

ASIAN PARENTS AND THEIR COLLEGE AGE CHILDREN:
EXAMINING FAMILY INFLUENCE ON CAREERS

by
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ABSTRACT
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There is a significant amount of literature on the role of family for Asian Americans' career development process. However, there is limited research examining how both Asian and Asian American college students and their parents view the role of family influence on careers. The primary purpose of this study was to examine the congruence of family influence on careers among Asian and Asian American parent and their college age children dyads, specifically examining congruence of acculturation, cultural values, and intergenerational conflict among the dyads. There were 30 Asian and Asian American parent and college age child dyads. Multiple regression analyses were conducted to examine the relationships between these variables. Results of the regression analyses suggested that congruence of acculturation, cultural values, and intergenerational conflict predicted congruence of the family expectations aspect of family influence. Implications for theory, intervention, and research are discussed.

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CHAPTER I

INTRODUCTION

Choosing a career is an important decision for individuals. Career development should be viewed as a lifelong process that extends from early childhood to adulthood instead of a one-time event (Hartung, Porfeli, & Vondracek, 2005; Savickas, 2002). The career development process involves one to carefully consider the acquisition of knowledge, interests, values, and skills about one's work options (Bryant, Zvonkovic, & Reynolds, 2006). This process includes how individuals develop occupational interests, expectations about careers and the world of work, and academic aspirations (Bryant et al., 2006).

Previous research in vocational psychology has examined the career development process, primarily focusing on "White middle class heterosexual men" (Fitzgerald & Betz, 1994, p. 409). As a result, several theoretical frameworks exploring career development have been based within a Western cultural context (Swanson & Gore, 2000). These frameworks have strived to better understand factors that influence one's career decision making process (Swanson & Gore, 2000).

The three prominent theoretical frameworks in vocational psychology are: 1) trait-factor, 2) social learning/cognitive, and 3) developmental (Betz, 2008; Swanson & Gore, 2000). These frameworks have aided in researchers' and clinicians' understanding of the career development process. However, modifications must be considered when applying these frameworks to diverse populations since the career development process differs for minority groups compared to the majority (Worthington, Flores, & Navarro, 2005). By

obtaining information about how career decisions are made within specific cultural contexts, researchers and clinicians can continue to address the multidimensionality of the career process (Fouad & Kantamneni, 2008).

Within the last two decades, there has been a shift in the career development literature with a focus on how minority populations make career choices (Byars & McCubbin, 2001). Scholars have suggested there are many contextual factors, such as socioeconomic status, acculturation, and culture-specific values, which influence the career development processes of minority groups (Fouad & Kantamneni, 2008; Worthington et al., 2005). In addition, theoretical frameworks such as Social Cognitive Career Theory (SCCT) and Holland's theory of vocational personalities have been adapted to examine the unique needs of various minority groups (Betz, 2008; Swanson & Gore, 2000). For example, SCCT has applied social cognitive variables to the career development of women and minority populations (Lent, 2005).

In regards to minority populations, previous research on the SCCT interest and choice models have provided evidence for its cross-cultural relevance (e.g. Fouad & Smith, 1996; Gainor & Lent, 1998; Tang, Fouad, & Smith, 1999). Further, Hackett and Byars (1996) demonstrated that exposure to various sources of efficacy information, such as role modeling and experiences with racism, affected African American women's career self-efficacy beliefs and outcome expectations, among other variables.

The issue of cultural validity has also been of interest in the application of Holland's theory to minority populations (Fouad & Kantamneni, 2009). Previous research has demonstrated the psychometric validity of Holland's theory with racially

and ethnically diverse groups (Fouad & Kantamneni, 2009). Carter and Swanson (1990) found that African Americans and European Americans demonstrated differences in their patterns of interests. However, other studies have indicated that Holland's hexagonal model is not applicable across cultures (e.g. Long & Tracey, 2006; Tang, 2001).

With an increased emphasis on the vocational needs of minority groups, one area of scholarship that has received attention is the career development of Asian Americans. Research on Asian American career development has primarily focused on two areas: 1) individual levels of analyses such as career interests, choices, and values, and 2) group and societal levels of analyses including family influence, occupational segregation, and occupation discrimination (Leong & Gupta, 2007; Leong & Serafica, 1995).

In terms of individual levels of analyses, previous research has shown that Asian Americans have different career interests when compared to Caucasians (e.g. Leong, 1985; Leong & Gupta, 2007). For example, findings indicated Chinese American men showed more interest in areas related to physical science, business, and skilled technical trades when compared to other men (Leong, 1985). Chinese American females also tended to be interested in occupations related to domestic work (Leong, 1985). In regards to Asian Americans' occupational interests, Leong, Ivey, and Suzuki (1994) found that this group endorsed higher interests in Investigative fields of Holland's theory of vocational personalities.

More recently, Tang et al. (1999) utilized the SCCT model with 187 Asian American college students. Their findings suggested that self-efficacy, acculturation, and family background variables impacted Asian Americans' career choices, but vocational

interests did not (Tang et al., 1999). Additionally, the results suggested that higher parental involvement predicted more traditional career choices, noting the importance of parental involvement (Tang et al., 1999). Tang et al.'s (1999) study was replicated in Castelino's (2005) dissertation with South Asian American college students. Castelino (2005) found that vocational interests were not related to this group's career choices, but family factors were. However, these studies did not take into consideration parents' perspectives regarding these concerns.

Research has also noted the importance of parental involvement and influence in Asian American students' career choices. For example, scholars have highlighted Asian parents' awareness that their children might experience workplace discrimination (e.g. Leong & Gupta, 2007; Sue & Okazaki, 1990). As a result, Asian parents are more likely to directly influence their children's vocational aspirations to prevent instances of future workplace discrimination (Leong & Gupta, 2007).

Values have also been shown to be important to the Asian American career development process. For example, Young, Ball, Valach, Turkel and Wong (2003) argued Asian parents have specific sets of values related to education (e.g. the importance of higher education) that they pass onto their children which influence the development process. In their study with adolescent-parent dyads, Young et al. (2003) emphasized the importance of obtaining perspectives from both Asian parents and children regarding the career development process. In addition, specific Asian cultural values may encourage Asian American children to defer career-related decisions to their parents (Chao & Tseng, 2002).

Previous studies have also suggested that Asian Americans pursue a limited range of occupations related to engineering, medicine, computer science, business, and accounting (Leong & Serafica, 1995; Tang et al., 1999). Additionally, Asian Americans have differed on occupational values when compared to Caucasians (Leong & Gupta, 2007). In a study examining work values of Asian American and European American college students, Leong (1991) found that Asian Americans placed a greater emphasis on extrinsic and security values. In addition, Weaver (2000) studied attitudes towards specific jobs and found Asian Americans were less satisfied in their jobs when compared to European Americans. Based on these findings, it is suggested that extrinsic factors, including security and money, are important work values for Asian Americans (e.g. Leong, 1991; Weaver, 2000).

For group and societal levels of analyses, the four factors of family influence, occupational segregation, occupational discrimination, and culture have been identified as major influences in Asian American career development (Fouad, Kantamneni, Smothers, Chen, Fitzpatrick, & Terry, 2008; Leong & Chou, 1994; Leong & Gupta, 2007). Scholars have found Asian American students often choose majors and ultimately careers based on family expectations (Leong & Serafica, 1995). Tang (2002) further noted occupations in traditional Asian cultures are viewed as both individual and family accomplishments. Therefore, decisions regarding careers are usually reflective of collectivist values in Asian culture (Tang, 2002). According to Castro and Rice (2003), Asian American students encountered unique challenges about career choice, often having to consider whether to please their families or themselves. While these findings

are important to consider when discussing the career development process of Asian Americans, research has not extensively focused on parents' perceptions of their children's career choices.

Tang (2002) conducted a study with 375 Asian Americans, Caucasians, and Chinese college students examining the relationship between family influence and career choice using Holland's theory as a theoretical framework. Findings suggested parents influenced career choices for Asian American and Chinese college students whereas Caucasian college students stated they made career-related decisions independently (Tang, 2002). Higher levels of family influence have also been shown to predict career choices related to math and science fields for Asian American college students (Tang et al., 1999). Dong Tran, Lee, and Khoi (1996) demonstrated parental influence is also relevant during the high school years, indicating Asian American high school students place high parental expectations to do well in school among their top five concerns.

Parental involvement and influence may also contribute to occupational segregation, defined as the over- and under- representation of certain fields within an ethnic group (Leong & Chou, 1994). Asian Americans tend to pursue occupations in the physical and biological sciences, but not social science oriented fields (Chun, 1980; Leong & Hardin, 2002). Chun (1980) hypothesized this trend is the result of various societal and cultural barriers to this population's vocational aspirations. Generational differences in values and acculturation between families can lead to intergenerational conflict (Chung, 2001). Chung (2001) found intergenerational tensions often exist when

there is disagreement over “expectations regarding family interactions, education and career concerns, and dating and marriage issues” (p. 382).

Previous research has highlighted specific contextual factors that influence the overall career decision making process of this population. When considering these contextual factors, past research has examined parents’ perceptions of their children’s career choices by asking students to report their parents’ opinions. While this is important, it is also necessary to obtain parents’ self-reported perceptions of their children’s careers. However, there has been limited research in this area. Therefore, the purpose of this study is to address the gap in existing literature by examining both Asian parents’ and their children’s perceptions about the role of family on career choices.

Significance of the Project

The demographics of the United States have changed drastically since research first began investigating the career development processes of Asian Americans (Leong & Gupta, 2007). Past research has emphasized the need to understand various contextual factors, such as acculturation, intergenerational conflict, cultural values, and family influence, which impact this group’s career-decision making process. However, many studies have solely focused on how Asian American students make career-related choices, often asking them to convey their parents’ perceptions of their careers. There is limited research examining how parents contribute to this overall process and comparing their perceptions to their children’s. It is critical that both perspectives are heard when exploring the career development process of Asian American students. The purpose of

this study coincides with this need in the literature by examining both parents' and their children's perceptions of career-related messages.

Research Questions

The following research questions were investigated:

1. Is the factor structure for the Family Influence Scale and Intergenerational Conflicts Item Pool the same for Asian parents and their college age children?
2. Is congruence of family influence on careers predicted by congruence of acculturation, cultural values, and intergenerational conflict for Asian parent-college age child dyads?

Hypotheses

Hypothesis 1: The factor structure for the Family Influence Scale and Intergenerational Conflicts Item Pool is the same for Asian parents and their college age children.

Hypothesis 2: Congruence of family influence on careers is predicted by congruence of acculturation, cultural values, and intergenerational conflict for Asian parent-college age child dyads.

Definition of Terms

For the purposes of this study, the following terms are defined:

Acculturation. Acculturation is defined as the process that occurs when an individual is exposed to two different cultures (Suinn, 1994). An individual exposed to two different cultures can change based on his/her continuous, direct, and personal interactions with the two groups (Kohatsu, 2005).

Asian American. This term is used to describe individuals who reside in the United States that identify as full or part Asian descent (Okazaki, Lee, & Sue, 2007).

Asian parent. An Asian parent is defined as an immigrant from Asia who is currently raising a child in the United States.

Career development. Career development is defined as the process by which individuals make decisions related to their career (Lent & Brown, 2005).

Congruence. The degree of agreement between an Asian parent's and his/her child's perceptions of family influence on careers. This variable was measured by difference scores for each scale and subscale for parents and their children.

Cultural values. Cultural values are operationalized by specific dimensions that are important to cultural group. These values often guide group members' behaviors and determine what behaviors are acceptable to that group (Kluckhohn & Strodtbeck, 1961).

Family influence. Family influence is the degree to which a person's family, including parents and extended relatives, affect his/her career-related choices (Fouad et al., 2008).

Intergenerational conflict. Intergenerational conflict refers to the tension that is experienced by parents and their children (Ying & Chao, 1996). This type of conflict is apparent across multiple domains in parent-child interacts such as occupational, income, and marital (Lee, Choe, Kim, & Ngo, 2000).

Summary of Chapters

The chapters are organized as follows:

Chapter 2 provides a thorough review of the literature on vocational theories, Asian American career development, and Asian values. Factors that influence the career decision making process of Asian Americans will also be addressed. Chapter 3 subsequently provides the methodology for this study, including demographic information of participants, instruments used, data collection procedures, and research design used to analyze the data. Next, chapter 4 will provide the results of the study, including correlations between variables and answers to the research questions posed. Finally, chapter 5 will discuss the results of the study, its limitations as well as implications for both researchers and clinicians working with this population.

CHAPTER II

LITERATURE REVIEW

This chapter provides a literature review of the relevant constructs related to the vocational development of Asian Americans, including contextual factors that influence this process. First, this review of literature examines career development theories, providing a critique of traditional career theories from a multicultural perspective, and summarizing and critiquing developmental career theory. Second, relevant literature pertaining to the career development of Asian Americans is provided, highlighting the demographic characteristics of this population, individual and societal levels of analyses, and previous research about this population's vocational interests.

Next, this literature review focuses on acculturation, defining the construct and discussing pertinent research on acculturation relating to vocational development. The construct of family influence is also discussed, discussing the role of family and its influence on the career decision making process of Asian Americans. Then, literature relating to intergenerational conflict will be examined, focusing specifically on conflict surroundings careers between parents and their children. Next, literature about Asian cultural values is reviewed, exploring the relationship between values and vocational development. Finally, this literature review focuses on the minimal research available investigating the congruence between Asian parents' and their children's perceptions of family influence on careers.

Career Development Theories

Summary of Traditional Career Development Theories

The field of vocational psychology first emerged in the 20th century with the work of Frank Parsons (1909). Parsons (1909) developed the tripartite model of choosing a vocation which is commonly referred to as the first trait-factor theoretical framework. The tripartite model is comprised of three key elements: “1) an understanding of one’s self, aptitudes, interests, resources, limitations, and other qualities, 2) knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, occupational opportunities, and work prospects, and 3) true reasoning relating one’s self to the world of work” (Parsons, 1909, p. 5). This model has been influential in the field of vocational psychology as it assists career counselors and others in exploring how individuals make career decisions.

Since Parsons’ (1909) tripartite model, there have been numerous theories in vocational psychology that have begun to address how individuals make career-related decisions (e.g. Lent et al., 1994; Super, 1953, 1980). The major vocational frameworks are: 1) trait-factor theories, 2) sociology/career choice theories, 3) developmental/self-concept theories, 4) vocational choice and personality theories, and 5) social learning and social cognitive theories (Betz, 2008; Swanson & Gore, 2000). Each of these theoretical frameworks differ in their conceptualizations but serve the purpose of assisting career counselors explore the career decision making process with their clients (Betz, 2008; Swanson & Gore, 2000).

Many of these theories emerged during the vocational guidance movement which occurred during the Industrial Revolution (Gysbers, Heppner, & Johnston, 2003; Herr, 2011). This movement focused specifically on assisting European immigrants obtain employment in the U.S. (Gysbers et al., 2003). Due to experiences with racism and discrimination, racial and ethnic minorities' options for entering the world of work during this period were limited (Gysbers et al., 2003). Minorities that received vocational services were often directed to pursue the limited amount of jobs open to them (Gysbers et al., 2003). As such, many vocational theoretical frameworks developed during this time were targeted towards Western European immigrants and could not be applied to diverse populations (Gysbers et al., 2003).

According to Gysbers et al. (2003), traditional career theories were based on five key components: 1) individualism and autonomy, 2) affluence, 3) structure of opportunity, 4) centrality of work in individuals' lives, and 5) linearity, progressiveness and rationality of the career development process. The first tenet of individualism and autonomy implies individuals make career choices that ultimately shape their destinies (Gysbers et al., 2003). The tenet of affluence asserts individuals can financially and economically afford to make their career choices (Gysbers et al., 2003). The third tenet, structure of opportunity, highlights the assumption that individuals who work hard enough can achieve their occupational aspirations (Gysbers et al., 2003). The fourth tenet of centrality of work in individuals' lives assumes work plays a significant role in individuals' lives (Gysbers et al., 2003). The last tenet that the career process is linear,

progressive, and rational implies the career development process is an orderly one (Gysbers et al., 2003).

However, these five components of traditional career theories were developed in consideration of Western European immigrants' experiences and worldviews. As such, they are not always relevant to minority populations. For instance, the tenet of individualism and autonomy is not applicable to many minority groups that endorse collectivist values and traditions such as Asian Americans (Hardin, Leong, & Osipow, 2001). Additionally, minority groups that are more collectivist in nature often rely on family and community members to assist when making career decisions (Leong, 1991; Leong & Gupta, 2007). Similarly, the tenet of affluence assumes that individuals can afford to make career choices (Gysbers et al., 2003). However, this is not the case for many minority groups who are below the poverty line and struggling to meet basic needs (Kim, 2011).

The third tenet of structure of opportunity assumes the idealistic notion of the American dream where if an individual works hard enough, all his/her dreams will come true (Gysbers et al., 2003). For minority groups, barriers such as occupational discrimination, racism, and prejudice hinder their occupational goals (Leong & Gupta, 2007; Worthington et al., 2005). In particular, the Immigration Act of 1965 resulted in many Asian doctors, scientists, and pharmacists immigrating to the U.S. (Kim, 2011). While many of these immigrants were able to obtain occupations that honored their educational levels, many had to settle for occupations that were not comparable to their country of origin positions due to cultural and language barriers (Kim, 2011). Fitzgerald

and Betz (1994) also highlighted this issue in their book chapter, stating that many individuals do not hold jobs that “provide for full-time meaningful employment” (p. 104). Rather, individuals may seek and hold employment positions out of necessity and survival (Fitzgerald & Betz, 1994).

The role of work is not necessarily a central element for many individuals residing in the U.S. (Gysbers et al., 2003). For example, minority groups may place a greater emphasis on family and culture due to work-related stressors such as discrimination and racism (Kim, 2011). Further, the process of choosing a career may not be linear for all individuals as the world of work is constantly undergoing changes (Fouad, 2007).

Cook, Heppner, and O’Brien (2002) argued that career counseling practices were originally developed when “the typical career client was young, male, White, able-bodied, publically heterosexual, and ethnically homogenous” (p. 291). Fitzgerald and Betz (1994) also shared this concern, suggesting one cannot generalize vocational development based on traditional theories to a heterogeneous sample. Similarly, the majority of research pertaining to career development has been conducted with undergraduate students which is not generalizable to other populations (Fitzgerald & Betz, 1994). Vocational research has also ignored the career processes of those who do not further their educations beyond high school (Fitzgerald & Betz, 1994).

Traditional career theories were also gender-specific when developed (Gysbers et al., 2003). Recent research has attempted to understand the career choices of women (Betz, 2008). As Fitzgerald and Betz (1994) noted, a limitation of trait-factor theories is

its failure to take into consideration sexual harassment can influence the career choices and ultimately, persistence, of women.

Another concern Fitzgerald and Betz (1994) highlighted is the need to address cultural and structural factors that influence the career decision making process of minority groups and women. Cultural factors, such as attitudes and beliefs towards occupations, held by specific groups are necessary to consider in vocational development theories (Fitzgerald & Betz, 1994). However, these factors are often ignored in the application of theoretical frameworks. Structural factors can be specific to occupational environments and may include concerns such as sexual harassment and occupational discrimination (Fitzgerald & Betz, 1994). Contextual factors, including but not limited to racism, prejudice, and lack of educational opportunities, all influence the career opportunities and subsequent development of minorities (Fitzgerald & Betz, 1994).

Application and Critique of Career Development Theories across Populations

While traditional career theories were initially developed for White, middle class, able-bodied males, researchers have begun to focus on how these theories apply across various populations. Leong and Brown (1995) highlighted the need to consider cultural validity and cultural specificity when applying career theories to ethnic minority groups. Cultural validity refers to the validity of the theory being utilized across cultures in terms of construct, concurrent, and predictive validity (Leong & Brown, 1995). For example, Holland's concept of congruence is predictive of job satisfaction among White Americans, but this may not necessarily be true for other populations (Leong & Brown, 1995). Cultural specificity is related to the concepts and constructs that are associated

with specific cultural groups which can help explain and predict behavior (Leong & Brown, 1995).

One career development theory that has been applied to minority groups is Holland's theory of vocational personalities (Betz, 2008). According to Holland's theory, individuals can be classified as one of six types: 1) Realistic, 2) Investigative, 3) Artistic, 4) Social, 5) Enterprising, or 6) Conventional (RIASEC) (Holland, 1997). Briefly, Realistic interest types enjoy working outdoors and have interests in mechanics and construction (Holland, 1997). Investigative interest types pursue scientific interests and enjoy analyzing and interpreting data (Holland, 1997). Artistic interest types typically express their interests through art while Social interest types enjoy working and helping others (Holland, 1997). Enterprising personality types enjoy activities such as selling and leading (Holland, 1997). Conventional interest types describe individuals who enjoy organization and detail, and tend to work with data systems (Holland, 1997). Another significant component of Holland's (1997) theory is the notion that environments can also be described as the six RIASEC types. Holland (1997) proposed that individuals search for environments that allow them to "exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles" (p. 4).

Holland (1997) hypothesized that the six personality types are represented as a hexagonal structure. Based on this hexagonal structure of interests, Holland (1997) noted the terms of consistency, congruence, and differentiation. Consistency refers to similar interest types being more closely related within an individual or an environment (Holland, 1997). According to Holland (1997), the closer the interest types are on the

hexagon, the more similarities they share. Conversely, the greater the distance between interest types, the more dissimilar they are from one another (Holland, 1997). For example, Realistic and Investigative interest types are closer together on the hexagonal structure and are similar to each other. However, Conventional and Social interest types are opposite of each other and are not similar to each other.

Within this theory, the term congruence refers to the degree of fit between an individual and his/her environment (Holland, 1997). Congruence is obtained when an individual is matched on their interests and work environments (Holland, 1997). For example, congruence occurs when an individual who identifies as an Investigative personality type obtains a position that is classified as Investigative (Holland, 1997). Incongruence occurs when an individual is in a work environment that is different from his/her personality type (Holland, 1997). According to Holland (1997), congruence is hypothesized to predict job satisfaction, tenure, and stability.

The structure of interests has received much attention in research. Spokane and Cruza-Guet (2005) argued researchers should examine three culturally relevant questions when determining the cultural applicability of Holland's (1997) theory. First, it is necessary to examine whether the six personality types exist across various cultures and whether they exist in a hexagonal structure as Holland (1997) initially hypothesized (Spokane & Cruza-Guet, 2005). Second, the researchers highlighted the need to address whether or not culture influences the career constructs proposed by Holland's model (Spokane & Cruza-Guet, 2005). Lastly, the cultural utility of Holland's model should be examined (Spokane & Cruza-Guet, 2005).

There has been debate regarding the application of the hexagonal structure to minority groups. Several previous studies demonstrated support for the hexagonal structure of underlying interests (e.g. Day & Rounds, 1998) whereas other studies have found evidence for a circular structure of interests (Tracey & Rounds, 1996). Day and Rounds (1998) examined the underlying structure of interests with African American, Mexican American, Asian American, Native American, and Caucasian American college-bound individuals. They utilized the revised version of the Unisex Edition of the ACT Interest Inventory (UNIACT) and performed multidimensional scaling analyses to determine the underlying structure of interests. Their analyses supported the notion that the underlying structure of interests is similar for various ethnic groups (Day & Rounds, 1998). However, this study had several limitations. For example, the participants were all college-bound individuals. Additionally, it is possible that students who have resided for longer periods of time in the U.S. are more familiar with vocational interests in comparison to minority students who may be the first in their families to attend college in the U.S.

Farh, Leong and Law (1998) examined the cross-cultural validity of Holland's theory in Hong Kong. They investigated college freshmen who were pursuing science, engineering, and business management majors (Farh et al., 1998). The researchers administered the UNIACT and obtained self-reported preferences for occupations (Farh et al., 1998). Their results supported the idea of a circular structure of interests instead of Holland's initial model of a hexagon (Farh et al., 1998). Findings also demonstrated congruence between Holland personality type and interests for four of the six interest

types (R, I, E, and C) (Farh et al., 1998). While this study's findings demonstrated support for a circular structure of interests, Farh et al. (1998) argued for a reexamination of the UNIACT to measure interest items. For example, the items on the Social scale were not necessarily reflective of Chinese culture (Farh et al., 1998). As such, it is important to take into consideration equivalence of measurement when administering career interest types.

While Farh et al. (1998) highlighted the idea of traditionality-modernity as a possible explanation for the results (e.g. students who endorse modern values are more likely to fit Holland's model), it is an area that can be explored further in research. The researchers did not take into consideration other contextual factors that could influence their results such as socioeconomic background and occupational prestige. Farh et al. (1998) argued there are several occupational limitations for individuals residing in Hong Kong. For example, occupations in business related fields are more available and offer competitive pay (Farh et al., 1998). As a result, students might want to pursue those occupations due to Hong Kong's economy. Another limitation of this study is the utilization of freshmen college students. Freshmen may not be developmentally ready to explore occupations or majors in their first year of study.

Soh and Leong (2001) also utilized the UNIACT to examine structural equivalence of personality types, comparing college students in Singapore and the U.S. to determine vocational interests. Their results suggested structural and criterion validity for the Social and Enterprising personality types but not for Artistic and Realistic types (Soh & Leong, 2001). However, the researchers noted participants may not have

comprehended all the test items due to difficulties with translation which could have influenced their findings (Soh & Leong, 2001).

From a multicultural perspective, Holland's (1997) theory has several limitations. One such limitation is not taking into consideration an individual's occupational barriers, experiences with discrimination, and access to resources which influence career choices (Hardin, 2007). Individuals will most likely experience different environments which can lead to different career choices and personality development. By emphasizing the degree of fit between a person and environment, individual differences such as barriers are often ignored (Hardin, 2007).

Another limitation in the application of Holland's theory to various populations is the definitions of personality, interests, and environment, which may be too narrow (Hardin, 2007). For example, the theory focuses solely on interests and occupational tasks, but does not take into consideration how other factors such as skills could influence interests (Hardin, 2007). Additionally, Hardin (2007) argued all occupations are not exactly the same in different settings, but are characterized as the same Holland code. Hardin (2007) highlighted this in her example with physicians, stating all physicians are assigned the same Holland code regardless of setting. Physicians who work in a rural, community clinic will have different experiences than physicians who work in suburban, specialized practices (Hardin, 2007). Both physicians will encounter differences in number of hours worked, routine, and access to resources. However, Hardin (2007) argued that both positions are characterized as the same career choice.

In summary, Holland's (1997) theory has been extensively studied in terms of fit between a person and his/her environment utilizing the RIASEC framework. There has been debate regarding the structure of interests and its application with diverse groups. Several researchers have shown support for the hexagonal structure of interests whereas others have argued for a circular structure (e.g. Day & Rounds, 1998; Tracey & Long, 1996). It is important to acknowledge the limitations of Holland's (1997) theory from a multicultural perspective. For example, it is necessary that researchers take into consideration one's experiences with discrimination, racism, and access to resources which can influence his/her opportunities and career choices.

Another career development theory that has been applied to diverse populations is Social Cognitive Career Theory (SCCT). This theory, derived from Bandura's (1986) social learning theory, highlights the importance of three cognitive-person variables: 1) self-efficacy, 2) personal goals, and 3) outcome expectations. Self-efficacy beliefs are related to an individual's judgments about his/her "capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). Personal goals refer to one's intent to engage in an activity or to achieve a particular outcome (Lent, 2005). Outcome expectations involve outcomes of performing specific behaviors based on self-efficacy and goals (Lent, 2005). The theory also examines how these cognitive-person variables interact with other aspects of a person's environment such as gender, culture, and barriers to career (Lent et al., 1994).

Lent, Brown, and Hackett (2000) argued that career development is influenced by objective and perceived environmental factors. Objective environmental factors include

financial support available for an individual and the quality of education received (Lent et al., 2000). Perceived environmental factors include opportunities, resources, barriers, and affordances presented by an individual's contextual environment (Lent et al., 2000). In addition, environmental variables can be categorized as proximal or distal to the career decision making process (Lent et al., 2000). Proximal factors include contextual influences during active phases of the career decision making process (Lent et al., 2000). Distal factors include contextual variables that influence learning experiences in which self-efficacy and outcome expectations develop (Lent et al., 2000).

