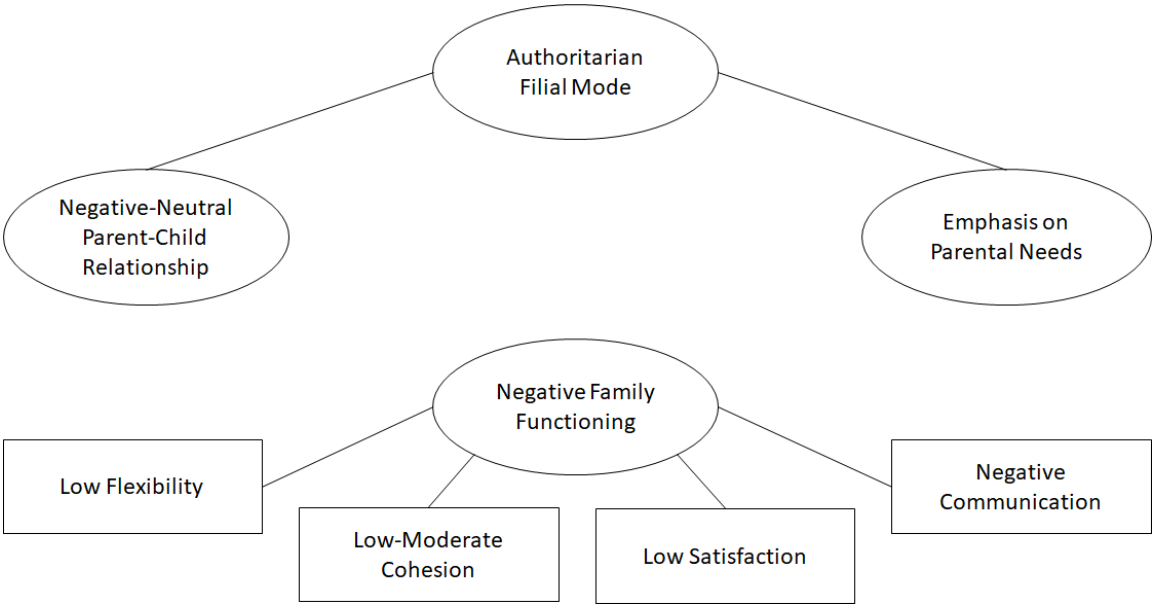
Example of Data Extraction and Final Coding – Authoritarian Filial Mode

Data Extract	Final Coding
1. My earliest memory was my mom sending me to Chinese Kindergarten. I did not really have a choice back then…it was a pretty standard Asian thing to do and I followed her instruction quite closely to satisfy her.	1a. Emphasis on obedience (Authoritarian) 1b. Had no choice (Low Flexibility)
2. I had pressure from my father to do well in all my classes…he was pretty harsh when I didn't do well in exams…It was quite stressful but at the same time I did not hate my father. It felt like it was natural.	2a. Pressure to do well (Low Cohesion) 2b. Stressful (Low Satisfaction) 2c. Harsh communication (Poor Communication) 2d. Stressful but didn't hate father (Neutral Parent-Child Relationship)
3. When I was in high school, I wanted to go study abroad for a summer. However, my parents felt like I should go to summer school instead…They wanted me to get good grades and I wanted to see the world…It was quite severe and it was the first time I rebelled against my parents.	3a. Differing goals (Low Cohesion) 3b. Severe interaction (Negative Parent-Child Relationship and Negative Communication)

Note. Final coding: Authoritarian Filial mode, negative-neutral parent-child relationship, low-moderate family cohesion, low family flexibility, negative family communication, low family satisfaction, and negative family functioning.

Figure 6

Final Thematic Map for Authoritarian Filial Mode



Note. Main Themes (Ovals): Authoritarian Filial Mode and Negative Family Functioning; Sub-Themes (Rectangles): Low Flexibility, Low-Moderate Cohesion, Low Satisfaction, and Negative Communication.

Table 25

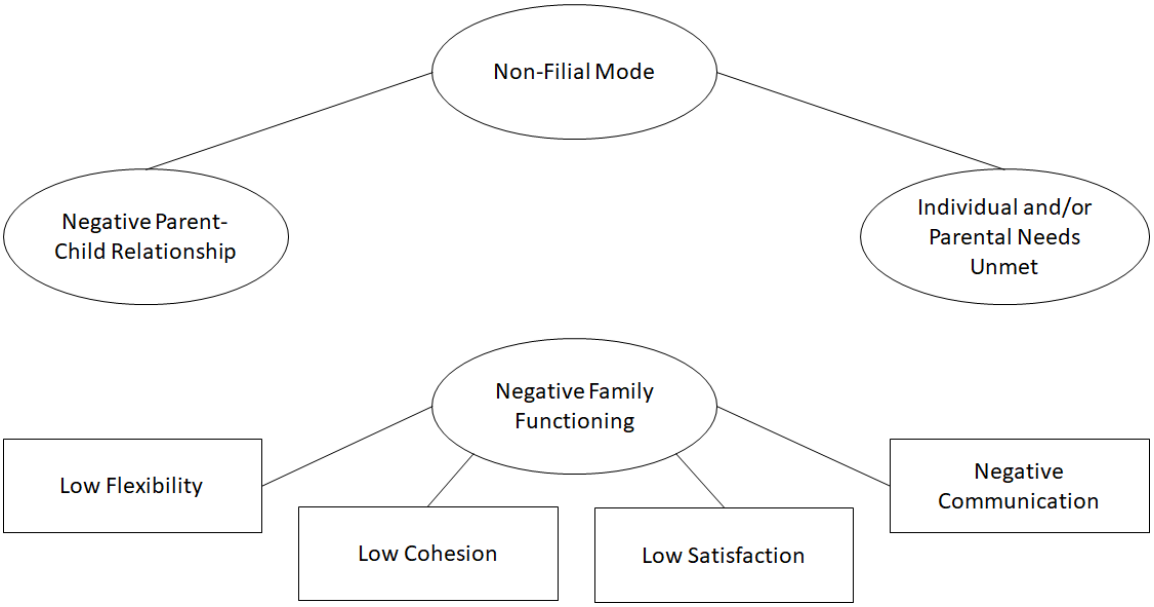
Example of Data Extraction and Final Coding – Non-Filial Mode

