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PARENTING IN CHINESE IMMIGRANT MOTHERS: THE INFLUENCES OF CHINESE IDENTITY, CULTURAL AND PARENTING COGNITIONS, GRANDPARENT SUPPORT AND CHILD TEMPERAMENT

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Abstract

Cultural cognitions have been shown to have important implications for parenting cognitions, behaviors and adjustment across cultures. However, few studies have examined the associations between cultural cognitions and parenting in acculturating Chinese communities. This study explored the following research questions among acculturating Chinese mothers in the United States: 1) How parents' sense of investment is determined by acculturation processes and its importance for parental involvement; 2) the relationships between parental satisfaction, individualism/collectivism and parenting stress; 3) the moderating role of acculturation on the relationship between grandparent support and parenting stress; 4) the moderating role of gender and acculturation on the relationship between child difficult behavior and parenting stress. Data were collected from 256 Chinese immigrant mothers with children under age 5 using online surveys. The results demonstrated that parental role involvement and distress are influenced by Chinese identification and collectivism through their impact on parenting cognitions (investment and satisfaction). The analysis also revealed that mothers' Chinese identity moderates the association between grandparent support and parenting stress, and the association between child difficult behavior and parenting stress in Chinese immigrant mothers. The finding advanced the research on parenting in acculturating parents, and demonstrated the pathways through which cultural cognitions may impact the parenting experiences of Chinese mothers undergoing acculturation in the United States.

Keywords: Acculturation, individualism/collectivism, parenting cognition, parenting involvement, parenting stress, Chinese immigrant mothers, grandparent support, child difficult behavior

PARENTING IN CHINESE IMMIGRANT MOTHERS: THE INFLUENCES OF
CHINESE IDENTITY, CULTURAL AND PARENTING COGNITIONS,
GRANDPARENT SUPPORT AND CHILD TEMPERAMENT

by

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Dissertation

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Introduction

Although Latinos and Indians constitute the two largest minority immigrant groups in the United States, Chinese immigrants are the fastest-growing immigrant population, and their immigration rate continues to escalate (Migration Policy Institute, 2015; Taylor, 2012). The Chinese immigration population has reached 2.3 million in 2016, growing six-fold since 1980 (U.S. Citizenship and Immigration Services, 2017). International migration creates unique sociocultural contexts for immigrant parents. Relocating to a new nation may bring both positive changes and stressful events while immigrant families adapt to the cultural differences between the host culture and cultural of origin. Cultural adaptations following immigration that take place as a result of persistent contact between two cultures is typically defined as acculturation (Berry, 2006). Changes may occur in various domains via the acculturation process, including changing beliefs, values, identity and behaviors (Berry, 2006; Costigan & Koryzma, 2011; Sam, 2006). These changes likely impact parenting in complex ways and it is important to understand how parenting of Chinese mothers is affected by the process of acculturation.

Numerous studies have been conducted to examine the behavioral and psychological changes that occur during acculturation in immigrant populations, and research has underscored the importance of understanding underlying cultural cognitions in learning about the variations in behaviors and beliefs (e.g., Berry, 2006; Bornstein & Cote, 2004; Cote & Bornstein, 2003; Markus & Kitayama, 1991; Triandis, 1989). Notably, there is an increase of research attention to the adaptation of cultural cognitions and its impact on parenting beliefs and behaviors in recent decades (e.g., Bornstein & Cote, 2004; Costigan & Koryzma, 2011; Halgunseth, Ispa, & Rudy, 2006; Ho, 2014). This shift of attention was motivated by the recognition that immigrant parents undergoing cultural changes may feel the push and pull of

the acculturation process when it comes to childrearing in a new sociocultural environment. It is necessary to understand the process through which they strive to adjust to the customs and values of the host culture, or maintain the beliefs and practices of the culture of origin, and its implication on parenting beliefs and behaviors for immigrants who are in a parenting role.

Acculturation, individualism, and collectivism have been shown to have significant implications for the variations in parenting cognitions and practices (e.g., Bornstein & Cote, 2004; Cote & Bornstein, 2000; Farver & Lee-Shin, 2000; Greenfield & Suzuki, 1998; Harwood, Schoelmerich, Schulze, & Gonzalez, 1999; Jain & Belsky, 1997). For example, research indicated that acculturation level predicted parents' knowledge of parenting, while individualism and collectivism predicted parental satisfaction in Japanese immigrants (Bornstein & Cote, 2004). Acculturation was also found to influence parental involvement among Indian immigrants (Jain & Belsky, 1997). While several studies have looked at the role of these cultural cognitions in parenting among Asian immigrant families, there is very limited research on the pathways through which parenting behaviors and adjustment may be affected by the acculturation process, and how cultural cognitions may influence parenting beliefs and practices in Chinese immigrant population.

During the last few decades, a body of research has emerged to investigate the cultural differences in parenting among Chinese and European American parents, and there is a recognition that Chinese and American parenting are notably divergent in terms of parenting beliefs, expectations, styles and practices (e.g., Chao, 1995, 1996, 2000; Chen & Uttal, 1988; Ho, 2014; Huntsinger, Jose, Liaw, & Ching, 1997; Lin & Fu, 1990; Ng, Pomerantz, & Lam, 2007; Pan, Gauvain, Liu, & Cheng, 2006; Qin, Pomerantz, & Wang, 2009; Sun & Rao, 2011). For example, Chinese parents tend to adopt the training style and view educational achievement as the most important goal for socialization, whereas European American mothers focus more on the development of their children's sense of self and tend to

adopt a facilitative role in their children's lives (Chao, 1995, 1996, 2000). In addition, Chinese parents generally reported higher expectations regarding their children's educational outcomes and higher everyday parental involvement compared with their American counterparts (e.g., Chen & Uttal, 1988, Ng et al., 2007; Pan et al., 2006). This is not surprising considering the fact that Chinese and American parenting are rooted in two distinct cultures which differ greatly in their value systems and social norms. Generally, Chinese culture is believed to value interdependence, filial piety, discipline and hard work, whereas American culture values self-development and expression, self-esteem and independence. Specifically, while American parenting ideals tend to value autonomy, parenting warmth and transfer of responsibility, Chinese parenting tend to emphasize familism, parental control and high investment (Chao, 1994). Immigration may create unique challenges for Chinese immigrant parents as they are raising the child in a host culture that differ greatly in cultural and parenting beliefs compared with their culture of origin. However, few studies have explored the implication these cultural variations may have on changes in parenting in Chinese immigrant parents. In particular, little is known regarding how they may rebuild their parenting cognitions to accommodate the social and cultural expectations of two distinct cultures, and the mechanism through which parenting practices may gradually change in acculturating parents.

Therefore, the current study investigated how cultural factors may impact parenting in acculturating Chinese mothers in the United States. More specifically, the study focused on the links between cultural variables, parenting cognitions, parental involvement, and parenting stress in Chinese immigrant mothers. The role of family support, particularly grandparental support, and child difficult behavior were also examined in this issue. Specifically, the following questions were addressed in this study:

- 1) Does parents' sense of investment mediate the association between acculturation level and parental involvement in Chinese immigrant mothers?
- 2) Does parental satisfaction mediate the association between parents' individualist and collectivist tendency and parenting stress in Chinese immigrant mothers?
- 3) Does acculturation level moderate the association between grandparent support and parenting stress in Chinese immigrant mothers?
- 4) Do gender and acculturation moderate the association between child difficult behavior and parenting stress in Chinese immigrant mothers?

Literature Review

Acculturation & Parenting

Acculturation. Acculturation is typically referred to as the cultural and psychological change occurring during intercultural contact (Berry, 2006; Szapocznik, Scopetta, Kurtines, & Arnalde, 1978). Originally acculturation was defined mainly as a group-level process, which emphasizes the broader concept of cultural changes in two groups as a result of intercultural contact; and more recently, researchers have shifted their attention to individual-level phenomena by introducing the term of psychological acculturation. It refers to the individual experiences of changes resulting from the contact with the external culture and the participation in the undergoing changes of one's cultural group (Berry, Poortinga, Segall, & Dasen, 1992). While general cultural acculturation occurs at group level, there are considerable individual variations in psychological acculturation, as at the individual level people may differ in terms of their adaptation goals, degree of participation and way of change in the same contact situation (Berry, 1990; Berry, Bouvy, Van de Vijver, Boski, &

Schmitz, 1994; Berry, Trimble, & Olmedo, 1986). Both group-level and individual-level acculturation are long-term processes that continue to take place as there is intercultural contact occurs, and adaptations may take various forms (Berry, 1992). Often different adaptations occur unevenly. For instance, acquisition of language and sharing food preference may take place more quickly and easily than adopting forms of social interactions and learning social norms.

People acculturate in different ways under the influence of a variety of contextual and individual factors. The context within which individual acculturation takes place can impact the changing process to a large degree (Berry, 2006). Research has shown that a number of differences in background characteristics could result in different level of changes over time, including group-level factors such as type of migration (temporary or permanent), reason for migration (study, work, family, etc.), and individual-level factors such as age, education, length of residence, social support (e.g., Cote & Bornstein, 2003; Marín & Gamba, 1996; Padilla & Perez, 2003; Suinn, Ahuna, & Khoo, 1992; Suinn et al., 1987). Thus, acculturation is more complex than the outcome of simple intercultural contact. Some immigrants may actively seek to be involved in either or both cultures, while other may intentionally decrease their participation in either or both cultural groups, and the decision may be made based on a combination of many background factors. Immigrants negotiate between two cultures and choose different paths as they make sense of the cultural contexts that they come into contact with.

The operationalization and measurement of acculturation appear to be very inconsistent in the previous literature. Much earlier research relies on proxy measures such as length of residence, and behavioral characteristics, such as language level, food preference and customs, while some others evaluate changes in intrinsic beliefs and values. More recently, acculturative processes or outcomes are increasingly measured using identity and

identification (Ward, 2008). Cultural identifications are proposed as indicators of acculturation to represent the complexities of the acculturative process. Researchers argue that acculturation should include both public (e.g., behaviors and practices) and private (e.g., values and identity) domains, and acculturation is most often conceptualized in four dimensions, including knowledge, behavior, value and identity (Ho, 2014; Kim & Abreu, 2001). In contemporary literature, these dimensions of acculturation are usually measured according to two basic models. Some studies have adopted a unidimensional model and only measure identification with host culture, assuming that it is a single process in which more identification with one culture results in less identification with the other. However, the bi-dimensional framework, which was proposed by Berry (1980), posits that identification with culture of destination and culture of origin can be independent of each other, therefore should be measured separately as two distinct orientations (Berry, 1980, 2006; Costigan & Koryzma 2011; Costigan & Su, 2004; Ryder, Alden, & Paulhus, 2000).

Parenting in Acculturating Families. Parenting beliefs and behaviors are shaped by the social context and cultural heritage. The acculturation process adds to the complexity of parenting since acculturating parents try to negotiate between the beliefs and practices of the two cultural groups. Previous research has explored cultural contributions to parenting through cross-cultural comparisons and the adjustment of parenting in immigrant populations. From that work, acculturation was found to impact parenting attitudes, beliefs and practices at individual level (e.g., Bornstein & Cote, 2004; Farver & LeeShin, 2000; Ho, 2014). Thus, studying concomitant changes in parenting approaches and acculturation level on a within-culture basis may further enhance our understanding of the complex role of culture in determining parenting.

There has been increasing research attention focused on the study of parent cognitions and its relation to individual variations in acculturation. Parenting cognitions are referred to

as the goals, attitudes, expectations and beliefs regarding child development, childrearing, and the parenting role (Cote, Kwak, Putnick, Chung, & Bornstein, 2015; Goodnow, 2002; Holden & Buck, 2002; Sigel & McGillicuddy-De Lisi, 2002). It is important to understand parenting cognitions in acculturating parenting as parenting cognitions can relate to parenting practices and child outcomes, and there are notable differences in parenting cognitions across cultural groups (Cote & Bornstein, 2003; Cote, Kwak, Putnick, Chung, & Bornstein, 2015; Harkness & Super, 1992; Holden & Buck, 2002; Goodnow, 2002). When it comes to acculturation and parenting, evidence has shown that parenting cognitions change in a complex fashion. Different parenting cognitions appear to acculturate in different pattern, depending on the flexibility and adaptability of the specific parenting cognition and specific cultural group. Some parenting cognitions are more like to be impacted by the acculturation process than the others. For example, acculturation was found to influence mothers' knowledge of parenting, but not maternal attributions (Bornstein & Cote, 2004). In addition, it was found that parenting cognitions acculturate differently across different immigrant groups. For example, South American mothers' parenting cognitions tend to acculturate more readily into the mainstream American pattern, whereas Japanese American mothers tend to retain their parenting cognitions to a larger extent (Bornstein & Cote, 2004).