A multicultural strength within this theory is the examination of contextual affordances which allows for the exploration of various contextual factors (e.g. gender, race/ethnicity) on the career development process (Lent, 2005). The theory also takes into consideration how career choices can be influenced through the paths of formative periods, active periods of educational and career choice making, and the transfer of interests into goals (Lent et al., 2000). Previous research with SCCT has focused on examining its applicability to minority populations. For example, this theory has been tested with Mexican American adolescent women (Flores & O'Brien, 2002). In their study, Flores and O'Brien (2002) chose variables that were especially salient for racial and ethnic minorities and women such as acculturation, feminist attitudes, and mothers' modeling through educational attainment and occupation (Flores & O'Brien, 2002). The researchers also examined parental support by utilizing the Career Support Scale (CSS; Binen, Franta & Thye, 1995). This scale measured the degree to which children perceived

support and encouragement regarding their career pursuits from their parents (Binen et al., 1995).

Results from Flores and O'Brien's (2002) study indicated nontraditional career self-efficacy predicted nontraditional career interests. Additionally, the proximal contextual variables of parental support and perceived future occupational barriers predicted career choice prestige (Flores & O'Brien, 2002). Parental support was also shown to predict career aspiration among this population (Flores & O'Brien, 2002).

One significant implication from this study's findings is the importance of the family unit. When counseling Mexican American women, it is important to take into consideration the roles of parental and familial expectations (Flores & O'Brien, 2002). Career-related interventions should also find ways to incorporate parents or family members into the process to facilitate discussion between children and their parents about career development (Flores & O'Brien, 2002). While this study is crucial in highlighting the various contextual factors that influence the career decision making process of Mexican American adolescents, it is limited in several ways. For example, the study only examined female high school seniors. The overall career development process could be different for Mexican American high school students. There could also be gender differences in how careers are perceived and the degree of parental support shown towards adolescent males.

There is a growing body of literature examining comparisons between Mexican American and White high school students utilizing SCCT as a theoretical framework. In McWhirter, Torres, Salgado, and Valdez (2007)'s study, the researchers examined

perceptions of internal and external barriers related to postsecondary education among 140 Mexican American and 296 White high school students. There were no ethnic differences in anticipated barriers as a function of immediate postsecondary plans within this sample (McWhirter et al., 2007). However, higher means for parental educational influenced whether or not students were more likely to attend 4-year colleges (McWhirter et al., 2007). Findings suggested Mexican American high school students anticipated more internal and external barriers than White participants pursuing postsecondary education (McWhirter et al., 2007). Mexican American high school students also perceived these barriers to be more difficult to overcome (McWhirter et al., 2007).

This study is influential in examining perceived barriers for Mexican American and White high school students. However, there are several limitations which include the population of this study. For example, the researchers did not consider whether or not access to resources could influence barriers. They surveyed high schools from various regions of the U.S., but did not note the socioeconomic background of the community the students were primarily raised in.

Another limitation is the difference in wording for the item measuring immediate postsecondary plans. Students in the Midwestern school sample responded to the question: “What are your plans for the near future (things you will *begin* next year or soon after)? (Check all that apply)” (McWhirter et al., 2007, p. 123). However, students from the Southwestern school sample responded to the question: “What are your plans after high school (immediately after high school or within the first year after)? (You can check more than one)” (McWhirter et al., 2007, p. 123). The differences in question

wording could have contributed to the study's outcomes regarding actual postsecondary educational plans.

With the contextual and economic climate changing in the mid-20th century, the need to further understand the process of choosing an occupation from a developmental perspective arose (Hartung, 2013). The life-span, life-space theory is one of the earliest developmental career theories developed by Donald Super (Super, 1953). This theory focuses on how an individual makes career choices over the lifespan (Super, 1953). In Super's formulation of the career development process, he highlighted the significance of vocational identity, career maturity, career stages, and developmental tasks (Super, 1990).

Vocational identity, often referred to as one's occupational self-concept, is developed through one's experiences, environment, and physical and mental growth (Super, 1963, 1980). Career maturity, an important aspect of this theory, suggests individuals must achieve specific age and development tasks throughout the lifespan (Super, 1963). Career patterns, as proposed by this theory, involve the psychological, physical, and environmental factors that shape a career (Super, 1953).

Super identified specific career stages that are important in one's development. The first stage, growth (birth to age 14), involves the initial formulation of a self-concept (Super, 1963). In this stage, individuals develop their attitudes and interests and a general understanding of the world of work (Super, 1963). Second, the exploratory stage (ages 15-24) is when individuals explore various jobs through taking classes, participating in hobbies, and developing a tentative choice (Super, 1963). The establishment stage (ages

25-44) involves individuals developing entry skills relevant to choice and obtaining work experience (Super, 1963). The maintenance stage (ages 45-64) is characterized by improving in work position (Super, 1963). The last stage, decline (age 65+) is marked by reduced work output and preparation for retirement (Super, 1963).

To complement these developmental stages, Super proposed six vocational developmental tasks which are: 1) crystallization, ages 14-18, 2) specification, ages 18-21, 3) implementation, ages 21-24, 4) stabilization, ages 24-35, 5) consolidation, ages 35-55, and 6) readiness for retirement, ages 55 and older (Super, 1963). The crystallization task involves developing and planning vocational goals (Super, 1963, 1980).

Specification of a vocational preference requires individuals to formulate specific vocational goals from general ones (Super, 1963). The implementation task in this developmental model focuses on training for the specific career and obtaining employment (Super, 1963). Stabilization refers to the notion of confirming a career choice by working in that specific field (Super, 1963). The last developmental task of consolidation focuses on individuals advancing in their chosen careers (Super, 1963).

These tasks are often viewed as crucial in the overall career decision making process. While these stages and tasks have specific ages associated with them, Super (1953) argued individuals can often go through these multiple times as they and the world of work change. Super (1980) further extended his theory to include the notion of role saliency known as the life career rainbow. This expansion involves examining the various roles an individual adopts throughout different points in one's life span (Super, 1980). The life space, life span theory asserts that individuals participate in various roles

throughout life, ranging from early life roles such as child to older life roles such as pensioner (Super, 1980). These roles are entered through four theaters: 1) home, 2) community, 3) school, and 4) workplace (Super, 1980).

An integral component of Super's theory is the idea of career maturity (Super, 1957). Career maturity is defined as the degree to which an individual accomplishes age-appropriate developmental tasks across the lifespan (Super, 1957). Super (1957) emphasized the importance of developing career maturity beginning in one's adolescence years so that he/she can make satisfying career-related decisions.

Previous research has highlighted various factors that may influence career maturity such as age, gender, race/ethnicity, and acculturation (e.g. Hardin et al., 2001; Kenny, 1990; Whiston & Keller, 2004). In Kenny's (1990) study with college seniors examining the role of gender on career maturity and parental attachment, results suggested that the amount of emotional support males received from parents was related to career maturity. Students whose parents endorsed autonomy in females also demonstrated higher levels of career maturity (Kenny, 1990). However, this study only examined gender differences among senior college students and did not include freshmen, sophomores, or juniors in their study. It can be argued that college seniors may receive more emotional support and autonomy as they transition from college to the workforce which could influence career maturity.

There has been extensive empirical research supporting various aspects of Super's theory in vocational psychology (Hartung, 2013). For example, the Career Pattern Study began in 1951 by Super and his colleagues investigated the relationship of socioeconomic

status (SES) to career exploration and career maturity (Super, 1985). This longitudinal study followed male participants from ninth grade until their early 30s (Super, 1985). The researchers found SES was somewhat related to the construct of career maturity, particularly in the cognitive domain of occupational information (Super, 1985, 1990). However, this only occurred during the last high school years (e.g. senior year) (Super, 1990). The researchers found that SES did not have a significant relationship to career exploration among high school boys (Super, 1990). While it is beneficial to study individuals across their development, this study is limited in its use of White male participants. Super (1990) also highlighted the importance of considering socioeconomic and environmental factors which may influence the career development process in two significant ways: 1) opening or closing opportunities for occupations or 2) shaping occupational concepts and self-concepts.

Several psychometric measures have been developed to assess for some of the constructs in this theory. Previous research has found support for the application of the Career Development Inventory to assess for readiness to make choices related to education and vocation in addition to examining the construct of adolescent career maturity (Savickas & Hartung, 1996). However, a criticism of this is that it solely focuses on adolescent career maturity. Further, the Adult Career Concerns Inventory has demonstrated reliability and validity in examining attitudes about completing development career stages and tasks during adult years (Cairo, Kritis, & Myers, 1996; Savickas & Hartung, 1996).

Previous research has also demonstrated the applicability of Super's theory to various populations. For example, Smart and Peterson (1997) studied Super's notion of recycling through vocational development stages and tasks. Their findings suggested adults who were in the process of experiencing career changes were more concerned with exploration in comparison to adults not changing jobs (Smart & Peterson, 1997). However, it can be argued that individuals making career changes might perceive developmental tasks differently than those who are not in transition. Similarly, Smart (1998) found that Australian women who were in the exploration stage of Super's framework were less concerned with pay satisfaction and job involvement. Women in the maintenance stage demonstrated more professional commitment and career involvement (Smart, 1998). However, this study only examined Australian women and generalizability is limited.

Super's initial concept of career maturity has been extended to the construct of career adaptability (Savickas, 1997). In more recent years, Savickas (1997) argued career adaptability should replace the construct of career maturity due to the constant need to "respond to new circumstances and novel situations" (p. 254). By making this shift, career adaptability can be applied to understanding vocational development throughout the lifespan (Savickas, 1997). The construct of career adaptability consists of four dimensions of career decision making: 1) concern, 2) curiosity, 3) confidence, and 4) control (Savickas, 1997). Career concern relates to developing an orientation to the future and feeling optimistic about the future while developing a planful attitude (Hartung, Porfeli, & Vondracek, 2008). The construct of career curiosity involves individuals

forming an inquisitive attitude that leads to career exploration (Hartung et al., 2008). Career confidence involves the acquisition of problem-solving abilities and self-efficacy beliefs (Hartung et al., 2008). Lastly, career control involves self-regulation, clarification of one's self-concept, and empowering clients engaged in career counseling (Hartung et al., 2008).

Summary

As the demographics and world of work in the U.S. change, it is important to consider how theoretical frameworks and subsequent career counseling approaches apply to minorities (Cook et al., 2002; Leong, 1995). Based on extant literature, it is clear that traditional career theories are not necessarily applicable to minority groups. This is based on the notion that traditional career theories were developed for a small sample of Western European, male, heterosexual immigrants and cannot be generalized to all groups (Gysbers et al., 2003). In addition, research on career development theories often utilize White undergraduate samples which cannot be generalized and ignore a majority of the population (Fitzgerald & Betz, 1994).

In light of these concerns, traditional career theories have still been applied to minority groups in the literature. From a multicultural perspective, it is important to examine and test career theories in the context of specific cultures and navigate the factors which influence minority career development (Hardin, 2007; Leong & Brown, 1995).

Career Development of Asian Americans

This section will provide a discussion of Asian American career development. First, an overview of the population's history and characteristics is provided, highlighting the projected increase of this group in the U.S. Next, the review of literature examines the career development process of Asian Americans, emphasizing previous areas of research including individual and group and societal levels of analyses. Individual levels of analyses include research on Asian American career interests and career choices (Leong & Gupta, 2007). Group and societal levels of analyses include family, culture, and occupational segregation (Leong & Gupta, 2007). Specific contextual factors such as acculturation, family influence, and intergenerational conflict are examined in relation to Asian American career development. Lastly, research on Asian values is explored, noting how traditionality of cultural values influences the career decision making process for this population.

Population History and Characteristics

Asian Americans are defined as individuals who identify as being Asian descent (Kim, 2011; U.S. Census Bureau, 2010). There are approximately 25 sub-ethnicities represented within the Asian population, including Indian, Chinese, and Filipino, among others (Kim, 2011). Each Asian sub-ethnic group has a different relationship and history with the U.S. The first migrant wave from Asia began in 1848 with Chinese laborers traveling to California during the Gold Rush (Chan, 1991). During this time, Chinese immigrants in California had limited opportunities for employment (Chan, 1991). For example, Chinese men were encouraged to work in laundry mats, tailor shops, and

restaurants which required little English proficiency (Chan, 1991; Takaki, 1998).

However, they were also excluded from owning land and gold mining (Takaki, 1998). As the Chinese immigrant population increased, they began to experience racism and discrimination (Chan, 1991).

Between 1924 and 1965, migration patterns varied with the passage of the Immigration Act of 1924 which limited immigrants from Asia in addition to the Japanese internment camps during World War II (Chan, 1991). The Immigration Act of 1965 increased the migration flow from Asia to the U.S., allowing for family reunification and the importation of skilled workers (Ong & Liu, 1994). Indians, Chinese, Filipinos/as, and South Koreans benefited the most from this act (Kim, 2011). Since the Vietnam War, the U.S. has seen an increase in the number of Asian refugees, specifically from Laos, Vietnam, and Cambodia (Kim, 2011). Within the last two decades, the Asian immigrant and Asian American populations have increased in their representations within the U.S., growing from 6.9 million people in the 1990 Census to 17.3 million in the 2010 Census (U.S. Census Bureau, 2010).

Per U.S. Census Bureau (2011) estimates in 2010, Asian Americans comprised 17.3 million or 5.6% of the total U.S. population. Of this, 14.7 million residents identify as being solely Asian and 2.6 million identify as being Asian in addition to one or more race (U.S. Census Bureau, 2011). The Asian American population, as a whole, increased approximately 46% from 2000 to 2010 (U.S. Census Bureau, 2011). The group is projected to increase to 40.6 million residents by 2050 (U.S. Census Bureau, 2011). The majority of this population resides in the states of California and New York (U.S. Census

Bureau, 2010). Chinese individuals, according to the 2010 Census, were the largest Asian group represented in the U.S. with approximately 3.8 million residents, followed by Filipinos/as (3.2 million), Indians (2.8 million), Vietnamese (1.7 million), Koreans (1.6 million) and Japanese (1.3 million) (U.S. Census Bureau, 2010).

The presence of Asian Americans in the U.S. labor market is also increasing. According to the U.S. Census Bureau (2011), there are approximately 6.7 million Asian Americans, ages 16 and older, employed in the U.S. Data from the U.S. Census Bureau (2010) stated Asian Americans are over-represented in management, professional and related occupations (47%) in comparison to the overall population (37.2%). Asian Americans are also over-represented in professional and related occupations when compared to the overall population (32.1% and 22.2% respectively). In particular, Asian Americans were more visible than the overall population in computer and mathematical occupations (8.5% and 2.5%) (U.S. Census Bureau, 2011). However, Asian American workers were underrepresented in education and construction careers (3.9% and 1.7% respectively) (U.S. Census Bureau, 2010, 2011). Additionally, there were gender differences in regards to income. For example, Asian American men earned approximately \$936 weekly whereas Asian American women earned \$773 weekly (U.S. Census Bureau, 2010). This data from the 2010 U.S. Census suggests Asian Americans are more represented in management and professional occupations than any other types of occupations.

These representations in occupations can be related to educational attainment. Approximately 52.4% of Asian Americans age 25 and older held bachelor's degrees and

higher in comparison to 30% of the overall population (U.S. Census Bureau, 2011).

Based on this, it is evident this population strives to obtain higher education. However, higher educational attainment may contribute to the “model minority” myth which states Asian Americans do not experience any discrimination or racism due to their upward social mobility and economic and financial success (Leong & Serafica, 1995).

Overall, it is clear that Asian Americans are becoming more visible in the U.S. in addition to significantly contributing to the labor market. They appear to be more represented in management, professional, and related occupations while being less represented in natural resources, construction, and sales occupations, among others (U.S. Census Bureau, 2010, 2011). While this group is also achieving higher levels of educational attainment than the overall population, it is necessary to examine the reasons for the over- and under-representation in certain fields. For instance, it is essential to consider contextual factors that influence this population’s occupational aspirations. This information can help career counselors better conceptualize and assist Asian Americans making career-related decisions.

Asian American Career Development Process

Research on Asian American career development began in the 1970s with the influx of Asian immigrants following the Immigration Act of 1965 (Kim, 2011). Within the past two decades, research in this area has gained significance. This is partly due to this population becoming one of the fastest growing minorities in the U.S. (Leong & Gupta, 2007). Scholars have also suggested more research is needed to learn how to effectively provide career counseling services for this group (Lowe, 2005). Research

about this topic has focused on two areas: 1) individual levels of analyses and 2) group and societal levels of analyses (Leong & Gupta, 2007; Leong & Serafica, 1995). This section will provide a review of the literature addressing both levels of analyses, highlighting the career interests and choices of Asian Americans, family influence, occupational segregation, and occupation discrimination (Leong & Gupta, 2007; Leong & Serafica, 1995).

Individual Levels of Analyses

Researchers have strived to understand the individual levels of analyses that influence the career development process of Asian Americans to gain a better understanding of how this group makes career-related decisions (Leong & Gupta, 2007). Individual levels of analyses include the examination of Asian Americans' interests, choices, and occupational values (Leong & Gupta, 2007). By exploring these factors, researchers and career counselors can assist Asian Americans as they progress through the career development process.

Career interests. Vocational interests have been a significant area of interest in the individual level of analysis. When Leong (1985) provided an initial review of the literature about Asian American career interests, there were three published empirical studies and one dissertation addressing this area. When examining vocational interests, Leong (1985) found gender differences among Chinese Americans. In his study, Chinese American men showed more interest in occupations related to physical science, skilled technical trades, and business and less interested in social services fields, when compared White male participants (Leong, 1985). Chinese American males' vocational interests

were also more masculine and aspired to lower levels of occupational status and responsibility (Leong, 1985). Chinese American females, in comparison to White females, were more oriented towards occupations such as teaching and secretarial work (Leong, 1985). They were also more interested in biological and physical sciences related occupations than social sciences aesthetic-cultural fields (Leong, 1985). One limitation of this study was that career traditionality was not examined which could explain the vocational interests of Chinese American women.

Leung et al. (1994) conducted a study comparing the career aspirations of Asian American and Caucasian college students. Participants were asked to complete an Occupations List in which they answered whether or not they had considered pursuing a list of 155 occupations (Leung et al., 1994). Results found Asian American college students were more likely to consider occupations classified as Realistic and Investigative (Leung et al, 1994). In comparison, Caucasian students were more likely to consider occupations classified as Artistic, Enterprising, and Conventional (Leung et al., 1994). Significant trends related to gender were also noted in this study's results. For example, Asian American men were more likely to consider traditionally male occupations in comparison to Caucasian men (Leung et al., 1994).

Findings also suggested Asian American women were more likely to consider nontraditionally female occupations in comparison to Caucasian women (Leung et al., 1994). However, this study only examined differences between Asian Americans as a whole in comparison to Caucasian students, and did not examine within group differences for Asian Americans. Additionally, this study only utilized college students

which limits generalizability about the overall career development process of Asian Americans and Caucasians.

This study also examined the personality structure and prestige hypotheses (Leung et al., 1994). The personality structure hypothesis states Asian Americans are drawn to careers in science and technology based on certain personality traits which include engaging in work that requires more logic and structure (Leung et al., 1994). These personality traits include engaging in work that requires more logic and structure (Leung et al., 1994). The prestige hypothesis is related to occupational values, stating that Asian American college students are more likely to choose majors, and ultimately careers, based on the prestige and status of these majors and careers (Leung, 1991; Leung et al., 1994). This hypothesis was supported by Leung et al. (1994), finding Asian American college students endorsed interests in occupations perceived to be prestigious when compared to their Caucasian counterparts.

However, there are several limitations of this study. For example, Leung et al. (1994) only sampled college students. The researchers did not take into consideration other variables that could have influenced students' consideration of occupations such as family, acculturation, and overall career aspirations. It is necessary to consider how Asian American college students decide whether or not an occupation is characterized as prestigious.

Tang et al. (1999) also examined the relationship between contextual factors and vocational interests of Asian American college students utilizing the SCCT framework. Their findings indicated this group often pursues limited occupational choices within the

Realistic and Investigative areas. Results also suggested vocational interests for this population were not related to career choice, noting that acculturation, self-efficacy, and family background influenced career choice (Tang et al., 1999). Therefore, it is important to examine the importance of contextual factors which may influence this group's career interests and choices. However, this study is limited in its generalizability by only examining the contextual factors and vocational interests of college students.

Sue and Kirk (1973) found within group differences among Asian Americans, focusing specifically on the vocational interests of Japanese and Chinese American college students in comparison to other ethnic groups. Results found Japanese and Chinese American college students showed similar trends in vocational interests. Both groups endorsed greater interest in physical sciences and technical skilled occupations and less interested in social occupations (Sue & Kirk, 1973). However, there were differences in vocational interests when Japanese American and Caucasian college men were compared. Results suggested Japanese American men were not more interested in physical sciences than their Caucasian male counterparts (Sue & Kirk, 1973). Japanese American men also expressed similar interests in social sciences occupations when compared to Caucasian males (Sue & Kirk, 1973). Japanese American women did not express more interest in domestic fields than Caucasian women (Sue & Kirk, 1973). The researchers suggested variables such as acculturation and assimilation could have influenced the career choices of all groups. However, these variables were not explicitly examined in this study and could have influenced participants' vocational interests.

In a different study, Tang (2002) investigated the association of career choices and parental influence among Asian American, Caucasian American, and Chinese college students. Participants were asked to answer questions about their actual and ideal career choices as well as their parents' preferences (Tang, 2002). Findings suggested ethnic group differences in relation to vocational choice, highlighting Asian American and Chinese students were more likely to choose Investigative occupations whereas Caucasian American students were more likely to choose Social occupations (Tang, 2002). The results from this study also found career choices were significantly related to parental expectations regarding career for Asian American and Chinese college students (Tang, 2002). Both groups reported their fathers were the most influential people in their career choices whereas Caucasian American college students viewed themselves as the most important when making career decisions (Tang, 2002). However, this study only utilized college students which limits its generalizability. Additionally, participants were asked to answer questions about their parents' preferences which may or may not be an accurate representation of their parents' actual preferences.

The studies examining the vocational interests of Asian American career development provide career counselors and researchers with valuable information about differences on career aspirations and choices. Several factors, such as parental influence, may influence how this group makes career-related decisions. However, these studies only considered Asian American college students' perspectives and asked them to convey their parents' perceptions. Obtaining information from their parents' perspectives would be beneficial to examine and is a gap in the current literature.

Career choices. It has been shown that Asian Americans' career choices are not directly related to their career interests. Leong and Gupta (2007) note many Asian American adolescents may initially be interested in pursuing artistic occupations, but later enter medical or engineering fields due to parental guidance. As noted above, Tang et al. (1999) found career interests were not related to choice for this group. The results also suggested the importance of parental involvement on career choice, noting that higher parental involvement predicted more traditional career choices (Tang et al., 1999). Similarly, Asian American parents are aware of workplace discrimination which may impact their children's career choices (Sue & Okazaki, 1990). Due to this discrimination, Asian American parents may believe their children would have an easier time if they pursued respectable occupations in which other Asian Americans have already succeeded in (Sue & Okazaki, 1990). However, there has been limited research in terms of how parents formulate such beliefs and how these beliefs are passed on to their children because few studies have examined both parents and their children together.

In Fouad et al.'s (2008) qualitative study with 12 Asian Americans, seven domains were found to influence this population's career development. The domains were: 1) family, 2) culture, 3) external factors, 4) career goals, 5) role models, 6) work values, and 7) personal characteristics (Fouad et al., 2008). All participants stated their career decisions were influenced by their families and cultures of origin (Fouad et al., 2008). Family expectations, in particular, impacted participants' goals, interest development, work values, and other traditional career variables (Fouad et al., 2008). An advantage of this study was the participants were not all college students which provides

researchers and clinicians with more insight regarding the career development process of Asian Americans.

Based on the studies in this section, it is evident that career choices may not always be linked to interests for Asian Americans. In addition, these studies indicate the importance of considering various contextual factors such as parental and family involvement in the career development process.

Occupational values. Another area of research examining the individual level of Asian American career development is occupational values. In general, there is limited research on the occupational values of this population (Leong & Gupta, 2007). One of the few studies in this area examined the work values and their relationship to acculturation of 177 Chinese American fifth and sixth graders in an inner-city elementary school (Leong & Tata, 1990). The study found two important work values for Chinese American children were money and task satisfaction (Leong & Tata, 1990). The value of money is consistent with Leung et al.'s (1994) notion of prestige in Asian American career interests. Gender differences were also noted in this study. Chinese American boys valued object orientation, self-realization, and ideas-data whereas girls valued altruism (Leong & Tata, 1990). However, the study's population was fifth and sixth graders whose values may be influenced by their parents' work values. Therefore, a significant limitation to this study was not examining how the work values were transmitted from children to parents.

Studies have also compared the work values between Asian Americans and European Americans. However, these studies have demonstrated mixed findings. For

example, Park and Harrison (1995) measured career-related values among Asian American and European American college students utilizing the Career Anchor Inventory (Nordvik, 1991). Work values of service and dedication to a cause, managerial competence, technical competence, and lifestyle were ranked as most important values (Park & Harrison, 1995). There were differences in rating on the values of challenge, geographical security, and creativity/entrepreneurship between the two groups (Park & Harrison, 1995). However, the reasoning behind such differences is unclear.

While the Park and Harrison (1995) study demonstrated Asian and European American students demonstrated similar rankings of most important work values, Leong (1991) found group differences. Using the Rosenberg's (1957) Occupational Values Scale, Leong (1991) created the following clusters of occupational values: 1) social, 2) extrinsic, 3) self-expression, 4) power, and 5) security. When compared to European Americans, results found Asian Americans placed more emphasis on the extrinsic and security work values (Leong, 1991). These studies suggest the need to further examine work values for Asian Americans, but also highlight the significance of these values. Work values can be greatly influential for Asian Americans, and is important to acknowledge when engaged in career counseling.

Career maturity and adaptability. As noted previously, career development theories can help guide career counselors in assisting Asian Americans. The construct of career maturity has been significantly investigated with this group. Savickas (1997) defines career maturity as an individual's readiness to make informed vocational and educational choices that are age-appropriate. The term career maturity has been replaced

with adaptability in current research (Savickas, 2005). Previous research assessing for career maturity with Asian Americans has shown they demonstrate lower levels of career maturity in comparison to European Americans (Leong & Gupta, 2007).

One such study examining the attributes of Asian American and European American college students in relation to career maturity found Asian Americans demonstrated more dependent decision-making styles (Leong, 1991). Differences in decision-making styles can be related to cultural orientations such as collectivism versus individualism (Leong & Gupta, 2007). Further, Asian Americans endorsed lower levels of career maturity in comparison to European Americans (Leong, 1991).

Hardin, Leong, and Osipow (2001) also examined differences in career maturity, acculturation, and self-construal among Asian American and European American college students. Hardin et al. (2001) found interdependence was more related to career maturity for Asian American college students, suggesting higher interdependence is associated with lower career maturity for this group. One limitation of this study was that it did not use the construct of career adaptability as proposed by Savickas (1997). Career adaptability may be a more appropriate domain to assess for Asian Americans as it considers this group's cultural context.

Summary

Based on the research presented in this section, it is important to highlight the individual levels of analyses for the career development process of Asian Americans. Researchers have concluded Asian Americans' vocational interests are not always linked to their career choices, attributing this to contextual factors such as acculturation, family

influence, and parental involvement. While it is imperative to understand how career choices are made at the individual level, it is also necessary to examine how career decisions are influenced by group and societal factors.

Group Levels of Analyses

There are multiple group and societal concerns that can hinder or facilitate the career development process of Asian Americans. Examples of such concerns include occupational segregation, stereotyping, and discrimination. By taking these considerations into account, researchers and clinicians can obtain more information about societal influences impacting this group's career development.

Occupational segregation. Data from the 2010 U.S. Census indicates Asian Americans are overrepresented in some fields (e.g. engineering, medicine), but underrepresented in others (e.g. social sciences) (U.S. Census Bureau, 2011). According to Tang et al. (1999), previous research in this area has strived to understand the causes of occupational segregation. For example, Tang et al. (1999) cited hypotheses by Leong and Gim-Chung (1995) which indicated a lack of role models could lead Asian Americans to not pursuing specific occupations. Additionally, Tang et al. (1999) noted this group often experiences workplace discrimination and occupational segregation "because they suffer from low self-confidence and a sense of powerlessness" (p. 143).

Walsh and Osipow (1983) discussed how financial rewards can encourage Asian Americans to pursue occupations in science and engineering versus the social sciences, indicating finances and job stability may contribute to occupational segregation. Based on

this evidence, it is clear Asian Americans experience occupational segregation due to various factors such as workplace discrimination and occupational stereotyping.