Data Extract	Final Coding
1. When I was able I was attached to my toy telephone and would play with it all night in my crib. My dad hated it and told me to shut up…I would cry incessantly. Regardless I defied him and kept playing and crying alternatively.	1a. Hostile relationship with dad (Negative Parent-Child Relationship) 1b. Deviance (Individual or Parental Needs Unmet) 1c. Crying incessantly (Low Satisfaction)
2. My mom and dad would always tell me how if I didn't screw up, my life would be better. They always blamed me for everything…My dad in particular would grow in rage and throw stuff to assert his dominance and make a point that whatever we did in our life was up to him and not us.	2a. Suppressed autonomy (Low Flexibility) 2b. Aggressive and controlling (Low Cohesion and Low Flexibility) 2c. Blaming (Negative Communication)
3. It was never resolved but moving out helped. Just being away from his presence helped since he never change his behavior.	3a. Lack of resolution and avoiding family (Low Satisfaction, Low Cohesion, Individual or Parental Needs unmet)

Note. Final coding: Non-Filial mode, negative parent-child relationship, low family cohesion, low family flexibility, negative family communication, low family satisfaction, and negative family functioning.

Figure 7

Final Thematic Map for Non-Filial Mode



Note. Main Themes (Ovals): Non-Filial Mode and Negative Family Functioning; Sub-Themes (Rectangles): Low Flexibility, Low Cohesion, Low Satisfaction, and Negative Communication.

means cluster analysis were used to analyze how the clusters were formed; the analysis confirmed the existence of the conceptualized four filial modes: Balanced, Reciprocal, Authoritarian, and Non-Filial. Therefore, Hypothesis 2 was fully supported.

The Multivariate Analysis of Covariance (MANCOVA) revealed that although there was a significant main effect of filial cluster on parent-child conflict, the specific relationship was not as predicted. The Non-Filial cluster did not differ significantly from the Balanced, Reciprocal, and Authoritarian cluster in terms of Demands Conflict with Desire (DCD) and Unreasonable Behavior (UB) types of parent-child conflict. Therefore, hypothesis 3 was not supported. The Balanced cluster did not differ significantly from the Reciprocal cluster in terms of DCD and UB types of parent-child conflict. Therefore, Hypothesis 4 was not supported. Lastly, the Balanced cluster did not have the lowest level of DCD, Demand Exceeds Ability (DEA), UB, and Role Conflict (RC) types of parent-child conflict. Therefore, Hypothesis 5 was not supported.

For Phase Three, the MANCOVA revealed there was a significant main effect to filial cluster on family functioning. For Family Cohesion and Family Flexibility, the Non-Filial cluster had a significant negative mean difference compared to the Reciprocal cluster but was not significantly different compared to the Authoritarian and Non-Filial cluster. For Family Communication, the Non-Filial cluster had a significant negative mean difference compared to the Balanced, Reciprocal, and Authoritarian cluster. For Family Satisfaction, the Non-Filial cluster had a significant negative mean difference compared to the Balanced and Authoritarian cluster but was not significantly different compared to the Reciprocal cluster. Therefore, Hypothesis 6 was partially supported.

The Balanced cluster had a significant mean difference in Family Cohesion and Family Flexibility compared to the Reciprocal mode, but the differences were not significant compared to the Authoritarian and Non-Filial clusters. Furthermore, the Balanced cluster had a significant positive mean difference in Family Communication and Family Satisfaction compared to the Reciprocal, Authoritarian, and Non-Filial clusters. Therefore, Hypothesis 7 was also partially supported.

Lastly, the theoretical thematic analysis successfully captured themes of filial piety and family functioning in participants' early memories. Data extraction and coding revealed four main themes (Mode of Filial Operations, Family Functioning, Quality of Parent-Child Relationship, and Emphasis of Needs) and four sub-themes (Family Cohesion, Family Flexibility, Quality of Family Communication, and Family Satisfaction). Final thematic maps were drawn to highlight the different filial modes and their corresponding family functioning.

Chapter VI

Discussion

This study was designed to contribute to filial piety literature through three separate phases. Phase One aimed to confirm the two-factor structure of the Dual Filial Piety Scale (DFPS) in a second-generation Chinese-American sample. Phase Two aimed to confirm the four filial modes conceptualized by Yeh and Bedford (2004) by using a more statistically robust classification analysis (hierarchical cluster analysis and K-means cluster analysis). The identified filial modes were then used to attempt to replicate Yeh and Bedford's (2004) findings regarding differences in parent-child conflict between the four filial modes. Phase Three aimed to add to the existing filial piety literature by examining differences in family functioning amongst the identified filial modes. The main goal of the study was to better understand how the dual filial dimensions concurrently impact the family functioning of second-generation Chinese-American individuals. The secondary goal of the study was to explore whether one's early memories can capture themes related to one's filial mode and family functioning.