It is believed that parenting cognitions shape how parents raise their children and structure family contexts (Costigan & Su, 2008; Goodnow, 2002, Sigel & McGillicuddy-De Lisi, 2002). Researchers have argued that acculturation of parenting cognitions underlies parenting approaches in acculturating families, and therefore, understanding how parenting cognitions acculturate is requisite to understanding parenting in immigrant communities (Bornstein, 2015a; Bornstein & Lansford, 2010). In particular, the self-perception of parenting was identified as one salient parenting cognition that can influence parenting practices and differs cross-culturally. Self-perceptions of parenting, including parental sense

of investment, parental satisfaction, parents' feeling of competence and ability to balance parent role with other social roles, largely influence parents' perception of their role as parents, as well as their self-identity (Bornstein, & Cote, 2006). When parents integrate parenting behaviors into their established role set, gain feeling of satisfaction and competence from the parenting process, they become more comfortable with their identity as parents. It is important to study self-perceptions of parenting as how parents perceive themselves may influence the kind of parent they become.

Self-perceptions of parenting are believed to derive from the culture of origins, and can help to transmit cultural information to the younger generations (Bornstein & Lansford, 2010; Cote, Kwak, Putnick, Chung, & Bornstein, 2015; Goodnow, 2010). Moreover, self-perceptions of parenting are thought to generate and shape parenting behaviors, and impact child development in both direct and indirect ways. Overall, self-perceptions of parenting help construct the world of parenting, and transmit cultural messages embedded in daily interactions to the children, which shapes the way parents interact with their children and the experiences they provide to their children. While self-perceptions of parenting are often relatively stable and resistant to change, there may be less stability during infancy and early years of childhood, as parents are responding to the complex developmental changes in these periods. A meta-analysis revealed that parenting constructs appeared to be more stable with school-aged children than with infants and toddlers (Holden, 1999). Cultural adaptations occurring during this time would further increase the likelihood of developmental change and instability in parenting cognitions (Bornstein & Cote, 2006). For acculturating parents, there are likely individual differences in their adaptations in attitudes, norms, values and identifications, due in part to the acculturation process. Their self-perceptions of parenting may change to accommodate the new beliefs and practices from the culture of destination.

Several studies have investigated parenting cognitions across cultures and in

acculturating parents. In general, there are considerable differences in self-perceptions of parenting between Eastern and Western cultures, and acculturation may be a factor that reshapes self-perceptions of parenting. It was found that Korean mothers and European American mothers differed significantly on their self-perceptions of parenting (Cote, Kwak, Putnick, Chung, & Bornstein, 2015). Specifically, Korean mothers reported a higher sense of investment than European American mothers, which seemed to be consistent with the distinct cultural belief systems of the United States and South Korea (Cote et al., 2015). Research also reported that Japanese mothers tend to report higher investment in childrearing compared with their European Americans counterparts (Bornstein et al., 1998; Kojima, 1996).

With respect to acculturation and parenting cognitions, few studies have been performed that explore the changing process during cultural adaptation. One study reported that Korean immigrant mothers report lower investment in their children compared with Korean mothers (Cote et al., 2015), which may suggest that parents' sense of investment may change during acculturation. The limited amount of evidence indicates that parenting cognitions tend to acculturate differently across different immigrant groups such that parenting cognitions may be more readily adapted for some cultural groups than for others. For instance, it has been found that Japanese American mothers are more likely to retain their parenting cognitions than South American mother (Bornstein & Cote, 2004). While South American mother tend to resemble the European American mothers rather than those in their country of origin in terms of parenting cognitions, Japanese American mothers tend to be either more like Japanese mothers or be intermediate when compared with Japanese and European American mothers after controlling for education, SES and reason for immigration (Bornstein & Cote, 2004). This research also indicated that among all parenting cognitions examined, self-perceptions of parenting tend to differ across groups. Moreover, in a

longitudinal study that examined cultural cognitions and parenting cognitions in acculturating mothers, it was found that Japanese American mothers' acculturation level at child age 5 months was a significant predictor of their knowledge of parenting at child age 20 months (Bornstein & Cote, 2003).

Overall, the process and dynamics of changes in parenting cognitions and practices in acculturating parents is complex and needs further study. Particularly, there is very limited research attempting to explore the link between parenting cognitions and actual practices in acculturating families. Although self-perceptions of parenting are believed to motivate and organize parenting behaviors, such as parental involvement, little has been known about whether the changes in parenting cognitions (if any) may translate into changes in actual parenting practices.

In summary, there is relatively limited evidence on how acculturation may change parenting cognitions and behaviors. In particular, almost no research has been conducted to understand the complex associations between parenting cognitions and practices during the process of acculturation for Chinese immigrant parents. Previous research has indicated that distinct immigrant groups tend to undergo the acculturation process in different ways when it comes to parenting cognitions, depending on the characteristics and adaptability of the culture (Bornstein & Cote, 2004). Some cultural groups are more likely to retain some parenting cognitions, while other groups tend to acculturate more rapidly, which pointed to the importance of examining this phenomenon in different immigrant populations, to advance the understanding of the nature of cultural influences on parenting cognitions and behaviors.

Chinese Model of Parenting. Parenting is multifaceted and can be influenced by many sociocultural conditions. Factors such as social comparison, traditions and cultural dictates, may largely impact parenting beliefs and behaviors (Cote et al., 2015). Therefore, in order to understand the parenting experiences of Chinese immigrant parents, specifically how

parenting cognitions and behaviors may acculturate in this group, it is necessary to examine the differences in cultural models of parenting in Chinese and American society.

First, the Chinese model of parenting is largely rooted in the Confucian philosophy which emphasizes the importance of education, and parents' moral responsibility of training and caring for their children in everyday lives. In contrast with the Western ideology, The Confucian thoughts of "*chiao shun*" (training) and "*guan*" (parental attentiveness) tend to put more emphasis on virtues of parental responsibility in their children's care and development. Specifically, "*chiao shun*" or training has been identified as a unique kind of parenting style for Chinese parents, which reflects their cultural values and socialization goals, and guides their parenting practices (Chao, 2000). Research indicated that the traditional Baumrind's conceptualizations of parenting style may not work as well for Asian parents as they do for European American parents, and it was argued that Baumrind's parenting style may fail to capture the culturally relevant parenting constructs for Asian parents (Chao, 1994, 2000). The training concept was developed as an alternative way of conceptualizing parenting style among Chinese groups. Although the emphasis on child obedience and set standards of behavior seems to overlap with Baumrind's authoritarian style, the essential features of the training concept focus on parents' continuous guidance and monitoring of their children (Chao, 2000). Instead of measuring responsiveness using physical and emotional demonstrativeness (e.g., hugging, praising), the responsiveness of Chinese parents may be more accurately described as parental support and involvement through their effort to prioritize the caretaking and education of children.

The training concept involves parents' responsibility of training children in appropriate behaviors and morals, and continuous guidance and monitoring of children's behaviors, which has important implications on parental involvement and support. The notion of training is also relevant to the understanding of parents' perceptions of their role regarding

their children's development. Compared with mainstream American ideas of parenting, the training style in Chinese culture emphasizes the unique importance of parental investment in children's development and education. Chinese parents are more likely to believe in the significance of parental devotion in child's success and view their participation in their children's lives and education as an integral parenting role. Immigrant parents from all cultures immigrating for better lives often stress the importance of education for improving their children's well-being, Chinese parents believe that is an essential task of parenting to ensure their children are doing well in school (Chao, 2000). It is believed that parents' perceptions of their own roles could build a crucial link between a social situation (e.g., the education of their children) and their parenting practices (Meighan, 1989; Moreno & Lopez, 1999). Parents who tend to believe in the importance of the parental role in child education and development are more likely to be highly involved in child caretaking and education.

Another important concept guiding Chinese parenting is "*guan*", which emphasizes parental attentiveness, concern, caring and involvement for their children. This concept is particularly relevant for mothers in Confucian cultures. In Confucian philosophy, a woman's most important social role is motherhood (Bao, 1997; Kim & Choi, 2014). Traditionally, Chinese mothers are expected to fulfil the culturally constructed parenting role of "*ci mu*", which means a loving and supporting mother, and hold responsibility of caring and educating their children all they need to learn to be successful in later lives. And this parenting role is particularly important during early years of caring and training of the children (Bao, 1997). In contrast with Western parenting beliefs, the notion of "*guan*" emphasized the total parental devotion to their children, and it is reasonable to assume that this notion could contribute to parents' sense of investment in their children.

In addition to tradition values, many societal factors in contemporary China also contribute to the cultural model of Chinese parenting. One of the most influential social

policies during the past few decades is the one-child policy, which was implemented in order to speed up the development and modernization of China. Recent research has pointed out the importance of the one-child policy in shaping parental investment and involvement in Chinese parents (Zhang, 2016). Due to the one-child policy, the only child becomes the “only hope” for the whole family, leading to the situation in which all family members tend to center around the only child (Fong, 2002; 2004). Parents sense of investment and continuous involvement became even more important in contemporary China to ensure the safety and success of the only child. Another important societal factor that may influence parent investment and involvement is social competition. Research found that compared with European American mothers, Chinese mothers tend to express their concerns regarding the competitive and difficult situation in contemporary society (Chao, 1996). In China, as there are too many children but relatively few opportunities, and everything is largely determined by examination, Chinese parents tend to believe that they need to put more effort to help their children to succeed in the social competition.

Overall, what is particularly valued in Chinese parenting ideology is continuous parental supervision, care and encouragement of educational achievement. Based on the cultural belief system and social influences, we can have a picture of modern Chinese parents in which they value the parental role, and are willing to offer high investment and involvement in their children to ensure their future success.

A number of studies have been conducted to explore parents’ sense of investment among Chinese and Chinese immigrant population. The traditional Confucian values are believed to continue to impact contemporary Chinese and immigrant parents to a notable extent (Costigan & Koryzma, 2011; Wu, 1996). Evidence has shown that the training style is a more appropriate measure of Chinese immigrant mothers compared with Baumrind’s authoritative/authoritarian styles (Chao, 2000). The training style of Chinese immigrant

mothers can be described as high sense of investment while they prioritize the education and caretaking of their children. In a cross-cultural comparison study of parental beliefs, Chinese immigrant mothers of preschoolers expressed greater emphasis on children's education, and conveyed the message that they could play a significant role in the schooling of their children, and that they felt the need to offer high level of investment and provide direct assistance to the learning of their children, whereas European American mothers tend to believe that they play a less direct and more facilitative role in their children's education and lives (Chao, 1996). Besides, it seems that cultural differences tend to be exacerbated in the early stages of child development, possibly because the differences in parental beliefs regarding childcare and development tend to be more salient during early developmental periods.

Parental involvement has been of particular interest to researchers when looking at parenting in Chinese groups. Cross-cultural differences have emerged in parental involvement in previous work comparing Chinese/Chinese immigrant parents with European American mothers. Chinese and Chinese American parents generally report high involvement with childrearing in their daily lives compared with their European American counterparts (Chen & Uttal, 1988; Hieshima & Schneider, 1994; Huntsinger et al., 1997; Pan et al., 2006; Shoho, 1994; Schneider & Lee, 1990). For example, parental involvement in child learning was found to be higher among Chinese parents (Huntsinger et al., 1997), and Chinese mothers of preschoolers reported teaching their children more often than their American counterparts in everyday lives (Pan et al., 2006). It was also found that Chinese parents are much more likely to spend time helping their first grader with homework compared with European American parents (Chen & Uttal, 1988). Moreover, research indicated that Chinese American parents showed higher structural involvement (e.g., managing their children's time) comparing with European American parents (Chao, 2000). And in general, the majority of

studies in this line of research suggested parental involvement is much higher and apparent during early years, such as toddlerhood, preschool or early elementary years.

Acculturation of Parenting in Chinese Immigrants. Few studies have investigated the impact of acculturation on parenting cognitions and behaviors in acculturating Chinese parents, and little is known regarding how Chinese immigrants may negotiate between the divergent parenting models in Chinese and American cultures. It remains unclear whether acculturation influences parenting cognitions and practices among Chinese immigrants. A qualitative study revealed that Chinese American parents are aware of the difference in cultural models of parenting, and intentionally attempt to balance between host and native cultures (Duncan, 2008). In another qualitative study on parenting acculturation, Chinese immigrant mothers also mentioned they need to be flexible when it comes to parenting as they have to consider the cultural expectations of the host society to promote their children's development in American society (Cheah, Leung, & Zho, 2013). It seemed that Chinese immigrant parents recognized the importance of accommodating the beliefs and practices of the host culture to better prepare their children for future success, and meanwhile also attempted to maintain traditional Chinese beliefs in their parenting to pass on cultural messages.