Occupational stereotyping. Occupational stereotyping refers to stereotyping individuals in specific occupations based on race/ethnicity or gender (Leong & Hayes, 1990). While this is an important topic, there is limited research on occupational stereotyping. One of the pioneer studies examining this topic measured three aspects of stereotyping: 1) probability of success, 2) qualifications of training, and 3) acceptance by others (Leong & Hayes, 1990). Leong and Hayes (1990) asked White college students to rate a profile of a high school senior based on these three aspects. Results found both negative and positive stereotypes related to Asian Americans. Negative stereotypes included being rated as less likely to be successful as insurance sales individuals (Leong & Hayes, 1990). Positive stereotypes included being rated as more likely to be successful as engineers, mathematicians, and computer scientists (Leong & Hayes, 1990).

Gender differences for occupational stereotypes also existed. Men were rated as being more qualified to seek training in occupations such as engineering and economists whereas women were rated as more qualified to seek training as secretaries (Leong & Hayes, 1990). The significance of these findings on the vocational development of Asian Americans is important to consider. For example, negative stereotypes may serve as barriers for Asian Americans seeking to enter the workplace. In addition, Asian Americans may foreclose early on exploring specific occupations due to stereotyping.

Occupational discrimination. Occupational discrimination is often ignored in the literature due to the prevalent “model minority” myth. This construct refers to

discriminatory experiences in the workplace that can hinder success. For example, Asian American scientists and engineers encounter occupational discrimination in American universities (National Science Foundation, 2004). In a similar study exploring the discrimination experiences of 681 Asian American female physicians, 31% reported experiencing ethnic-based harassment compared to Hispanic Americans, African Americans, and European Americans (Corbie Smith, Frank, Nickens, & Elon, 1999). This workplace harassment often led to increased stress at work and less perceived control (Corbie Smith et al., 1999). However, this study only examined female physicians whose experiences may differ from women in other occupations.

Summary

Research on the Asian American career development process has focused primarily on individual and group/societal levels of analyses. Individual levels of analyses include variables such as career interests, choices, and maturity. Previous research has shown differences in the career interests, choices, and maturity between Asian American and European American college students.

The studies in this section emphasized the importance of parental involvement and family influence on the career decision making process. However, limited studies examined both the Asian American student's perspective in addition to his/her parent's opinions related to career decisions. Therefore, it is necessary that future research addresses this gap in the literature by examining both perspectives. Research pertaining to group levels of analyses has demonstrated societal concerns that influence the career development process of Asian Americans including occupational segregation,

stereotyping, and discrimination. This information is also valuable in assisting career counselors and researchers with understanding the unique concerns of this group.

Contextual Factors and Career Development

The previous section highlighted two levels of analyses that impact the career development process of Asian Americans, noting acculturation and family as significant influences. The literature has shown there are multiple contextual factors which influence how this group makes career-related decisions. This section provides a review of specific contextual factors that have been linked to the career development process of Asian Americans. First, this section reviews the literature on acculturation and its relationship to the career development process, focusing on previous research in this area and critiquing the research methodology used. Next, literature on the construct of family influence is noted, exploring how immediate and extended family members impact how Asian Americans make decisions related to their careers. Third, the construct of intergenerational conflict is reviewed, focusing on how conflict can be a source of stress for Asian Americans in terms of career choice.

Acculturation and Acculturation Theories

Acculturation has been studied extensively in the context of psychology as a whole. In order to understand acculturation, one must note the significance of culture. Triandis (1994) defined culture as a multidimensional construct encompassing a group's shared values, behaviors, traditions, and norms. Culture can also undergo reconstruction over a period of time (Leong & Gupta, 2007). Acculturation, therefore, was first defined as the "phenomena which results when groups of individuals having different cultures

come into continuous first-hand contact with subsequent changes in the original culture patterns of either or both groups” (Redfield, Linton, & Herskovits, 1936, p. 136).

Acculturation can occur at both societal and individual levels, but most research has focused on the individual effects of this construct (Miller, 2007).

Several theories have been offered to better comprehend the process of acculturation. Graves (1967) coined the term psychological acculturation to discuss acculturation at the individual level. This process focuses on individuals’ experiences in terms of their attitudes, values, and identity as a result of being in contact with other cultures (Graves, 1967). The most commonly known theory and model of acculturation was developed by John Berry and colleagues.

In Berry’s (1980) model, acculturation is viewed as a continuum with one dimension focusing the degree to which individuals adhere to their cultures of origin (cultural maintenance) and the other dimension represents the individuals’ desire to interact with the majority group (contact-participation). Berry (1980) proposed four attitudes that can assist in our understanding of acculturation which are: 1) integration, 2) assimilation, 3) separation, and 4) marginalization. Integration occurs when individuals adhere to their cultures of origin, but also maintain interactions with the majority culture (Berry, 1980). Assimilation is the process in which individuals have daily interactions with the majority culture, but do not demonstrate interests in their cultures of origin (Berry, 1980). Separation occurs when individuals solely focus on their cultures of origin (Berry, 1980). Marginalization takes place when individuals do not endorse their cultures of origin or the majority culture (Berry, 1980).

Leong and Chou (1994) expanded Berry's model (1980) and applied it to Asian American vocational development. In particular, Leong and Chou (1994) argued Asian Americans who endorsed the Separationist identity and were less acculturated to the dominant culture would be more likely to experience occupational segregation (Leong & Chou, 1994). In contrast, Asian Americans who were more acculturated to the dominant culture would endorse Assimilationist and Integration identities and would follow similar occupational patterns as European Americans (Leong & Chou, 1994). However, this model does not necessarily take into account other influences on vocational development, such as various contextual factors, and only considers following one's culture of origin or dominant culture.

In summary, Berry's (1980) model of acculturation has been most frequently utilized in understanding the process of acculturation. Berry's model has been expanded by Leong and Chou (1994) to utilize this specific framework for Asian Americans. However, there is limited research in this area of applying Leong and Chou's (1994) model to Asian American career development. By understanding how this model of acculturation can be applied to the career context of Asian Americans, career counselors can begin to differentiate this population's occupational needs based on acculturation.

Acculturation and Career Development

Acculturation has primarily been examined in the context of Mexican Americans and Asian Americans. Flores and O'Brien (2002) conducted a study with Mexican American adolescent women in efforts to understand the influence of contextual and cognitive variables on career aspiration, traditionality, and career choice prestige utilizing

a SCCT framework. One of the primary purposes of this study was to examine the validity of SCCT for career-related goals of Mexican American adolescent women (Flores & O'Brien, 2002). The researchers found consistency in this, stating that non-traditional career self-efficacy predicted non-traditional career interests (Flores & O'Brien, 2002). Findings indicated acculturation was significantly related to career aspiration, career choice prestige, and traditionality (Flores & O'Brien, 2002).

In short, Mexican American adolescent women who were more assimilated into mainstream culture chose more gender traditional occupations and higher career aspirations than those who were not (Flores & O'Brien, 2002). Since this study examined Mexican American adolescent women who identified as high school seniors, it is important to note that the career development process could be different for Mexican American high school students as a whole. In other words, a Mexican American adolescent female who is in her first year of high school may have different experiences with career-related decisions and choices than a Mexican American high school senior.

More recently, Flores, Ojeda, Huang, Gee, and Lee (2006) examined the relationship between acculturation, problem-solving appraisal, and career decision-making self-efficacy among Mexican American high school students' educational goals and aspirations. Results indicated Mexican American high school students who were more acculturated towards the dominant Anglo culture were more likely to set higher educational goals than those who were not as acculturated to Anglo culture (Flores et al., 2006). However, this study utilized Mexican American high school students and did not highlight any gender differences, or lack thereof.

Acculturation has also been studied in the context of Asian American career development, primarily focusing on Berry's (1980) model. Acculturation is described as how an individual interacts with the dominant culture (Tang et al., 1999). For example, highly acculturated individuals tend to endorse characteristics of the dominant culture whereas less acculturated individuals adhere to their cultures of origin (Leong, 2001). According to Leong (1991), levels of acculturation can influence Asian Americans' career choice. In particular, acculturation has been linked to psychological adjustment. Asian parents who remain attached to their culture of origin and raise children who become accustomed to mainstream culture often experience more family conflict which leads to greater emotional problems (Cho & Bae, 2005).

In previous literature, Leong and Tata (1990) examined acculturation and vocation experiences among Asian Americans. In relation to acculturation, Asian Americans who had higher levels of acculturation focused more on their skills and talents when choosing occupational pursuits (Leong & Tata, 1990). Park and Harrison (1995) also noticed a relationship between acculturation and vocational outcomes for Asian American college students. Specifically, those who were highly acculturated tend to choose career goals related to more entrepreneurial opportunities than those with lower levels of acculturation (Park & Harrison, 1995). However, other variables need to be considered when examining acculturation and career goals such as family influence and parental support.

In another study, Tang et al. (1999) studied the career choices of Asian Americans, utilizing social cognitive career theory as a theoretical framework. Tang et al.

(1999) specifically examined contextual factors relevant to Asian Americans (e.g. acculturation, family SES, family involvement) and their influence on self-efficacy among 187 Asian American college students. Findings indicated that vocational interests were not related to career choice (Tang et al., 1999). However, results indicated that acculturation, self-efficacy, and family background were associated with career choice (Tang et al., 1999). Additionally, acculturation served as a mediator variable between self-efficacy and career choice (Tang et al., 1999). A limitation of this study is that it only examined college students and did not investigate within group differences. As noted previously, each Asian subgroup has a unique relationship with the U.S. and it is important to consider how these relationships may influence acculturation and assimilation into the dominant culture.

More recently, Leong (2001) examined the impact of acculturation on job satisfaction, occupational stress, and supervisors' performance ratings of their Asian American employees in an attempt to test Leong and Chou's (1994) formulations. Leong and Chou's (1994) formulations were supported by demonstrating low acculturation levels (e.g. less acculturated to dominant Anglo culture) among Asian Americans was correlated with higher levels of occupational stress and lower levels of job satisfaction (Leong, 2001). Asian Americans who were highly acculturated in to the dominant culture experienced higher levels of job satisfaction and positive supervisors' performance ratings (Leong, 2001). An advantage of this study was its use of Asian American employees in comparison to many studies in this area that focused primarily on college students.

Similarly, Hardin et al. (2001) examined the maturity of career choice attitudes and acculturation between Asian American and European American college students. Maturity of career choice included the degree to which participants tried to make autonomous and independent decisions (Hardin et al., 2001). Findings suggested Asian Americans in the high acculturation group did not exhibit differences in the maturity of career attitudes when compared to European Americans. However, the notion of maturity of career choices must be conceptualized from a cultural standpoint as Asian Americans may place more emphasis on family influence.

Acculturation has also been associated with family conflict in education and career choices. In Chung's (2001) study examining the relationships between gender, ethnicity, acculturation, and intergenerational conflict among Asian American college students. Results suggested those who were more acculturated reported experiencing less conflict with their parents, specifically regarding education and careers. While Chung (2001) highlighted that this finding may appear to be counterintuitive at first, she argued individuals who are more acculturated to the dominant culture may also be raised by parents who were born in the U.S. or resided in the U.S. for long periods of time.

Farver, Narang, and Bhadha (2002) conducted a study with 180 Indian adolescents and their immigrant parents, examining ethnic identity, acculturation, and family conflict. Their hypothesis that conflict would be higher in families where there was a mismatch between Indian adolescents and parents acculturation styles (e.g. integrated, assimilated, marginalized, separated) (Farver et al., 2002). Their findings also suggested less family conflict when there was no acculturation gap between adolescents

and their parents (Farver et al., 2002). Similarly, Fan's (2012) dissertation found that conflict is higher among 23 Chinese adolescents and their immigrant parents when their acculturation styles differ.

Summary

Overall, the studies support that the construct of acculturation play a significant role in the career choices of two specific minority groups. Further, Asian Americans levels of acculturation have important outcomes on variables such as job satisfaction and occupational stress (e.g. Leong, 2001). Varying degrees of acculturation can also impact Asian Americans' career choice as demonstrated by findings in Leong's (1991) study. Further, differences in acculturation between Asian parents and their children can lead to family conflict, emotional problems, and lower levels of psychological well-being.

Family Influence and Career Development

Research has highlighted the importance of family and parental influence in the career development process of minority groups. In a review of the literature, Schulenberg, Vondracek, and Crouter (1984) emphasized the significance of the impact of family on vocational development. They identified specific family characteristics, such as socioeconomic status, that were positively associated with individuals' occupational status, aspirations, and educational attainment (Schulenberg et al., 1984).

Racial and ethnic differences in families have also shown to be contribute to the career development process. Initial discussions regarding the role of minority vocational development involved comparing African Americans and Caucasians. Portes and Wilson (1976) demonstrated Caucasians' predictors of educational expectations were parental

status, abilities and grades whereas African Americans' educational expectations were self-esteem and educational aspirations. Discriminatory practices in the U.S. climate also contributed to differences in educational attainment and aspirations (Hauser & Featherman, 1974). Hernandez (1973) studied Mexican American students' achievement in comparison to Caucasian students, finding vocational and educational aspirations were lower for Mexican American males. This difference was partially attributed to cultural values and family aspirations for one's child (Hernandez, 1973).

In more recent studies, factors such as perceived parental support have been reported to be important in the career development process of minority groups. For example, a qualitative study by Fisher and Padmawidjaja (1999) examined the influence of parental support on the career choices of 20 African American and Mexican American college students. Results from participants' interviews supported the role of parental support in the career decision-making process of these minority groups (Fisher & Padmawidjaja, 1999). Parental availability and encouragement were viewed as significant factors which influenced the development of positive parent-child relationships and career development (Fisher & Padmawidjaja, 1999).

Asian American career development has focused on the influence of family and parents. Leong and Serafica (1995) noted Asian American parents often provide guidance in this area as they typically have a set of values related to education (e.g. importance of higher education, high occupational expectations) that they pass onto their children. These educational and career-related values can ultimately influence their children's career development process (Young et al., 2003).

In a different study, Leung, Hou, Gati, and Li (2011) examined cultural-values conflict and parental expectations on the career-decision making process of Chinese college students in China. The researchers argued that a relational aspect is important to consider within Chinese communities due to its collectivist orientation (Leung et al., 2011). They hypothesized Chinese college students will most likely experience cultural-values conflict due to being exposed to both traditional Chinese and Western cultural values (Leung et al., 2011). In particular, Chinese college students who experienced higher degrees of cultural-values conflict would experience higher levels of career decision-making difficulties (Leung et al., 2011). In contrast, those who experienced lesser degrees of conflict would not experience as much career decision-making difficulties (Leung et al., 2011). Another hypothesis that was tested was that higher parental expectations would be associated with higher levels of career decision-making difficulties (Leung et al., 2011).

Findings indicated specific areas of parental expectations (e.g. academic achievement) had stronger effects on career decision-making difficulties (Leung et al., 2011). Specifically, Chinese college students who acknowledged higher parental expectations in relation to academic achievement and felt their performance in these areas were inadequate were more likely to experience career decision-making difficulties (Leung et al., 2011).

The findings also have implications for taking into account contextual factors when making career decisions, suggesting the “effects of contextual factors on an individual are often moderated by his/her cultural orientation” (Leung et al., 2011, p. 18).

For example, a Chinese university student who adopts a more traditional Chinese cultural-value orientation (e.g. filial piety, submission to authority) might place more emphasis on parental expectations (Leung et al., 2011). This individual's career decision-making difficulties will significantly differ from a Chinese university student's (Leung et al., 2011). The Chinese university student may adopt more of a Western cultural-value orientation and might not focus on parental or other social expectations (Leung et al., 2011). It is important to consider that this study focused on college students in China who endorsed a collectivist orientation and valued parental input about their career choices. The study also highlights the importance of parental expectations when working with college students who identify with a collective orientation.

Fouad et al. (2008) and Tang et al. (1999)'s results both highlight the importance of this contextual factor as well, citing the need to consider family influence, expectations, and obligations into the career counseling of Asian Americans. Varying degrees of family influence can impact what occupations Asian Americans ultimately pursue. In a study by Bright, Duefield, and Stone (1998), Asian Americans were more likely than other minority groups to endorse family influence as a significant factor to enter medicine as an occupation. Similarly, Gim (1992) found Asian American adolescents reported higher level of parental pressures as being influential in their career choices.

A limitation in these studies is the failure to examine career choices from the family or parental perspective. The studies presented in this section thus far have considered Asian Americans students' perspectives about career choice and aspirations,

but have neglected to consider their parents' views on career choices together. There has been limited research that has examined both parent and child perspectives.

Young et al. (2003) examined six Chinese Canadian families from a larger dataset comprised of adolescent-parent dyads to determine the role of family on the career decision-making process. Each dyad was responsible for discussing and identifying career-related goals (Young et al., 2003). While this study highlighted the importance of communication about the career development process between parents and their children, this study was not embedded in a career-related theoretical framework.

There have been a few studies that have strived to fill the gap in existing literature, such as Hou and Leung (2011) and Roysircar, Carey, and Koroma (2010). In Hou and Leung's (2011) study, the researchers explored Chinese high school students' vocational aspirations and their parents' vocational expectations for their children utilizing Gottfredson's circumstance and compromise theory (Hou & Leung, 2011). Results reported Chinese male and female high school students preferred occupations classified as Investigative, Enterprising and Artistic (Hou & Leung, 2011). However, their parental expectations for occupational choice varied by gender (Hou & Leung, 2011). Parents were more likely to expect their sons to enter Investigative occupations and expected both their sons and daughters to enter Enterprising occupations (Hou & Leung, 2011). They also found congruence between parental expectations and child's aspirations to be higher for parent-male student dyads than parent-female student dyads (Hou & Leung, 2011).

Roysircar et al. (2010) examined the cultural, immigrant, and prejudicial contexts for Asian Indian immigrant college students and their parents. Their findings demonstrated the significance of generational status when considering math and science majors for this population. For example, they found that first generation Asian Indian parents' preferences for their U.S. born children, who were second generation, were influential in their children's ratings for math and science majors (Roysircar et al., 2010). They also found that second generation students often did not prefer science majors but were influenced by their parents towards math and science majors (Roysircar et al., 2010).

Based on these studies, it is evident the role families and parents play in the career development process of Asian Americans. Family and parental involvement has been reported to influence the career decision-making processes of Asian American high school and college students (e.g. Hou & Leung, 2011; Leung et al., 2011). These studies also reported Asian American parents provide more guidance in the area of their children's career development as they value higher education and have high occupational expectations for them (Leong & Serafica, 1995).

While the contextual factors of family and parental influence are important, most of these studies have solely focused on Asian American college students' perspectives. Hou and Leung (2011) and Roysircar et al. (2010) highlighted how obtaining data from both Asian parents and their children is significant. By receiving both parents' and children's reports on perceived family and parental influence, career counselors can explore this avenue with their Asian American clients further.

Intergenerational Family Conflict and Career Development

Intergenerational family conflict has traditionally become noticeable during one's early adolescence over concerns of autonomy across ethnicities (Arnett, 1999). As students begin to enter college, they begin to separate from their parents with noticeable shifts in parent-child relationships (Lee, Su, & Yoshida, 2005). During this time, students start to develop their own personal identities in addition to turn to their peers for social support instead of their parents (Lee et al., 2005). As students become more autonomous, they might experience more conflict with their parents related to topics such as career choice, dating, and relationships (Chung, 2001).

This construct has been reported to be relevant across various cultures. Fuligini (1998) investigated intergenerational conflict and cohesion among Mexican, Chinese, Filipino/a, and European American adolescents. The purpose of this study was to determine whether ethnically diverse adolescents with varying cultural traditions about autonomy and authority had different perceptions of their relationships with their parents (Fuligini, 1998). Results found differences among the four ethnic groups regarding parental authority and individual autonomy (Fuligini, 1998). However, all groups reported similar levels of conflict and cohesion with their parents (Fuligini, 1998). Mexican, Chinese, and Filipino/a adolescents were less willing to disagree with their parents when compared to European American adolescents (Fuligini, 1998). Additionally, these three groups reported a lower emphasis on individual autonomy than European Americans (Fuligini, 1998).

Gender and age differences were also reported in the study's findings. Girls, regardless of their cultural backgrounds, held expectations for later autonomy than boys (Fulgini, 1998). Older adolescents were found to express a greater willingness to disagree with their parents and were less likely to accept parental authority than their younger peers (Fulgini, 1998).

Intergenerational conflict was also examined by Lee and Liu (2001). In their study, Asian American, Hispanic, and European American college students were compared in terms of likelihood of intergenerational conflict, coping strategies used to manage this conflict, and effects of this conflict on psychological distress (Lee & Liu, 2001). Lee and Liu (2001) found Asian American college students reported the greatest likelihood of experiencing intergenerational family conflict, regardless of generation status. This suggests cultural differences between parents and children can lead to intergeneration conflict (Lee & Liu, 2001).

This study provides support for research conducted by Lee et al. (2000) where findings suggested Asian American parents and children with the fewest cultural differences (e.g. those parents and children who were highly acculturated to Western culture) reported less likelihood of family conflict (Lee & Liu, 2001). This study highlighted the importance of recognizing differences between parents and their children, but did not examine intergenerational conflict from the parent and child perspectives. Rather, the study examined how Asian American, Hispanic, and European American college students perceived intergenerational conflict. The findings of this study are also limited to the specific ethnic groups mentioned. It is important to note that while this

study utilized college students, comparisons were made between various ethnic groups. This can be viewed as a limitation as each ethnic group examined has different cultural values and orientations.

Discrepancies between family expectations and actual occupations chosen by Asian Americans can lead to family conflict (Ma & Yeh, 2005). Ma and Yeh (2005) conducted a study with 129 Chinese American adolescents, hypothesizing that Chinese American adolescents born in the U.S. would experience more conflict with their parents regarding career choice in comparison to those who immigrated. As a result, high levels of intergenerational family conflict would lead to career indecision (Ma & Yeh, 2005). Their findings suggested positive correlations between intergenerational family conflict and career indecision (Ma & Yeh, 2005). Additionally, those students born in the U.S. experienced more intergenerational family conflict than those born in China (Ma & Yeh, 2005). While this study is important in examining conflict with parents surrounding career choice, it can be expanded to assess intergenerational family conflict past adolescence. For example, family conflict can increase in college when students are faced with the challenge of declaring a major and/or career choice.

Deciding whether to pursue family wishes or one's own expectations can be a source of stress (E.Y. Kim, 1993). In career counseling sessions, many Asian American college students highlighted their cultures' collectivist orientation and noted struggles meeting parental expectations about academic success and career choice (Lowe, 2005). By further conceptualizing and understanding these specific components, researchers and

clinicians can strive to help Asian Americans who hold collectivistic orientations navigate through an individualistic society.

Cultural Values

This section provides a review of existing literature on cultural values, highlighting the importance of considering individualist and collectivist orientations. Next, cultural values, as related to Asian American career development, is reviewed. Within a multicultural framework of psychology, cultural values are important to consider in counseling relationships as Western and minority group cultures vary. Many scholars have argued for the importance of cultural values, but also assert this area may have neglected in past research (e.g. Hartung et al., 1998).

Individualist and Collectivist Orientations

One significant factor to comprehend when examining cultural values is the notion of individualism and collectivism. Triandis (1995) noted the idea of individualist versus collectivist orientations, stating groups are often categorized as one of the two. Individualistic orientations are comprised of societies that possess the value for autonomy (Triandis, 1995). In this worldview, individuals are separate from the family or group, and it is common for children to separate from their parents during specific developmental milestones (Triandis, 1995).

Such milestones can include when a child becomes an adult and is able to make autonomous decisions (Triandis, 1995). Other groups and societies adhere more towards collectivist orientations which value the family or the group over individuals. Cultures adhering to collectivism are often interdependent in nature, relying on each other instead

of one's self (Triandis, 1995). In general, it is often thought Western countries such as the U.S. are more individualist in nature whereas Eastern countries such as Asia are more collectivist (Triandis, 1995).

Asian Cultural Values

Asian cultural values are more oriented towards collectivism and often have differing value systems than mainstream (e.g. Western) society (Leong & Gupta, 2007). Many researchers have argued for the need to understand Asian values which resulted in examining cultural values between Asian Americans and European Americans (e.g. Sue & Sue, 2003). In particular, Ho (1987) and Sue and Sue (2003) have argued the role of family within Asian American families can be viewed as interdependent in which family roles do not interfere with each other.

In relation to making decisions, Asian Americans often make decisions for the benefit of their families instead of their personal preferences (Leong & Chou, 1994). Examples include Asian Americans making decisions related to their career aspirations, educational attainment, and occupational choices (Leong & Tang, 2002).

An Asian American's self-worth and self-identity are related to his/her family achievements (Fernandez, 1988; Kitano & Matsushima, 1981; Tomita, 1994). For instance, when an Asian American makes a decision or is successful, the entire family of that individual Asian American is viewed positively (Sue & Sue, 2003). On the contrary, if an Asian American demonstrates inappropriate behaviors, the entire family shares in the embarrassment and failure (Sue, 1981). Leong and Tang (2002) demonstrated this idea in their study with Asian American college students, finding traditional Asian

Americans placed high value on parental expectations when making career-related decisions.

Previous research has demonstrated that Asian Indian families in particular have been influenced by a patriarchal, joint family system that involves parents, grandparents, and other elders when discussing culturally expected and appropriate behaviors (Inman, Howard, Beaumont, & Walker, 2007). Research has also found that Asian Indian parents often endorse authoritarian parenting styles (Jambunathan & Counselman, 2002) in addition to emphasizing academic achievement (Tewari, Inman, & Sandhu, 2003). Within this context, first-generation parents perceive themselves as being responsible for transmitting cultural values to their children (Roysircar Sodowsky & Carey, 1988)

Filial piety is another significant Asian cultural value, characterized by respect, honor, and sacrifice on the part of children for their parents (Chen, 1982). This also demands obedience to parents as well and understanding their needs and wishes (Murakawa, 1986). In addition to respect for parents, Sue (1981) noted Asian elders are treated with respect and reverence. Respecting parents and elders is based on the cultural expectation that authority figures have knowledge and expertise (Sue, 1981). Asian Americans who adhere strongly to Asian cultural values will also defer to authority figures such as their parents and elders to make important decisions (Kitano & Matsushima, 1981; Leong, 1992; Sue & Sue, 2003).

Kim, Atkinson, and Yang (1999) generated an initial list of Asian cultural values by reviewing the literature about this topic, using a nationwide survey of Asian American psychologists, and conducting three focus-group discussions. One hundred and twelve

statements represented 14 value dimensions which were: 1) ability to resolve psychological problems, 2) avoidance of family shame, 3) collectivism, 4) conformity to family and social norms and expectations, 5) deference to authority figures, 6) educational and occupational attainment, 7) filial piety, 8) family importance, 9) maintenance of interpersonal harmony, 10) placing others' needs ahead of one's own needs, 11) reciprocity, 12) respect for elders, 13) self-control and restraints, and 14) self-effacement (Kim et al., 1999).

These cultural values, specific to Asians, must be considered in counseling settings. More importantly, counselors must determine whether or not their Asian American clients adhere to traditional Asian cultural values to obtain a better understanding of their worldviews. The extent to which these values influence the career development process of Asian Americans has been explored in previous literature.

Asian Cultural Values and Career Development

Cultural values, as a whole, have been linked to the career development process. Specific cultural values have been related to the relationship between individualism and collectivism and counseling outcomes (Lowe, 2005). However, research linking cultural values and career development has been limited in scope.

Gaps in cultural values between parents and children can often lead to conflict. In Ahn, Kim, and Yang's (2008) study with Korean American college students, this specific topic was explored. In general, their findings demonstrated participants did not adhere as strongly to Asian values when compared to their parents. When they encountered conflicts, participants utilized problem-solving coping strategies the most. Simultaneous

regression analyses indicated a positive relationship between participants' perceived gap with their parents in terms of cultural values and intensity of conflicts (Ahn et al., 2008). While this study was not related to career choices, it demonstrated the significance of cultural gaps leading to conflicts. If cultural gaps can lead to conflict regarding dating and marriage situations, it is possible that adherence to non-traditional Asian cultural values regarding traditionality of career choice can lead to conflict in that area. However, this study, like many others, only examined college students. This study also focused on one specific ethnic subgroup which cannot be generalized to other Asian groups.

When seeking career counseling services, Asian American college students may encounter therapists who promote individualist values regarding career choices (Lowe, 2005). Some potential areas of concern include cultural misunderstandings and a lack of reinforcement of collectivist cultural values (Lowe, 2005). Clients and counselors may often conflict regarding value orientations during counseling sessions (e.g. individualism vs. collectivism) (Lowe, 2005).