In contrast to much of the filial piety literature conducted with Chinese individuals from Chinese societies (Hong Kong, Taiwan, and China), the sample in the present study was unique in that it aimed to bridge East with West. Filial research in non-Chinese samples has only started recently (i.e., Ha et al., 2020; Różycka-Tran et al., 2021a; Tan et al., 2019), with one published study indirectly bridging individualism and collectivism by confirming the two-factor structure of the DFPS with Polish and Vietnamese samples (Różycka-Tran et al., 2021b). Additionally, a currently unpublished study is the first known study to confirm the two-factor structure of the DFPS in a sample

of Americans (O. Bedford, personal communication, December 13, 2021) and in a sample of Asian American women (O. Bedford, personal communication, February 17, 2022). Similarly, this study was the first to confirm the two-factor structure of the DFPS in a sample of second-generation Chinese-Americans. Due to the lack of consensus regarding classification of generational statuses, in addition to the wide variation of first-generation categories, those considered second-generation Chinese-American (American born Chinese individuals to immigrant parent(s) from either Hong Kong, Taiwan, or China) were chosen as this study's population sample to reduce sampling variability and to ensure sample homogeneity.

The following section will review the findings in this study and the contribution made to filial piety literature. The limitations of the current study and directions for future research will be examined as well. Finally, the clinical implications of the findings will be reviewed.

Summary and Explanation of Findings

Two-Factor Structure of the Dual Filial Piety Scale

The two-factor structure of the DFPM conceptualized filial piety as being represented by two higher-order factors (reciprocity and authoritarianism) that corresponded to the two stages of historical development grounded in Confucius' two ethical principles: *Favoring the Intimate* and *Respecting the Superior* (Hwang, 1987). The Dual Filial Piety Scale (DFPS) was developed to encompass the two-factor structure of filial piety: Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP; Yeh & Bedford, 2003). The current study aimed to confirm the two-factor structure of the DFPS

in a sample of second-generation Chinese-Americans. No study thus far has confirmed the two-factor structure of the DFPS in this unique sample.

The results of the current study indicated that although the original 10-item measure of the DFPS had poor goodness-of-fit indices, they were successfully improved by removing two problematic items: one item from the Reciprocal Filial Piety Subscale (RFPS) and one item from the Authoritarian Filial Piety Subscale (AFPS). The remaining 8-items of the DFPS had acceptable to good goodness-of-fit indices, demonstrating that the two-factor structure of the DFPS was best captured by eight items instead of ten items. As most of the filial piety literature includes research done primarily on samples in Chinese societies (e.g., Jin et al., 2011; Leung et al., 2010; Li et al., 2014; Yeh, 2009; Yeh et al., 2013), filial research in non-Chinese societies have only begun recently (i.e., Ha et al., 2020; Różycka-Tran et al., 2021a; Tan et al., 2019). Thus, the current study's findings added to the filial research by confirming that filial piety research is applicable in second-generation Chinese-Americans as well.

It is important to note that the purpose of the abovementioned unpublished study by Bedford was to reduce the number of problematic items of the DFPS that have been consistently found to reflect traditional Chinese norms instead of tapping into underlying filial motivations in American samples (O. Bedford, personal communication, December 13, 2021). As a result, this study used the 10-item measure of the DFPS instead of its original 16-item DFPS measure (Yeh & Bedford, 2003). However, this study's findings identified two problematic items: DFP_5R ("*Be concerned about my parents, as well as understand them*") and DFP_8A ("*Do whatever my parents ask right away*"). These two items had a significant standardized residual covariance with other items, suggesting that

there may be additional relationships or sources of covariance that the model did not capture. Thus, further investigation may provide more clarification regarding the cross-cultural application of the DFPS to assess whether different versions of the DFPS may be needed for different cultural groups within America.

Identification of Filial Modes

Only one research study thus far has conceptualized and examined the filial interaction between RFP and AFP to identify different modes of filial interactions (Yeh & Bedford, 2004). The researchers identified the four filial modes based on individuals' mean scores on the RFPS and AFPS (i.e., scores above the mean were classified as high and scores below the mean were classified as low): Absolute/Balanced mode (High RFP and High AFP), Reciprocal mode (High RFP and Low AFP), Authoritarian mode (Low RFP and High AFP), and Non-Filial mode (Low RFP and Low AFP). The current study aimed to contribute to the literature by using hierarchical cluster analysis to provide a more statistically robust classification analysis to identify the conceptualized filial modes.

The results from the hierarchical cluster analysis confirmed four filial clusters and the consequent K-means cluster analysis revealed how the clusters were formed based on their final cluster centers. As hypothesized, the four filial clusters were classified based on how respondents scored RFPS and AFPS, where individuals who scored high on both RFP and AFP were assigned to the Balanced cluster, individuals who scored high on RFP and low on AFP were assigned to the Reciprocal cluster, individuals who scored low on RFP and high on AFP were assigned to the Authoritarian cluster, and individuals who scored low on both RFP and AFP were assigned to the Non-Filial cluster. Thus, the

current study's findings provided support for the four modes of filial interaction as conceptualized by Yeh and Bedford (2004).

It is important to note that in the dendrogram provided by the hierarchical cluster analysis, the four clusters gradually agglomerated into two stable clusters before ultimately combining into one. It is likely that the two identified clusters are the conceptualized two-factor structure of the DFPS, with one cluster representing RFP and one cluster representing AFP. The final single cluster is likely to represent filial piety as a whole. However, further investigation is needed to confirm this postulation.