In terms of parenting practices, research has indicated that acculturation may have an impact on some parenting behaviors in acculturating Chinese parents. One study examining the parenting of Chinese immigrants found that parental involvement changed after immigration, whereas parental warmth did not (Chiu, Feldman, & Rosenthal, 1992). Another research compared the parenting practices between Chinese, Chinese immigrants, and European American parents, and found that Chinese immigrant parents tend to be intermediate in terms of parenting style, which may infer a relationship between acculturation level and parenting (Lin & Fu, 1990). Moreover, research on Chinese immigrant mothers has

found that higher acculturation level predicted less use of harsh discipline (Liu, Lau, Chen, Dinh, & Kim, 2009). However, non-significant relationships between acculturation level and some parenting behaviors in Chinese immigrants, such as parenting verbosity and laxness, (Hulei, Zevenbergen, & Jacobs, 2006), and parental control (Chuang, 2006) have been reported. It is possible that some parenting behaviors may not change easily during acculturation, but the lack of significance may also be explained by the small sample size, the homogenous nature of the participants, and the use of one-dimensional measure of acculturation. Another study examined parenting in Chinese parents living in China and Canada, and they found that Chinese immigrant parents tend to apply authoritative parenting style, whereas parents living in China are more likely to adopt authoritarian parenting style (Chuang & Sun, 2009). However, no association was detected between acculturation level and parenting style among Chinese Canadian mothers, which may be attributed to the small sample size ($n=67$), and the short average length of residence in Canada ($M=3.78$ years). While there is limited research on acculturation and parenting practices among Chinese immigrant parents, research on other Asian immigrant populations has suggested that acculturation could have an impact on many parenting behaviors, such as parenting involvement, parenting style and discipline strategies (e.g., Farver & Lee-Shin, 2000; Jain & Belsky, 1997; Kim, Cain, & Webster-Stratton, 2008).

In summary, there is little evidence regarding how acculturation may impact parenting cognitions and behaviors in acculturating Chinese parents. Of the studies that do exist, the majority was limited by the measurements and the nature of the sample. As different parenting conditions and practices tend to acculturate differently, it is also crucial to identify the specific type of cognition and behavior that is likely to be significantly impacted by acculturation.

Individualism, Collectivism & Parenting

Individualism & Collectivism. In addition to acculturation level, another important cultural cognition that may impact parenting cognitions is the level of individualism and collectivism. The concept of individualism and collectivism concerns individuals' underlying belief of self-identity and motivations. Individualism was defined as the degree to which people view themselves as being independent and are driven by personal goals and preferences; in an individualist society, interpersonal ties tend to be loose and people are expected to take care of themselves instead of relying on others (Hofstede, 1991; Triandis, 1995). In contrast, collectivism refers to the extent to which people identify themselves as members of social group and are driven by the values and norms of the social group they belong to; in a collectivist society, interpersonal connections are strong, and people are expected to be integrated into cohesive social groups (Hofstede, 1991; Triandis, 1995). Individualism and collectivism are believed to largely influence people's values, beliefs and behaviors (Triandis, 1994). Individuals with a more collectivist tendency are more likely to identify themselves in terms of social relationships, emphasize social interdependence and connectedness, and feel more motivated to achieve in-group goals; whereas people with more individualist tendency stress autonomy and personal goals, and are more cautious in evaluating personal gain and loss before they act (Bhawuk, 2001; Triandis, 1994). It has been pointed out that the different views of self are not opposing poles of the same dimension (Markus & Kitayama's, 1991; Triandis, 1995). Different views of self can co-exist in individuals and one can hold individualist and collectivist beliefs at the same time (Triandis, 2001). The bi-dimensional model of individualism-collectivism argued that individualism and collectivism can be endorsed independently, and potentially to the same degree (Markus & Kitayma, 2010).

Individualism and collectivism will be examined in addition to acculturation in the

current study for several reasons. First, socialization goals such as individualism and collectivism were thought to be influential when it comes to parenting beliefs and outcomes (e.g., Bornstein & Cote, 2004; Greenfield & Suzuki, 1998; Harwood, Miller, & Irizarry, 1995; Harwood et al., 1999), however individualism and collectivism were rarely examined in relation to parenting cognitions at individual level in immigrant populations. While Chinese cultures are generally believed to be more collectivist than individualist, it would be interesting to explore the impact of these cultural cognitions when Chinese immigrants are acculturating to an individualist society.

Moreover, research on individualism and collectivism among acculturating populations indicated that there is a complex relationship between acculturation and individualist and collectivist tendency. While people may assume that when people from a collectivist culture acculturate into an individualist culture, there will be a shift in their value system from collectivism to individualism, however, empirical research does not necessarily support this assumption. The relationship between acculturation and collectivism and individualism seem to be complicated and differ across distinct immigrant groups. Research on Chinese American university students found that the correlation between acculturation and individualist and collectivist was low (Tata & Leong, 1994). In a study exploring cultural cognitions among Asian Americans (Chinese, Japanese, Korean, Filipino, Vietnamese), researchers found that, contrary to general beliefs, high-acculturated and bi-cultural individuals reported to be more collectivist than low-acculturated individuals (Hom, 1998). The authors argued that it is possible that more acculturated groups have already adapted to the living environment and experience less pressure of adjustment, and therefore have more opportunity to be concerned about goals and welfare of a larger group. In a study investigating how acculturation impact cultural values of Hispanic Americans, it was found that Hispanic Americans who are more acculturated into American culture seemed to lose

collectivism but not gain individualism (Gomez, 2003).

Overall, the existing literature in this area seems to suggest that acculturation of beliefs and behaviors does not necessarily mean changes in the intrinsic values of individualism and collectivism. It appears that immigrants from collectivist cultures do not have to accept individualist values to adapt to the traits, beliefs and behaviors of an individualist society. Indeed, evidence has shown that such values can help people understand cultures but have less to do with actual behavioral changes (Kurman & Ronen-Eilon, 2004). It is possible that the essential belief systems of a cultural group are not easily adapted, and some deeply held values such as individualism and collectivism tend to resist changes as it consists of the core of self-identity, thus are more continuous and change more slowly than other beliefs and behaviors. All in all, these findings point to the inadequacy of simply looking at the impact of acculturation when attempting to understand parenting cognitions in immigrant parents. The complex relationship between acculturation and cultural values systems highlighted the importance of considering deeper cultural values such as individualism and collectivism, and exploring the influence of acculturation and these cultural values separately.

Parental Satisfaction & Parenting Stress. Parental satisfaction appears to be one parenting cognition that is largely influenced by individualist and collectivist values. Research generally indicated that more collectivist values could lead to more parental satisfaction. In a longitudinal study of the predictive relationship between cultural values and parenting cognitions, it was found that Japanese American mothers' collectivist tendency at child age 5 months is a significant predictor of parental satisfaction at child age 20 months (Bornstein & Cote, 2004). Studies conducted in collectivist cultures have generally indicated that Asian parents are likely to obtain pleasure and gain a strong sense of satisfaction from their investment in their children and tend to not feel that they are burdened by the parent role

(Han, 2007; Ren & Hyun, 2002). This pattern of result may suggest that parents with more collectivist values may obtain more satisfaction from parenting, possibly because they focus more on the contribution the childcare may bring to the whole family. As in collectivist cultures, the self is not considered to be a separate identity but rather embedded in the context of a social group such as family, and they may feel more fulfilled about the parenting process as collectivist individuals are more motivated to achieve group goals, and value the contribution they can make to the social group, whereas parents with more individualist views may be more likely to feel that childcare is a burden that eats up their private time and prevents them from achieving personal goals.

Therefore, it is necessary to investigate whether and how individualist and collectivist beliefs in acculturating groups may predict their parenting satisfaction. Few studies have examined this issue in immigrant populations, particularly almost no study was conducted in Chinese immigrant parents. Another gap in the literature is that although research has underscored the importance of parenting cognitions such as parental satisfaction in influencing parenting stress outcomes (e.g., Hassal, Rose & Macdonald, 2005; Ohan et al., 2000), little research has explored the linkage between parenting satisfaction and parenting stress in relation to individualism and collectivism. Since research has shown that variations in parenting stress can be explained by parenting satisfaction, and parenting satisfaction is largely related to collectivist and individualist views, it would be interesting to examine whether such cultural values may affect parenting stress through the effect of parenting satisfaction.

Grandparent Support & Parenting Stress

It is normative for parents to experience stress due to childrearing, especially during early parenthood when childcare is particularly intensive. In addition, immigrant parents

undergoing cultural adaptation may face additional challenges in parenting process, which may interact with other stressors and contribute to their parenting stress. Previous literature attempting to identify buffering factors on parenting stress have underscored the importance of perceived social support. Perceived social support, such as family support and community support, can effectively reduce parenting stress during early parenthood (e.g., DeGarmo, Patras, & Eap, 2008; Fagan, Bernd, & Whiteman, 2007; Hall & Graff, 2011; Hassall, Rose, & McDonald, 2005; Quittner, Glueckauf, & Jackson, 1990). With respect to family support, the majority of exiting research focused on the role of spouse support as most studies only included nuclear family. The impact of extended family support, such as grandparent support, tend to be understudied in this line of research as intergenerational ties are generally thought to be loose in America. However, it should be noted that in many immigrant groups, such as Chinese Americans, families of origin are believed to common resources of social support, especially when it comes to childcare (Yoon, 2005). Therefore, when understanding parenting cognitions and stress in Chinese immigrant parents, family should be defined in a broader way and include the extended family. The support from grandparents, as a very prevalent but overlooked phenomenon, should be examined in acculturating Chinese parents.

The degree to which grandparents are involved in childcare may largely depend on sociocultural norms and preferences (Lokteff & Piercy, 2012). Since there are long-held cultural traditions of grandparental childcare in many Asian cultures, it is not uncommon for Asian grandparents to support their adult children and provide childcare during early parenthood (Cong & Silverstein, 2011; Lee & Bauer, 2010, 2013; Nyland et al., 2009). With respect to cultural norms and preferences, traditional Chinese families are extended compared to the prevalent nuclear families in the United States. Joint households with multigenerational co-residence are considered to be ideal family structures in traditional Chinese culture (Chu, Xie, & Yu, 2007). Even in contemporary China, the cultural belief that the elderly are

expected to live with their adult children still exists (Sun, 2002; Whyte & Xu, 2003). In addition, the socioeconomic and political context also contributes to the prevalence of three-generational family arrangement and grandparental childcare in contemporary China. The labor force participation of Chinese women is among the highest worldwide (United Nations, 2000). However, there is very limited paid maternal leave and childcare facility for young children (infants, toddlers, and preschoolers). Meanwhile, due to the only child policy, the availability of grandparents has largely increased, with up to four grandparents being available to care for one child (Du & Dong, 2010; Zhang, 2016); and the child-centered cultural values also lead grandparents to pool all resources to guarantee the only child to get the best care. As a consequence of social policies, the role of grandparents in childcare for young grandchildren has become increasingly salient during the past few decades (Goh & Kuczynski, 2010; Zhang, 2016). It was reported that two thirds of the parents living in urban China are receiving grandparent support in terms of early childcare, and over a half of these grandparents are providing exclusive care (China's Research Center on Aging, 2013; Federation, 2013). Chinese grandparents commonly assist their adult children by providing care for their grandchildren to free up time of the parents, and by providing financial support to help pay for other childcare options (Chen, Liu, & Mair, 2011).

Intergenerational co-residence and grandparental childcare is also very common among Chinese immigrant families. Intergenerational co-residence rate is much higher in Asian American families than in European Americans (Kamo & Zhou, 1994; Simmons & Dye, 2003; Szinovacz, 1998). It is typical for Asian American grandparents to provide care for young grandchildren, and grandparental childcare is more common in Asian American populations compared with European Americans (American Association of Retired Persons, 2002; Asian American Federation of New York, 2003). It was reported that 35 % of Asian American immigrants older than 65 are providing children to their grandchildren (American

Association of Retired Persons, 2002; Asian American Federation of New York, 2003). This phenomenon may be a result of both traditional values and pragmatic factors. Besides the traditional expectation of grandparent support in childcare, it may also be adjustment strategies for Chinese immigrant families, depending on the availability of other forms of childcare facilities.