To further test this, Lowe (2005) examined Asian American college students who were receiving career counseling services from European Americans implementing an individualist or collectivist orientation. Asian American college students reported therapists who expressed a collectivist value orientation in therapy higher on cross-cultural competence than therapists who endorsed an individualist value orientation (Lowe, 2005). Specific areas of the collectivist orientation that were implemented were exploring family involvement in students' careers, family expectations, and sacrifices for the collective group (Lowe, 2005). This further supports Leong's (1993) notion that

collectivist principles should be incorporated when counseling Asian Americans on career issues.

Tang et al. (1999) further argued the importance of considering Asian cultural values in the career choices of Asian Americans. If an individual identifies strongly with Asian cultural traditions and endorses an Asian cultural identity, he/she will place importance on the family's role in career choices. It is known that Asian Americans seek counseling related services for academic and vocational concerns. Therefore, exploring the degree to which they adhere to traditional Asian cultural values is an important part of the counseling process.

Present Investigation

While there is pertinent evidence suggesting the presence of contextual factors influencing the career choices of Asian Americans, most of the research on the career development of this group has focused on college students. Limited information is available regarding parents' and their children's perceptions regarding the career process. Therefore, this study strives to address that gap in the literature by examining variables that have been shown to influence the career development process of Asian American college students. This study hopes to contribute to existing literature by including parents' opinions regarding their children's career choices while examining their children's perspectives simultaneously.

CHAPTER III

METHODOLOGY

The purpose of this chapter is to state the research questions and proposed hypotheses, describe the participants, outline the procedure for data collection, explain the measures that were administered, and provide methods for data analysis.

Purpose of the Study

Prior research in vocational psychology has examined how contextual factors such as family influence, acculturation, cultural values, and intergenerational conflict have influenced the overall career development process of Asian Americans. However, the vocational psychology literature has rarely examined the role of parent-child dyads in the career decision making process. Previous research has surveyed Asian American college students to gain a better understanding of what factors influence their career choices. These studies have found that Asian American college students emphasize family influence when making career-related choices. Additionally, researchers have often relied on Asian American college students to self-report their parents' perceived roles on the career development process. However, there are several limitations to this approach.

First, Asian American college students may not accurately represent their parents' perspectives. Second, researchers may not be able to fully understand how parents and their college age children influence each other in the career development process by simply having college students participate. Therefore, the primary purpose of this study was to address the gap in current vocational psychology literature by examining the

degree to which parent-college age children dyads are congruent about family influence on careers, specifically investigating acculturation, cultural values, and intergenerational conflict.

Research Questions

1. Is the factor structure for the Family Influence Scale and Intergenerational Conflicts Item Pool the same for Asian parents and their college age children?
2. Is congruence of family influence on careers predicted by congruence of acculturation, cultural values, and intergenerational conflict for Asian parent-college age child dyads?

Hypotheses

Hypothesis 1: The factor structure for the Family Influence Scale and Intergenerational Conflicts Item Pool is the same for Asian parents and their college age children.

Hypothesis 2: Congruence of family influence on careers is predicted by congruence of acculturation, cultural values, and intergenerational conflict for Asian parent-college age child dyads.

Participants

An a priori analysis was conducted using the program G*Power 3.1 to determine the needed sample size to achieve a specific significance level, desired statistical power, and desired effect size (Faul, Erdfelder, Buchner, & Lang, 2009). Based on factor analyses and multiple regression analyses ($\alpha = 0.05$, power = 0.80, and medium effect size), the sample size required is 200. Therefore, a minimum of 200 Asian parent and college age children pairs were needed. Due to difficulties with recruitment, this

sample size was not obtained and did not satisfy the minimum requirements for factor analyses.

Parent participants had to identify as residing in the U.S., speak English, identify as Asian or Asian American, and be currently raising a college age child who attends a two-year or four-year university in the U.S. Parents who did not meet these criteria were excluded from the study.

In order to participate, college age children had to identify as currently attending a two-year or four-year university in the U.S., speak English, be 18 or older, and identify as Asian or Asian American. College age children that did not meet these criteria were excluded from the study.

Parent Participant Information

Table 1 presents the demographic information for the parent participants. Table 2 presents the occupation choices parent participants had for their children. There were 30 parents (N = 15 female, N = 15 male) who identified as Asian or Asian American and whose students completed the student version of the survey. Their ages ranged from 44 - 67 (N = 29, M = 53.55 years, SD = 6.350). One participant chose not to report her age. All 30 participants reported being married.

One participant reported being born in the U.S. while 29 reported being born outside of the U.S. Countries of origin for those born outside of the U.S. ranged from British Crown Colony of Hong Kong (N = 1), China (N = 1), India (N = 5), Indonesia

(N = 2), Laos (N = 1), Laos and China (N = 1), Philippines (N = 4), Singapore (N = 1), South Korea (N = 1), Taiwan (N = 4), Myanmar (N = 1), and Vietnam (N = 1). Length of residence in the U.S. ranged from 0 years to 50 years.

Parent participants resided in the following states: Michigan (N = 8), Illinois (N = 7), Wisconsin (N = 3), California (N = 2), Florida (N = 1), Massachusetts (N = 1), Virginia (N = 1), and Texas (N = 1). Six parent participants either did not report the state they were currently residing in or wrote “Not Applicable.” Since it was unclear what “Not Applicable” meant, they were included in the sample. The majority of parent participants resided in the Midwest (N = 17), Southwest (N = 2), Southeast (N = 2), West (N = 2), Northwest (N = 1), and Northeast (N = 1). Five parent participants did not respond to this question.

Table 1

Demographic Information for Parent Participants

	N	%	M	SD
Age	29		53.55	6.350
Ethnic Background				
Chinese	13	43.3%		
Indian	4	13.3%		
Filipino/a	4	13.3%		
Taiwanese	3	10.0%		
Hmong	2	6.6%		
Japanese	1	3.3%		
Korean	1	3.3%		
Biracial (Chinese/Burmese)	1	3.3%		
Chinese/Indonesian	1	3.3%		
Socioeconomic Status				
Working class	9	30%		
Middle class	14	46.7%		
Upper middle class	6	20.0%		
Wealthy	1	3.3%		
Type of Community				
Rural	1	3.3%		
Suburban	22	73.3%		
Urban	6	20.0%		
Other	1	3.3%		
Number of Children				
One	4	13.3%		
Two	15	50.0%		
Three	9	30.0%		
Four	2	6.7%		
Generational Status				
1st Generation	26	86.7%		
3rd Generation	1	3.3%		
5th Generation	2	6.7%		
Other	1	3.3%		

Table 1 (continued)

Highest Level of Education		
Elementary/secondary school	2	6.7%
Some high school	3	10.0%
High school diploma or equivalent	4	13.3%
Some college	1	3.3%
Associate or two year degree	1	3.3%
Bachelor's or four year degree	10	33.3%
Graduate or professional degree	8	26.7%
Not applicable or Don't know	1	3.3%

Table 2

Occupational Choices of Parent Participants for their Children

	N	%
Occupation Choice for Children		
Career that finds happiness, accomplishment, worth, financial stability	1	3.3%
Anything/Whatever he/she chooses	6	20.0%
Director of Finance	1	3.3%
Doctor	2	
Doctor, lawyer, business	1	3.3%
Doctor, lawyer	1	3.3%
Education and English major	1	3.3%
Engineer	2	6.7%
Professional engineer (in structural engineering)	1	3.3%
Entrepreneur	1	3.3%
Medical	1	3.3%
Nursing	1	3.3%
Physician	1	3.3%
Professor or engineer	1	3.3%
Professor	2	6.7%
Psychology or research field	1	3.3%
Psychology or medical field	1	3.3%
Research/teaching	1	3.3%
Software	1	3.3%
Teacher	1	3.3%
Working in government/professor	1	3.3%
Uncertain	1	3.3%

Student Participant Information

Table 3 presents the demographic information for the student participants. Table 4 presents the academic information for these participants. There were 30 college students (N = 13 female, N = 17 male) who identified as Asian or Asian American and whose students completed the student version of the survey. Their ages ranged from 18-27 (M = 21.50 years, SD = 2.330). Eighteen participants were born in the U.S. and twelve were born outside of the U.S. Student participants were located in these various states: Michigan (N = 15), Illinois (N = 8), Wisconsin (N = 3), California (N = 2), Arizona (N = 1), and Massachusetts (N = 1). They reported being located the following regions of the U.S.: Northwest (N = 2), Northeast (N = 2), Midwest (N = 23), Southwest (N = 1), and West (N = 2).

Table 3

Demographic Information for Student Participants

	N	%	M	SD
Age	30	100%	21.50	2.330
Ethnic Background				
Chinese	10	33.3%		
Indian	4	13.3%		
Filipino/a	4	13.3%		
Taiwanese	3	10.0%		
Hmong	2	6.6%		
Japanese	1	3.3%		
Korean	1	3.3%		
Vietnamese/Caucasian	1	3.3%		
Chinese/Burmese	1	3.3%		
Japanese/American	1	3.3%		
Chinese/Polish	1	3.3%		
Chinese/Polish/Russian	1	3.3%		
Socioeconomic Status				
Poor	2	6.7%		
Working class	9	30%		
Middle class	11	36.7%		
Upper middle class	8	26.7%		
Type of Community				
Rural	1	3.3%		
Suburban	22	73.3%		
Urban	7	23.3%		
Other	0	0.0%		
Number of Siblings				
Zero	4	13.3%		
One	15	50.0%		
Two	9	30.0%		
Three	2	6.7%		
Generational Status				
1st Generation	12	40.0%		
2nd Generation	18	60.0%		

Table 4

Academic Information for Student Participants

	N	%
Type of University		
Two year university	3	10.0%
Four year university	27	90.0%
Year in School		
Freshman	2	6.7%
Sophomore	5	16.7%
Junior	5	16.7%
Senior	10	33.3%
Other		
Ph.D.	2	6.7%
Graduate Student	2	6.7%
Masters Student	2	6.7%
5th Year Senior	1	3.3%
Unspecified	1	3.3%
Highest Level of Education		
High school diploma or equivalent	7	23.3%
Some college	20	66.7%
Associate/two-year degree	1	3.3%
Other		
Master's degree	2	6.7%
Major Declared		
Yes	29	96.7%
No	1	3.3%
Commitment to Major		
1 (low)	0	0.0%
2	0	0.0%
3	5	16.7%
4	4	13.3%
5 (high)	20	66.7%
Other		
4.5	1	3.3%

Table 4 (continued)

Commitment to Occupation		
1 (low)	2	6.7%
2	0	0.0%
3	8	26.7%
4	8	26.7%
5 (high)	11	36.7%

Data Collection Procedures

Dyad recruitment for this study was a two-step process. First, college students who met the criteria were contacted to participate. They were also asked to provide the contact information (e.g. mailing address, email address) of the parent or guardian they felt was most influential in their career development process. Second, the primary investigator contacted the parent the college student listed either via email or mail to follow-up with the parent measures. For parents who could not be reached via email, the primary investigator sent a reminder to their student participants. This reminder message asked the student to forward the survey link to his/her parent. Data collection was conducted both in-person and on Qualtrics.

The study utilized a snowball sampling method to initially contact college students. First, the primary investigator of the study contacted the IRB offices of four different colleges and universities in the U.S. with large Asian American populations to determine if IRB approval was required to recruit participants from each university. One school responded noting that IRB approval was required as the primary investigator was both an employee and collecting data during her period of employment. The other three universities indicated that IRB was not required if recruitment was conducted by contacting student organizations on their campuses. Therefore, the primary investigator contacted the Asian and Asian American student organizations on those college campuses asking if they would be able to send out a recruitment email to their student members inviting them to participate in the study.

The primary investigator contacted eight non-profit organizations that were comprised of Asian Pacific Islander American student groups from the Midwest, East Coast, and West Coast, asking them if they could send out a recruitment email to their members inviting them to participate. By including these non-profit organizations, the primary investigator was able to reach more students that identified as Asian and Asian American from different regions of the country. Of these eight organizations, three stated that they would pass along the email to their members.

Additionally, the primary investigator contacted seven non-profit community organizations across the country to ask if they could distribute the recruitment email to their members. Of these, two organizations responded with one agreeing to distribute it to their members via email and one stating that they did not wish to pass the recruitment message to their members due to privacy concerns. The primary investigator also utilized several social media networks, such as Facebook groups, to post the recruitment message about the study and study participation.

The recruitment email was also sent out to several student groups through national professional organizations (e.g. Asian American Psychological Association – Division on Students and Division of South Asian Americans). The primary investigator also enlisted the assistance of family and friends to distribute the recruitment email to any Asian and Asian American college students they knew.

The electronic recruitment message for both Asian parents and their college age children consisted of a brief description of the study, an incentive of two raffle drawings of \$50 Amazon.com gift cards should they choose to participate, and a link to the online

survey. Those interested in participating were instructed to click on the link which directed them to the survey website hosted by Qualtrics. The first page of the survey provided the participant with the elements of informed consent, including a brief description of the study, its significance, risks and benefits of participation, and participants' rights should they choose not to participate in the study. At the end of the electronic consent page, participants were instructed to click the "I am 18 years or older and agree to participate" button, indicating that they read the informed consent and agreed to participate. For those who chose not to participate or decided not to complete the survey, they were informed that they could exit out of the survey at any time.

The in-person recruitment message for both Asian parents and their college age children consisted of a brief description of the study and an incentive of two raffle drawings of \$50 Amazon.com gift cards should they choose to participate. The consent form and the survey measures were distributed to them in a packet. The first page of the survey for in-person data collection contained the same information as the electronic version with the exception of a signature line to obtain their consent.

All the data collection procedures employed in this study complied with the University of Wisconsin-Milwaukee Institutional Review Board standards for the safekeeping of research participant information. Data collected for this study was stored confidentially in databases on password-protected computers. Only the primary investigator has access to this data. The study was identified to be one that is not likely to cause harm or very little harm to participants. In the event participants experienced any distress during or after the study, they were encouraged to contact the primary

investigator whose contact information was provided in the informed consent. To date, no participant has contacted the primary investigator regarding distress from participating in this study.

Measures

Tables 5 and 6 present the reliabilities, means, and standard deviation of each scale and subscale for both parent and student participants.

Demographic Questionnaire

The college age children completed a demographic questionnaire soliciting self-reported information about gender, age, country of origin, year in college, college major, intended career choice, and socioeconomic status, among other variables. Their parents were also asked to answer a modified version of this questionnaire. The parent version of the demographic questionnaire included questions about their gender, age, country of origin, highest education obtained, and expected career choices for their children.

Asian American Multidimensional Acculturation Scale

The Asian American Multidimensional Acculturation Scale (AAMAS) was administered to both Asian parents and their college age children participants to measure acculturation after permission to use the scale was obtained (Chung, Kim, & Abreu, 2004). The purpose of this measure was to be orthogonal and distinguish between the dimensions of acculturation to the host culture and to the Asian culture of origin (Chung et al., 2004). The AAMAS is comprised of three scales: 1) AAMAS – Culture of Origin, 2) AAMAS–Asian American, and 3) AAMAS – European Americans. Each of these

scales is comprised of 15 items, using a 6-point Likert type scale that ranges from *Not Very Much* to *Very Much* (Chung et al., 2004).

In order to examine the psychometric properties of the AAMAS, the researchers administered the three AAMAS scales, the SL-ASIA (Suinn et al., 1987), the Intergenerational Conflict Inventory (Chung, 2001), and the Cultural Identification Scale (Oetting & Beauvais, 1991) to a sample of Asian American undergraduate students. To determine criterion-related validity, the three AAMAS scales were correlated with the participants' generational status (Chung et al., 2004). Findings suggested significant negative correlation between AAMAS-CO and generation status, and nonsignificant correlations between the other AAMAS scales and generational status (Chung et al., 2004).

Correlation coefficients between the scores for each of the three AAMAS scales and the scores from the SL-ASIA, CIS-Origin, and CIS-Anglo scales were calculated to examine concurrent validity (Chung et al., 2004). Divergent validity was examined by comparing the AAMAS scores on each of the three scales with the ICI total and subscale scores (Chung et al., 2004). An exploratory factor analysis was conducted to examine the factor structure for the three AAMAS scales (Chung et al., 2004). For each scale, four factors were retained (Chung et al., 2004).

The purpose of the second study was to further examine the scales' reliability, validity, and factor structure utilizing Asian American undergraduate students (Chung et al., 2004). For this study, the researchers administered the three AAMAS scales, the Asian Values Scale (Kim et al., 1999), and Rosenberg's Self-Esteem Scale (Rosenberg,

1965). Coefficient alphas were calculated for the AAMAS-CO, AAMAS – AA, and AAMAS – EA, finding coefficient alphas of 0.89, 0.83, and 0.81, respectively (Chung et al., 2004). The AAMAS scores were correlated with participants' generation status to evaluate criterion-related validity (Chung et al., 2004). Findings were consistent with the first study which demonstrated a significant negative correlation between AAMAS-CO and generation status, and nonsignificant correlations between the other AAMAS scales and generational status (Chung et al., 2004).

To examine concurrent validity, the researchers correlated the AVS ratings with the scores of the three AAMAS scales (Chung et al., 2004). The correlations indicated modest levels of correlations suggesting concurrent validity (Chung et al., 2004). The researchers also correlated the three AAMAS scale scores with the Rosenberg Self-Esteem Scale to demonstrate divergent validity (Chung et al., 2004). The findings yielded nonsignificant correlations which suggest that self-esteem and acculturation are not the same constructs (Chung et al., 2004). Confirmatory factor analysis was conducted to evaluate the factor structures for each of the AAMAS scales, finding that each scale yielded four factors (Chung et al., 2004).

Study 3 was conducted to investigate the test-retest reliability of the AAMAS scales with Korean Americans (Chung et al., 2004). Coefficient alphas were calculated to determine the two week coefficient of reliability. Findings demonstrated that the three scales of the AAMAS was reliable with coefficient alphas of 0.89, 0.75, and 0.78 for the AAMAS-CO, AAMAS-AA, and AAMAS-EA, respectively (Chung et al., 2004).

Asian Values Scale – Revised

The Asian Values Scale - Revised (AVS-R) was administered to assess Asian cultural values for Asian parent and college age children participants after permission was obtained to use the scale. This measure is comprised of 25 items designed to assess dimensions of Asian cultural values (Kim et al., 1999; Kim & Hong, 2004). The initial AVS was a 32-item measure assessing for six dimensions of cultural values: 1) conformity to norms, 2) family recognition through achievement, 3) emotional self-control, 4) collectivism, 5) humility, and 6) filial piety (Kim et al., 1999). Internal consistency for these subscales ranged from 0.39 to 0.69 (Kim et al., 1999). Since internal consistency for subscales were low, the researchers recommended using the total AVS score instead of subscale scores (Kim et al., 1999).

During the revision process, Kim and Hong (2004) examined the adequacy of the 7-point Likert scale, whether the items supported unidimensionality, and the difficulty level of items. The revised version of the AVS comprised of 25 items that utilized a 4-point Likert scale, ranging from *Strongly Disagree to Strongly Agree* (Kim & Hong, 2004). Internal consistency estimates for the AVS-R was 0.86 (Kim & Hong, 2004). In other studies, the internal consistency estimates ranged from 0.81 to 0.86 (e.g. Kim et al., 1999; Kim & Atkinson, 2002). Convergent validity was demonstrated by examining the high correlations between the AVS-R and measures of collectivism (Kim & Hong, 2004). Discriminant validity was shown by examining low correlations between the AVS-R and SL-ASIA (Kim & Hong, 2004).

Family Influence Scale

The Family Influence Scale (FIS) was initially comprised of 57 items based on a literature review of family influences on career decision making (Fouad et al., 2010). More than 10 themes of family influence were found when performing the literature review, including gender expectations, role models, financial support, informational support, and religious expectations (Fouad et al., 2010). Initially, five factors of family influence (e.g. informational support, emotional support, financial support, family expectations, and role models) were proposed based on existing literature (Fouad et al., 2010). With further factor analysis, it was found that four factors could be retained. These factors were: 1) information support, 2) emotional support, 3) financial support, and 4) family expectations (Fouad et al., 2010). The reliabilities for these four factors were 0.79 (information support), 0.90 (emotional support), 0.79 (financial support), and 0.85 (family expectations) (Fouad et al., 2010).

In a different study, Fouad et al. (2010) examined the convergent validity of the FIS utilizing a diverse sample. The surveys for this study included a demographic questionnaire, the FIS, the Parental Attachment Questionnaire, Individualism/Collectivism Scale, the Career Decision-Making Self-Efficacy scale, and the Satisfaction with Life Scale (Fouad et al., 2010). Two confirmatory factor analyses with oblique rotations were conducted to confirm the four factors proposed (Fouad et al., 2010). Content validity was achieved through a thorough literature review of family influence on the career decision-making process (Fouad et al., 2010). The FIS items also demonstrated convergent validity since the scale correlated with measures of related constructs (Fouad

et al., 2010). For example, results showed there was a negative association with age, positive association with parental attachment, and positive association with career decision making self-efficacy (Fouad et al., 2010). For this study, this scale was modified with permission to reflect items representing both student and parent forms.

Intergenerational Conflicts Item Pool

Previous research has suggested that existing family conflicts scales such as the Asian American Family Conflicts scale (Lee et al., 2000) are more general and do not specifically focus on occupational conflict. In a dissertation by Qin (2010), the Intergenerational Conflicts Item Pool was developed to specifically measure occupational conflicts. The scale is comprised of 40 items and measures specific conflicts on major/career related values and intergenerational conflicts in general (Qin, 2010). The first 20 items of the scale measures specific conflicts related to major/career related values, whereas the second 20 items measure general conflicts (Qin, 2010).

In the dissertation, participants were asked to respond to the first 10 items based on how they thought their parents held specific values (Qin, 2010). Then participants are asked to respond to items 11-20 based on how much they agreed with the values (Qin, 2010). Scores are calculated for perceived parents' value and one's own value to determine conflict while choosing careers (Qin, 2010). The sum of the "absolute values of differences between comparisons of corresponding items was computed for the total score of intergeneration conflict on major/career related values subscale" (Qin, 2010, p. 42). A higher score indicates higher intergenerational conflict on major/career related values. The sum of the first 10 items is also calculated to derive a total score for

perceived parents' belief on major/career related values subscale (Qin, 2010). Higher scores indicate one perceived his/her parents to hold strong beliefs about family helping children with their career choices.

The sum of scores for items 11-20 is calculated as a self-belief on major/career related values subscale total score (Qin, 2010). Higher scores on this subscale indicate an individual believes his/her family should help with career choices. The Cronbach's alpha coefficient for items related to parents' beliefs on major/career related values was 0.92 in the dissertation study, and 0.88 for items of self-belief on major/related values (Qin, 2010).

The second part of the scale is comprised of 20 items and was referred to as the general intergeneration conflicts (Qin, 2010). Participants are asked to respond to the first 10 items based on how often conflicts occurred, characterized as the general intergeneration conflict with frequency measure subscale (Qin, 2010). The next 10 items ask about the intensity of the conflicts and comprised the general intergeneration conflict with severity measure subscale (Qin, 2010). The Cronbach's alpha coefficient for the general intergeneration conflict with frequency measure was 0.79 and 0.985 for the general intergeneration conflict with severity measure subscale for the dissertation study (Qin, 2010).

The Family Acculturation Conflicts Scale (FCS) was included in Qin's (2010) dissertation to determine concurrent validity (Lee et al., 2000). The FCS is comprised of 10 items regarding the likelihood of conflict (FCS – Likelihood subscale) and seriousness (FCS – Seriousness) of problems on 10 family situations (Lee et al., 2000). Both the

likelihood and seriousness subscale scores were calculated for each participant. High scores on the FCS-Likelihood were indicative of likelihood of having family acculturation conflicts (Lee et al., 2000). High scores on the FCS-Seriousness were indicative of high levels of seriousness of family acculturation conflicts (Lee et al., 2010). The concurrent validity for this study demonstrated that FCS was moderately correlated with family based acculturative stress (Qin, 2010). For this study, the scale and instructions were modified with permission to be administered to both students and parents.

Table 5

Scale Reliability, Means, and Standard Deviations for Parent Participants

Scale	N	α	M	SD
Family Influence Scale				
Financial support	5	-0.16	4.50	0.48
Family expectations	6	0.75	3.77	1.26
Values and beliefs	3	0.74	3.90	1.19
Informational support	8	0.65	4.76	0.79
Asian Values Scale – Revised	25	0.84	2.71	0.35
Intergenerational Conflicts Item Pool				
Self belief on major/career related values	10	0.95	3.82	0.96
Child's belief on major/career related values	10	0.93	3.59	0.81
General intergeneration conflict with frequency measure	10	0.88	2.33	0.86
General intergeneration conflict with severity measure	10	0.86	2.20	0.88
Asian American Multidimensional Acculturation Scale				
Culture of Origin	15	0.94	5.30	0.85
Asian American	15	0.91	3.02	1.04
European American	15	0.94	3.50	0.85

Table 6

Scale Reliability, Means, and Standard Deviations for Student Participants

Scale	N	α	M	SD
Family Influence Scale				
Financial support	4	0.58	4.41	0.92
Family expectations	6	0.87	3.58	1.30
Values and beliefs	3	0.73	3.62	1.19
Informational support	8	0.91	3.94	1.12
Asian Values Scale – Revised	25	0.82	2.51	0.32
Intergenerational Conflicts Item Pool				
Self belief on major/career related values	10	0.92	3.37	0.89
Parent’s belief on major/career related values	10	0.95	3.95	0.99
General intergeneration conflict with frequency measure	10	0.84	2.47	0.84
General intergeneration conflict with severity measure	10	0.88	2.32	0.89
Asian American Multidimensional Acculturation Scale				
Culture of Origin	15	0.90	4.35	0.93
Asian American	15	0.91	3.22	0.99
European American	15	0.78	4.62	0.60

Dyadic Research

Since this study involves examining Asian parents and their college age children together, it is important to examine the current literature on dyads. According to Kenny, Kashy, and Cook, (2006), dyads are comprised of two individuals that influence one another in some form. Examples of dyads include members in a romantic relationship, members of a family, and two friends. An important concept in dyadic research is nonindependence (Kenny et al., 2006). Nonindependence asserts that individuals in a dyad are not two independent individuals (Kenny, et al., 2006). Instead, they share something in common and the relational aspect can influence the other's responses (Kenny et al., 2006).

It is also important to determine whether or not members of a dyad can be distinguished from each other on some variable (Kenny et al., 2006). For example, gender can be a distinguishable factor among heterosexual couples. Other examples of dyads with distinguishable members include older and younger siblings, parents and their children, and husbands and wives (Kenny et al., 2006). Dyads with indistinguishable members include twins, coworkers, and roommates (Kenny et al., 2006). For dyads with distinguishable members, nonindependence can be calculated by correlating the dyad members' scores using a Pearson product-moment correlation (Kenny et al., 2006).

The most commonly used dyads for data analysis is the standard design. In this design, there are three different ways in which a dyad can be structured: 1) individual, 2) dyad, and 3) pairwise (Kenny et al., 2006). In the individual structure, each member of the dyad is treated as a single unit (Kenny et al., 2006). While this can be beneficial in

many types of research, there are several disadvantages in using the individual structure. The primary disadvantage in using the individual structure encourages analysis at the individual/person level which ignores the concept of nonindependence (Kenny et al., 2006).

The dyad structure involves analyzing a single unit for each dyad. If there is n dyads and $2n$ individuals, there will be n records (Kenny et al., 2006). This is beneficial in analyzing the dyad level of analysis. The pairwise structure involves combining the individual and dyad structures (Kenny et al., 2006). In this method, there is one record for each member of the dyad, but both members' scores are on the record as well (Kenny et al., 2006). One disadvantage of this structure is that there can be no missing records (Kenny et al., 2006). If missing records are present, dummy records must be created. Based on this, this study will examine Asian parents and their college age children together in a dyad instead of individually. The data will be organized into a dyad structure format on SPSS which will enable the researcher to examine members' scores across dyads.

Data Analysis

Since the required sample size of 200 dyads was not achieved to conduct factor analyses, the first research question was not able to be answered. To examine the construct of congruence of family influence on careers, difference scores were calculated for parent-college age child dyads on the Family Influence Scale. All the items for the parent version of the FIS were added, taking its absolute value, to provide a total score for parents' perceptions of family influence on careers. Similarly, all the items for the

student version of the FIS were added, taking its absolute value, to obtain a total score for college age students' perceptions of family influence on careers. The parent's total score were then subtracted from the student's total score on the FIS for each dyad to create a total difference score for parents' and their college age children's perceptions of family influence on careers. In a similar fashion, total difference scores were calculated for Asian and Asian American parents and their college age children on the acculturation, cultural values, and intergenerational conflict variables.