Filial Modes and Parent-Child Conflict Replication

Yeh and Bedford's (2004) study found that Balanced individuals reported significantly less parent-child conflict than Reciprocal individuals, whereas Non-Filial individuals reported significantly more parent-child conflict in the Demands Conflict with Desire (DCD) and Unreasonable Behavior (UB) category than the Absolute/Balanced, Reciprocal, and Authoritarian mode. This finding challenged the consensus in the filial literature suggesting the merits of high RFP and low AFP, where RFP was relates to beneficial effects and AFP relates to harmful effects (e.g., Jen et al., 2019; Leung et al., 2010; Li et al., 2014; Wang et al., 2019; Yeh, 2009; Yeh & Bedford, 2003, 2004).

This study's findings unexpectedly contradicted Yeh and Bedford's (2004) findings, where the Balanced mode did not report significantly less parent-child conflict than the Reciprocal mode. Rather, the Balanced mode reported significantly more parent-child conflict in the Demand Exceeds Ability (DEA) and Role Conflict (RC) category than the Reciprocal mode, whereas the difference for DCD and UB were not significant.

Interestingly, even though some of the differences were not significant compared to the other filial modes, the Reciprocal mode nonetheless reported the lowest mean score for all four categories of parent-child conflict. This finding aligns with the consensus in the filial literature that emphasizes the beneficial effects of high RFP and low AFP.

It is also interesting to note that although the differences between the Balanced mode and Authoritarian mode were not significantly different, the Balanced mode had higher mean scores in three of the four categories of parent-child conflict (DCD, DEA, and RC) than the Authoritarian mode, suggesting that high levels of both RFP and AFP may potentially contribute to more parent-child conflict than those with low RFP and high AFP. Conceptually, it is possible that Authoritarian individuals may experience less conflict due to their submissive nature towards parental demands, whereas Balanced individuals may experience more conflict as they try to navigate between their individual needs and their parental demands. It is also conceptually possible that Authoritarian individuals experience higher levels of UB type of parent-child conflict than Balanced individuals, in that the parental demands may be ego-syntonic for Balanced individuals who may genuinely want to consider both their own needs and the needs of their parents and do not see their parental demands as unreasonable, whereas the parental demands may be ego-dystonic for Authoritarian individuals who are meeting their parental needs due to a sense of obligation and/or obedience rather than seeing their needs as reasonable.

This study also found that although the Non-Filial mode had the highest mean score for all four categories of parent-child conflict, their mean differences were not significant when compared to the other filial modes. It remains unclear as to whether the uneven sample size amongst the four filial groups may have impacted the results,

especially since there were only five individuals who were assigned the Non-Filial cluster for Phase Two. Nonetheless, low levels of both RFP and AFP is likely to result in higher levels of parent-child conflict. However, further investigation with larger sample size is needed to confirm this postulation. Nonetheless, individuals with low levels of both RFP and AFP are likely to result in higher levels of parent-child conflict and are likely to have problems with attachment.

Filial Modes and Family Functioning

This study aimed to add to the current filial piety literature by assessing how the filial interaction between RFP and AFP may concurrently influence one's family functioning. Previous filial research suggests that RFP had a positive influence on family functioning, whereas AFP had a negative influence on family functioning (Li et al., 2014). What remained unclear is how high or low levels of both RFP and AFP may concurrently influence one's overall family functioning, especially since both filial dimensions are not mutually exclusive. Additionally, since some research has also found that AFP can sometimes relate to higher levels of family cohesion, better quality of family life (Chen et al., 2016), and life satisfaction (Yan & Chen, 2018), the contradictory findings regarding AFP may be a result of the concurrent influence between levels of RFP and AFP. Thus, this study adopted the filial typology approach to examine the differences in family functioning between the identified filial modes to clarify how the dual filial dimensions interact to influence one's overall family functioning and to assess whether the effects of each filial dimensions may be dependent on the level of the other.

This study found that the Non-Filial mode reported significantly less Family Cohesion and Family Flexibility when compared to the Reciprocal mode, as well as non-significant differences when compared to the Balanced and Authoritarian mode. The Non-Filial mode also reported significantly less Family Communication when compared to all the other filial modes, and significantly less Family Satisfaction when compared to the Balanced and Authoritarian mode, as well as non-significant differences when compared to the Reciprocal mode. These results only partially supported the hypothesis that the Non-Filial mode would report the lowest level of family functioning. However, although some of the differences were not significant, the Non-Filial mode reported the lowest mean ratio score for Family Cohesion and Family Flexibility, and the lowest mean score for Family Communication and Family Satisfaction compared to the other three filial modes. Similarly as in Phase Two, it remains unclear as to whether the uneven sample size amongst the four filial groups may have impacted the results, especially since there were only six individuals who were assigned the Non-Filial cluster for Phase Three. Nonetheless, it appears likely that low levels of both RFP and AFP may result in lower levels of family functioning, which would support the conceptualization that both filial dimensions concurrently influence one's overall family functioning. However, further investigation is needed to confirm this postulation.

Furthermore, the Balanced mode reported significantly less Family Cohesion and Family Flexibility when compared to the Reciprocal mode, as well as non-significant differences when compared to the Authoritarian and Non-Filial mode. The Balanced mode also reported significantly higher levels of Family Communication and Family Satisfaction when compared to the other three filial modes. These results only partially

supported the hypothesis that the Balanced mode would report the highest level of family functioning when compared to the other three filial modes. Since the hypothesis was only partially supported, it continues to remain unclear as to whether individuals with high levels of both RFP and AFP (Balanced) have higher levels of family functioning than individuals with high levels of RFP and low levels of AFP (Reciprocal). Result findings for each of the four family functioning variables are further conceptualized and discussed below.