Research has suggested grandparent support could have a stress-buffering effect for parents, and for Chinese parents, grandparent support appears to be more helpful than community support or support from other relatives when it comes to parental adjustment (Arnold et al., 2011; Chi et al., 2011; Liu et al., 2012; Gao et al., 2010; Greenfield, 2011; McConnell, Breitzkreuz & Savage, 2010; Pearson & Chan, 1993; Zhang, 2016). The relationship between grandparent support and parenting stress may differ based on cultural norms and expectations of intergenerational relationship and childcare arrangement, and other pragmatic factors. When it comes to acculturating parents who are undergoing cultural adaptation, it is necessary to consider the influence of acculturation in this issue.

First, acculturation may change parents' beliefs in social norms and expectations of intergenerational interactions, which may affect the impact of grandparent support on parenting stress. Research found that the buffering effect of grandparent support may be affected by the variations in social norm of intergenerational relationship and living arrangement. Grandparent support in multigenerational household may either buffer or exacerbate parenting stress based on ethnicity (Greenfield, 2011). Research on Latino immigrants indicated that acculturation level could moderate the association between grandparent support and parenting stress (Contreras et al., 1999). Latino mothers who identify more with Latino family traditions emphasizing the normativeness of multigenerational co-residence tend to find grandparent support more helpful in reducing parenting stress.

Literature on social support has highlighted the importance of recipients' subjective perception and interpretations of received support (Maisel & Gable, 2009; Kalil & Danziger, 2000; Gordon et al., 2004). Research suggested that Chinese parents' positive perception of grandparent support may be attributed to their strong trust of kin care and distrust of non-kin relationship in childcare (Goh, 2006; Zhang, 2016). In Chinese culture, grandparental childcare is usually perceived to be more reliable and nurturing than any other non-kin care. Chinese parents tend to believe that kinship status is a significant factor determining the quality of childcare one is willing to offer, thus even the nanny or other childcare professionals may be more experienced, they may be not able to provide genuine love to the child (Zhang, 2016). However, it should be noted that these perceptions may also be largely shaped by the limited childcare options and the relatively low quality of childcare facilities for young children in China. Parents' perceptions and interpretations of different types of childcare may change as they become more acculturated into the U.S. society, which may impact the relationship between grandparent support and parenting stress.

Furthermore, parents' acculturation status may impact the relationship between grandparent support and parenting stress as it likely increases parents' access to other types of support and resources, such as high-quality childcare facilities. The acculturation status may largely determine the strategies available to parents with respect to childcare. For example, research indicated that parents' language ability can influence their childcare selection and access (Cohen & Christakis, 2006; Liang, Fuller, & Singer, 2000). High-acculturated parents may be more capable of navigating the available facilities and setting outside the family, and better at communicating with childcare workers which may also help foster trust of non-kin care. On the contrary, low-acculturated parents may face more challenges when navigating social settings, and have more barriers to the use of childcare facilities outside the family.

In addition to acculturation status, another factor may impact the relationship

between grandparent support and parenting stress is parent-grandparent relationship. Literature suggested that the relationship between parents and grandparents may affect how much support is received and the degree to which the support is effective in reducing parenting stress (Apfel & Seitz, 1991; Zhang, 2016). Positive interactions between parents and grandparents could help promote parental adjustment to stressful events. On the contrary, grandparent support could also be source of stress when there is much conflict between parents and grandparents (Goh, 2006; Goh & Kuczynski, 2010; Leung & Fung, 2014). This is particularly relevant to Chinese families, considering the well-documented conflicts between daughter-in-law and mother-in-law in Chinese cultures (e.g., Chan, Levy, Chung & Lee, 2002; Gao et al., 2010; Yan Du, 2013; Zhang, 2016). Historically, paternal grandparents, particularly paternal grandmothers, were considered to be normative sources of childcare, while maternal grandparents were referred to as “outside grandparents” in Chinese. The traditional expectation that mothers-in-law held authority over daughters-in-law tend to complicate the parent-grandparent relationship in childrearing (Yan Du, 2013; Cong & Silverstein, 2008). Conflicts regarding childrearing beliefs and practices, and role ambivalence in power between mother-in-law and daughters-in-law were reported to be sources of stress for Chinese mothers (Chan, Levy, Chung & Lee, 2002; Gao et al., 2010, Zhang, 2016). However, contrary to traditional beliefs, a new pattern has emerged during the past years in which maternal grandparents have become increasingly involved in grandchild care. Researchers believe that the one-child policy has challenged the traditional model of patrilineality and strengthened the connections between young mothers and their families of origin (Zhang, 2016). Many young couples prefer to rely more on maternal grandparents with respect to childcare to avoid the traditional mother-in-law and daughter-in-law conflict. Thus, it is important to consider the parent-grandparent relationship when attempting to understand the role of grandparent support in reducing parenting stress.

Child Difficult Behavior & Parenting Stress

Previous literature suggested that child difficult behavior was a source of parenting stress (e.g., DeMore, Adams, Wilson, & Hogan, 2005; Hassall, Rose, & McDonald, 2005; Neece, Green, & Baker, 2012; Quittner, et al., 2010). However, few studies have examined whether this association may differ based on cultural cognitions. While parents' perception of child behavior is constructed in the sociocultural context where they raise their children, cultural cognitions may affect the extent to which parents perceived a certain behavior as a problem. Thus, it would be interesting to investigate whether the acculturation of parents may change their perceptions and stress reactions to child difficult behaviors.

Chinese parenting is largely rooted in Confucian values which emphasize filial piety and humility. It is generally believed that Chinese parenting tend to stress the importance of disciplining child behavior, and training children to be humble and respectful. The training concept in Chinese model of parenting values child obedience and set standards of behaviors (Chao, 2000). Previous literature has underscored the importance of obedience and shyness-sensitivity in Chinese culture. Compared with European American parents who value self-direction in their children, Chinese parents tend to emphasize respect for rules and appear to be more restrictive with behavior standards (Chan, Bowes, & Wyver, 2009; Costigan & Koryzma, 2011; Costigan & Su, 2008; Xua et al., 2005). Besides, Chinese culture tend to value and encourage shyness and behavioral restraint as indicators of social maturity (Chen, Dong & Zhou, 1997; Liang, 1987; Rubin et al., 2009; Yang, 1986), which are generally considered socially incompetent in U.S. culture (Asendorpf, Denissen, & van Aken, 2008; Caspi et al., 2003). It is argued that shyness and restraining behaviors may be perceived as less deviant in cultures where self-expression and assertiveness are not encouraged (Chen, Wang, & Cao, 2011). Research on Chinese populations indicated that shy children tend to be accepted by peers and viewed as being well adjusted to social settings (Chen, Dong, & Zhou,

1997; Chen, Rubin, & Sun, 1992; Chen, Wang, & Cao, 2011). Therefore, based on the cultural differences between belief systems, it is reasonable to assume that parents who identify more with Chinese culture which value obedience and restraining behaviors are more likely to perceive externalizing behaviors to be problematic.

In addition to acculturation, child gender may also be an influential factor in the relationship between child difficult behavior and parenting stress. Research on gender roles indicated that the role of boys and girls are constructed differently, while boys are expected to display an active posture, girls are usually expected to adopt a passive role (Adler, Kless, & Adler, 1992; Kerr, Lopez, Olson, & Sameroff, 2004). Typical boys' behaviors usually include competition with peers, rough play, and toughness. High activity level in boys could be perceived as indicators of masculinity. In contrast, girls are typically expected to adopt a more nurturing role; and gentleness is often perceived as a feminine trait. Therefore, it is reasonable to assume that parents may be more accepting of difficult behavior in boys as it is considered to be more consistent with their social-assigned gender roles.

The gender-specific perception of child difficult behavior may be affected by parents' culture cognitions. The well-documented son-preference custom may exacerbate the gendered perceptions of typical boy and girl behaviors. Traditionally, the continuity of the male line was considered to be important in Chinese families. Sons were viewed as the future head of the family, who will protect other family members when they grow up. This cultural belief continues to exist in modern Chinese families and contributes to the gender differences in parents' expectation of boys and girls. Research indicated that most Chinese parents believe that it is important to ensure boys turn out to be masculine (e.g., strong, active) and girl turn out to be feminine (e.g., gentle, soft), and parents should correct it if their children behavior in a way that is not consistent with these gender-role expectations (Liu, 2006). Therefore, it is reasonable to assume that gender-specific perception of child difficult

behavior would be more salient in parents who identify more with Chinese culture.

Theoretical Approach

In this section, theoretical perspectives will be described to explain the link between cultural cognitions, parenting cognitions, parental involvement and parenting stress in acculturating Chinese families. Three theoretical perspectives will be used in this study as major conceptual frameworks that serves as basis for generating the hypotheses, including the social identity perspectives, cultural learning approach and stress coping model.

Social Identity Perspectives. Identity theory (Stryker, 1968) has been applied to understand parental investment and involvement with children in previous literature (Henley & Pasley, 2005; Marsiglio et al., 2000). On the basis of identity theory, social roles are assigned meanings and importance through social interactions, and behaviors are either reinforced or inhibited as a consequence (Burke & Reitzes, 1981). According to this perspective, people's perceptions and expectations regarding the parent role will guide how they act as parents. It was posited that parent identity could be conceptualized as parents' self-perceptions regarding investment and satisfaction in the parent status, which will influence parenting behaviors. Research has found that self-perceptions of parenting regarding investment was associated with parental involvement (Henley & Pasley, 2005).

Moreover, social identity theory emphasizes the importance of overarching societal contexts, such as cultures and groups (Tajfel & Turner, 1986). Social identity theorists argued that individual behavior reflects their identification with larger social units, and group membership largely determines people's cognitions and behaviors (Markus et al., 1996). That is, people form thoughts and actions through social interactions within collective groups, and think and behave as members of larger social units, rather than a self-contained unit. Therefore, bases on this perspective, it is reasonable to assume that immigrants' group

identification can impact their cognitions and behaviors. During the acculturation process, the adaption of social cognitions will serve as the psychological baseline, which can relate to the actual behavioral adaptation.

Self-categorization theory was developed as an extension of identity theory. Based on this theory, individuals have auto-categorization mechanisms for distinguishing in-groups and out-groups, and there is variability in one's perception of certain beliefs and behaviors as in-groups and the degree to which one includes in-groups in self-conceptions (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Self-categorization theory stressed the dynamic nature of social identity, which is a socially constructed concept that may change depending on situational factors. According to this argument, people build social categories to organize in-groups and out-groups, and those categorizations can shift or be rebuilt when there are changes regarding the perception of the larger community. With respect to acculturating individuals, their group identifications may change and indicate the state in which they acculturate, and consequently there may also be changes in the social categories they view as in-groups and out-groups, which can be manifested in their self-perceptions and behaviors. Therefore, in terms of immigrant parents, it is reasonable to assume that their parenting cognitions may gradually change in response to their experience of acculturation, which will eventually impact their parenting behavior and adjustment.

Cultural Learning Approach. The cultural learning approach emphasized the importance of learning and acquisition of culturally-specific knowledge and behaviors (Ward, 2001; Ward & Kennedy, 1994). Based on this perspective, it is important to study culture-specific factors in acculturation process. It calls for attention to the intercultural differences in rules, norms, and traditions, and their impact on cultural adaptation. It was argued that acquisition of culturally appropriate knowledge and skills is important in developing the ability to negotiate in intercultural contact and fit in a new cultural group. The knowledge and

skills include not only fundamental level variables such as language proficiency, general knowledge about the culture, but also adaptation to views, beliefs, and cognitions. Sociocultural adaptations of behaviors require understanding of new rules, values and norms. That is not to say that one has to accept new values to be well adjusted to a new culture, however, the knowledge and awareness of new cultural values and rules are important for effective adaptations of behaviors. Moreover, adaptation of social behaviors and activities is also influenced by expectations, motivational factors and background characteristics such as age, education, and length of residence. Based on this approach, the acculturation of parenting can be affected by immigrants' knowledge of the new culture, adaptations to new beliefs and norms, and their ability to adjust to the new environment, reasons or motivations for immigration as well as other background characteristics. Therefore, in this study, to better understand the adaptation of parenting, parents' cultural cognitions, motivational factors and background characteristics were examined in relation to parenting acculturation.