The second research question was answered by multiple regression analyses. Each dyad's difference score for each subscale of the Family Influence Scale was entered as the outcome variables. The range of difference scores for each of the subscales is as follows: 0 – 26 for Informational Support, 0 – 16 for Family Expectations, and 0 – 9 for Values/Beliefs. The independent variables in the regression equations were the difference scores for cultural values, acculturation subscales and intergenerational conflict subscales.

Difference Scores in Research

Since this study utilized difference scores to calculate congruence, it is important to briefly examine the existing literature on this topic in addition to highlighting the advantages and disadvantages of employing this method. Tisak and Smith (1994) highlighted several reasons researchers should utilize difference scores, specifically in dyadic and relationship research. First, Tisak and Smith (1994) argued that difference scores can be useful in measuring similarities and differences between pairs. Further, Tisak and Smith (1994) argued that using difference scores, whether it be calculating

individual or group differences, makes sense conceptually as people think about differences in everyday life. Tisak and Smith (1994) also asserted that difference scores offers researchers a unique combination of underlying combinations that would not be possible by examining one set of scores.

However, there are several measurement concerns with using difference scores. For instance, Cronbach (1958) and Johns (1981) noted the most consistent criticism against using difference scores is their unreliability. The reliability of a difference score is defined as the proportion of true score variance to the observed score variance (Cronbach, 1958; Johns, 1981; Tisak & Smith, 1994). The reliability of a difference score may be less than the average reliability of its component variables, especially if the component variables are positively correlated (Cronbach, 1958; Johns, 1981; Tisak & Smith, 1994). To promote reliability of a difference score, Chiou and Spreng (1996) suggested that the correlation between pre- and post-test measures need to be reduced in addition to selecting reliable measures that will be used to calculate the difference scores.

Another common criticism of using difference scores is related to their validity. Tisak and Smith (1994) stated in their article that this criticism has to do with the fact that difference scores “cannot be unambiguously interpreted, confound the effects of their component variables, and do not explain variance beyond that associated with their components” (pps. 677-678). However, Tisak and Smith (1994) argued that both these common criticisms can be overcome by carefully examining the data and creating meaningful difference scores from their component variables.

CHAPTER IV

RESULTS

This chapter describes and summarizes the data management process, including how missing data and outliers were accounted for, and the statistical analyses performed to answer the research questions and hypotheses established in the previous chapters.

Data Management

Upon completing of data collection, there were several steps to the data management process. First, the primary investigator checked the accuracy of the data entry, both from collecting data through Qualtrics and in person recruitment, to ensure no mistakes were made in the coding process. Demographic information and responses to each item were scanned to remove any invalid entries before analysis. Missing values for items were replaced with the mean value of the variable (George & Mallery, 2009). Means were imputed for five participants with missing data. However, missing values in the demographic questionnaires were not replaced. Participant cases with more than two-thirds of missing data were removed through listwise deletion (Tabachnick & Fidell, 2001). Several scale items were also recoded in SPSS to account for reverse-scored items. Outliers were visually checked through histograms. Since the dyad difference scores are expected to show variability, no potential outliers were removed.

This initial data screening procedure revealed that there were 149 college student participants that identified as Asian or Asian American. Of this, 56 participants began the study but did not finish. Additionally, two participants were parents who began the student version of the study. Twenty-four participants did not provide any parent contact

information. One participant reported that his/her parents were not influential in his/her career choices. One participant indicated that she was adopted by White parents and did not think they qualified to participate in the parent version of the survey. Four participants stated they could not provide parent contact information because their parents were not fluent in English (N = 1), not fluent in English and not the primary caregiver (N = 1), could not read English (N = 1), and could not participate in the parent version due to the language barrier (N = 1). Therefore, these 88 participants were removed from the data analysis, resulting in a total of 61 college students that identified as Asian or Asian American and provided contact information for their parent or guardian.

Further, there were 39 parents who identified as Asian or Asian American whose college students had completed the student version of the survey. Of this, six participants did not complete the demographic information or survey measures and three participants indicated that they were not currently residing in the United States. These nine participants were excluded from the data analysis, thereby yielding 30 Asian or Asian American parents. A total of 30 dyads (60 participants) participated in the study. Additionally, data was visually rechecked to identify potential missing variables.

Research Questions and Hypotheses Testing

In this section, the research questions and hypotheses set forth by this study are examined.

Research Question 1: Is the factor structure for the Family Influence Scale and Intergenerational Conflicts Item Pool the same for Asian parents and their college age children?

It was hypothesized that the factor structure for the Family Influence Scale and Intergenerational Conflict Items Pool would be the same for Asian parents and their college age children. However, due to the limited sample size of this study and the minimum number of participants needed to perform a factor analysis, this research question and subsequent hypothesis was not able to be answered.

Research Question 2: Is congruence of family influence on careers predicted by congruence of acculturation, cultural values, and intergenerational conflict for Asian parent-college age child dyads?

It was hypothesized that congruence of family influence on careers will predict the congruence of acculturation, cultural values, and intergenerational conflict. Before answering this research question, there were several preliminary analyses performed to comply with both dyadic research and multiple regression analyses.

Preliminary Analyses

Dyadic Research Requirements

In order to perform dyadic research, there are several requirements that must be met. First, it is important to determine whether the dyad members are distinguishable or indistinguishable from each other (Kashy & Kenny, 2000). Members are distinguishable if “there is a meaningful variable that can be used to differentiate all the individuals with each of the dyads or groups” (Kashy & Kenny, 2000, p. 591). Examples include spouses, family members, and roommates. Members are indistinguishable if there is no systematic way to order their scores (Kashy & Kenny, 2000). Examples of this include homosexual couples and randomly assigning participants to dyad groups (Kashy & Kenny, 2000). In this study, the dyads are distinguishable as they are distinguished by their family role – parent or child.

Another important consideration in dyadic research is the violation of independence of observations, which is a requirement of regression analyses (Kashy & Kenny, 2000). Kenny (2000) argues that if there are less than 35 dyads in a dataset, one should treat the data as if they are non-independent. In dyadic research, the dyad is typically the unit of analysis and standard methods of analyses cannot always be utilized because the independence assumption is violated (Kenny & Kashy, 2000). In this study, the independence assumption is violated because the parent-child members within the dyad are distinguishable (Kashy & Kenny, 2000). Each dyad member is assumed to influence the other in terms of family influence on careers, acculturation, intergenerational conflict, and cultural values. Kashy and Kenny (2000) note that while

dyadic research relies on nonindependence between dyad members, one can still perform regression analyses with dyads by examining difference scores, within-dyad differences, and between-dyad differences.

The specific types of variables are also important in dyadic research. Variables can vary within dyads, between dyads, or within and between dyads, known as mixed variables (Kashy & Kenny, 2000; Kashy, 2000). Within-dyad variables are those that vary across group members (Kashy & Kenny, 2000). However, when the variable scores are averaged across individuals in the same group, each group has the same average score (Kashy & Kenny, 2000). A between-dyads variable differs from dyad to dyad but it does not vary across individuals in the same group (Kashy & Kenny, 2000). Mixed variables are defined as variables in which each member's score may differ for the two partners. In these types of variables, the scores vary from each member in the dyad and across dyads. The type of variable utilized in dyadic research is beneficial to determine whether each member of the dyad has his/her own score or if the analysis will occur at the unit level (e.g. examining differences across dyads). For this study, the dyad is the unit of analysis as the research question is interested in examining differences among the 30 dyads.

Multiple Regression Assumptions

Before performing regression analyses to answer the second research question, there were several assumptions that were evaluated. One of the primary assumptions in regression analyses is the independence of observations. As noted above, this assumption was violated due to the dyadic nature of the data. However, Kashy and Kenny (2000)

note that regression analyses can still be conducted for dyadic data despite this assumption being violated.

Another assumption is no measurement error in the predictor variables (reliability). According to Cohen, Cohen, West, and Aiken (2003), each predictor variable in regression models are assumed to be measured without any errors. To evaluate whether or not this assumption was violated, internal consistencies (Cronbach's alpha) were computed for each of the variables included in this model.

For the parent version of the Family Influence Scale, the internal consistency reliabilities were the following: financial support (-0.16), family expectations (0.75), values and beliefs (0.74), and informational support (0.65). Since the internal consistency for the financial support subscale was poor, it was removed from any further analyses. The internal consistency for the parent version of the Asian Values Scale – Revised was 0.84. The internal consistencies for the parent version of the Intergenerational Conflicts Item Pool were the following: self-belief on major/career related values (0.95), child's belief on major/career related values (0.93), general intergeneration conflict with frequency measure (0.88), general intergeneration conflict with severity measure (0.86). The internal consistencies for the parent version of the Asian American Multidimensional Acculturation Scale were the following: culture of origin (0.94), Asian American (0.91), and European American (0.94).

For the student version of the Family Influence scale, the internal consistency reliabilities were the following: financial support (0.58), family expectations (0.87), values and beliefs (0.73), and informational support (0.91). One item was deleted from

the financial support subscale as the item was worded incorrectly in the paper and pencil version of the student survey. Since the internal consistency for the financial support subscale was poor, it was removed from any further analyses.

The internal consistency for the student version of the Asian Values Scale – Revised was 0.82. The internal consistencies for the student version of the Intergenerational Conflict Items Pool were the following: child-belief on major/career related values (0.92), parent’s belief on major/career related values (0.95), general intergeneration conflict with frequency measure (0.84), general intergeneration conflict with severity measure (0.88). The internal consistencies for the parent version of the Asian American Multidimensional Acculturation Scale were the following: culture of origin (0.90), Asian American (0.91), and European American (0.78).

Based on the reported internal consistency reliabilities, the majority of the scales and subscales, with the exception of the parent and student versions of the Family Influence Financial Support subscale, had acceptable levels of reliability. To meet this assumption for multiple regression analyses, the financial support subscales were removed from subsequent analyses.

The assumption of normality is also important to consider in regression analysis. This assumption was tested for all the variable difference scores. Figures 1 – 11 present the normality plots for each of the variables’ difference scores. Based on the normality plots, the normality assumption is met for each variable.

Figure 1. Normality Plot for Asian Values Scale - Revised Difference Scores

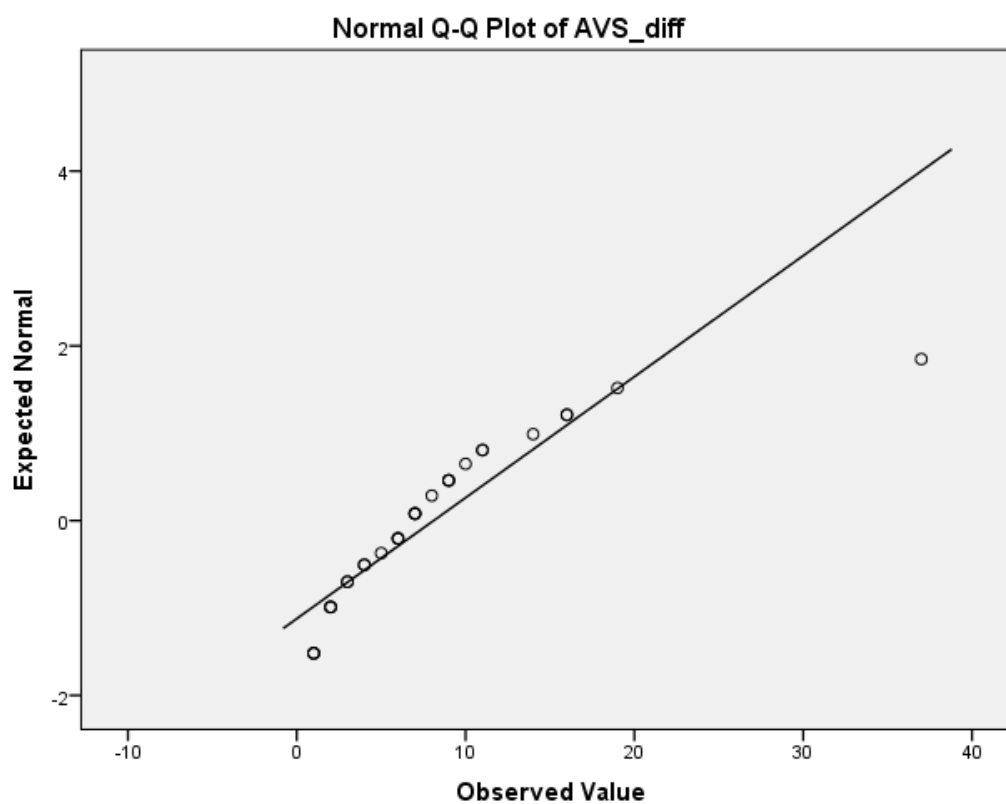


Figure 2. Normality Plot for Asian American Multidimensional Acculturation Scale – Culture of Origin Difference Scores

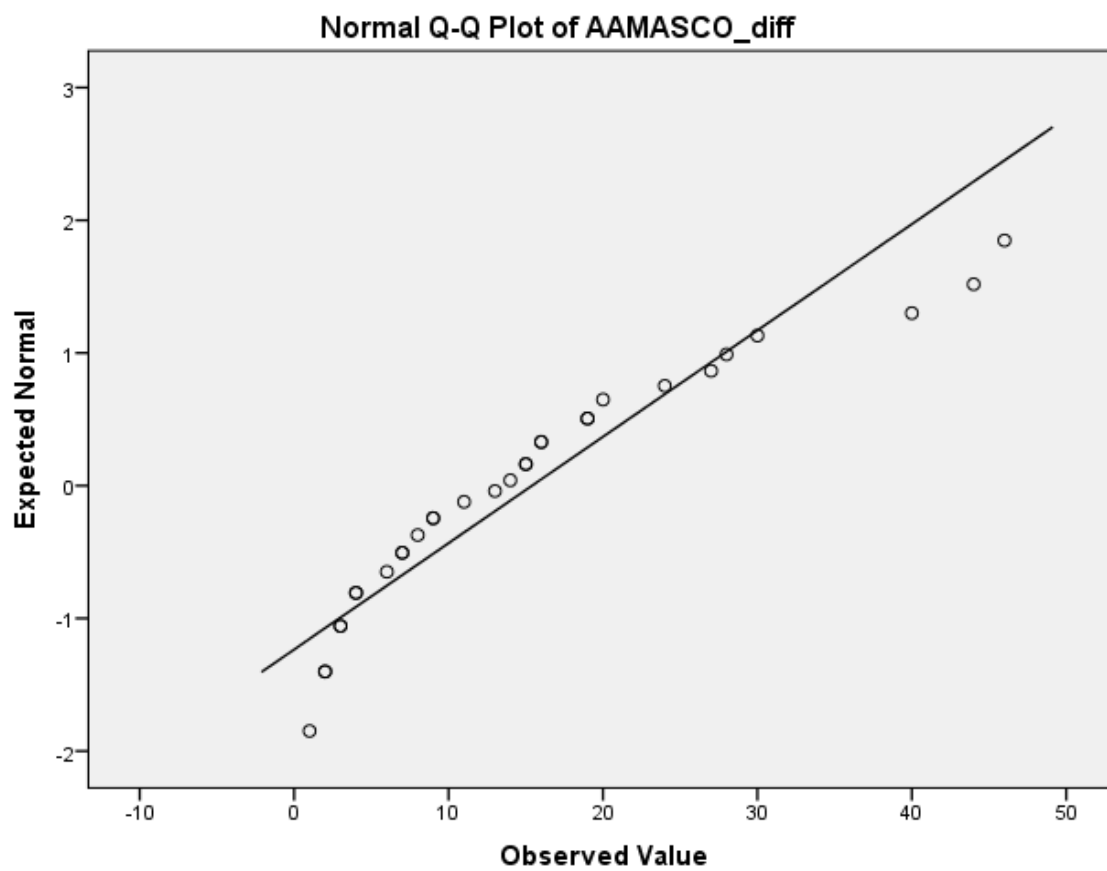


Figure 3. Normality Plot for Asian American Multidimensional Acculturation Scale – Asian American Difference Scores

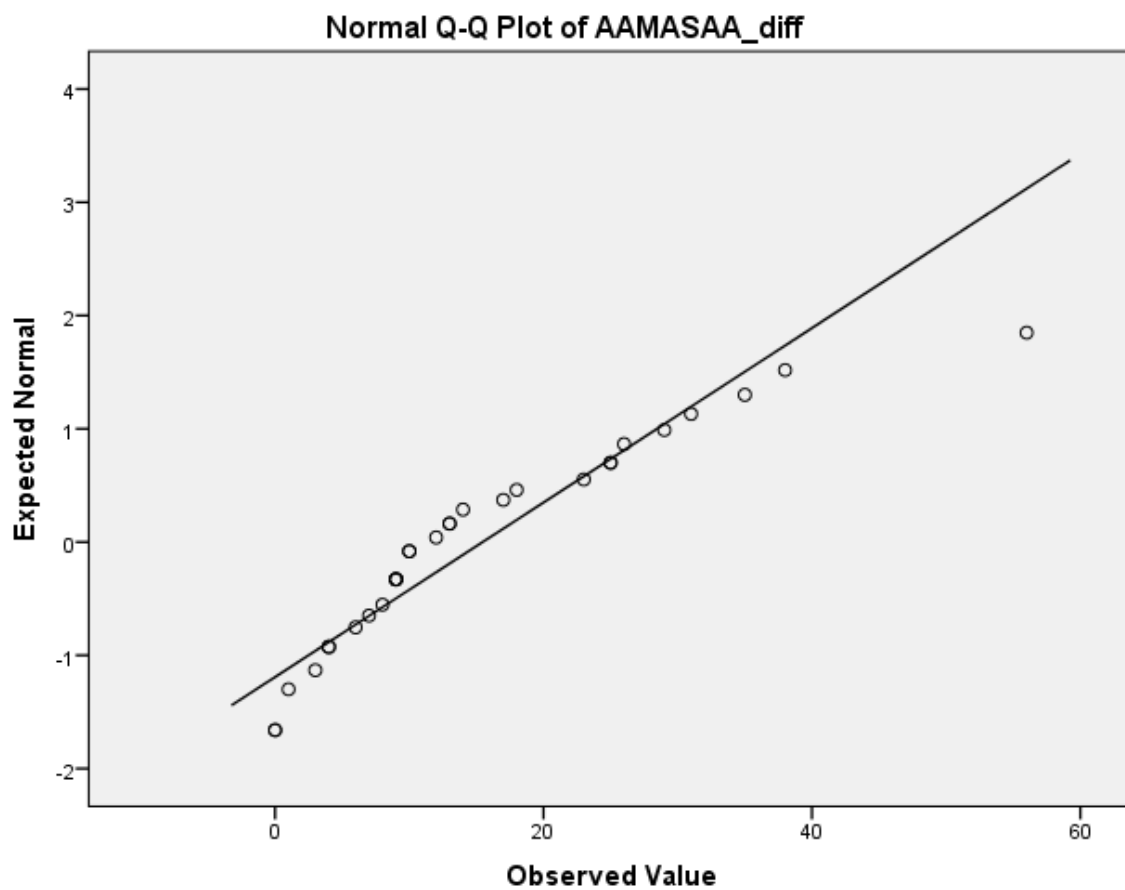


Figure 4. Normality Plot for Asian American Multidimensional Acculturation Scale – European American Difference Scores

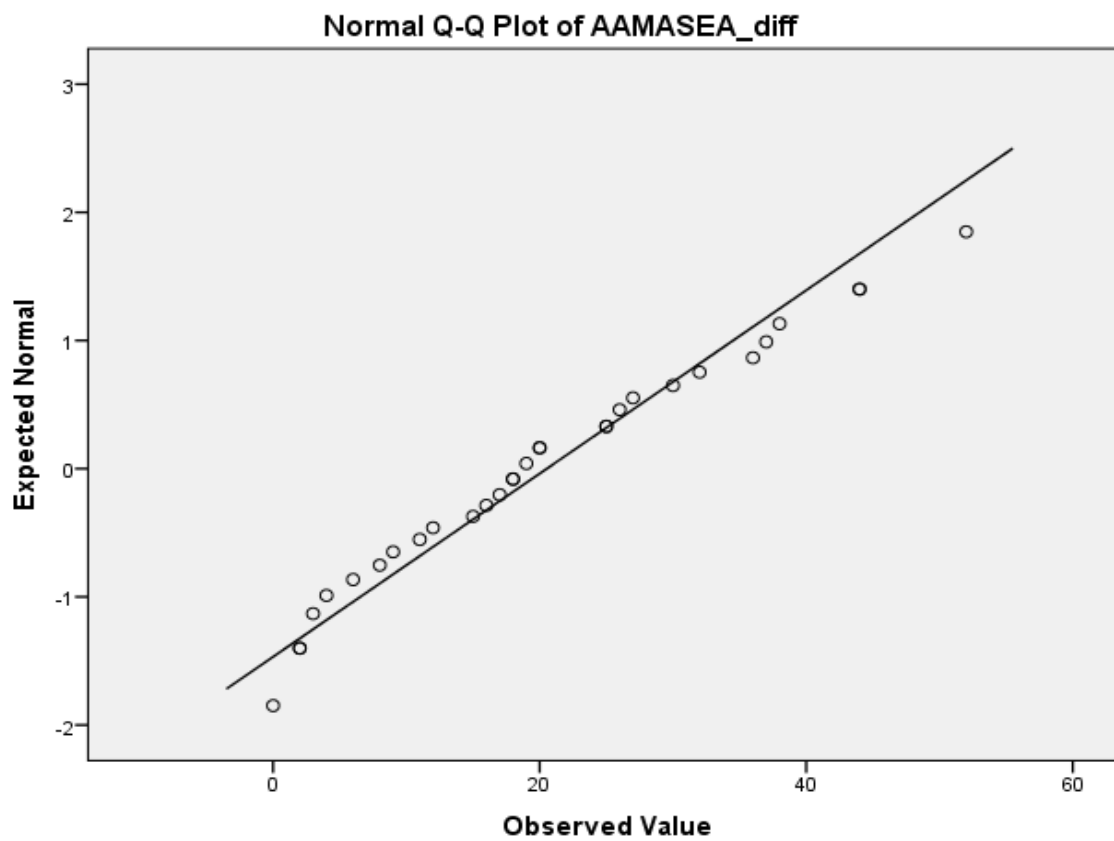


Figure 5. Normality Plot for Family Influence Scale Informational Support Difference Scores

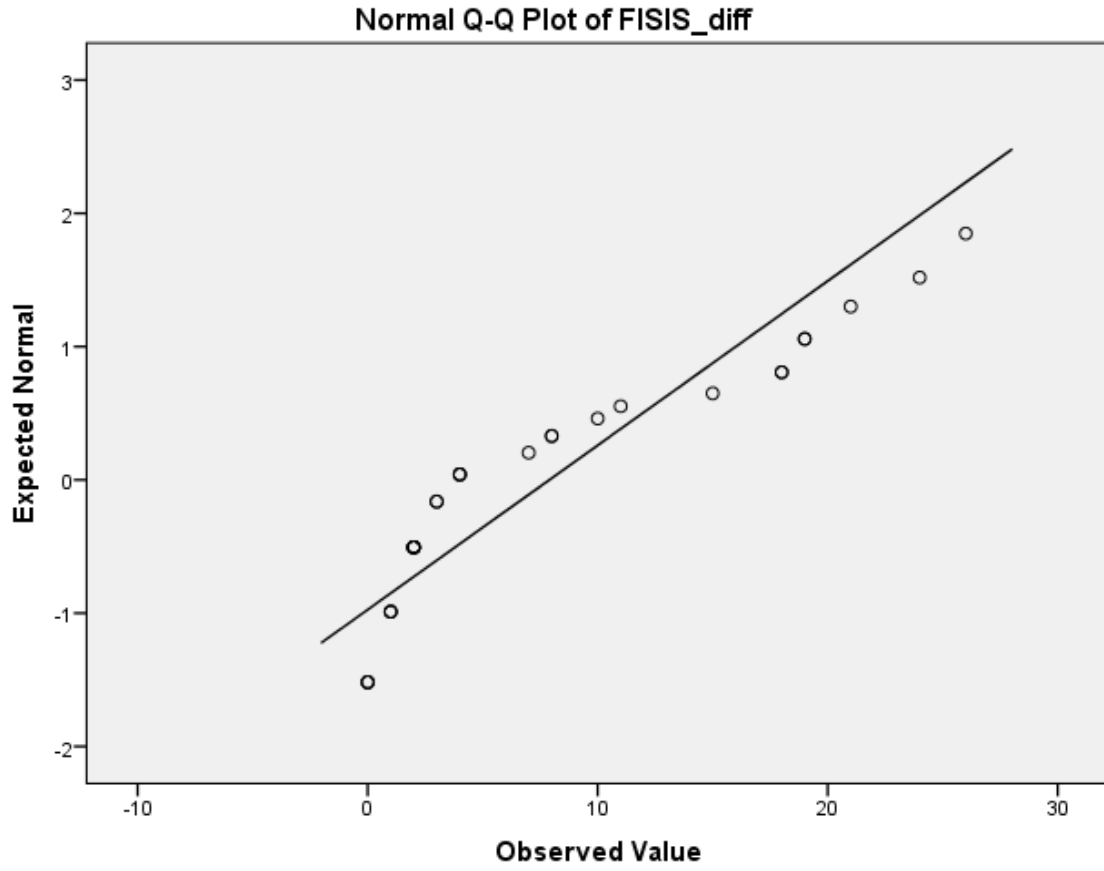


Figure 6. Normality Plot for Family Influence Scale Values and Beliefs Difference Scores

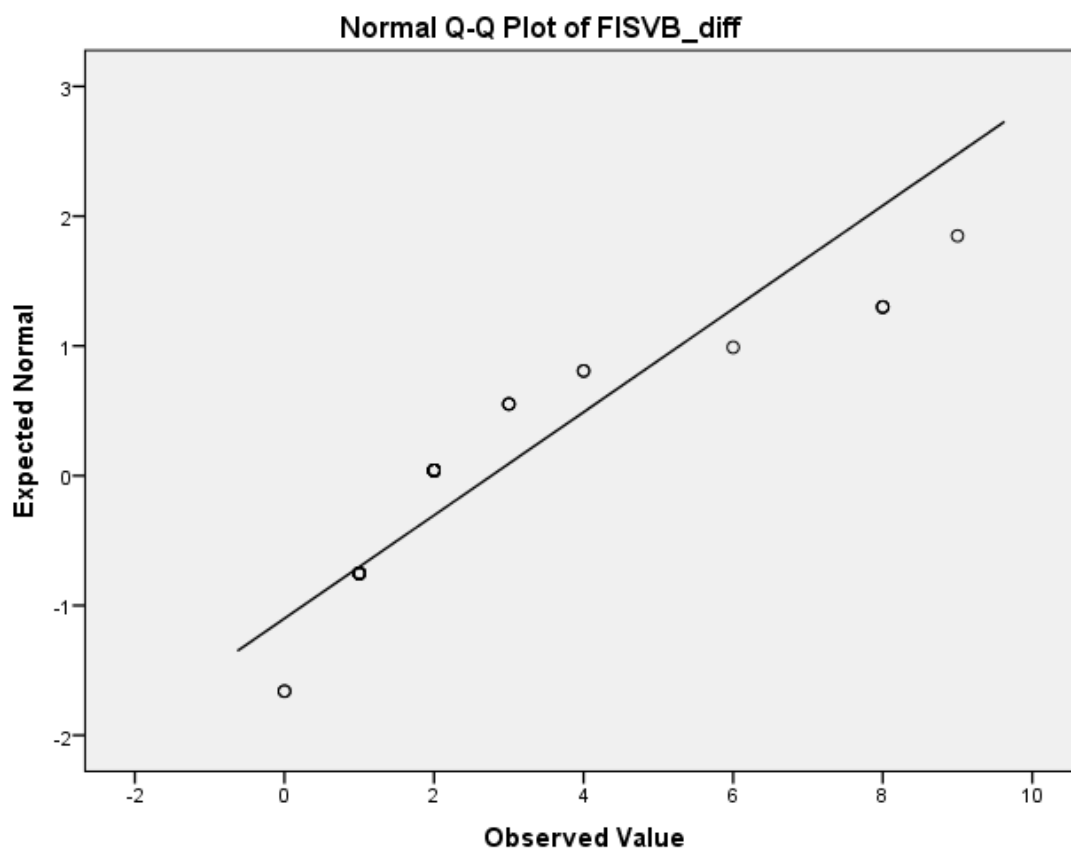


Figure 7. Normality Plot for Family Influence Scale Family Expectations Difference Scores