Filial Modes and Family Cohesion

In terms of Family Cohesion, it is likely that Balanced, Authoritarian, and Non-Filial individuals may experience similarly low levels of cohesion for different conceptual reasons. For example, Balanced individuals are conceptualized as individuals who can successfully navigate between their needs and their parental demands, which leads to a more harmonious parent-child dynamic (Bedford & Yeh, 2019, 2021). However, this conceptualization has never been tested with the exception of one study that found the Balanced mode to report the lowest amount of parent-child conflict compared to the other three filial modes (Yeh & Bedford, 2004). Contrary to this finding, the current study found that the Reciprocal mode reported the lowest amount of parent-child conflict. Thus, it is conceptually likely that although Balanced individuals may attempt to navigate both their individual needs and their parental demands, they may not always be successful, which may result in them feeling less cohesive in their family dynamics. Family cohesion is also not individually dependent; despite Balanced individuals' desire to consider both their individual needs and their parental demands, it is possible that their parents may not always be receptive to their desire. Thus, it is also

plausible that one's perception of family cohesion may also be dependent on other external factors, such as their parents' behaviors and attitudes.

Authoritarian individuals are conceptualized as having a more obedient and less intimate relationship with their parents, in which their dynamics focus more on role obligation, self-suppression, and obedience. As such, their individual needs are often neglected, and they may hold the belief that being filial to one's parents may often warrant self-sacrifice. Thus, Authoritarian individuals may oftentimes choose to suppress their own needs to meet the demands of their parents, resulting in a lower sense of family cohesion, where the needs of the individual do not align with the needs of their parents.

Non-Filial individuals are conceptualized to have low identification with their family and may deviate away from carrying out the obligations of their child roles. This may result in Non-Filial individuals' decision to isolate themselves from the family and engage in behaviors that are guided by their egocentrism rather than filial piety, which ultimately suggests a low level of family cohesion.

Lastly, Reciprocal individuals are conceptualized to have a positive relationship with their parents based on good communication and mutual affection, both of which can contribute to higher levels of family cohesiveness. It is interesting to note that the Reciprocal mode had significantly higher levels of Family Cohesion when compared to the Balanced mode. This finding suggests that high levels of AFP in conjunction with high levels of RFP may not be as beneficial as predicted, providing support for previous research findings that highlighted the negative influence of AFP on family functioning (Li et al., 2014). However, further investigation is required to assess what underlying mechanisms may be impacting Balanced individuals to perceive their family dynamics as

less cohesive in comparison to Reciprocal individuals, as well as what mechanisms may be impacting Reciprocal individuals to perceive their family dynamics as more cohesive.

Filial Modes and Family Flexibility

In terms of Family Flexibility, while Balanced, Authoritarian, and Non-Filial individuals may display similarly low levels of flexibility, the conceptual reasons likely differ as well. Although Balanced individuals are conceptualized as having a more harmonious parent-child dynamic, this too has never been tested aside from the abovementioned study regarding Balanced individuals reporting the least amount of parent-child conflict (Yeh & Bedford, 2004). It is possible that despite Balanced individuals' desire to navigate between individual needs and their parental demands, their ability to do so may not solely depend on the Balanced individual and/or they may not always be successful, both of which could result in a lower sense of family flexibility. Family flexibility may be dependent on the congruency between parental filial attitudes and the individuals' resolve. For example, if the individual strives to integrate their own needs with their parental demands, but their parents are rigid and/or unsupportive (i.e., more authoritative), this may result in the individual perceiving their parents as being less flexible than compared to one's whose parents' desires are congruent with their own. Thus, it is possible that parental filial attitudes may also influence how flexible the Balanced individual perceives their family to be.

Authoritarian individuals may perceive their family as being inflexible due to the intense pressure for them to meet their parents' demands/wishes, which often requires self-sacrifice and self-suppression. The emphasis on family hierarchy can cause the individual to feel as if they do not have a choice, where their parents' demands/wishes are

non-negotiable and more important than their own needs and/or personal desires, resulting in Authoritarian individuals perceiving their family as being less flexible. Specifically, this may be that Authoritarian individuals perceive an unequal distribution of flexibility, as the individuals must be accommodating to meet the immutable demands of the parents.

Non-Filial individuals have low identification with their family, which can oftentimes contribute to their desire to deviate away from carrying out the obligations of their child roles. This is likely to cause contention between the Non-Filial individuals and their parents due to both their needs being unmet, which may ultimately result in Non-Filial individuals perceiving their family dynamics as being inflexible, perhaps because of a perception that neither party are willing to consider the other's needs.

Lastly, it is interesting to note that the Reciprocal mode reported significantly higher levels of Family Flexibility than the Balanced mode. Like the aforementioned findings regarding Family Cohesion, this finding also suggests that high levels of AFP in conjunction with high levels of RFP may not be beneficial as predicted, which similarly supports previous research findings that highlighted the negative influence of AFP on family functioning (Li et al., 2014). This unexpected finding raises the conceptual question of whether Balanced individuals have a more harmonious relationship with their parents than Reciprocal individuals. However, further investigation is required to assess what underlying mechanisms may be impacting Balanced individuals to perceive their family dynamics as less flexible, as well as what mechanisms may be impacting Reciprocal individuals to perceive their family dynamics as more flexible.

Filial Modes and Family Communication

In terms of Family Communication, the Balanced mode was found to have the highest level of Family Communication when compared to the other three filial modes. The conceptualization that Balanced individuals have a harmonious relationship with their parents due to their success in navigating between their individual needs and their parental demands is supported by this finding. It is likely that Balanced individuals' desire to navigate between their individual needs and their parental demands may motivate them to develop a healthy dialogue with their parents, leading to a more positive quality of family communication between them.