Stress and Coping Model. The stress and coping model was originally proposed by Selye's (1976) and Lazarus and Folkman's (1984), which emphasized the importance of one's cognitive process in affecting psychological adaptation to a stressful situation. Individuals evaluate life events and situations through cognitive appraisal, and stress occurs when certain events are perceived as challenges (Sands, & Goldberg-Glen, 2000). Cognitive process was identified as a mediator in the relationship between certain situations and stress outcomes. With respect to parenting, parents' cognitive perception of parenting can impact their coping strategies and stress outcomes. For example, parenting satisfaction and self-efficacy were found to be predictors of parenting stress (Hassal, Rose & Macdonald, 2005; Ohan et al., 2000). When looking at acculturating parents, it should also be noted that since cognitions are formed within cultural context, cognitive perception of life events is situational and can change based on larger context (Berry, 2006; Pedersen, 2006). Therefore, it is necessary to

examine the relationship between parenting cognitions and cultural cognitions during the cultural adaptation process and the implication for parenting stress outcomes. Based on this model, it is reasonable to assume that for immigrant parents, their parenting cognitions, such as parenting satisfaction, may be influenced by their cultural tendency, such as individualist and collectivist beliefs, which may ultimately impact their parenting stress.

Moreover, social support has been shown to be an influential factor impacting stress. Social support can help people adjust to life events, and alleviate stress in difficult situations (Pearlin, Mullan, Semple, & Skaff, 1990). With respect to parenting, support from spouse, grandparents and community can provide parents with resources to deal with the caregiving demands, and help relieve parenting stress (Arnold et al., 2011; DeGarmo, Patras, & Eap, 2008; Fagan, Bernd, & Whiteman, 2007; Greenfield, 2011; Hall & Graff, 2011; McConnell, Breitkreuz & Savage, 2010). With respect to Chinese parents, research has indicated that grandparent support appears to be more helpful than community support or support from other relatives when it comes to parental adjustment (e.g., Chi et al., 2011; Liu et al., 2012; Gao et al., 2010; Zhang, 2016). Therefore, in this study, the role of grandparent support was emphasized when examining parenting stress among Chinese immigrant parents.

Research Questions & Hypothesis

The study was designed to address several gaps in existing literature. First, although many studies have explored parenting cognitions and behaviors across cultures, few have examined parenting constructs during the cultural transition in acculturation. Second, while some studies have examined parenting beliefs, attitudes in relationship to acculturation, little is known regarding whether the acculturation of parenting cognitions would translate into actual parenting behaviors in immigrant parents. Moreover, there is very limited evidence on the acculturation of parenting and the role of grandparent support within Chinese immigrant

populations. Therefore, the current study attempted to understand how acculturation may change self-perceptions of parenting (sense of investment and satisfaction), and parenting involvement and stress in Chinese immigrant parents, and explore the role of grandparent support and child difficult behavior in the context of acculturation. The following research questions were addressed in this study:

Research question 1. Does mothers' sense of investment mediate the association between acculturation level and parental involvement in Chinese immigrant mothers?

Hypothesis 1.1. Increased Chinese identification among Chinese immigrant mothers predicts increased sense of parental investment in their children, which in turn is associated with higher level of actual parental involvement.

Hypothesis 1.2. Increased American identification among Chinese immigrant mothers predicts decreased sense of parental investment in their children, which in turn is associated with lower level of actual parental involvement.

Figure 1 (see appendix)

Research question 2. Does parental satisfaction mediate the association between parents' individualist/collectivist tendency and parenting stress in Chinese immigrant mothers?

Hypothesis 2.1. More collectivist belief among Chinese immigrant mothers predicts higher satisfaction obtained from parenting, which in turn is associated with lower level of parental distress.

Hypothesis 2.2. More individualist belief among Chinese immigrant mothers predicts lower satisfaction obtained from parenting, which in turn is associated with higher level of

parental distress.

Figure 2 (see appendix)

Research question 3. Does acculturation level moderate the association between grandparent support and parenting stress in Chinese immigrant mothers?

Hypothesis 3. Grandparent support is associated with lower level of parental distress among Chinese immigrant mothers, and the association is more evident for parents with high Chinese identification.

Figure 3 (see appendix)

Research question 4. Do gender and acculturation moderate the association between child difficult behavior and parenting stress in Chinese immigrant mothers?

Hypothesis 4.1. Child externalizing behavior is associated with increased parenting stress among Chinese immigrant mothers, and this association is more evident for mothers with high Chinese identification.

Hypothesis 4.2. The association between child externalizing behaviors and parenting stress is more evident for girls than for boys in Chinese immigrant mothers.

Hypothesis 4.3. The gender effect on the association between child externalizing behaviors and parenting stress is more salient in mothers with high Chinese identification.

Figure 4 (see appendix)

Method

Sample

Participants included 256 first-generation Chinese immigrant mothers in the United States who had a child aged between 0-5 years. The demographic characteristics of the sample are presented in Table 1. Mothers' mean age was 36.71 (SD = 6.21) and the average length of residency in U.S. was 6.84 years (SD = 4.49). 92% of the mothers were employed, and 78% of them had an annual family income above \$40,000. 85% of the participants had a college degree or higher. In terms of the reasons for immigration, 47% of the sample reported education as reason for immigration, 38% reported work-related reasons, and 15% reported family-related reasons. 67% of the sample are married, 32% are single and 1% are divorced. 71% of the mothers were living with at least one grandparent and 37% of all mothers reported that grandparent was the main caregiver of the child. In terms of the child gender, 66% of the children were male and 34% were female.

Purposive sampling was used in this study. Snowball technique was used to identify Chinese immigrant mothers who meet the inclusion criteria. Potential participants were recruited through known people, and through Chinese organizations (e.g., Chinese Students and Scholars Association in Syracuse, New York, and California) that the student researcher has worked with in her previous research experience. Flyers were posted online, through the Email list and online forums commonly used by Chinese immigrants. The online forums (<http://forums.huaren.us/>, <https://www.mitbbs.com/>, <http://bbs.wenxuecity.com/>) have been used to recruit research participants. Users only need to register with the forums and then log in to post recruitment messages on the message board. The Email list used is public information provided by Chinese Students and Scholars Association and is available to all Chinese students and scholars. The Email list has been used for research recruitment purposes. The researcher sent out recruitment flyers via email to the Email list. The flyer was

also posted in Chinese restaurants and supermarkets in Syracuse to increase awareness about the study. The student researcher also asked friends in New York and California to post the flyer in the local Chinese supermarkets and restaurants to increase the sample size. Snowball techniques were also utilized wherein research participants were also used to recruit participants for the study. Participants helped pass on the information to other potential participants among their acquaintances.

Amazon Mechanical Turk (MTurk) was used as another recruitment method. Mturk is an online labor market created by Amazon for microtasks where requesters can post their job descriptions (e.g., surveys, translation service) through the website and workers can select which job to do for payment. Amazon claims that there have been hundreds of thousands of workers on Mturk today (Mason & Suri, 2011). Amazon MTurk has been used by social scientists as a recruitment site to obtain large samples online (Paolacci & Chandler, 2014), and research has indicated that it can be used to collect high-quality data at a low cost (Buhrmester, Kwang, & Gosling, 2011). Information regarding this study was posted in the task description on Mturk to recruit more participants. Among all 256 participants, 125 were recruited through Mturk and 131 were obtained using snow ball technique.

Procedures

Potential participants reviewed the information about the purpose, procedures and benefits of the research on the flyer. Contact information was included in the flyer to allow potential participants to contact the researcher to ask any questions regarding the study. If they were interested in participating in this study, they could use the survey link included in the flyer to take it online. Participants completed the survey in Chinese. For participants that were recruited via Amazon Mturk, information regarding the study was posted in the task description on the website. Contact information of the researcher was provided to allow the

participants to ask any questions regarding the study. A link was posted in the task to direct the participants to the Qualtrics survey. Once the participants have indicated their consent to take the survey by clicking on the “I consent” button in Qualtrics, a random survey code was generated and the participants was asked to provide the survey code in Mturk task to receive their payment incentives. Participants were paid \$1.00 through Mturk after they submitted their responses. The total survey takes around 20 minutes to complete.

Measures

The mothers completed the measures in Chinese. Most instruments used in this study have been used in Chinese or Chinese immigrant communities and have been previously translated into Chinese, except for Self-Perceptions of the Parental Role Scale, Parental Responsibility Scale, Role Involvement Scale, and background information. Self-Perceptions of the Parental Role Scale, Parental Responsibility Scale, Role Involvement Scale, and background information were translated by the author. To ensure the equivalence of the translated instrument, back-translation was conducted by another independent bilingual translator who has no knowledge of the instruments. After the scales had been translated back to English, discrepancies between back-translation documents and the original instruments were identified and resolved by the author to achieve a satisfactory version. The mothers were asked to identify one child in the target age group, and answer questions with reference to the child they identified.

Acculturation. Acculturation level was measured using Asian American Multidimensional Acculturation Scale (AAMAS, Chung, Kim, & Abreu, 2004). Chinese identification and American identification will be measured using two subscales: AAMAS-Culture of Origin (AAMAS-CO), and AAMAS-European American (AAMAS-EA). Note that the items that had previously referred to European Americans have been changed to refer

to broader United States culture rather than specifically using European Americans as the referent. Respondents were asked to rate 15 items with reference to two groups: Chinese and Americans. Questions were rated on a 6-point scale, ranging from “*not very*” to “*somewhat*” to “*very*”, depending on their view on each question. 6 questions were asked regarding cultural identity. For example, “*How much do you identify with a) Chinese and b) Americans?*” 3 questions were asked regarding language level. For example, “*How well do you speak the language of a) Chinese and b) English?*” 4 questions were asked regarding cultural knowledge. For example, “*How knowledgeable are you about the culture and traditions of a) China and b) the United States?*” 2 questions were asked regarding food preference. For example, “*How much do you like the food of a) China and b) the United States?*” Two scores were produced to indicate Chinese identification and American identification respectively. Higher scores on AAMAS-CO indicate stronger Chinese identification, and higher scores on AAMAS-EA indicate stronger American identification. AAMAS-CO and AAMAS-EA were reported to have good construct, criterion validity and test-retest reliability (Chung, Kim, & Abreu, 2004). Cronbach’s alpha was .89 for AAMAS-CO and .77 for AAMAS-EA.

Individualism and Collectivism. Individualist and Collectivist tendency were measured by Individualism and Collectivism Scale (Triandis & Gelfand, 1998). The scale includes 16 items and respondents were asked to rate each item on a 9-point scale, ranging from 1 (strongly disagree) to 9 (strongly agree). Example items for the collectivism subscale include “*It is my duty to take care of my family, even when I have to sacrifice what I want*” and “*It is important to me that I respect the decisions made by my groups*”. Example items for the individualism subscale include “*My personal identity, independent of others, is very important to me*” and “*I’d rather depend on myself than others*”. High scores on the collectivism subscale indicate more collectivist tendency, and high scores on the

individualism subscale indicate more individualist tendency. Individualism and Collectivism Scale was reported to have good convergent and divergent validity (Triandis & Gelfand, 1998). Cronbach's alpha was .81 for the collectivism subscale and .74 for the individualism subscale.

Sense of Investment and Parental Satisfaction. Parents' sense of investment and satisfaction obtained from parenting were measured using the two subscales of Self-Perceptions of the Parental Role Scale (SPPR; MacPhee, Benson, & Bullock, 1986). SPPR subscales were reported to have good construct validity and test-retest reliability (MacPhee et al., 1986; Seybold, Fritz, & MacPhee, 1991).

For the sense of investment subscale, participants were asked to read 4 sets of statements, and in each set of statement, first decide whether statement A or statement B best reflects them. After choosing either statement A or statement B, they were asked to rate how true that statement is for them from 1 (sort of true) to 4 (really true). An example of the sets of statements is "*A: Some parents want to learn everything possible about being a parent*" and "*B: but other parents feel that they already know all they need to know about parenting*". Items were coded on an 8-point scale, ranging from 1 (really true for statement A) to 8 (really true for statement B). High scores indicate high sense of parental investment. Cronbach's alpha was .75 for the investment subscale.

For parental satisfaction, participants were asked to read 12 sets of statements, and in each set of statement, decide whether statement A or statement B best reflects them. After choosing either statement A or statement B, they were asked to rate how true that statement is for them from 1 (sort of true) to 4 (really true). Example of sets of statements include "*A: Being a parent is a satisfying experience to some adults*" and "*B: but for other adults, being a parent is not all that satisfying*". Items were coded on an 8-point scale, ranging from

1 (really true for statement A) to 8 (really true for statement B). High scores indicate high level of parental satisfaction. Cronbach's alpha was .90 for the satisfaction subscale.