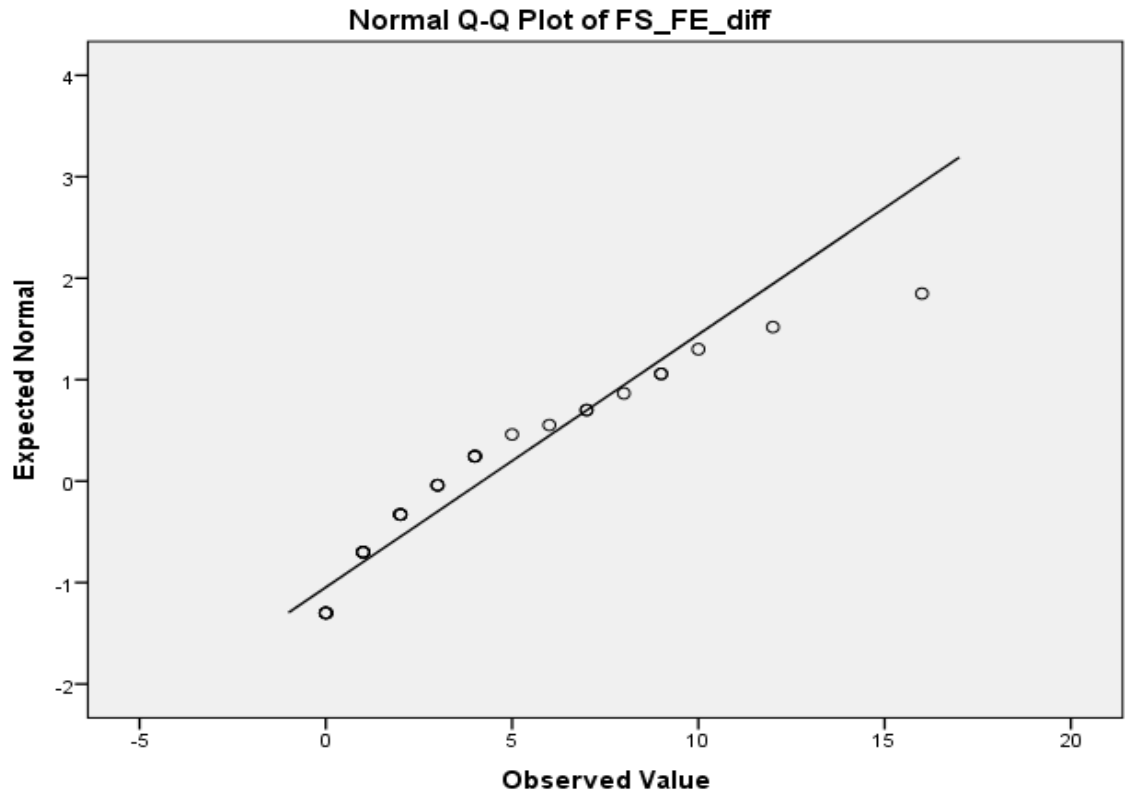


Figure 8. Normality Plot for Intergenerational Conflicts Item Pool Frequency Difference Scores

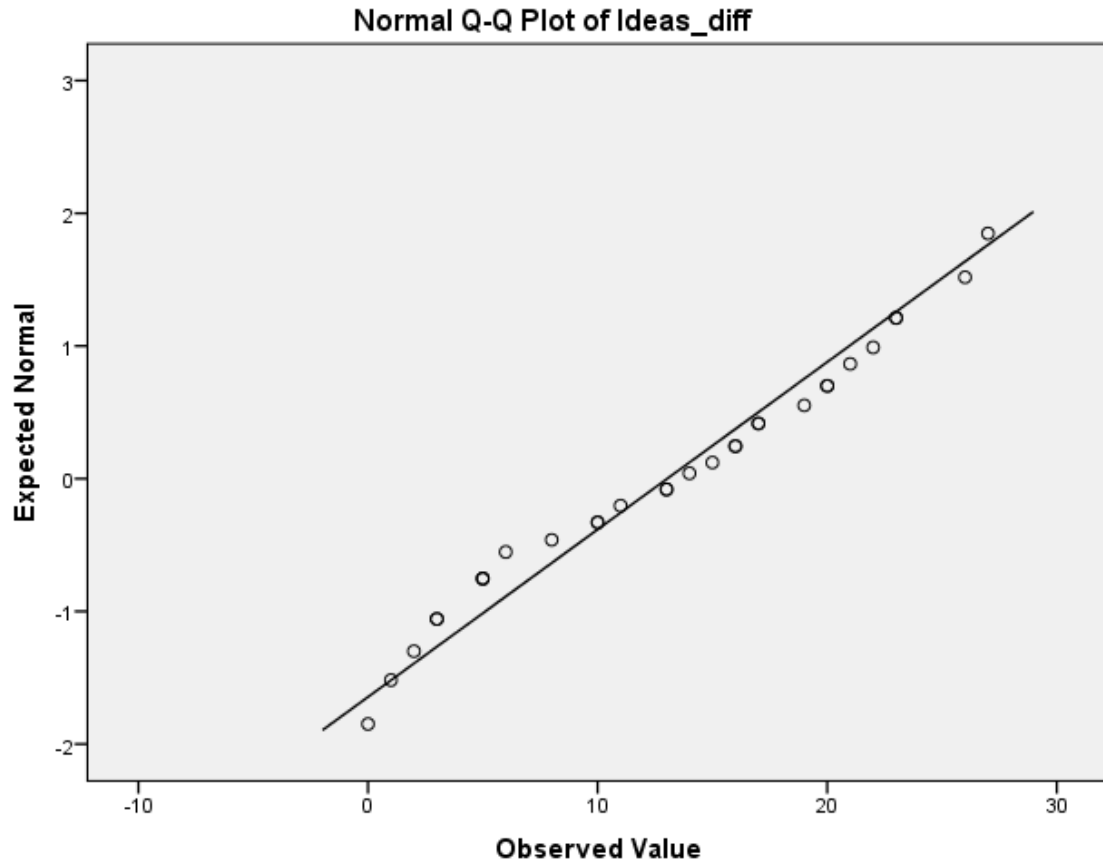


Figure 9. Normality Plot for Intergenerational Conflicts Item Pool Severity Difference Scores

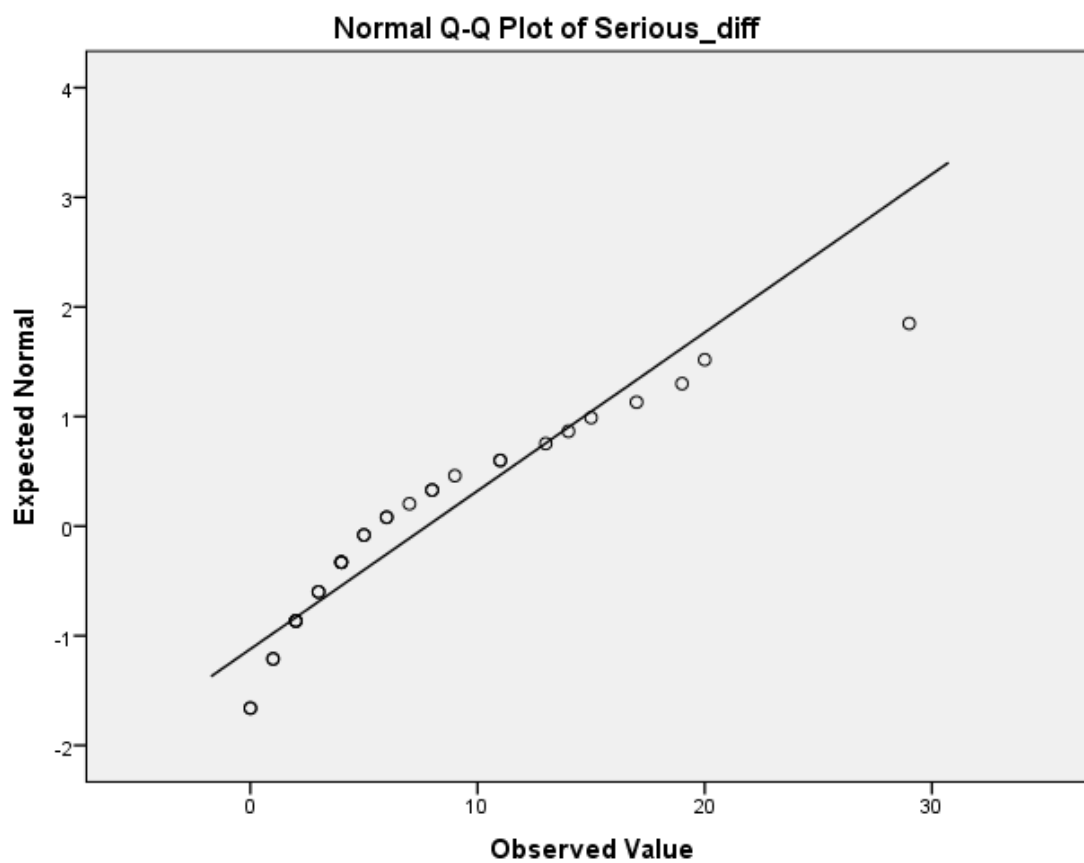


Figure 10. Normality Plot for Intergenerational Conflicts Item Pool Child-Belief Difference Scores

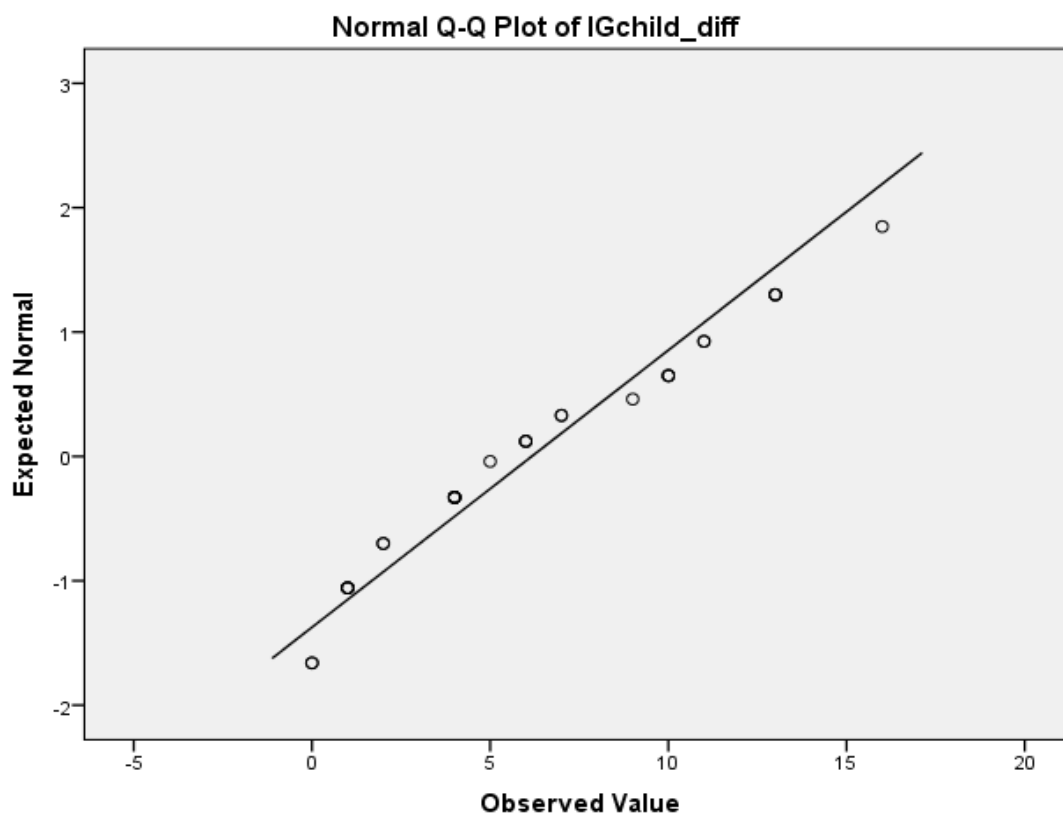
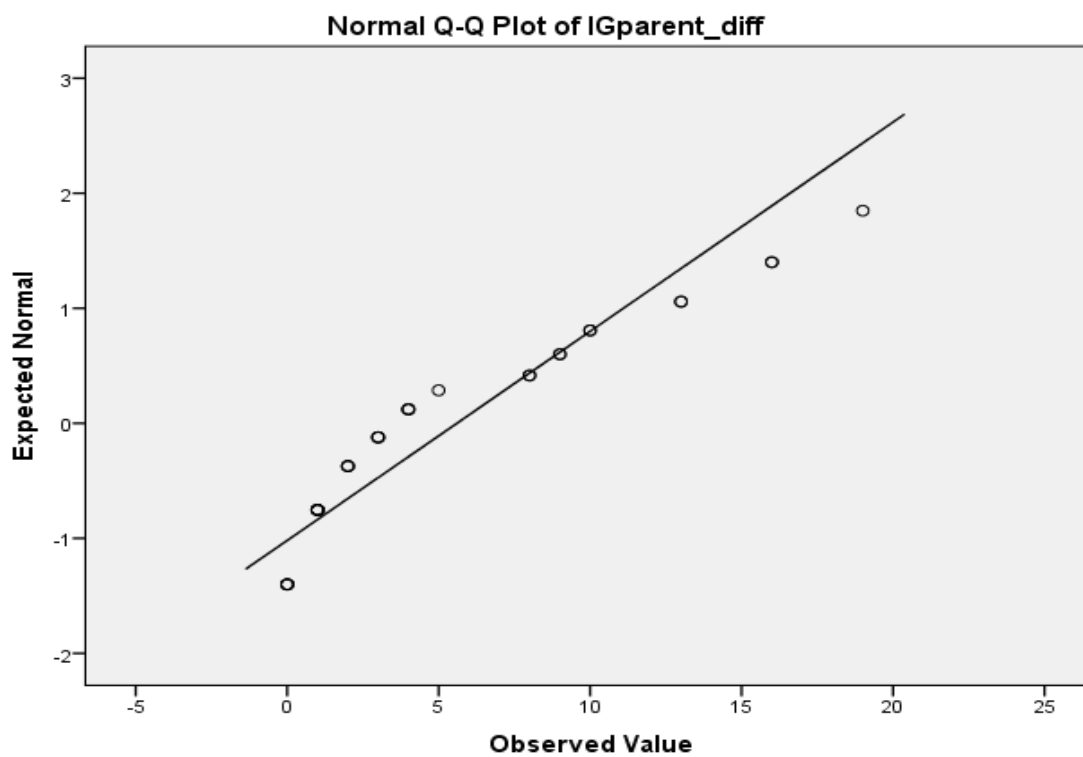


Figure 11. Normality Plot for Intergenerational Conflicts Item Pool Parent-Belief Difference Scores



Difference Scores

Table 7 presents the means and standard deviations of the difference score variables. The lower the difference score between the Asian parent-child dyad, the more agreement between the dyad on the variables of interest (e.g. family expectations, cultural values, acculturation, intergenerational conflict). For example, lower difference scores between dyads on cultural values, as measured by the Asian Values Scale – Revised, the more agreement between the dyads on their endorsement of these values. Similarly, the larger the differences between the Asian parent-child dyad, the less agreement between the dyad on the variables of interest. For example, higher difference scores between Asian parent-child dyads on subscales of the Family Influence Scale (e.g. informational support, family expectations, values/beliefs), the less agreement between dyads on these variables.

Table 7

Means and Standard Deviations of the Difference Score Variables

Variable	M	SD
AVS – R	8.10	7.22
AAMAS – CO	15.40	12.48
AAMAS – AA	15.47	12.99
AAMAS – EA	20.53	13.99
FIS – IS	7.90	8.11
FIS – FE	4.20	4.01
FIS – VB	2.77	2.51
IG – Frequency	13.03	7.92
IG – Severity	7.77	6.92
IG – Parent	5.60	5.49
IG – Child	6.17	4.49

Note: AVS – R = Asian Values Scale – Revised, AAMAS – CO = Asian American Multidimensional Acculturation Scale – Country of Origin, AAMAS – AA = Asian American Multidimensional Acculturation Scale – Asian American, AAMAS – EA = Asian American Multidimensional Acculturation Scale – European American, FIS – IS = Family Influence Scale Informational Support, FIS – FE = Family Influence Scale Family Expectations, FIS – VB = Family Influence Scale Values and Beliefs, IG – Frequency = Intergenerational Conflicts Item Pool Frequency, IG Severity = Intergenerational Conflicts Item Pool Severity, IG – Parent = Intergenerational Conflicts Item Pool Parent Belief on Major/Career Related Values, IG – Child = Intergenerational Conflicts Item Pool Child Belief on Major/Career Related Values

While it is important to determine whether or not differences on these variables exist between Asian parent-child dyads, one cannot make specific assumptions as to whether these differences are positive or negative at the group level since they differ by dyad. For example, a dyad can endorse lower difference scores on cultural values meaning they tend to agree on specific Asian cultural values. This agreement may be positive for a particular dyad and lead to discussions within the family unit regarding information and expectations about careers. However, this level of agreement may be negative for another dyad because it can potentially cause more conflict in other areas.

Table 8 examines the correlations between each difference score variable. There were statistically significant correlations among cultural values and family expectations ($r = 0.480$), informational support and values/beliefs ($r = 0.651$), and values/beliefs and general intergeneration conflict frequency (measured by the intergenerational conflict items pool frequency subscale) ($r = 0.415$). Findings indicate that the differences in cultural values between Asian parent-child dyads positively correlated with differences in family expectations between Asian parent-child dyads, suggesting that increases in differences on cultural values significantly relates to increases in differences on family expectations. Increases in differences on informational support was significantly related to increases in differences on values/beliefs for Asian parent-child dyads. Similarly, increases in differences in values/beliefs was significantly related to increases in the frequency of conflict regarding major and career related values for Asian parent-child dyads.

Table 8

Correlations among Difference Score Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.	1	-0.012	0.167	0.228	0.48**	0.062	-0.004	0.172	0.407	-0.134	0.159
2.	-0.012	1	0.054	-0.09	0.027	0.095	0.252	-0.287	-0.122	0.127	-0.312
3.	0.167	0.054	1	0.097	0.143	-0.107	-0.095	0.041	0.195	-0.244	-0.005
4.	0.228	-0.09	0.097	1	-0.016	-0.037	-0.202	0.078	0.189	-0.237	-0.106
5.	0.48**	0.027	0.143	-0.016	1	0.352	0.237	0.14	0.213	-0.194	0.136
6.	0.062	0.095	-0.107	-0.037	0.352	1	0.651**	-0.15	0.201	0.083	-0.235
7.	-0.004	0.252	-0.095	-0.202	0.237	0.651**	1	-0.103	0.454	0.415*	0.057
8.	0.172	-0.287	0.041	0.078	0.14	-0.015	-0.103	1	-0.048	-0.283	0.154
9.	0.407	-0.122	0.195	0.189	0.213	0.201	0.454	-0.048	1	-0.009	0.255
10.	-0.134	0.127	-0.244	-0.237	-0.194	0.083	0.415*	-0.283	-0.009	1	0.319
11.	0.159	0.312	-0.005	-0.106	0.136	-0.235	0.057	0.154	0.255	0.319	1

Note: 1 = Asian Values Scale Revised, 2 = Asian American Multidimensional Acculturation Scale – Country of Origin, 3 = Asian American Multidimensional Acculturation Scale – Asian American, 4 = Asian American Multidimensional Acculturation Scale – European American, 5 = Family Influence Scale Family Expectations, 6 = Family Influence Scale Informational Support, 7 = Family Influence Scale Values/Beliefs, 8 = Intergenerational Conflicts Item Pool Parent Belief on Major/Career Related Values, 9 = Intergenerational Conflicts Item Pool Child Belief on Major/Career Related Values, 10 = Intergenerational Conflicts Item Pool Frequency, 11 = Intergenerational Conflicts Item Pool Severity

** $p < 0.01$ (2 tailed),

* $p < 0.05$ (2 tailed)

Multiple Regression Analyses

To answer the second research question, three multiple regression analyses were performed. Congruence was measured by difference scores. Due to the poor reliability of the financial support subscale of the Family Influence Scale, it was removed from further analyses.

First Regression Analysis

In the first regression analysis, congruence of the informational support aspect of family influence was entered as the outcome variable. Difference scores of Asian values, acculturation subscales (e.g. country of origin, Asian American, European American), and intergenerational conflict subscales (e.g. parent's belief on major/career related values, child's belief on major/career related values, general intergeneration conflict with frequency measure, general intergeneration conflict with severity measure) were entered as the predictor variables. Table 9 presents the findings from this analysis. The total variation in the difference scores for the informational support subscale accounted for the difference scores in the values scale, difference scores in all three subscales of the Asian American Multidimensional Acculturation Scale, and difference scores in all four subscales of the Intergenerational Conflicts Item pool was 29.3% ($R^2 = 0.293$), and was not statistically significant ($F = 1.086$, $p > 0.05$). This means that differences for values, acculturation subscales, and intergenerational conflict subscales, when identified as the only predictors, does not account for a significant amount of variability in differences of informational support among Asian parent-child dyads.

The regression model was identified as Differences in Informational Support (\hat{Y}) = 0.500 (Differences in Asian Values) + 0.064 (Differences in AAMAS – CO) + 0.012 (Differences in AAMAS – AA) – 0.090 (Differences in AAMAS – EA) + 0.246 (Differences in Intergenerational Conflict Child Belief on Major/Career Related Values) – 0.319 (Differences in Intergenerational Conflict Parent Belief on Major/Career Related Values), + 0.023 (General Intergeneration Conflict with Frequency Measure) + 0.039 (Differences in General Intergeneration Conflict with Severity Measure) + 4.203.

This model shows that differences in informational support between Asian parents and their children is predicted to increase by 0.500 when differences in Asian values increased by one, predicted to increase by 0.064 when differences in AAMAS – CO increased by one, predicted to decrease by 0.090 when differences in AAMAS – EA increased by one, predicted to increase by 0.246 when differences in intergenerational conflict child belief's regarding major/career related values increased by one, predicted to decrease by 0.319 when differences in intergenerational conflict parent's beliefs regarding major/career related values increased by one, predicted to increase by 0.023 when frequency of conflicts increased by one, predicted to increase by 0.039 when severity of conflicts increased by one. Differences in informational support was predicted to be 4.203 when differences in Asian values, differences in AAMAS – CO, differences in AAMAS – AA, differences in AAMAS – EA, differences in intergenerational conflict parent belief on major/career related values, differences in intergenerational conflict child belief on major/career related values, differences in frequency of conflict, differences in severity of conflict were equal to zero.

The total effects for differences in AAMAS – CO ($t = 0.472, p > 0.05$), differences in AAMAS – AA ($t = 0.098, p > 0.05$), differences in AAMAS – EA ($t = -0.793, p > 0.05$), differences in Intergenerational Conflict Parent Belief on Major/Career Related Values ($t = -0.970, p > 0.05$), differences in Intergenerational Conflict Child Belief on Major/Career Related Values ($t = 0.605, p > 0.05$), differences in General Intergeneration Conflict with Frequency ($t = 0.107, p > 0.05$), and differences in General Intergeneration Conflict with Severity ($t = 0.157, p > 0.05$) were not significant. However, the total effects for the differences in cultural values ($t = 2.104, p < 0.05$) was significant. This suggests that the higher the differences between Asian parent-child dyads in endorsing Asian values, the higher the differences between the dyads in their perceptions of informational support on careers.

Table 9

Findings from Values, Acculturation, and Intergenerational Conflict Predicting Informational Support

	b	SE b	β	p	R ²
Model 1				0.486	0.293
(constant)	0.4203	5.932			
AVS - R	0.500	0.238	0.446	0.048*	
AAMAS – CO	0.064	0.135	0.098	0.642	
AAMAS – AA	0.012	0.122	0.019	0.923	
AAMAS – EA	-0.090	0.114	-0.156	0.437	
IG – Child	0.246	0.466	0.136	0.551	
IG – Parent	-0.319	0.328	-0.216	0.343	
IG – Frequency	0.023	0.212	-0.022	0.915	
IG – Severity	0.039	0.251	0.034	0.877	

Note: AVS - R = Asian Values Scale – Revised, AAMAS – CO = Asian American Multidimensional Acculturation Scale – Country of Origin, AAMAS – AA = Asian American Multidimensional Acculturation Scale – Asian American, AAMAS – EA = Asian American Multidimensional Acculturation Scale – European American, IG – Self = Intergenerational Conflicts Item Pool Child Belief on Major/Career Related Values, IG – Parent = Intergenerational Conflicts Item Pool Parent Belief on Major/Career Related Values, IG - Frequency = Intergenerational Conflicts Item Pool Frequency, IG Severity = Intergenerational Conflicts Item Pool Severity

Note: * p < 0.05

Second Regression Analysis

In the second regression analysis, congruence of the family expectations aspect of family influence was entered as the outcome variable. Difference scores of Asian values, acculturation subscales (e.g. country of origin, Asian American, European American), and intergenerational conflict subscales (e.g. self-belief on major/career related values, child's belief on major/career related values, general intergeneration conflict with frequency measure, general intergeneration conflict with severity measure) were entered as the predictor variables. Table 10 presents the findings from this analysis.

The total variation in the difference scores for the family expectations subscale accounted for the difference scores in the Asian Values Scale – Revised, difference scores in all three subscales of the Asian American Multidimensional Acculturation Scale, and difference scores in all four subscales of the Intergenerational Conflicts Item pool was 56% ($R^2 = 0.560$), and was statistically significant ($F = 3.339, p < 0.05$). This means that differences for Asian values, acculturation subscales, and intergenerational conflict subscales, when identified as the only predictors, accounts for a significant amount of variability in differences in family expectations among Asian parent-child dyads.

The regression model was identified as Differences in Family Expectations (\hat{Y}) = -0.089 (Differences in Asian Values) + 0.086 (Differences in AAMAS – CO) - 0.032 (Differences in AAMAS – AA) - 0.056 (Differences in AAMAS – EA) - 0.167 (Differences in Intergenerational Conflict Child Belief on Major/Career Related Values) + 0.298 (Differences in Intergenerational Conflict Parent Belief on Major/Career Related Values), + 0.100 (General Intergeneration Conflict with Frequency Measure) + 0.388 (Differences in General Intergeneration Conflict with Severity Measure) + 0.307.

This model shows that differences in family expectations between Asian parents and their children is predicted to decrease by 0.089 when differences in Asian values increased by one, predicted to increase by 0.086 when differences in AAMAS – CO increased by one, predicted to decrease by 0.032 when differences in AAMAS – AA increased by one, predicted to decrease by 0.056 when differences in AAMAS – EA increased by one, predicted to decrease by 0.167 when differences in Intergenerational Conflict Child Belief's Regarding Major/Career Related Values increased by one, predicted to increase by 0.298 when differences in Intergenerational Conflict Parent's Beliefs Regarding Major/Career Related Values increased by one, predicted to increase by 0.100 when differences in Frequency of Conflicts increased by one, predicted to increase by 0.388 when differences in Severity of Conflicts increased by one. Differences in family expectations was predicted to be 0.307 when differences in Asian values, differences in AAMAS – CO, differences in AAMAS – AA, differences in AAMAS – EA, differences in intergenerational conflict parent belief on major/career related values,

differences in intergenerational conflict self/child belief on major/career related values, differences in frequency of conflict, differences in severity of conflict were equal to zero.

The total effects for differences in Asian values ($t = -0.963, p > 0.05$), differences in AAMAS – CO ($t = 1.624, p > 0.05$), differences in AAMAS – AA ($t = -0.674, p > 0.05$), differences in AAMAS – EA ($t = -1.269, p > 0.05$), differences in General Intergeneration Conflict with Frequency ($t = 1.202, p > 0.05$), and differences in Intergenerational Conflict Child Belief on Major/Career Related Values ($t = -1.056, p > 0.05$), were not significant. However, the total effects for the differences in cultural values ($t = 2.104, p < 0.05$) was significant. The total effects for the differences in General Intergeneration Conflict with Severity ($t = 3.958, p < 0.05$) and differences in Intergenerational Conflict Parent Belief on Major/Career Related Values ($t = 2.327, p < 0.05$) were significant. The significance of the General Intergeneration Conflict with Severity subscale suggests that the more serious general and major/career-related conflicts are between Asian parents and their college age children, there will be more disagreement around family expectations on careers among the dyads. Similarly, the more Asian parents and their college age children disagree on the parents' perceptions of conflict around major/career related values, there will more disagreement around family expectations on careers among the dyads.