Reciprocal individuals are conceptualized as having a positive relationship with their parents; however, the emphasis is on personal choice rather than role obligations, which may at times result in anxious feelings about others' criticisms and doubts toward their personalized filial behaviors. This may result in the potential dispute between the individual and their parents and/or other family members, which could ultimately result in a poorer quality of family communication.

Authoritarian individuals are often obedient towards their parents, where they may find it difficult to satisfy their parents' needs and feel stressed due to the intense pressure of needing to meet their parents' demands/wishes. The quality of their communication may often appear one-sided, such that only the Authoritarian individuals are trying to communicate, while the parents are dictating orders. This may result in Authoritarian individuals feeling less content towards the quality of the communication within their family dynamics.

Lastly, Non-Filial individuals' low identification with their family suggests a difficulty in navigating between their needs and their parental demands. As such, their tendency towards isolating themselves away from their family suggests a poor quality of (or even lack of) communication between them and their parents. The poor communication between Non-Filial individuals and their parents may likely contribute to their inability to express their needs in an effective manner to one another, which ultimately results in the Non-Filial individual deviating from the obligations of their child role and causing their behaviors to become more guided by egocentrism rather than filial piety.

Filial Modes and Family Satisfaction

In terms of Family Satisfaction, the Balanced mode was found to have the highest level of Family Satisfaction when compared to the other three filial modes. Balanced individuals can successfully navigate between their individual needs and their parents' demands, resulting in a more harmonious parent-child dynamic that highlights a deep and intimate relationship with their parents. Their ability to successfully combine and/or balance their own needs with their parents' demands/wishes may have contributed to their high degree of satisfaction towards their family dynamics. More specifically, both parties may feel fulfilled and mutually prioritized.

Reciprocal individuals often emphasize personal choice over role obligation. However, their personalized filial behaviors may at times become a source of contention amongst their family dynamics, especially if their parents and/or other family members are not as open and/or receptive towards their egocentric approach. As such, even though their individual needs are met, Reciprocal individuals may ultimately feel less satisfied

with their family dynamics due to not being able and/or willing to meet the demands and wishes of their parents.

Authoritarian individuals may experience the opposite from Reciprocal individuals, where Authoritarian individuals may find it necessary to suppress their needs to cater to the demands and wishes of their parents. Since their own needs are neglected and/or are often sacrificed to meet their parental needs, they are likely to perceive their family dynamics as less satisfying.

Lastly, Non-Filial individuals' low identification with their family and their disengagement from carrying out the obligation of their child roles may result in contention with their parents. Their avoidant and self-isolative tendencies may be an attempt to regulate such contention, resulting in a lower sense of satisfaction towards their family dynamics. The main difference between Non-Filial individuals' egocentrism and Reciprocal individuals' egocentrism is that Reciprocal individuals still nonetheless have a good relationship and good communication with their parents despite choosing personal choice over parental demands, whereas Non-Filial individuals do not have a good relationship with their parents and would rather avoid identifying and/or communicating with them.

Limitations

The present study has several limitations that are addressed in this section. One limitation is related to the differing recruitment methods employed in this study. Phase One collected data only through Amazon MTurk. However, for Phase Two and Three, snowball sampling was implemented in conjunction with Amazon MTurk to expand the recruitment process. The decision to expand the recruitment method to include snowball

sampling was made due to three main reasons. First, due to the strict criteria required for eligibility in the study, there was an increasing number of participants recruited via Amazon MTurk that were removed from analyses due to failing the screening questionnaire. The rejection rate increased significantly between the three separate phases of this study, which is likely due to more participants dropping out as the study length increased (e.g., Phase One took only 5 minutes and Phase Three took 20-30 minutes). Additionally, Amazon MTurk has also been highly criticized for including more "bots" and inattentive respondents than previously recognized (Webb & Tangney, 2022), which also contributed to the high rejection rates in this study for all three phases. Second, although creating a protocol that was fully online was helpful in recruiting a large number of participants, the strict criteria of this study resulted in a very slow, albeit successful, recruitment process, where often only one or two participants from Amazon MTurk were accepted with over 50 participants rejected per week. Third, snowball sampling through postings on social media (i.e., Facebook groups) and word-by-mouth helped specifically target the population of interest for this study, which increased the likelihood that the participants recruited were indeed second-generation Chinese-Americans. The average rejection rate from participants recruited via Amazon MTurk for all three phases of the current study was 94%, whereas the average rejection rate from participants recruited via snowball sampling between Phases Two and Three was 47%. Nonetheless, the mixed recruitment methods employed in this study poses a potential risk of confounding the data and its consequent analyses.

Another limitation of the current study is that it was not an in-person study. While creating a fully online protocol was helpful in providing ease of access to help recruit

many participants, as well as the reduced demand on personnel to administer a study protocol, there are also inherent limitations to this type of data collection. Some of these limitations include inability for identification checks, random responding, potential for survey fraud, and potential risks of distraction, interruptions, or lapse in attention during survey completion due to a lack of control over the setting in which participants completed the study. Although some of these concerns were mitigated through the implementation of a robust screening procedure and thorough data checking procedure to assure fidelity of the data (e.g., review of IP address, completion time, consistency across demographic items, two attention checks, and three cultural checks), these limitations may still introduce potential biases or distortions in the data and limit the generalizability of the study's findings.