Parental Involvement. Parental involvement was measured by Parental Responsibility Scale (PRS; McBride & Mills, 1993) and Role Involvement Scale (Kanungo, 1982; Ladewig & White, 1984; Lodahl & Kejner, 1965). The Parental Responsibility Scale asked mothers to report actual hours spent daily performing three types of child care, including attending to basic physical needs (e.g., feeding, bathing, dressing, carrying), play activities (e.g., recreational or educational activities, such as engagement with toys, reading, singing, teaching), and outings (e.g., taking children to stores, restaurants). High scores on the PRS indicate high involvement in parental responsibility. Cronbach's alpha was .83 for PRS. The Role Involvement Scale was developed to measure the involvement in work or family roles. Mothers were asked to rate 6 statements concerning their involvement in the parent role using a 5-point scale ranging from 1 (fully agree) to 5 (agree strongly). Examples of items include *"Most of my interests are centered around my child"* and *"My role as a parent role is only a small part of who I am"*. High scores on the scale indicate high involvement in the parent role. Cronbach's alpha was .76 for the role involvement scale.

Parental Distress and Difficult Child. Two types of parenting stress outcomes were measured using two subscales of Parenting Stress Index Short Form (PSI-SF; Abidin, 1995). For each subscale, mothers will be asked to rate 12 questions that best reflects their feelings using a 5-point scale, ranging from 1 (Strongly Agree) to 5 (Strongly Disagree). The parental distress subscale was used to measure parenting stress due to general parenting responsibilities. An example of items is *"I feel trapped by my responsibilities as a parent"*. The difficult child subscale was used to measure parenting stress caused by child behavior problems. An example of items is *"My child turned out to be more of a problem than I expected"*. High scores on the subscales indicate high level of parenting stress. PSI-SF

subscales show good construct validity and adequate test-retest reliability (Barroso, Hungerford, Garcia, Graziano, & Bagner, 2016). Cronbach's alpha for the parental distress subscale was .87, and .84 for the difficult children subscale respectively.

Externalizing behavior. Child externalizing behavior was measured by Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). The subscale of aggressive and destructive behavior was used in this study. Mothers were asked to rate their children on 25 items based on how true each item describes their children from now or within the past 6 months, from 0 (not true) to 2 (very true or often true). Examples of questions include "*my child is disobedient*", "*my child gets in many fights*" and "*my child screams a lot*". High scores on the scale indicate more externalizing behaviors. The subscale shows excellent test-retest reliability and good construct validity (Achenbach & Rescorla, 2001). Cronbach's alpha for this subscale was .78.

Grandparent Support. Perceived grandparent support was measured using the family support subscale adopted from Multidimensional Scale of Perceived Social Support (MSPSS, Zimet, Dahlem, Zimet, & Farley, 1988). The family support subscale consists of 4 questions regarding the feeling about the support you receive from your family. In this study, the questions were reworded to reflect feelings regarding grandparents support with respect to childrearing. Mothers were asked to answer the questions with reference to the grandparent who provide the most childcare. Mothers were asked to indicate how they feel about each statement using a 7-point scale, ranging from 1(very strongly disagree) to 7 (very strongly agree). Examples of questions include "*When it comes to childrearing, I get the emotional help & support (practical/financial) I need from my child's grandparents*" and "*When it comes to childrearing, my child's grandparents really try to help me*". High scores on the scale indicate high level of grandparent support in child care. MSPSS shows good test-retest reliability and moderate construct validity (Zimet, Dahlem, Zimet, & Farley, 1988).

Cronbach's alpha was .85 for this scale.

Control variables.

General Family Support. General family support was measured using Family Support Scale (FSS; Dunst, Jenkins, & Trivette, 2007). Mothers were asked to report on the helpfulness of their spouse/partner, their parents and their spouse/partner's parents has been to her family during the last 3 to 6 months, using a 5-point scale, ranging from 1 (not at all helpful) to 5 (extremely helpful). High scores indicate high level of general family support. FSS shows adequate face validity (Littlewood, Swanke, Strozier, & Kondrat, 2012) and good test-retest reliability (Dunst, Jenkins, & Trivette, 1984). Cronbach's alpha was .80 for this scale.

Parent-Grandparent Relationship. Parent-grandparent Relationship was measured by one single item, asking mothers, to report on their relationship with the grandparents on a 4-point scale ranging from 1 (not getting on well at all) to 4 (getting on very well). Mothers will be asked to answer the question with reference to the grandparent who provide the most childcare. High scores indicate better parent-grandparent relationship.

Spouse Relationship. Spouse relationship was measured by one single item, asking mothers to report on their relationship with their spouse/partner on a 4-point scale ranging from 1 (not getting on well at all) to 4 (getting on very well). High scores indicate better relationship with the spouse/partner.

Maternal Depression. Maternal depression was measured by Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). Mothers were asked to rate 20 statements regarding how often they feel in the way described in each statement, ranging from "*rarely or none of the time*" (less than 1 day) to "*most or all of the time*" (5-7 days).

Examples of statements include *“I was bothered by things that usually don’t bother me”* and *“I felt that I could not shake off the blues even with help from my family or friends”*. High scores indicate high level of depression. CES-D shows good test-retest reliability and appropriate construct validity (Radloff, 1977). Cronbach's alpha was .88 for this scale.

Child Temperament. Child temperament was measured using Children’s Behavior Questionnaire, Very Short Form (CBQ-VSF; Putnam & Rothbart, 2006). CBQ-VSF was developed to assess three temperament domains, including Surgency/Extraversion, Negative Affect, and Effortful Control. Mothers were asked to rate 36 statements to indicate how well each statement describes their children, using an 8-point scale, ranging from 1 (extremely untrue of your child) to 7 (extremely true of your child), and 8(N/A). Examples of items include *“My child is very difficult to soothe when she/he has become upset”*, *“my child gets quite frustrated when prevented from doing something s/he wants to do”*, and *“My child seems to be at ease with almost any person”*. CBQ-VSF demonstrates good criterion validity and adequate test-retest reliability. Cronbach's alpha was .73 for this scale.

Background Information. Mothers were asked to complete a questionnaire on background information including age, education, reason for immigration, employment status, occupation, working hours per week, work schedule, family income, marital status, planned or unplanned pregnancy, length of residence in U.S., previous place of residence in China, previous moving experience, and child gender, members living in the house, ages of children living in the house, person who provided most childcare, experience of co-residence with grandparent, general availability of childcare services, general access to Chinese community.

Results

Descriptive Statistics and Correlations

In order to represent the bivariate associations between the predictor, control and outcome variables, the correlation and descriptive statistics for the main study variables were calculated and are represented in Table 2. Significant correlations existed among Chinese identity, collectivism and several parenting variables as predicted. However, US identity and individualism were not associated with any parenting variables, which indicated that these two cultural cognition variables have very limited predictive value in determining the parenting outcomes of interest. The relationships between cultural variables, parenting cognitions, and parental time involvement also tend to be very low and nonsignificant, which suggested time involvement may either not be predicted by such variables or does not characterize meaningful differences in parenting. Chinese identity was significantly and positively associated with grandparent support and family support. However, interestingly, US identity was positively correlated with the quality of parent-grandparent relationships and spouse relationships. The matrix also indicated that child difficult behavior is strongly and positively correlated with parenting stress, and grandparent support is negatively correlated with parenting stress as predicted. Furthermore, maternal depression showed a strong association with parenting stress variables and will consequently be controlled in the analyses predicting parenting stress. In addition, independent sample t-tests were conducted to compare the two samples (M Turk vs. snowball) on each study variable. Results are represented in Table 3. Some differences emerged between the two samples on parent role involvement, general parenting stress and parenting stress due to child behavior. Basically, the sample recruited through snowball technique appeared to be less stressed and more involved.

Table 1 (see appendix)

Table 2 (see appendix)

Table 3 (see appendix)

Data Analysis Plan

In order to test for the influence of cultural cognitions and parenting cognitions on parenting behaviors and adjustment among Chinese immigrant mothers, a series of regression analyses were specified. For each regression model, demographic variables were controlled in the analyses to better assess the unique influence of the cultural cognition variables. For regression model predicting parenting stress, maternal depression was also controlled, as the correlation matrix indicated that the depression variable has strong association with parenting stress variables.

Two sets of analyses were performed to examine the hypothesized mediation processes. First, hierarchical multiple regression analyses were conducted using SPSS to examine the relationship between cultural cognitions, parenting cognitions (predictors) and parenting involvement and stress (outcome variables). Second, PROCESS Macro was used to assess the indirect influence of the cultural cognitions on parenting involvement and stress through their influence on parenting cognitions. The analyses sought to reveal the pathways through which parenting involvement and stress were affected by cultural cognitions. Through the two set of analyses, the mediating relationship linking parenting cognitions on the relationship of cultural cognitions and parenting outcomes can be tested.

Mediation effects were tested using PROCESS installed in SPSS. The PROCESS macro for SPSS is a computational tool for observed variable path analysis, which has been widely used by social scientists for estimating direct and indirect effects in mediation models (Hayes, Montoya, & Rockwood, 2017). PROCESS is available freely and can be easily

installed into SPSS as an extension. A series of model numbers were preprogrammed into PROCESS which defines a set of conceptual and statistical diagrams. User can select a model number corresponding to the model he or she wants to test (e.g., moderation, mediation, moderated mediation), and enter variables in different blocks based on their roles in the model (e.g., predictor, outcome, moderator, mediator, covariate). PROCESS will provide an estimation of all path coefficients with standard errors, confidence intervals, t and p values. PROCESS can give an estimation of conditional indirect effects, which is important for testing mediation hypotheses. Moreover, PROCESS makes inferences about those statistics based on bootstrapping method instead of ordinary methods, which works better with irregular sampling distributions. Similarly to SEM, PROCESS estimates mediation process as the magnitude of the indirect pathway rather the Baron and Kenny (1986) approach wherein the primary test is the magnitude of the drop in the association once the proposed mediating variables is entered. Although SEM and PROCESS are based on different theories and estimation methods, in terms of models of observed variable, the results produced by the two methods tend to be substantively identical and the differences between them tend to be trivial (Hayes, Montoya, & Rockwood, 2017). And in contrast with SEM which also performs path analysis with observed variables, PROCESS simplifies the process and produces all statistics automatically rather than requires users to have programming skills. Therefore, for path analysis with observed variables, PROCESS can be used as equivalence of SEM to calculate relevant statistics, which yields similar results but requires much less operation efforts and programming skill compared with SEM

To test the hypotheses predicting moderation (hypotheses 3 & 4), hierarchical multiple regression analyses were conducted using SPSS to examine the influence of grandparent support, acculturation, child difficult behavior and gender on parenting stress. In each, the interaction terms between predictors and moderators were constructed as product

terms and entered along with each of the variables as predictors in the regression models. For those models in which there were significant were plotted to better illustrate the moderation effects.

For all regression analyses using SPSS, the normal probability plot and the scatterplot of the residuals were examined to ensure there was no violations of the assumptions of normality, linearity, or homoscedasticity; correlation coefficients and variance inflation factor (VIF) values were checked to ensure there is no multicollinearity.

Hypothesis Testing

Model Testing the Associations between Chinese Identity, Parental Investment, and Parental Role Involvement. The first hypothesis is that mothers' sense of investment mediates the association between acculturation and parental involvement in Chinese immigrant mothers. First, multiple regression was conducted to examine the predictive relationship between acculturation, mothers' sense of investment and parental involvement. Mothers' role involvement was regressed first on the control variables (maternal education, family income, marital status, number of children) and then on the control variables and Chinese identity and sense of investment in the second step.

Results are presented in Table 4. The first step of the model was not significant, $F(4, 252) = 1.86, p > .1$. In this model, only number of children was significantly associated with role involvement. Parents with more children are more likely to be highly involved in their parent role. In the second step, Chinese identity and sense of investment were entered, which significantly increased the variance accounted for in role involvement $\Delta R^2 = 0.24, F \text{ change}(2, 250) = 11.53, p < .01$. The number of children remained a significant predictor of role involvement. Chinese identity and sense of investment predicted role involvement after the

shared associations with the demographic variables were controlled. Chinese identity and parental investment were associated with increased role involvement.

The process by which mothers' sense of investment mediates the association between Chinese identity and role involvement was tested using the PROCESS macro. Chinese identity was entered as the predictor variable, role involvement was entered as the outcome variable, and mothers' sense of investment was entered as the mediating variable. Background variables (maternal education, family income, marital status, number of children) were included as covariates in the analyses.