Table 10

Findings from Values, Acculturation, and Intergenerational Conflict Predicting Family Expectations

	b	SE b	β	p	R ²
Model 1					0.560
(constant)	0.307	2.315		0.896	
AVS - R	-0.089	0.093	-0.161	0.347	
AAMAS – CO	0.086	0.053	0.266	0.119	
AAMAS – AA	-0.032	0.048	-0.104	0.507	
AAMAS – EA	-0.056	0.044	-0.197	0.218	
IG – Child	-0.167	0.158	-0.187	0.303	
IG – Parent	0.298	0.128	0.408	0.030*	
IG – Frequency	0.100	0.083	0.197	0.243	
IG – Severity	0.388	0.098	0.670	0.001*	

Note: AVS - R = Asian Values Scale – Revised, AAMAS – CO = Asian American Multidimensional Acculturation Scale – Country of Origin, AAMAS – AA = Asian American Multidimensional Acculturation Scale – Asian American, AAMAS – EA = Asian American Multidimensional Acculturation Scale – European American, IG – Child = Intergenerational Conflicts Item Pool Child Belief on Major/Career Related Values, IG – Parent = Intergenerational Conflicts Item Pool Parent Belief on Major/Career Related Values, IG - Frequency = Intergenerational Conflicts Item Pool Frequency, IG Severity = Intergenerational Conflicts Item Pool Severity

Note: * p < 0.05

Third Regression Analysis

In the third regression analysis, congruence of the values and beliefs aspect of family influence was entered as the outcome variable. Difference scores of the acculturation subscales (e.g. country of origin, Asian American, European American), intergenerational conflict subscales (e.g. self-belief on major/career related values, child's belief on major/career related values, general intergeneration conflict with frequency measure, general intergeneration conflict with severity measure), and cultural values were entered as the predictor variables. Table 11 presents the findings from this analysis.

The total variation in the difference scores for the values and beliefs subscale accounted for the difference scores in the Asian Values Scale – Revised, difference scores in all three subscales of the Asian American Multidimensional Acculturation Scale, and difference scores in all four subscales of the Intergenerational Conflicts Item pool was 20.6% (R square = 0.206), and was not statistically significant ($F = 0.681$, $p > 0.05$). This means that differences for Asian values, acculturation subscales, and intergenerational conflict subscales, when identified as the only predictors, do not account for a significant amount of variability in differences in values and beliefs among Asian parent-child dyads.

The regression model was identified as Differences in Values and Beliefs (\hat{Y}) = 0.013 (Differences in Asian Values) + 0.004 (Differences in AAMAS – CO) – 0.025 (Differences in AAMAS – AA) – 0.019 (Differences in AAMAS – EA) – 0.237 (Differences in Intergenerational Conflict Child Belief on Major/Career Related Values) + 0.094 (Differences in Intergenerational Conflict Parent Belief on Major/Career Related

Values), + 0.043 (General Intergeneration Conflict with Frequency Measure) + 0.127 (Differences in General Intergeneration Conflict with Severity Measure) + 2.761

This model shows that differences in values and beliefs between Asian parents and their children is predicted to increase by 0.013 when differences in Asian values increased by one, predicted to increase by 0.004 when differences in AAMAS – CO increased by one, predicted to decrease by 0.025 when differences in AAMAS – AA increased by one, predicted to decrease by 0.019 when differences in AAMAS – EA increased by one, predicted to decrease by 0.237 when differences in intergenerational conflict self/child belief's regarding major/career related values increased by one, predicted to increase by 0.094 when differences in intergenerational conflict parent's beliefs regarding major/career related values increased by one, predicted to increase by 0.043 when differences in frequency of conflicts increased by one, predicted to increase by 0.127 when differences in severity of conflicts increased by one. Differences in values and beliefs among Asian parent-child dyads was predicted to be 2.761 when differences in cultural values, differences in AAMAS – CO, differences in AAMAS – AA, differences in AAMAS – EA, differences in intergenerational conflict parent belief on major/career related values, differences in intergenerational conflict self/child belief on major/career related values, differences in frequency of conflict, differences in severity of conflict were equal to zero.

The total effects for differences in cultural values ($t = 0.163, p > 0.05$), differences in AAMAS – CO ($t = 0.082, p > 0.05$), differences in AAMAS – AA ($t = -0.630, p > 0.05$), differences in AAMAS – EA ($t = -0.497, p > 0.05$), differences in

General Intergeneration Conflict with Frequency ($t = 0.632, p > 0.05$), differences in General Intergeneration Conflict with Severity ($t = 1.537, p > 0.05$), differences in Intergenerational Conflict Child Belief on Major/Career Related Values ($t = -1.774, p > 0.05$), and differences in Intergenerational Conflict Parent Belief on Major/Career Related Values ($t = 0.871, p > 0.05$) were not significant.

Table 11

Findings from Values, Acculturation, and Intergenerational Conflict Predicting Values and Beliefs

	b	SE b	β	p	R ²
Model 1					0.206
(constant)	2.761	1.949		0.171	
AVS - R	0.013	0.078	0.037	0.872	
AAMAS – CO	0.004	0.044	0.018	0.936	
AAMAS – AA	-0.025	0.040	-0.130	0.535	
AAMAS – EA	-0.019	0.037	-0.130	0.625	
IG –Child	-0.237	0.133	-0.422	0.091	
IG – Parent	0.094	0.108	0.205	0.394	
IG – Frequency	0.043	0.070	0.137	0.540	
IG – Severity	0.127	0.083	0.349	0.139	

Note: AVS – R = Asian Values Scale – Revised, AAMAS – CO = Asian American Multidimensional Acculturation Scale – Country of Origin, AAMAS – AA = Asian American Multidimensional Acculturation Scale – Asian American, AAMAS – EA = Asian American Multidimensional Acculturation Scale – European American, IG – Self/Child = Intergenerational Conflicts Item Pool Child Belief on Major/Career Related Values, IG – Parent = Intergenerational Conflicts Item Pool Parent Belief on Major/Career Related Values, IG - Frequency = Intergenerational Conflicts Item Pool Frequency, IG Severity = Intergenerational Conflicts Item Pool Severity

Note: * $p < 0.05$

CHAPTER V

DISCUSSION

The purpose of this chapter is to restate the purpose of the study, revisit the research questions and subsequent hypotheses, briefly summarize the methodology, state and discuss the results, provide theoretical, counseling, and methodological implications, discuss limitations, and provide recommendations for future research.

Restatement of the Problem

Research on the career development process of Asian Americans has primarily focused on individual and group levels of analyses (Leong & Gupta, 2007). Individual levels of analyses include Asian Americans' career interests, choices, and occupational values (Leong & Gupta, 2007). Research in this area has suggested that the career choices of Asian American college students do not necessarily match their interests (e.g. Tang et al., 1999; Leong & Gupta, 2007). Rather, this group makes career-related choices based on family influence (Tang et al., 1999).

Group levels of analyses include occupational segregation, stereotyping, and discrimination (Leong & Gupta, 2007). Asian Americans are often overrepresented in fields such as medicine, science, and engineering, but underrepresented in fields such as social sciences (U.S. Census Bureau, 2011). Both levels of analyses provide researchers and clinicians with more information on how to assist this population in making career-related decisions.

Research has also demonstrated that specific contextual factors, such as family influence, acculturation, conflict, and cultural values, influence the career decision making process of Asian American college students (e.g. Leong, 2001; Tang et al., 1999; Fouad et al., 2008). However, the majority of research on this topic focuses on the college student's perspective. If a parent or guardian's perspective regarding career choices is examined, it is typically the student who reports this information instead of the parent or guardian. There have been a few studies that have examined Asian and Asian American parents and their college students regarding careers, but not within a developmental framework. Therefore, the primary purpose of this study is to contribute to existing literature by including Asian and Asian American parents' career choices for their college children while examining their children's perspectives within the same study.

Research Questions and Hypotheses

This study intended to answer two research questions. First, the factor structure for the Family Influence Scale and Intergenerational Conflicts Item pool was supposed to be investigated for both Asian parents and their college children. It was hypothesized that the factor structure for these two measures would be the same for Asian parents and their college age children.

The second research question investigated whether congruence of family influence on careers was predicted by congruence of acculturation, cultural values, and intergenerational conflict for Asian and Asian American parent-child dyads. Congruence was measured by using difference scores between Asian parent-child dyads for each

variable of interest. Based on previous research on Asian American college student career development, it was hypothesized that congruence of family influence on careers would predict congruence of acculturation, cultural values, and intergenerational conflict.

Methodology

Several instruments were used to measure contextual factors. College students who identified as Asian or Asian American and their parents were administered a demographic questionnaire. They were also administered the Family Influence Scale (FIS) which measures informational support, financial support, family expectations, and values and beliefs around careers (Fouad et al., 2010). Acculturation was measured by the Asian American Multidimensional Acculturation Scale (AAMAS) (Chung et al., 2004) while Asian cultural values were measured by the Asian Values Scale-Revised (AVS-R) (Kim & Hong, 2004). Intergenerational conflict was assessed by Qin's (2010) Intergenerational Conflicts Item Pool.

Data was collected electronically on Qualtrics and in-person. College students who identified as Asian or Asian American, were enrolled in two- or four-year universities, resided in the U.S., and were 18 or older were invited to participate in the study. The students were also asked to provide the contact information (e.g. mailing address, email address) of the parent or guardian they felt was most influential in their career development process. Next, the primary investigator contacted the parent the college student listed either via email or mail to follow-up with the parent measures.

The college students were recruited through snowball sampling, focusing specifically on university student organizations, non-profit organizations, social media networks (e.g. Facebook), and national professional organizations. This yielded 149 college student participants that met the inclusionary criteria. However, only 61 of these participants provided contact information for their parent or guardian. There were 39 parents who identified as Asian or Asian American whose college students had completed the student version of the survey. Of this, 30 Asian and Asian American parents completed all the measures. The parents and their college students were matched to create 30 parent-child dyads. The college students ages ranged from 18 – 27 years old, and their parents ages ranged from 44 – 67 years old. All participants were eligible to enter into two raffle drawings of \$50 Amazon gift cards.

In order to examine congruence of family influence, acculturation, cultural values, and intergenerational conflict, difference scores were calculated for parent-child dyads on each variable. Multiple regression analyses examined whether congruence of family influence on careers was predicted by congruence of acculturation, cultural values, and intergenerational conflict. Data was analyzed using multiple regression analyses with SPSS statistical software.

Review of Results

This study examined difference scores between Asian parents and their college age children. Specifically, the lower the differences between the Asian parent-child dyad on the variables of interest (e.g. informational support, family expectations, values/beliefs, cultural values, acculturation, intergenerational conflict), the more

agreement there was between the dyad on these variables. Similarly, the larger the differences between the Asian parent-child dyad, the less agreement between the dyad on the variables of interest.

In the first regression analysis, difference scores of the informational support aspect of the FIS was entered as the outcome variable. Difference scores of the AVS-R, AAMAS-Culture of Origin, AAMAS – Asian American, AAMAS – European American, Intergenerational Conflict Child Belief on Major/Career Related Values, Intergenerational conflict Parent Belief on Major/Career Related Values, General Intergeneration Conflict with Frequency Measure, and General intergeneration Conflict with Severity Measure were entered as the predictor variables.

The total variation in the difference scores for the informational support subscale of the FIS accounted for the difference scores in the AVS-R, difference scores in all three subscales of the AAMAS, and difference scores in all four subscales of the Intergenerational Conflicts Item Pool was 29.3% ($R^2 = 0.293$), and was not statistically significant ($F = 1.086$, $p > 0.05$). This means that differences for cultural values, acculturation subscales, and intergenerational conflict subscales, when identified as the only predictors, do not account for a significant amount of variability in differences of informational support among Asian parent-child dyads.

Findings from the first regression analysis indicated that the total effects for differences in AAMAS – CO ($t = 0.472$, $p > 0.05$), differences in AAMAS – AA ($t = 0.098$, $p > 0.05$), differences in AAMAS – EA ($t = -0.793$, $p > 0.05$), differences in Intergenerational Conflict Parent Belief on Major/Career Related Values ($t = -0.970$, $p >$

0.05), differences in Intergenerational Conflict Child Belief on Major/Career Related Values ($t = 0.605$, $p > 0.05$), differences in General Intergeneration Conflict with Frequency ($t = 0.107$, $p > 0.05$), and differences in General Intergeneration Conflict with Severity ($t = 0.157$, $p > 0.05$) were not significant. However, the total effects for the differences in cultural values ($t = 2.104$, $p < 0.05$) was significant. This suggests that the higher the differences between Asian parent-child dyads in endorsing Asian cultural values, the higher the differences between the dyads in their perceptions of informational support on careers.

In the second regression analysis, difference scores of the family expectations aspect of the FIS was entered as the outcome variable. Difference scores of the AVS-R, AAMAS-Culture of Origin, AAMAS – Asian American, AAMAS – European American, Intergenerational Conflict Child Belief on Major/Career Related Values, Intergenerational conflict Parent Belief on Major/Career Related Values, General Intergeneration Conflict with Frequency Measure, and General intergeneration Conflict with Severity Measure were entered as the predictor variables.

Findings from the second regression analysis stated that the total variation in the difference scores for the family expectations subscale accounted for the difference scores in the AVS-R, difference scores in all three subscales of the AAMAS, and difference scores in all four subscales of the Intergenerational Conflicts Item pool was 56% ($R^2 = 0.560$), and was statistically significant ($F = 3.339$, $p < 0.05$). This means that differences for cultural values, acculturation subscales, and intergenerational conflict

subscales, when identified as the only predictors, does account for a significant amount of variability in differences in family expectations among Asian parent-child dyads.

In the third regression analysis, congruence of the values and beliefs aspect of the FIS was entered as the outcome variable. Difference scores of the AVS-R, AAMAS-Culture of Origin, AAMAS – Asian American, AAMAS – European American, Intergenerational Conflict Child Belief on Major/Career Related Values, Intergenerational conflict Parent Belief on Major/Career Related Values, General Intergeneration Conflict with Frequency Measure, and General intergeneration Conflict with Severity Measure were entered as the predictor variables.

The total variation in the difference scores for the values and beliefs subscale accounted for the difference scores in the AVS-R, difference scores in all three subscales of the AAMAS, and difference scores in all four subscales of the Intergenerational Conflicts Item pool was 20.6% ($R^2 = 0.206$), and was not statistically significant ($F = 0.681, p > 0.05$). This means that differences for cultural values, acculturation subscales, and intergenerational conflict subscales, when identified as the only predictors, do not account for a significant amount of variability in differences in values and beliefs among Asian parent-child dyads.

The total effects for differences in Asian values ($t = 0.163, p > 0.05$), differences in AAMAS – CO ($t = 0.082, p > 0.05$), differences in AAMAS – AA ($t = -0.630, p > 0.05$), differences in AAMAS – EA ($t = -0.497, p > 0.05$), differences in General Intergeneration Conflict with Frequency ($t = 0.632, p > 0.05$), differences in General Intergeneration Conflict with Severity ($t = 1.537, p > 0.05$), differences in

Intergenerational Conflict Self/Child Belief on Major/Career Related Values ($t = -1.774$, $p > 0.05$), and differences in Intergenerational Conflict Parent Belief on Major/Career Related Values ($t = 0.871$, $p > 0.05$) were not significant.

Discussion of Results

After examining all of the research questions and hypotheses, results indicated that differences between Asian parent-child dyads on the family expectations aspect of family influence on careers was predicted by differences between Asian parent-child dyads on Asian values, acculturation, and intergenerational conflict. More specifically, differences in endorsing cultural values, differences in the degree of seriousness regarding general and major/career related values, and differences in conflict regarding parents' perceptions around major/career related values were predictive of differences in family expectations.

Some of this study's findings are consistent with previous research about contextual factors on Asian American career development while some are inconsistent with existing literature. However, it is important to note that the majority of research in this area is limited to examining Asian American college students' perspectives and not within a dyadic context.

The first regression analysis yielded nonsignificant results as a model. However, the analysis yielded significant results for the total effects of differences in values, noting that the higher the differences in endorsing Asian values, the higher the differences between the dyads in their perceptions of informational support on careers. In other

words, higher differences indicated the potential for more disagreement between Asian parents and their college age children.

While research has not explicitly examined adherence to cultural values within a dyadic context, these findings are consistent with existing literature pertaining to Asian American college students experiencing conflict related to cultural values. This finding is supported by Leung et al. (2011)'s study investigating cultural values conflict and parental expectations on the career decision-making process of Chinese college students in China. Leung et al. (2011) suggested that a relational aspect is important to consider within Chinese communities due to its collectivist orientation. They hypothesized that Chinese college students will most likely experience conflict due to cultural values if they are exposed to both traditional Chinese and Western cultural values (Leung et al., 2011). In particular, those who experienced more conflict regarding cultural values would experience more difficulties in career decision making (Leung et al., 2011).

Similarly, Kim (2001) argued that conflict around cultural values and how they are interpreted by children can be influenced by the dominant culture. For example, children who are being raised by immigrant parents from Asia will experience a family culture that is influenced by ethnic cultural values (Kim, 2001). However, the children themselves will most likely be exposed to mainstream values and beliefs which may lead to cultural conflict (Kim, 2001). These discrepancies will most likely also be influenced by acculturation levels and rates (Porters, 1997).

The second regression model yielded significant results, specifically noting that the total effects of differences in general intergenerational conflict with the severity

measure (e.g. severity of conflict around majors and careers) and differences in intergenerational conflict parent belief on major/career related values were significant. These findings are surprising as they have not been investigated in previous literature. The construct of intergenerational conflict has been examined in relation to other contextual factors such as acculturation (e.g. Chung, 2001), but not solely for conflicts surrounding majors and careers.

One potential explanation for these significant results is the degree to which Asian parents and their college children have expectations around the career decision-making process may differ depending on their endorsement of cultural values, acculturation levels, and conflict experienced (e.g. Hou & Leung, 2011; Tang, 2002). For example, Asian or Asian American college students can hear information and receive support around majors, careers, and career choices. They can also hear information on what cultural values the family of origin endorses and whether to adhere to their cultures of origin. However, they may choose not to endorse these ideas, beliefs, and practices (e.g. Kim, 2001). Additionally, expectations may not always be explicitly communicated between Asian parents and their college students. For example, an Asian parent may expect his/her child to pursue a certain occupation based on status but not have the tools to provide informational support around that occupation. Further, family expectations regarding careers can change over time which may impact how Asian parents influence their children's choices.

In Ma, Desai, George, San Filippo and Varon's (in press) qualitative study investigating conflict over career decisions, results suggested that Asian American participants felt guilty and indebtedness due to conflicting values, traditions, and expectations regarding careers. They also experienced parental disapproval regarding their career choices and coped by discussing their choices with friends and compromising between personal desires and parental expectations (Ma et al., in press). This level of parental disapproval can potentially explain the second regression's significant findings. For example, if Asian parent-child dyads are already disagreeing on what cultural values and acculturation levels they are endorsing, they are most likely experiencing some conflict within the family unit. Previous research suggests that conflict around majors and careers typically occurs because of a mismatch of values and interests between the Asian parent and child (Ma et al., in press), which is supported by the significant total effects of the differences in parent belief on major/career related values found in this study.

The third regression analysis also yielded nonsignificant results and none of the variables had significant total effects. Previous research within vocational psychology has not closely examined the degree to which cultural values, acculturation, and intergenerational conflict influence values and beliefs in regards to career choices. Future research in this area would be interesting to explore further.

It is surprising that the three subscales of acculturation, as measured by the AAMAS, did not yield significant results for any of the three regression analyses. This is inconsistent with previous research as it relates to the role of acculturation on career development and career choices. Previous research in this area has utilized Leong and

Chou's (1994) revision of Berry's (1980) model of acculturation which states that Asian Americans who endorse a Separationist identity, those who focus more on culture of origin and are less acculturated to the dominant culture, tend to experience occupational segregation. Conversely, Asian Americans who endorsed Assimilationist (e.g. having daily interactions with the dominant culture) and Integration (e.g. adhering to the culture of origin but also interacting with the dominant culture) identities follow similar occupational patterns to European Americans (Leong & Chou, 1994).

Previous research has also suggested that Asian American college students who are more acculturated to the dominant culture experience less conflict with parents regarding education and careers (Chung, 2001). While this appears to be counterintuitive at first, it is important to consider whether or not these students were raised by parents who were born in the U.S. or resided in the U.S. for long periods of time and have become acculturated to the dominant culture.

One possible explanation for nonsignificant results for differences in acculturation is the actual acculturative nature between Asian parents and their children. While the majority of parent participants in this study reported being born outside of the U.S., their length of residence in the U.S. ranged from 0 years to 50 years. This suggests that the parents have been exposed to the dominant culture and could have similar acculturation levels as their college age children, which would imply less conflict regarding careers. It is also possible that the acculturation styles of Asian parents and their college age children in this study were similar, but this variable was not explicitly assessed.

Another explanation for the overall nonsignificant findings for the first and third regression analyses is the age range of student participants (ages 18 – 27). Previous research has highlighted specific developmental stages and tasks that should be achieved during this time frame (e.g. Super, 1963; 1980). According to Super's life-span, life-space theory, this study covered the exploratory stage (ages 15 – 24) and the establishment stage (ages 25 – 44). During the exploratory stage, individuals are encouraged to explore various jobs through taking classes, participating in hobbies, and developing tentative career choices (Super, 1963). During the establishment stage, individuals are developing entry level skills that are relevant to choice and obtaining work experience (Super, 1963).

The tasks associated with Super's (1963) stages include: 1) crystallization (ages 14 – 18) which involves developing and planning vocational goals, 2) specification of a vocation preference (ages 18 – 21) which involves formulating specific vocational goals from general ones, 3) implementation (ages 21 – 24) which focuses primarily on training for a specific career and obtaining employment, and 4) stabilization (ages 24 – 35) which focuses on by working in a particular field to confirm one's career choice (Super, 1963).

Since the majority of the participants identified as seniors (N = 10) and graduate students (N = 6), they may have already accomplished several of the tasks associated with Super's model. For example, the older participants who identified as seniors and graduate students may have already thought critically about their vocational goals, obtained training through internships, and obtained employment related to these goals. Therefore, they may not be experiencing as much conflict regarding majors and careers,

which in turn could suggest that their parents' perceptions of family influence on careers is congruent to theirs. Previous research also suggests that older students, regardless of their ethnic backgrounds, are more willing to challenge their parents regarding education and career-related views (e.g. Leung et al., 2011). While there was not enough variance in age due to the study's limited sample size, it may be beneficial to explore this further.

Implications

Theoretical Contributions

This study was conceptualized within a developmental framework in vocational psychology. Research suggests that college is a significant time in one's life to make decisions about majors, career choices, and career trajectories (e.g. Hartung, 2013). As students enter and persist in college, they are exposed to a plethora of ideas and opportunities to interact with peers, professors, and professionals to expand on their knowledge of the world of work. Therefore, it is important to understand how the relationships they form both inside and outside of the academic environment impact the overall career development process (e.g. Schultheiss, 2007).

However, the majority of research in vocational psychology focuses on career choices within the context of the individual. These traditional developmental theories may not be as applicable to dyadic research in vocational psychology as career choices often occur in the context of relations for Asian American college students. Therefore, it is important to further investigate the role of various relationships, including those with parents, in vocational psychology dyadic research.

Researchers such as Blustein (2011) note that as the world of work becomes more fluid, traditional career theories are finding that people do not develop in a relational vacuum. As a result, their career choices are not void of relational influences either. For example, Whiston and Keller (2004) highlighted how family of origin influences one's career development by providing emotional support and role modeling. Similarly, theoretical frameworks such as Bowlby's (1982) attachment theory focusing on family systems, Bratcher's (1982) perspective on family's myths, rules, and boundaries and their impact on one's career development, and Ulrich and Dunne's (1986) emphasis on family dynamics may be useful in conceptualizing the role of family on career choices for college students and their parents.

Due to the lack of significant findings in this study, it is important to investigate the how the relational contexts of Asian American college students and their parents effect their overall career decision making skills and career-related messages. The intersection of career-related messages between parents and their college children is often ignored in vocational psychology research. Since this study was dyadic in nature, it is important to modify and adapt traditional developmental theories to apply to both parents and their college children. One such way of doing this is the continued incorporation of contextual variables when examining parents and students perspectives.

Counseling Implications

According to Lowe (2005), Asian American college students typically present in counseling for academic concerns. During the course of counseling, Asian American college students may report distress regarding their majors and career choices, often citing conflict in these areas with their parents. Therefore, it is important for counselors to explicitly address the role of family when making career-related choices for this group in individual or career counseling. There are various tools that are available to clinicians to assess how clients in general are influenced by their families when making career decisions such as Chope's Family Protocol (Chope, 2001) and the Career Genogram (Dagley, 1984; Gysbers & Moore, 1987). These tools can also be utilized in sessions with Asian American college students in beginning conversations about how family members may influence one's career choices.

The findings of this study suggest that even though the Asian and Asian American parent-child dyad is not physically present in a counseling environment, the dyad is still present. Its presence often takes the form of how Asian and Asian American college students perceive the information their parents provided them with about majors, careers and academic achievement, expectations about these areas, and adherence to cultural values. Therefore, it is important that their parents' perceptions are addressed even though they may not be evident at first.

More specifically, it is important that counselors assess what differences in cultural values, acculturation, and intergenerational conflict regarding major/career related values mean for the Asian American college student or Asian parent seeking

counseling services. While Asian parents and their college students may disagree on a particular issue, such as degree of endorsement of cultural values, this disagreement may not necessarily be bad or lead to conflict. Therefore, it is imperative that counselors explore what it means for Asian American college students to agree or disagree with their parents. In some instances, the level of disagreement can be a positive interaction between the dyad which leads to more open communication regarding family expectations about careers and a subsequent reduction in conflict. In other cases, disagreeing on the endorsement of cultural values and acculturation levels can lead to more conflict regarding major and career-related values.

Counselors working with both Asian parents and their college age children can think critically about how to improve the parent-child relationship by making parents aware of their children's needs and by making children aware of their parents' values. Allowing a safe space for these conversations to take place in therapy can reduce the severity of conflict regarding majors and careers the dyads experiences. Communication about parents' perceptions of conflict about major and career-related values should also be explored as the total effects for this variable was statistically significant. One way to explore this area is to discuss Asian parents' expectations openly and invite them to individual and group interventions providing psychoeducation about the career development process, majors, and how to resolve conflicts.

Methodological Implications

The primary methodological concern with this type of research is securing participants and establishing trust within the community. While there have been

successful studies in securing large sample sizes with Asian and Asian American dyads (e.g. Hou & Leung, 2011), research examining variables such as family, parental attachment, and acculturation have yielded smaller sample sizes. For example, in Fan's (2012) dissertation, 23 Chinese immigrant families responded to the research study over the course of two years. One potential reason for low response rates among this community is not wanting to reveal personal or family information to individuals that are not family members or close friends. Therefore, it is imperative that researchers establish trusting relationships with the Asian and Asian American communities they wish to study.

While several leaders of university student organizations and non-profit organizations agreed to pass along the recruitment message for this study and were in general very supportive, few families completed both the parent and student surveys. One lesson from this process has been to further examine the "insider-outsider" dynamic that often takes place in research. While the primary investigator identified as one who struggled with her career choices and the role of family in making that choice, it was essential to be more visible to each family despite having built relationships with each of the organizations and individuals contacted for recruitment. Therefore, it is important to continue building strong relationships and participate in community activities prior to data collection. For future researchers, it may be beneficial to become immersed in the Asian communities they are wishing to study by attending various community-sponsored activities.

Limitations

There are several limitations in this study. The primary limitation is the study's sample size due to difficulties with recruitment. Due to a limited number of dyads in the analyses, findings should not be generalized to Asian Americans as a whole. Further, there were not enough dyads in each Asian subgroup to perform any within group analyses. Secondly, the measures were limited as they relied on participants' self-report. As such, observed associations among the variables may have been inflated by common method variance (Campbell & Fiske, 1959). Additionally, participants could have under- or over- reported the degree of family influence, acculturation, level of conflict, and endorsement of cultural values.

When performing the analyses, all the dyads were grouped together to examine difference scores among the variables. Therefore, any individual differences within dyad members were not investigated. This may be beneficial to examine in the future as one dyad may experience more family influence on career choices than other dyads.