In the same vein, another limitation of online data collection relates to the self-selected sampling bias in data collection. Participants recruited via Amazon MTurk may result in an overrepresentation of certain demographic groups, such as those who are more tech-savvy, have more free time, and/or may be motivated by certain incentives. Participants recruited via social media (e.g., Chinese groups on Facebook) were likely to have an interest in their identity as second-generation Chinese-Americans, which translates to interest in their social media engagement, interest in research, and be of certain geographic areas (e.g., urban) and/or specific SES. For instance, individuals who do not engage in social media or participate in Chinese groups, are not interested in research, or individuals who live in rural areas (which often have fewer social groups associated with them) may be underrepresented in our sample and our findings may not necessarily apply to them.

There was also a statistical limitation in the current study that applies specifically to Hypotheses 6 and 7. Separate Welch's ANOVA was conducted in Phase Three of the study as SPSS does not have a built-in function to run Welch's MANOVA. As a result of running separate Welch's ANOVAs, the results may not capture all the benefits of a true multivariate analysis and may lead to increased type 1 error.

A final important limitation relates to the uneven sample sizes amongst the four identified filial modes in Phase Two and Phase Three. There were only five participants in Phase Two and six participants in Phase Three who were assigned the Non-Filial cluster. As mentioned previously, it remains unclear as to whether the unexpected small sample size of the Non-Filial clusters may have impacted the results for both phases. It is likely that differences between some variables may not have been detected due to lack of statistical power. Similarly, it is equally possible that the effect sizes may have been stronger if the sample size amongst the filial clusters were larger and/or more even. Despite the small sample size, however, it is important to note the possibility that individuals categorized as Non-Filial may be unique in the second-generation Chinese-American population. The consistency in identifying only a small number of Non-Filial individuals in two separate phases of this study suggests that it is entirely possible that Non-Filial individuals are rare amongst the second-generation Chinese-American population. Thus, it may be possible that future filial typology research will continue to identify only a small number of Non-Filial individuals in their studies.

Future Directions

The findings in this study helped determine some directions for future research. The nature of the concurrent influence of Reciprocal Filial Piety (RFP) and Authoritarian

Filial Piety (AFP) on family functioning continues to remain unclear as evidenced by the conflicting results of this study. Balanced individuals (high RFP and high AFP) unexpectedly reported significantly higher levels of parent-child conflict, lower levels of family cohesion, and lower levels of family flexibility than Reciprocal individuals (high RFP and low AFP). This finding suggests that high levels of AFP in conjunction with high levels of RFP may negatively impact one's family functioning and result in more parent-child conflict. However, Balanced individuals also reported significantly higher levels of family communication and family satisfaction than Reciprocal individuals. This finding suggests the opposite, that in conjunction with high RFP, high levels of AFP may also positively impact one's family functioning. However, it is possible that high levels of AFP in conjunction with high levels of RFP may reduce one's sense of family cohesion and family flexibility, but consequently increase one's sense of family communication and family satisfaction. Since this study operationalized family functioning as based on levels on all four family functioning variables (family cohesion, family flexibility, family communication, and family satisfaction), future filial typology research can acquire more clarification by providing more in-depth analyses on these family functioning variables individually to assess whether they correspond to one's overall family functioning. Future family functioning research can also examine the relationship between the family functioning variables and the different types of parent-child conflict to assess whether certain family functioning dynamics contribute to higher or lower levels of parent-child conflict.

Furthermore, Non-Filial individuals (low RFP and low AFP) were found to have the highest mean score for all four types of parent-child conflict, the lowest mean ratio

score for family cohesion and family flexibility, and the lowest mean score for family communication and family satisfaction when compared to the other three filial modes. Although these findings were only partially significant, this nonetheless suggests the possibility that low levels of both RFP and AFP may negatively impact one's overall family functioning. As mentioned in the limitation section above, it remains unclear as to whether the small sample size of Non-Filial individuals may have impacted these results. Future filial typology research can provide more credence to these findings by recruiting a larger number of Non-Filial participants to try to replicate and/or expand this study's findings.

Summary of Contributions to the Literature

The present study contributed to the body of literature related to filial piety and family functioning. First, this study added to the filial piety literature by confirming the two-factor structure of the Dual Filial Piety Scale (DFPS) with the second-generation Chinese-American sample of this study. The final accepted model of the confirmatory factor analysis (CFA) of the DFPS included eight items total, with four items measuring Reciprocal Filial Piety (RFP) and four items measuring Authoritarian Filial Piety (AFP). This finding ultimately confirms the application of the DFPS with the second-generation Chinese-American population.

Second, this study added to the filial piety literature by confirming the four filial modes conceptualized in previous research (Yeh & Bedford, 2004). This study employed a more statistically robust analysis to classify the conceptualized four filial modes and successfully confirmed the four filial modes: Balanced, Reciprocal, Authoritarian, and Non-Filial. Although this study was unable to replicate the findings regarding the

connection between filial modes and parent-child conflict (Yeh & Bedford, 2004), the findings nonetheless highlight the importance of further filial typology research to assess how the dual filial dimensions concurrently influence one's overall family functioning. Additionally, the findings in which Non-Filial individuals reported the highest mean score for parent-child conflicts compared to the other three filial modes suggests that the dual filial dimensions do indeed concurrently influence one's family functioning. Furthermore, the findings from this study also provided support for previous research highlighting the beneficial effects of high RFP and the harmful effects of AFP, where Reciprocal individuals reported the lowest amount of parent-child conflict.

Third, this study added to both filial piety and family functioning literatures by assessing how different modes of filial piety impact one's overall family functioning. The findings from this study also provide support for previous research highlighting the beneficial effects of high RFP and the harmful effects of high AFP, where Reciprocal individuals reported the highest levels of family cohesion and family flexibility compared to the other three filial modes. Furthermore, both the findings where the Balanced mode reported the highest level of family communication and family satisfaction, and the findings where Non-Filial mode reported the lowest level of family cohesion, family flexibility, family communication, and family satisfaction provide credence to the conceptualization that the dual filial dimensions concurrently influence one's family functioning.