Results of the mediation analysis are summarized in Table 5, including path coefficients (B), standard errors, and confidence intervals. Estimations for total effect, direct and indirect effects of Chinese identity on role involvement are reported. The magnitude of indirect effect demonstrated the test of the mediation effect through the mediator. The associated Confidence Interval does not include 0, thereby indicating that the collective pathway is significantly different than 0. Thus, there is a significant indirect effect of Chinese identity on parental role involvement through parental sense of investment. The mediator accounts for 40% of the total effect. Therefore, the hypothesis that mothers' sense of investment mediates the association between acculturation and parental involvement in Chinese immigrant mothers was partly supported by the analysis.

Table 4 (see appendix)

Table 5 (see appendix)

Figure 5 (see appendix)

Model Testing the Associations between Collectivism, Parental Satisfaction, and Parenting Stress. The second hypothesis is that parental satisfaction mediates the association between individualism/collectivism and parenting stress in Chinese immigrant mothers. First, a multiple regression model was specified to examine the predictive relationship between collectivism, parenting stress, and parental satisfaction. Parenting stress was regressed first on the control variables (maternal education, family income, marital status, number of children, maternal depression) and then on the control variables and collectivism and parental satisfaction in the second step.

The results of the analysis are presented in Tables 6. The first step of the model was significant, $F(5, 251) = 21.16, p < .01$. In this model, number of children and depression were significantly associated with parenting stress. Notably, depression was a strong predictor of parenting stress. In the second step, collectivism and parental satisfaction were entered, which significantly increase the variance accounted for in parenting stress, and the model remained significant, $\Delta R^2 = 0.16, F \text{ change}(2, 249) = 8.02, p < .01$. The number of children and depression remained significant predictors of parenting stress. Collectivism and parental satisfaction uniquely predicted parenting stress after the associations with the control variables were accounted for. Increased collectivism and parental satisfaction were associated with less parenting stress.

Furthermore, the mediation effect of parental satisfaction on the association between collectivism and parenting stress was tested using the PROCESS macro installed in SPSS. Collectivism was entered as the predictor variable, parenting stress was entered as the outcome variable, and parental satisfaction was entered as the mediating variable. Background variables (maternal education, family income, marital status, number of children, maternal depression) were included as covariates in the analyses.

The results are summarized in Table 7, including path coefficients (B), standard

errors, and confidence intervals. Estimations for total effect, direct and indirect effects of collectivism on parenting stress are provided. The magnitude of indirect effect demonstrated the amount of mediation effect through the mediator, and the associated Confidence Interval does not include 0. Thus, there is a significant indirect effect of collectivism on parenting stress through parental satisfaction. The mediator accounts for 74% of the total effect. Therefore, the hypothesis that parental satisfaction mediates the association between individualism/collectivism and parenting stress was supported by the analysis.

Table 6 (see appendix)

Table 7 (see appendix)

Figure 6 (see appendix)

Model Testing the Moderating Role of Chinese Identity on the Association between Grandparent Support and Parenting Stress. To test the third hypothesis that mothers' acculturation level moderates the association between grandparent support and parenting stress in Chinese immigrant mothers, a hierarchical multiple regression analysis was conducted to explore the association between grandparent support and parenting stress in Chinese immigrant mothers and the moderating effect of acculturation. In the first model, parenting stress was regressed on the controls (maternal education, family income, marital status, number of children, maternal depression, general family support). In the second model, parenting stress was regressed on the controls and grandparent support, Chinese identity, and the interaction term (which is a product of the standardized grandparent support

and Chinese identity variable).

Results are presented in Table 8. The first step of the model was significant, $F(6, 250) = 11.52, p < .01$. Marital status and general family supported were negatively associated with parenting stress. That is, being married and having more family support is associated with less parenting stress. Number of children and depression were positively associated with parenting stress. Having more children and being depressed was associated with more parenting stress. Notably, depression is a strong predictor of parenting stress. In the second step, Chinese identity, grandparent support and the interaction term were entered, which significantly increase the variance accounted for in parenting stress, and the model remained significant, $\Delta R^2 = 0.10, F \text{ change}(3, 247) = 19.24, p < .01$. The number of children, depression and general family support remained to be significant predictors of parenting stress. Grandparent support and the interaction between grandparent support and Chinese identity uniquely predicted parenting stress after the effects of control variables were accounted for. In order to understand the nature of the interaction, the interaction was modeled such that the slopes representing the associations between grandparent support and parenting stress were represented separately for those mothers with a higher Chinese identity and with a relatively lower Chinese identity (as represented by a median split). As can be seen in Figure 1, more grandparent support was associated with less parenting stress, and this association was stronger for those with strong Chinese identity. Therefore, the hypothesis that mothers' acculturation level moderates the association between grandparent support and parenting stress was supported by the analysis.

Table 8 (see appendix)

Figure 7 (see appendix)

Model Testing the Moderating Role of Gender and Chinese Identity on the Association between Child Difficult Behavior and Parenting Stress. To test the fourth hypothesis that gender and acculturation moderates the association between child difficult behavior and parenting stress in Chinese immigrant mothers, regression analysis was conducted to explore the relationship between child difficult behavior and parenting stress in Chinese immigrant mothers and the moderating effect of gender and acculturation. In the first model, parenting stress was regressed on the controls (maternal education, family income, marital status, number of children, maternal depression, general family support, and child temperament). In the second model, parenting stress was regressed on the controls and child difficult behavior, gender, Chinese identity and the interaction terms (products of standardized difficult behavior and gender variable, standardized difficult behavior and Chinese identity variable, standardized gender and Chinese identity variable, and standardized difficult behavior, gender and Chinese identity variable).

Results are presented in Table 9. The first step of the model was significant, $F(7, 168) = 15.51, p < .01$. Marital status (being married) was associated with less parenting stress. Child temperament and depression were positively associated with parenting stress. That is, difficult temperament and being depressed were associated with more parenting stress. Notably, depression is a strong predictor of parenting stress. In the second step, child difficult behavior, Chinese identity, gender, and the interaction terms were entered, which significantly increase the variance accounted for in parenting stress, and the model remained significant, $R^2 \text{ change} = 0.21, F \text{ change}(7, 161) = 25.31, p < .01$. Marital status, depression and child temperament remained to be significant predictors of parenting stress. Child difficult behavior, Chinese identity, the interaction between child difficult behavior and Chinese identity uniquely predicted parenting stress after the effects of control variables were accounted for. In order to understand the nature of the interaction, an approach was modeled

such that the slopes representing the associations between child difficult behavior and parenting stress were represented separately for those mothers with a higher Chinese identity and with a relatively lower Chinese identity (as represented by a median split). As can be seen in Figure 2, more difficult child behavior was associated with more parenting stress, and this association was stronger for those with strong Chinese identity. Child gender, the interaction between child gender and difficult behavior, and the interaction between child gender, difficult behavior and Chinese identity were not significant predictors of parenting stress.

Table 9 (see appendix)

Figure 8 (see appendix)

Discussion

The main purpose of this research was to examine whether variations in cultural-specific features of identity were linked to changes in parenting among acculturating Chinese mothers. That is, as Chinese mothers acculturate to the American context, their cultural identity should change in complex ways, which will in turn influence their parenting experiences. The findings demonstrated the pathways through which cultural cognitions may impact the parenting experiences of Chinese mothers undergoing acculturation in the United States. Parental role involvement and distress were shown to be influenced by Chinese identification and collectivism through their impact on parenting cognitions (sense of investment and parental satisfaction). The results also revealed that mothers' acculturation,

grandparent support, child difficult behavior played important role in determining parenting stress among Chinese immigrant mothers.

The impact of Chinese Identity on Parental Role Involvement through Parental Investment

This study tested the hypothesis that mothers' sense of investment mediates the association between acculturation and parental involvement in Chinese immigrant mothers. The results indicated that Chinese identity affected parental role involvement partly through its impact on parental sense of investment. That is, Chinese immigrant mothers' Chinese identity influenced their sense of investment in their children, which ultimately impact parental role involvement.

Overall, the finding appeared to be consistent with previous research on cultural contributions to parenting and the adjustment of parenting in immigrant populations, which suggested that acculturation could impact parenting attitudes, beliefs and practices at individual level (e.g., Bornstein & Cote, 2004; Farver & LeeShin, 2000; Ho, 2014). Moreover, the finding adds to the literature on acculturation and parenting by studying concomitant changes in parenting approaches and acculturation on a within-culture basis. While some research suggested that parenting cognition and practice change during cultural adaptation (e.g., Cote et al., 2015), little research has demonstrated the mechanism of the changing process. The current study revealed the linkage between parenting cognitions and parental practices in acculturating Chinese mothers. The results suggested that the differences in mothers' Chinese identity translate into different level of parental sense of investment, which may ultimately lead to different level of parental role involvement in acculturating Chinese mothers. Parenting cognitions are believed to derive from cultural background and researcher has argued that cultural adaptations occurring during the acculturation process may

increase the likelihood of instability and changes in parenting cognitions (Bornstein & Cote, 2006; Bornstein & Lansford, 2010; Cote, Kwak, Putnick, Chung, & Bornstein, 2015; Goodnow, 2010). For immigrant parents undergoing acculturation, there are likely individual variations in their adaptations in attitudes, values and identifications, and as a result, their parenting cognition may gradually change to accommodate the new beliefs and norms of the culture of destination. Moreover, the link between parental sense of investment and parental role involvement is consistent with the notion that parenting cognition motivates and organize parenting behaviors. Overall, this finding lends support to the arguments that acculturation may be a factor that reshapes parenting cognition, and that acculturation of parenting cognitions underlies parenting approaches in acculturating immigrant communities (Bornstein, 2015a; Bornstein & Lansford, 2010; Cote et al., 2015).

Increased Chinese identity was linked with increased parental investment, which was in turn associated with high level of parental role involvement in acculturating Chinese mothers. This pattern of results was consistent with previous studies that have been conducted to explore parents' sense of investment and involvement among Chinese and Chinese immigrant population, which generally suggested that Chinese and Chinese American parents felt the need to offer high level of investment and reported high involvement with childrearing in their daily lives (Chao, 1996, Chen & Uttal, 1988; Hieshima & Schneider, 1994; Huntsinger et al., 1997; Pan et al., 2006; Shoho, 1994; Schneider & Lee, 1990). This parenting style seems to reflect the training style and the "*guan*" concept in Chinese model of parenting, which is generally characterized as high level of support and involvement in the education and caretaking of their children, especially during the early years of childhood (e.g., Chao, 2000; Chao, 1996; Huntsinger et al., 1997; Pan et al., 2006). The Chinese model of parenting tends to emphasize the importance of parental guidance, monitoring and total devotion to their children, and Chinese parents are more likely to believe

in the significance of the parent role in child's success and view their involvement in their children's education and lives as an integral parenting role (Chao, 2000). Moreover, these parenting beliefs are particularly relevant for Chinese mothers, as they are expected to fulfil the parent role of a loving and devoted mother in Confucian philosophy, and hold responsibility of caring and training their children to be successful in later lives (Bao, 1997; Kim & Choi, 1994). Therefore, it is reasonable that these parenting beliefs would contribute to higher level of parental investment and role involvement in Chinese mothers. However, it should be noted that, in the current study, increased Chinese identity and sense of investment only predict parental role involvement, but not the actual time spent with their children. It seems to imply that the impact of cultural identity is most relevant for the extent to which parents would prioritize the education and caretaking of their children in their lives. This is not surprising considering that Chinese parenting is largely rooted in the Confucian philosophy which emphasizes parents' moral responsibility of training and caring for their children. A women's most important social role is believed to motherhood based on Confucian ideas (Bao, 1997; Kim & Choi, 1994), thus it is reasonable that mothers with high Chinese identity are more likely to center their lives around their children.

Parenting Stress Mediates the Impact of Collectivism on Parental Satisfaction

This study found that parental satisfaction mediates the association between collectivism and parenting stress in Chinese immigrant mothers. That is, Chinese mothers' collectivist tendency predicted the satisfaction they obtained from parenting, which in turn predicted their parenting stress. More collectivist belief was linked to higher parental satisfaction, which in turn leads to less parenting stress.