Additionally, the majority of the data collected was through university student organizations, non-profit organizations, and professional organizations. It is important to note that being a member of any of these organizations may suggest higher levels of ethnic identity, family influence, acculturation and endorsement of cultural values and lower levels of conflict than participants who are not part of similar organizations. Therefore, recruiting from these specific organizations may not be representative of all students that identify as Asian or Asian American.

Only one Asian or Asian American college student and his/her Asian or Asian American parent could be paired as a dyad. However, many individuals have “parental” figures, such as grandparents, aunts and uncles, which influence their career choices. Any of these other figures could have influenced the students’ responses as level of parental influence was not formally assessed.

Another limitation is with the validity of the Family Influence Scale and the Intergenerational Conflict Items Pool. At the time of the investigation, these measures had not been validated with parents that identified as Asian or Asian American. While validating the two measures with parents was the primary investigator’s first research question, it could not be answered to due to the limited sample size needed for a factor analysis. However, it is still important that future research investigate the validity of these measures with Asian and Asian American parents. Further, the financial support subscale of the Family Influence Scale was removed from all analyses due to poor reliability estimates. Prior to administering the paper and pencil versions of the survey, the primary investigator noted that two items were incorrectly labeled. One was from the financial support subscale which was supposed to be “My family has not been able to financially support my career decisions.” The word financially was omitted. The second item was in the Intergenerational Conflicts Item Pool, which was supposed to be “How much time to spend on studying.” The word studying was omitted. During in-person recruitment, all potential participants were made aware of these errors and told to write in the missing words.

This study was also limited due to its initial reliance on web-based data collection methods through Qualtrics. While college students typically reside in computer-friendly environments, it is easy to ignore email messages asking for study participation which may increase selection bias. Additionally, parents who were contacted via email to participate in the parent version of the survey may have not responded due to receiving a message from an unknown sender. In-person recruitment was also challenging. While this form of recruitment assisted in recruiting students, it was difficult to have parents fill out the survey.

Another limitation is its methodology. College students may not have felt comfortable providing contact information for the parent or guardian that was most influential in their career choices. This could have served as a deterrent for them to participate in the study. Similarly, parent participants may have not felt comfortable responding to questions about their family and their child's career choices which could have prevented them from completing the parent version of the survey. Further, students who did provide contact information for their parent or guardian may have done so because their parents were more likely to respond to research requests. This may also increase selection bias.

Future Directions

Recommendations

Based on previous research, findings from this study, theoretical contributions, practical implications, and this study's limitations, it is evident that further investigation is warranted in this area. While there is research on the role of family influence on careers, there is limited information on its role within a dyad.

The primary recommendation is in regards to methodology. As noted above, it is important that any research done with this population gain the trust of its community members. Future research should focus on fostering relationships with various Asian and Asian American communities to better understand their perspectives. In addition to attending community-sponsored activities, it is also important to be transparent about research goals. For example, participants may not be willing to participate in a quantitative study because they do not know who the researcher is and what will happen to their responses. One way to overcome this potential obstacle is through in-person data collection where potential participants have the opportunity to meet and interact with the researchers.

Another recommendation is theoretical in nature. As noted before, there are several theories in career development that focus on the relational aspect of career choices. These frameworks can be further applied to determine the role of family influence within parent-child dyads. There are several theories outside of the vocational psychology realm that may be more applicable to this population such as the concepts of emerging adulthood and volitional functioning.

An individual's development during these parts of the age ranges in this study (18 – 27) is further explored in Arnett's (2000) concept of emerging adulthood. Arnett (2000) defined emerging adulthood as the period between 18 – 25 years old and described it as neither adolescence nor young adulthood. During this period, individuals are distinguished by being relatively independent from social roles and from normative expectations (Arnett, 2000).

While research has primarily focused on identity development in adolescence, Arnett (2000) noted that identity development continues into emerging adulthood in three primary areas: 1) work, 2) worldviews, and 3) love. Regarding work, an emerging adult focuses more on obtaining work experiences that can assist them in preparing for adult work roles (Arnett, 2000). This age group tends to focus on how their work experiences will serve as a foundation for future careers and career options. Emerging adults are encouraged to explore various options for majors and careers while enrolled in college (Arnett, 2000). This degree of sustained exploration can be helpful as they think critically about their future occupations (Arnett, 2000).

While sustained exploration may or may not be valued by Asian parents, it may be desired by Asian American college students. The potential lack of support regarding exploration could also lead to varying degrees of conflict regarding major and career-related values. Therefore, it is important to conduct future research about whether this model might be more applicable for Asian American college students and their parents regarding career choices.

The concept of volitional functioning within self-determination theory may also be useful in understanding Asian American career development. According to Ryan, Deci, and Grolnick (1995), volitional functioning can be viewed as an alternative to autonomy development which focuses on adolescents physically and emotionally distancing themselves from their parents and taking more responsibility for themselves. Volitional functioning focuses more on adolescents enacting behaviors that are based on internalized values and interests (Ryan et al., 1995). Instead of focusing on traditional career development theories to conceptualize differences between Asian parents and their college age children, it may be beneficial to focus on the degree of support, involvement, and autonomy development that is fostered within a dyad.

Future Research

An important area to consider in terms of future research is the examination of gender and age differences as it relates to intergenerational conflict. Previous research in Asian American career development has found that intergenerational conflict exists within this population. For example, Lee and Liu (2001) found that Asian American college students reported the greatest likelihood of experiencing intergenerational family conflict when compared to Hispanic and European American college students. Similarly, Lee et al. (2000) argued that Asian American parents and children with the fewest cultural differences (e.g. those that were acculturated to the dominant Western culture) reported less likelihood of intergenerational conflict.

Fuligini (1998)'s study investigating European American, Mexican, Chinese, and Filipino/a adolescents highlighted the need to assess for gender and age differences in relation to intergenerational conflict. Findings indicated that adolescent girls, regardless of cultural background, had later expectations for autonomy than boys (Fuligini, 1998). Adolescent girls also reported less conflict and cohesion with their fathers (Fuligini, 1998). Regarding age differences, older adolescents, regardless of ethnic background, expressed a greater willingness to disagree with their parents on parental authority and autonomy (Fuligini, 1998). While this study solely investigated adolescents, it is important to consider whether these patterns are evident for older Asian American students.

Traditionality of career choice and its impact on intergenerational conflict regarding majors and careers should also be explored in the future. For example, if an Asian parent values that his/her daughter choose a career that is expected of her gender and the daughter does not share the same expectations, this may lead to conflict regarding future careers. While this particular study did not explore career traditionality, it would be important to investigate in the future to determine if this is a source of potential conflict among Asian parents and their college children.

Other variables also need to be examined to continue this line of research. For example, this study did not investigate how Asian parent-child dyads coped with the conflict they experienced. Similarly, the study did not investigate the outcomes of these conflicts, specifically examining whether or not parents and children disagreeing are positive or negative. While the degree to which dyads agreed or disagreed on a particular

variable is dependent on the particular dyad, it would be interesting to investigate what this means for them in terms of coping strategies and major/career outcomes in the future.

Conclusion

Due to the limited sample size, the first research question and hypothesis regarding the factor structures of the Family Influence Scale and Intergenerational Conflicts Item Pool were not able to be answered. The second research question yielded significant results for differences between Asian parents and their college age children in the family expectations aspect of family influence being predicted by differences in cultural values (measured by the AVS-R), acculturation (measured by AAMAS – CO, AAMAS – AA, AAMAS – EA), and intergenerational conflict (measured by Intergenerational Conflict Child Belief on Major/Career Related Values, Intergenerational Conflict Parent Belief on Major/Career Related Values, .General Intergeneration Conflict with Frequency Measure, and General intergeneration Conflict with Severity Measure). The total effects of differences in the severity of conflict and differences in parents' perceptions of conflict about major/career related values were statistically significant.

The other two regression analyses investigating the informational support and values and beliefs aspects of family influence were not statistically significant. However, the total effects of differences in cultural values was significant in predicting the informational support aspect of family influence on careers.

Even though two of the regression models did not yield significant results, it is important to better understand how messages regarding career choices are conveyed between Asian parents and their college age children. Nonsignificant results suggest the need for additional research to refine the variables that influence the career development process between Asian parent-child dyads. Continued research on Asian parent-child dyads will allow for a more thorough discussion of how other contextual factors, such as acculturation gap, gender differences, and age differences, impact the overall career development process for this population.

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APPENDIX A
DEMOGRAPHIC QUESTIONNAIRES

Demographic Questionnaire – Student Form

Directions: For the following questions, please fill in the blank or check the response that best describes you.

If you wish to participate in the lottery drawing for one of two \$50 Amazon gift cards, please provide your email address.

1. What is your gender? (Please check one)
 - Female
 - Male
 - Transgender
 - Other

2. Please type in your name.

3. Please type in your age.

4. Please type in your birthdate.

5. Please indicate your ethnic background (Please check all that apply).
 - Indian
 - Chinese
 - Cambodian
 - Japanese
 - Korean
 - Taiwanese
 - Vietnamese
 - Filipino/a
 - Hmong
 - Indonesian
 - Pakistani
 - Thai
 - Laotian
 - Malaysian
 - Bi-racial (Please specify)

6. How would you describe your current socioeconomic status? (Please check one)
 - Poor
 - Working class
 - Middle class
 - Upper middle class
 - Wealthy

7. How would you describe the current community you are residing in? (Please check one)

- Rural
- Suburban
- Urban
- Other

8. How many siblings do you have?

9. Please type which state you are currently residing in.

10. What region of the U.S. are you currently residing in?

- Northwest
- Northeast
- Midwest
- Southwest
- Southeast
- West

11. Are you currently a college student?

- Yes
- No

12. What type of university are you attending?

- Two year
- Four year

13. What year are you in?

- Freshman
- Sophomore
- Junior
- Senior
- Other (Please specify)

14. Have you declared your major?

- Yes
- No

14a. What is your academic major? If undecided, please list possible major(s).

15. On a scale of 1 to 5 (1 = low, 5 = high), how committed are you to that major?

16. What occupation do you want to pursue after graduation? _____
17. On a scale of 1 to 5 (1 = low, 5 = high), how committed are you to that occupation?
18. What is the highest level of education you have obtained? (*Please check one*)
- Elementary/Secondary school
 - Some high school
 - High school diploma or equivalent
 - Some college
 - Associate or two-year degree
 - Not applicable or Don't know
19. Were you born in the U.S.?
- Yes
 - No
- 19a. If no, what is your country of origin?
- 19b. How long have you resided in the U.S.?
- 19c. How would you identify your generational status in the U.S.?
- 1st generation – I was not born in the U.S.
 - 2nd generation – I was born in the U.S., one or both of my parents were not born in the U.S.
 - 3rd generation – I was born in the U.S., both of my parents were born in the U.S., and my grandparents were born in another country
 - 4th generation – I was born in the U.S., both of my parents were born in the U.S., at least one of my grandparents was born in another country and remaining born in the U.S.
 - 5th generation – I was born in the U.S., my parents were born in the U.S., and all my grandparents were born in the U.S.
 - Other _____
20. What is your mother's occupation? _____
21. What is your father's occupation? _____
22. Please provide the researcher with contact information (e.g. name, mailing address and/or email address) of the **parent/guardian you consider most influential in your career development and decision-making process** so that the researcher can follow up with them. Please also include his/her relationship to you.

Demographic Questionnaire – Parent Form

Directions: For the following questions, please fill in the blank or check the response that best describes you.

If you wish to participate in the lottery drawing for one of two \$50 Amazon gift cards, please provide your email address.

1. What is your gender? (*Please check one*)
 - Female
 - Male
 - Transgender
 - Other _____

2. Please type in your age.

3. Please type in your college age student's birthdate.

4. Please provide the name of the college-age student that completed the student version of this survey (this can be found in the original message that was sent to you describing the study).

5. What is your relationship to the college-age student that completed the student version of this survey (e.g. biological mother/father, guardian, step-mother/step-father, etc.)?

6. Please indicate your ethnic background (Please check all that apply).
 - Indian
 - Chinese
 - Cambodian
 - Japanese
 - Korean
 - Taiwanese
 - Vietnamese
 - Filipino/a
 - Hmong
 - Indonesian
 - Pakistani
 - Thai
 - Laotian
 - Malaysian
 - Bi-racial (Please specify)

7. How would you describe your current socioeconomic status? (*Please check one*)

- Poor
- Working class
- Middle class
- Upper middle class
- Wealthy

8. How would you describe the current community you are residing in? (*Please check one*)

- Rural
- Suburban
- Urban
- Other _____

9. What is your current marital status?

- Single
- Married
- Divorced
- Widowed
- Separated
- Other _____

10. How many children do you have?

10a. How many of your children are in college?

11. Were you born in the U.S.?

- Yes
- No

11a. If no, what is your country of origin?

11b. How long have you resided in the U.S.?

11c. How would you identify your generational status in the U.S.?

- 1st generation – I was not born in the U.S.
- 2nd generation – I was born in the U.S., one or both of my parents were not born in the U.S.
- 3rd generation – I was born in the U.S., both of my parents were born in the U.S., and my grandparents were born in another country
- 4th generation – I was born in the U.S., both of my parents were born in the U.S.,

at least one of my grandparents was born in another country and remaining born in the U.S.

- 5th generation – I was born in the U.S., my parents were born in the U.S., and all my grandparents were born in the U.S.
- Other _____

12. Please type which state you are currently residing in.

13. What region of the U.S. are you currently in?

- Northwest
- Northeast
- Midwest
- Southwest
- Southeast
- West

14. What is the highest level of education you have obtained? (*Please check one*)

- Elementary/Secondary school
- Some high school
- High school diploma or equivalent
- Some college
- Associate or two-year degree
- Bachelor's or four-year degree
- Business or trade school
- Some graduate or professional school
- Graduate or professional degree
- Not applicable or Don't know

15. Please type in your current occupation.

16. What occupation or career would you like for your child to pursue?

APPENDIX B

ASIAN VALUES SCALE - REVISED

Asian Values Scale – Revised
(Kim & Hong, 2004)

Instructions: Use the scale below to indicate the extent to which you agree with the value expressed in each statement.

- 1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

- _____1. One should not deviate from familial and social norms.
- _____2. Children should not place their parents in retirement homes.
- _____3. One need not focus all energies on one's studies.
- _____4. One should be discouraged from talking about one's accomplishments.
- _____5. Younger persons should be able to confront their elders.
- _____6. When one receives a gift, one should reciprocate with a gift of equal or greater value.
- _____7. One need not achieve academically in order to make one's parents proud.
- _____8. One need not minimize or depreciate one's own achievements.
- _____9. One should consider the needs of others before considering one's own needs.
- _____10. Educational and career achievements need not be one's top priority.
- _____11. One should think about one's group before oneself.
- _____12. One should be able to question a person in an authority position.
- _____13. Modesty is an important quality for a person.
- _____14. One's achievements should be viewed as family's achievements.
- _____15. One should avoid bringing displeasure to one's ancestors.
- _____16. One should have sufficient inner resources to resolve emotional problems.
- _____17. The worst thing one can do is to bring disgrace to one's family reputation.
- _____18. One need not remain reserved and tranquil.
- _____19. One should be humble and modest.
- _____20. Family's reputation is not the primary social concern.
- _____21. One need not be able to resolve psychological problems on one's own.
- _____22. Occupational failure does not bring shame to the family.
- _____23. One need not follow the role expectations (gender, family hierarchy) of one's family.
- _____24. One should not make waves.
- _____25. One need not control one's expression of emotions.

APPENDIX C
FAMILY INFLUENCE SCALE

Family Influence Scale – Student Form
(Fouad et al., 2010)

Directions: After reading each statement carefully, please choose the number that is most appropriate for you.

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	My family shared information with me about how to obtain a job.	1	2	3	4	5	6
2	My family discussed career issues with me at an early age.	1	2	3	4	5	6
3	My family showed me how to be successful in choosing a career.	1	2	3	4	5	6
4	My family showed me what was important in choosing a career.	1	2	3	4	5	6
5	Watching my family work gave me confidence in my career.	1	2	3	4	5	6
6	My family provided guidance on which careers would be best for me.	1	2	3	4	5	6
7	My family has given me information about obtaining education/training.	1	2	3	4	5	6
8	My family supported me asking career-related questions.	1	2	3	4	5	6
9	My family expects me to select a career that has a certain status.	1	2	3	4	5	6
10	My family expects me to make career decisions so that I do not shame them.	1	2	3	4	5	6
11	My family is only willing to support me financially if I choose a career of which they approve.	1	2	3	4	5	6
12	My family expects that my choice of occupation will reflect their wishes.	1	2	3	4	5	6
13	My family expects people from our culture to choose certain careers.	1	2	3	4	5	6
14	My family's career expectations for me are based on my gender.	1	2	3	4	5	6
15	My family expects me to contribute	1	2	3	4	5	6

	financially to my career education and training.						
16	Because my family supports me financially, I can focus on my career development.	1	2	3	4	5	6
17	My family has not been able to financially support my career decisions.	1	2	3	4	5	6
18	If I wanted to get additional education, my family would provide financial support.	1	2	3	4	5	6
19	If I were to experience a difficult career situation, my family would support me financially.	1	2	3	4	5	6
20	My family expects that I will consider my religion/spirituality when making career decisions.	1	2	3	4	5	6
21	My family explained how our values and beliefs pertain to my career choices.	1	2	4	4	5	6
22	My family expects my career to match our family's values/beliefs.	1	2	3	4	5	6

Family Influence Scale – Parent Form
(Fouad et al., 2010)

Directions: After reading each statement carefully, **please circle the number** that best reflects the extent to which you agree or disagree with the statement regarding **you and your family’s influence on your college-age child’s career decisions**.

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1.	I/we shared information with my child about how to obtain a job.	1	2	3	4	5	6
2.	I/we showed my child how to be successful in choosing a career.	1	2	3	4	5	6
3.	I provided guidance on which careers would be best for my child.	1	2	3	4	5	6
4.	Watching our family work gave my child confidence in his/her career decisions.	1	2	3	4	5	6
5.	Because I/we support my child financially, he/she can focus on his/her career development.	1	2	3	4	5	6
6.	I/we expect my child to contribute financially to his/her career education	1	2	3	4	5	6
7.	If my child were to experience a difficult career situation, I/we would support him/her financially.	1	2	3	4	5	6
8.	I/we expect my child to make career decisions so that he/she does not shame	1	2	3	4	5	6
9.	I/we expect my child to select a career that has a certain status.	1	2	3	4	5	6
10.	My career expectations for my child are based on his/her gender.	1	2	3	4	5	6
11.	I/we expect my child’s career to match our family’s values/beliefs.	1	2	3	4	5	6
12.	I/we have showed my child what was important in choosing a career.	1	2	3	4	5	6
13.	I/we discussed career issues with my child at an early age.	1	2	3	4	5	6
14.	I have given my child information about obtaining education and training.	1	2	3	4	5	6

15.	I/we have supported my child asking career-related questions.	1	2	3	4	5	6
16.	I/we have not been able to support my child's career decisions.	1	2	3	4	5	6
17.	If my child wanted to get additional education after high school, I/we would provide financial support.	1	2	3	4	5	6
18.	I/we expect that my child's choice of occupation will reflect our family's wishes.	1	2	3	4	5	6
19.	I expect people from our culture to choose certain careers.	1	2	3	4	5	6
20.	I/we am only willing to support my child financially if he/she chooses a career of which I approve.	1	2	3	4	5	6
21.	I/we expect my child to consider my religion/spirituality when making career decisions.	1	2	4	4	5	6
22.	I/we explained how our values and beliefs pertain to my child's career choices.	1	2	3	4	5	6

APPENDIX D
INTERGENERATIONAL CONFLICTS ITEM POOL

Intergenerational Conflicts Item Pool – Student Form
(Qin, 2010)

The following items are designed to explore how your family impacts you on choosing your majors/careers. To complete these items, circle the number that most closely represents the degree you think your parents would agree with the statement, and the degree you agree with the statement. Read each statement and answer the following questions using the following rating scales:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

		My parents believe that:	I believe that:
1	Succeeding occupationally is an important way of making your family proud.	1 2 3 4 5	1 2 3 4 5
2	Getting into a good school reflects well on your family.	1 2 3 4 5	1 2 3 4 5
3	Failing academically brings shame to your family.	1 2 3 4 5	1 2 3 4 5
4	You should go as far as you can academically and professionally on behalf of your family.	1 2 3 4 5	1 2 3 4 5
5	Your academic and occupational reputation reflects on the family's reputation.	1 2 3 4 5	1 2 3 4 5
6	It is an important way to show your appreciation for your family by succeeding in school and work.	1 2 3 4 5	1 2 3 4 5
7	It is your duty to bring honor through achievements to your family.	1 2 3 4 5	1 2 3 4 5
8	You should work hard so that you won't be a disappointment to your family.	1 2 3 4 5	1 2 3 4 5
9	You should bring respect to family by having a high prestige job.	1 2 3 4 5	1 2 3 4 5
10	You should secure family's financial status by choosing a well paid occupation.	1 2 3 4 5	1 2 3 4 5

The following questions describe situations that your parents may have different ideas than yours. To complete these items, circle the number that most closely represents how often you and your parents have different ideas and how serious such conflicts are. Please answer the following questions using the following rating scales.

How often do you have different ideas?

- 1 = Almost never
- 2 = Once in a while
- 3 = Sometimes
- 4 = Often or frequently
- 5 = Almost always

How serious are such conflicts in your family?

- 1 = Not at all
- 2 = Slightly
- 3 = Moderately
- 4 = Very much
- 5 = Extremely

		How often do you have different ideas on the following issues?					How serious are such conflicts in your family?				
		Never				Always	Not at all				Extremely
11.	How much time to spend on studying	1	2	3	4	5	1	2	3	4	5
12.	How much time to spend on recreation	1	2	3	4	5	1	2	3	4	5
13.	How much time to spend on sports	1	2	3	4	5	1	2	3	4	5
14.	How much time to spend on practicing music	1	2	3	4	5	1	2	3	4	5
15.	Importance of academic achievement	1	2	3	4	5	1	2	3	4	5
16.	Emphasis on materialism and success	1	2	3	4	5	1	2	3	4	5

17.	Which school to attend	1 2 3 4 5	1 2 3 4 5
18.	What to major in college	1 2 3 4 5	1 2 3 4 5
19.	Which career to pursue	1 2 3 4 5	1 2 3 4 5
20.	How much time to help out in the family business	1 2 3 4 5	1 2 3 4 5

Intergenerational Conflicts Item Pool – Parent Form
(Qin, 2010)

The following items are designed to explore how you impact your children in majors/careers. To complete these items, circle the number that most closely represents the degree you think your child would agree with the statement, and the degree you agree with the statement. Read each statement and answer the following questions using the following rating scales:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

		My child believes that:	I believe that:
1	Succeeding occupationally is an important way of making your family proud.	1 2 3 4 5	1 2 3 4 5
2	Getting into a good school reflects well on your family.	1 2 3 4 5	1 2 3 4 5
3	Failing academically brings shame to your family.	1 2 3 4 5	1 2 3 4 5
4	You should go as far as you can academically and professionally on behalf of your family.	1 2 3 4 5	1 2 3 4 5
5	Your academic and occupational reputation reflects on the family's reputation.	1 2 3 4 5	1 2 3 4 5
6	It is an important way to show your appreciation for your family by succeeding in school and work.	1 2 3 4 5	1 2 3 4 5
7	It is your duty to bring honor through achievements to your family.	1 2 3 4 5	1 2 3 4 5
8	You should work hard so that you won't be a disappointment to your family.	1 2 3 4 5	1 2 3 4 5
9	You should bring respect to family by having a high prestige job.	1 2 3 4 5	1 2 3 4 5
10	You should secure family's financial status by choosing a well paid occupation.	1 2 3 4 5	1 2 3 4 5

The following questions describe situations that your child may have different ideas than yours. To complete these items, circle the number that most closely represents how often you and your children have different ideas and how serious such conflicts are. Please answer the following questions using the following rating scales.

How often do you have different ideas?

- 1 = Almost never
- 2 = Once in a while
- 3 = Sometimes
- 4 = Often or frequently
- 5 = Almost always

How serious are such conflicts in your family?

- 1 = Not at all
- 2 = Slightly
- 3 = Moderately
- 4 = Very much
- 5 = Extremely

		How often do you have different ideas on the following issues?					How serious are such conflicts in your family?				
		Never				Always	Not at all				Extremely
11.	How much time to spend on studying	1	2	3	4	5	1	2	3	4	5
12.	How much time to spend on recreation	1	2	3	4	5	1	2	3	4	5
13.	How much time to spend on sports	1	2	3	4	5	1	2	3	4	5
14.	How much time to spend on practicing music	1	2	3	4	5	1	2	3	4	5
15.	Importance of academic achievement	1	2	3	4	5	1	2	3	4	5
16.	Emphasis on materialism and success	1	2	3	4	5	1	2	3	4	5

17.	Which school to attend	1 2 3 4 5	1 2 3 4 5
18.	What to major in college	1 2 3 4 5	1 2 3 4 5
19.	Which career to pursue	1 2 3 4 5	1 2 3 4 5
20.	How much time to help out in the family business	1 2 3 4 5	1 2 3 4 5

APPENDIX E

ASIAN AMERICAN MULTIDIMENSIONAL ACCULTURATION SCALE

Asian American Multidimensional Acculturation Scale
(Chung et al., 2004)

Instructions: Use the scale below to answer the following questions. Please circle the number that best represents your view on each item. Please note that reference to “Asian” hereafter refers to Asians in America and not Asia.

	Not very well		Somewhat		Very well	
	1	2	3	4	5	6
1. How well do you <u>speak</u> the language of --						
a. your own Asian culture of origin?	1	2	3	4	5	6
b. other Asian groups in America?	1	2	3	4	5	6
c. English?	1	2	3	4	5	6
2. How well do you <u>understand</u> the language of --						
a. your own Asian culture of origin?	1	2	3	4	5	6
b. other Asian groups in America?	1	2	3	4	5	6
c. English?	1	2	3	4	5	6
3. How well do you <u>read and write</u> in the language of --						
a. your own Asian culture of origin?	1	2	3	4	5	6
b. other Asian groups in America?	1	2	3	4	5	6
c. English?	1	2	3	4	5	6
4. How often do you <u>listen to music or look at</u> movies and magazines from						
a. your own Asian culture of origin?	1	2	3	4	5	6
b. other Asian groups in America?	1	2	3	4	5	6
c. the White mainstream groups?	1	2	3	4	5	6
5. How much do you <u>like</u> the food of -						
a. your own Asian culture of origin?	1	2	3	4	5	6
b. other Asian groups in America?	1	2	3	4	5	6
c. the White mainstream groups?	1	2	3	4	5	6
6. How often do you <u>eat</u> the food of –						
a. your own Asian culture of origin?	1	2	3	4	5	6
b. other Asian groups in America?	1	2	3	4	5	6
c. the White mainstream groups?	1	2	3	4	5	6
7. How <u>knowledgeable</u> are you about the history of -						
a. your own Asian culture of origin?	1	2	3	4	5	6
b. other Asian groups in America?	1	2	3	4	5	6
c. the White mainstream groups?	1	2	3	4	5	6

8. How knowledgeable are you about the culture and traditions of -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian groups in America? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream groups? | 1 | 2 | 3 | 4 | 5 | 6 |
9. How much do you practice the traditions and keep the holidays of -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian American cultures? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream culture? | 1 | 2 | 3 | 4 | 5 | 6 |
10. How much do you identify with -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian groups in America? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream groups? | 1 | 2 | 3 | 4 | 5 | 6 |
11. How much do you feel you have in common with people from -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian groups in America? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream groups? | 1 | 2 | 3 | 4 | 5 | 6 |
12. How much do you interact and associate with people from -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian groups in America? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream groups? | 1 | 2 | 3 | 4 | 5 | 6 |
13. How much would you like to interact and associate with people from -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian groups in America? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream groups? | 1 | 2 | 3 | 4 | 5 | 6 |
14. How proud are you to be part of -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian groups in America? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream groups? | 1 | 2 | 3 | 4 | 5 | 6 |
15. How negative do you feel about people from -
- | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|
| a. your own Asian culture of origin? | 1 | 2 | 3 | 4 | 5 | 6 |
| b. other Asian groups in America? | 1 | 2 | 3 | 4 | 5 | 6 |
| c. the White mainstream groups? | 1 | 2 | 3 | 4 | 5 | 6 |

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