Lastly, this study's exploratory analysis added to both filial piety and family functioning literatures by successfully capturing themes related to filial piety and family functioning based on individual's early memories. The final thematic maps drawn for the

four different filial modes identified distinct qualitative differences in family functioning. This ultimately provided support for the conceptualization of the four filial types identified by Yeh and Bedford (2004) regarding the differences in parent-child dynamics amongst the four filial types.

Clinical Implications

Overall, although it is clear from the literature that Reciprocal Filial Piety (RFP) often relates to positive effects (Jen et al., 2019; Lawrence et al., 1992; Wong et al., 2010; Yeh et al., 2009; Yeh & Bedford, 2003), the literature has been inconsistent regarding the effects of Authoritarian Filial Piety (AFP), where some literature found AFP to relate to negative effects (Jen et al., 2019; Wang et al., 2019; Yeh, 2006) and others found AFP to relate to positive effects (Chen et al., 2016; Yan & Chen, 2018). The present study addresses this issue by providing empirical support that the dual filial dimensions concurrently influence one's overall family functioning. This suggests that when assessing individual's familial difficulties, it is important to gauge *both* levels of RFP and AFP to get a more accurate sense of their feelings and attitudes towards their parent-child relationship. Furthermore, the individuals' mode of filial operation can also provide valuable clinical information regarding how the individual relates to their parents, shedding light onto the individuals' level of family cohesion, flexibility, communication, and satisfaction.

Additionally, the findings from the current study's exploratory analysis revealed that it is possible to capture themes related to filial piety and family functioning based on the individual's early memories. When gathering information regarding one's early childhood experiences, not only does paying attention to the individual's early parent-

child dynamics reveal valuable clinical information regarding potential areas of strain in their relationship, but it can also shed light regarding the individuals' familial motivation. Taken altogether, gathering information regarding one's mode of filial interaction, their parent-child dynamics, and their overall family functioning can highlight areas in need of clinical intervention. Below are four examples of how clinical treatment may differ depending on the individuals' mode of filial interaction.

If the individual revealed information that suggests a Balanced mode of filial interaction, the individual's behaviors are likely motivated by their desire to balance their own needs with their parents' demands. Therefore, treatment can focus on helping the individual work towards integration by enhancing their levels of cohesion and flexibility and resolving any conflict that may arise as the individual tries to navigate between meeting their needs and satisfying their parents' demands/wishes.

If the individual revealed information that suggests a Reciprocal mode of filial interactions, the individual's behaviors are likely motivated by personal choice over role obligations. This can result in feelings of anxiety, fear, and guilt towards their parents' and/or other family's criticisms towards their personalized filial behavior. Therefore, treatment can focus on processing these negative emotions and ambivalence to help the individual work towards improving their communication with their parents/family, which may consequently improve their sense of satisfaction towards their family dynamics.

If the individual revealed information that suggests an Authoritarian mode of filial interactions, the individual's behaviors are likely motivated by feelings of obligation and obedience towards satisfying their parents demands/wishes, which can result in their needs being unmet. As such, treatment can focus on processing the potential feelings of

frustration, ambivalence, and anxiety that stem from having their needs suppressed within their parent-child dynamics, as well as exploring alternative avenues in which they can meet their parents' demands/wishes without sacrificing their own needs and desires. This can then help Authoritarian individuals develop a higher degree of agency, self-esteem, and assertiveness.

Lastly, if the individual revealed information that suggests a Non-Filial mode of filial interaction, the individual's behaviors are likely motivated by egocentrism rather than filial piety, where they may deviate away from the obligations of their child role and avoid interactions with their parents, which may potentially result in significant attachment concerns. Treatment can therefore focus on processing the individual's unresolved negative feelings that they may have towards their parents/family, as well as processing the negative feelings associated with not having their needs met. This can then help Non-Filial individuals resolve and/or process future interaction with their parents/family to improve the quality of their family life.

Summary and Conclusion

The present study was the first to confirm the application of the Dual Filial Piety Scale (DFPS) with a sample from the second-generation Chinese-American population. It was also the first to run a statistical classification analysis to identify and confirm the four filial modes conceptualized by Yeh and Bedford (2004). No further filial typology research has been conducted ever since its conceptualization and thus, the present study successfully supported the conceptualization of the four modes of filial interactions. While this study did not replicate previous research findings regarding the connection between filial modes and parent-child conflict, it nonetheless provided empirical support

for the concurrent influence of both filial dimensions (Reciprocal Filial Piety (RFP) and Authoritarian Filial Piety (AFP)) on one's overall family functioning. This raises an importance question regarding whether previous filial research that examined RFP and AFP as separate variables accurately captured the underlying mechanisms that comprise filial piety as a whole, or whether the findings only captured distinct/incomplete aspects of filial piety.

The results from this present study suggest that future research should continue to consider the concurrent influence of both filial dimensions when assessing its relationship with, and/or effects on, other constructs. This study also serves as a bridge to expand filial piety research to more westernized cultures, especially hyphenated cultures such as Chinese-Americans. Since familial values are often emphasized in many collectivistic cultures, and parent-child dynamics are present in all cultures, future cross-cultural filial piety research can provide valuable research and clinical information to help address the global trend of population aging and the growing issue of elder care. Lastly, in clinical settings, it might be helpful to identify individual's mode of filial interaction to better understand one's filial beliefs, attitudes, and motivation to identify areas of familial strain that can be targeted to help improve one's overall family functioning and parent-child relationship.

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