The results lend support to the argument that socialization goals such as individualism and collectivism were influential when it comes to parenting attitudes and

outcomes (e.g., Bornstein & Cote, 2004; Greenfield & Suzuki, 1998; Harwood, Miller, & Irizarry, 1995; Harwood et al., 1999). The pattern of results is consistent with previous literature which generally indicated that more collectivist values lead to more parental satisfaction, and that parents from collectivist cultures tend to not feel burdened by the parent role (Bornstein & Cote, 2004; Han, 2007; Ren & Hyun, 2002). Mothers with more collectivist beliefs are more likely to consider self as embedded in the context of a social group such as family and therefore are more motivated to achieve group goals (e.g., childrearing), while mothers with more individualist view may tend to consider self as a separate identity and view childcare as a burden that prevents them from achieving personal goals. It has been found that collectivism is associated with emphasis on within-group harmony and more stability in self-ingroup relationship, which could help reduce stress in everyday life (Triandis, Bontempo, & Villareal, 1988). Chinese immigrant mothers with more collectivist values may feel more fulfilled about the parenting process, as they tend to focus more on within-family harmony and self-ingroup relationship, and value the contribution the childcare may bring to the whole family. Furthermore, while previous research generally suggested that collectivist beliefs in Asian parents may lead to more parental satisfaction and less burden, it is also worth further studies on other collectivist cultures to test the generalizability of the results to other Asian immigrant groups in the U.S.

Japanese American mothers' collectivist tendency at child age 5 months is a significant predictor of parental satisfaction at child age 20 months (Bornstein & Cote, 2004). Studies conducted in collectivist cultures have generally indicated that Asian parents are likely to obtain pleasure and gain a strong sense of satisfaction from their investment in their children and tend to not feel that they are burdened by the parent role (Han, 2007; Ren & Hyun, 2002). This pattern of result may suggest that parents with more collectivist values

may obtain more satisfaction from parenting, possibly because they focus more on the contribution the childcare may bring to the whole family.

Moreover, this finding extends work on understanding the cultural basis of parenting adjustment by investigating the linkage between parenting satisfaction and parenting stress in relation to individualism and collectivism in an acculturating group. The results suggested that collectivist beliefs in acculturating mothers could affect their parenting stress through the effect of parenting satisfaction. The finding points to the importance of understanding individual variations in cultural values when examining the parenting adjustment in acculturating parents. There is no uniform pattern even within one cultural group when it comes to the acculturation of parenting. Within-group differences in cultural cognitions are important when examining the outcomes of parenting adaptation. In addition, this pattern of results shows support to the notion that there is a complex relationship between acculturation and individualist and collectivist tendency. Acculturation level and individualism/collectivism appeared to be different predictors when it comes to parenting acculturation. The findings highlighted the importance of considering deeper cultural values such as individualism and collectivism in addition to exploring the influence of acculturation when investigating the acculturation of parenting cognitions and outcomes.

Furthermore, one general lesson we can take away from the first two findings is that Chinese cultural elements seemed to be more important in affecting the adaptation of parenting among Chinese immigrant mothers, rather than the U.S. cultural elements. Results indicated that significant correlations exist among Chinese identity, collectivism and several parentings, whereas U.S. identity and individualism were not associated with any parenting variables. It is possible that the measures of U.S. cultural elements failed to capture the meaningful cultural element in parenting acculturation, or it may suggest that individual variations in Chinese cultural components are more essential for determining the adaptation

of parenting in acculturating Chinese mothers. It should be noted that the measure of individualism was developed in western context and the target-specific constructs may not work as well in a collectivist culture. For example, researchers have raised the methodological concern that whether social desirability in collectivist cultures may be confounded with the scores (e.g., Hui, 1988). As interpersonal harmony is considered to be the dominating virtue in Chinese culture, individuals may respond to the measure in a manner to align themselves with others and to avoid violating the core cultural ideals. Therefore, the measurements of U.S cultural elements and how these variables may be related to parenting behavior still need further exploration in Chinese context.

The Moderating Role of Acculturation on the Association between Grandparent Support and Parenting Stress

In support of the hypothesis, the analysis revealed that mothers' Chinese identity moderates the association between grandparent support and parenting stress in Chinese immigrant mothers. That is, grandparent support and the interaction between grandparent support and Chinese identity uniquely predicted parenting stress after the effects of control variables were accounted for. Specifically, increased grandparent support was linked with decreased parenting stress, and this association was stronger for those with strong Chinese identity.

The finding that grandparent support can help decrease parenting stress was consistent with previous findings that underscored the importance of perceived social support in buffering parenting stress (e.g., DeGarmo, Patras, & Eap, 2008; Fagan, Bernd, & Whiteman, 2007; Hall & Graff, 2011; Hassall, Rose, & McDonald, 2005). Moreover, the finding also goes along with previous research which indicated that extended family support has a unique stress-buffering effect for Chinese parents when it comes to parental adjustment (Arnold et

al., 2011; Chi et al., 2011; Liu et al., 2012; Gao et al., 2010; Greenfield, 2011; McConnell, Breitzkreuz & Savage, 2010; Pearson & Chan, 1993; Zhang, 2016). This finding also pointed to the importance of defining family in a broader term when examining parenting and childcare in similar cultures in which families of origin are believed to common resources of social support. Grandparent support, as well as general family support from the extended family, appeared to have unique influence on parenting stress among Chinese acculturating mothers. Therefore, it is necessary to consider the support from the larger family context when understanding parental adjustment in such culture.

The analysis also indicated that Chinese immigrant mothers with strong Chinese identity are more likely to benefit from the buffering effect of grandparent support on parenting stress. This pattern of results was consistent with previous research which found that the influence of grandparent support on parenting stress can be based on acculturation level (Contreras et al., 1999). It is not surprising as previous literature on social support has underscored the importance of recipients' subjective perception and interpretations of received support (Maisel & Gable, 2009; Kalil & Danziger, 2000; Gordon et al., 2004). Adaptation of cultural identity may gradually change mothers' belief in social norms and expectations of intergenerational interactions, which may affect the impact of grandparent support on parenting stress. There is a strong trust of kin care and distrust of non-kin relationship when it comes to childrearing in Chinese culture (Goh, 2006; Zhang, 2016). Mothers with strong Chinese identity may be more likely to perceive grandparent support as a common and reliable resource of childcare compared with those with low Chinese identity, thus it is reasonable that they appeared to benefit more from grandparent support.

Moreover, the results also reveal one interesting phenomenon about cultural identity, support and relationship. Chinese identity was significantly and positively associated with grandparent support and family support. However, interestingly, U.S. identity was positively

correlated with the quality of parent-grandparent relationships and spouse relationships. This result pattern seemed to suggest that Chinese identity may lead to more support, but not necessarily good spouse or intergenerational relationship. On the contrary, while U.S. identity was not linked with level of grandparent or family support, it was associated with better spouse and parent-grandparent relationships. Previous literature has documented that conflicts between daughter-in-law and mother-in-law are not uncommon in China, particularly conflicts regarding childrearing beliefs and practices, and role ambivalence in power between mother-in-law and daughters-in-law in Chinese culture (e.g., Chan, Levy, Chung & Lee, 2002; Gao et al., 2010; Yan Du, 2013; Zhang, 2016). There appears to be a complex relationship between cultural identity, support and relationship. While strong Chinese identity may bring higher level of grandparent support and family support, it may not necessarily be beneficial for family relationships.

Overall, these findings contain important implications for support and psychological service with Chinese immigrant families. Grandparent support, general family support and cultural identity appeared to play an important role in determining parenting stress in Chinese immigrant mothers with young children. Therefore, for intervention with acculturating Chinese parents who are undergoing cultural adaptation, it is crucial to consider the influence of acculturation and the relationship with the larger family system.

The Moderating Role of Acculturation on the Association between Child Difficult Behavior and Parenting Stress

In support of the hypothesis, the analysis demonstrated that Chinese identity moderates the association between child difficult behavior and parenting stress in Chinese immigrant mothers. That is, child difficult behavior and the interaction between child difficult behavior and Chinese identity uniquely predicted parenting stress after the effects of

control variables were accounted for. Specifically, more difficult child behavior was associated with more parenting stress, and this association was stronger for those with strong Chinese identity.

First, the finding was consistent with previous literature suggesting that child difficult behavior was a source of parenting stress (e.g., DeMore, Adams, Wilson, & Hogan, 2005; Hassall, Rose, & McDonald, 2005; Neece, Green, & Baker, 2012; Quittner, et al., 2010). Moreover, this research extends existing work on child difficult behavior and parenting stress by examining this association in relation to cultural cognitions. The results suggested the acculturation of parents may change their perceptions and stress reactions to child difficult behaviors. Parents' perception of child behavior is constructed in the sociocultural context where they raise their children, therefore, it is reasonable that cultural adaptation may affect the extent to which parents perceived a certain child behavior as a problem.

Chinese identity appeared to exacerbate the impact of child difficult behavior on parenting stress among acculturating Chinese mothers. That is, mothers with strong Chinese identity are more likely to be stressed out by child difficult behavior. This is not surprising considering Chinese parenting philosophy is largely shaped by Confucian values emphasizing filial piety and humility. The training style of Chinese parenting tend to value child obedience, respect for rules and set standards of behaviors (Chan, Bowes, & Wyver, 2009; Chao, 2000; Costigan & Koryzma, 2011; Costigan & Su, 2008; Xua et al., 2005). And it is thought to be the parents' responsibility to train their children to be humble and respectful. Since obedience, shyness and restraining behaviors are generally perceived as less deviant and encouraged in Chinese cultures (Chen, Dong, & Zhou, 1997; Chen, Rubin, & Sun, 1992; Chen, Wang, & Cao, 2011; Liang, 1987; Rubin et al., 2009; Yang, 1986), it is not surprising that mothers with strong Chinese identity may be more restrictive with child behavior standards, and find child difficult behavior to be more problematic. Mothers who

identify more with Chinese culture may be more likely to feel the pressure of correcting their children's difficult behavior so that they would be more accepted in social settings.

Contrary to the hypothesis, child gender failed to moderate the association between child difficult behavior and parenting stress. There did not appear to be gendered differences in mothers' stress reactions to child difficult behavior, which failed to support the original thoughts that Chinese mothers may have gendered perception of child difficult behavior due to long-held cultural basis for gender inequality. The insignificance may be simply due to lack of statistical power, but it may also point to the possibility that gender was not a significant factor in determining parenting stress due to child difficult behavior in Chinese immigrant mothers. Although there is well-documented son-preference custom which can contribute to the gender-specific perception of child behavior, it is also possible that the one-child policy may have challenged traditional patrilineality in Chinese culture in the past few decades (Hong, 1987). Researcher argued that parents' attitudes towards girls has largely changed because of the singleton status (Fong, 2002). For parents who only have one daughter, they must depend on their daughter for future welfare and emotional ties, thus parents' perception of girls would change because of the new family dynamics. It has been argued that the prevalence of one-child family may greatly contribute to parents' belief of gender equality in China (Deutsch, 2006). Research has documented parents' gender-blind treatment and beliefs of only sons and daughters in contemporary China (e.g., Chow & Zhao, 1996, Davis & Sensenbrenner, 2000; Short et al., 2001; Wu, 1996). For example, research examining the purchases of parents made for their only child in Shanghai indicated that there were no gender differences in parental emphasis on achievement and investment over different categories (Davis & Sensenbrenner, 2000). Therefore, the absence of gender differences in parenting stress caused by child difficult behavior may also be attributed to the changing attitudes of parents towards girls due to one-child policy.

Additionally, it is important to note that the assessment of child difficult behavior is largely influenced by social and cultural context. Considering the western nature of CBCL in identifying difficult behavior, there are possible issues of using some constructs to measure child behavior in Chinese culture, and further research is still needed to establish the use of CBCL in mainland Chinese population, particularly among preschool-age children (Liu, Leung, Sun, Li, & Liu, 2012).

Furthermore, of all controlled variables, maternal depression appeared to be a critical factor for determining parenting stress variables. Maternal depression accounted for a large proportion of the variances in both general parenting distress and parenting stress due to child difficult behavior. This result could be simply due to the similarity between the depression and parenting stress measures, but it may also point to the significance of maternal depression in determining parenting stress in Chinese immigrant mothers. Further research is needed to look into the fairly strong association between maternal depression and parenting stress in acculturating Chinese mothers.

Strengths & Limitations

This study has several noteworthy strengths as it attempts to address the gaps in previous literature. First, it focused on a unique cultural group in immigrant research, among which acculturation of parenting and family support has seldom been examined. While there has been research that explored parenting acculturation, little work has been conducted in Chinese immigrant population. Thus, this study adds to the limited number of studies that examine the cultural adaptation of parenting and the role of family support in Chinese immigrant parents.

Second, the current study extends work on understanding the cultural basis of parenting between Asian and Western cultures by examining how within-cultural changes are

linked to parenting. While several studies have looked at the role of these cultural cognitions in comparing parenting, via a social address approach, in Asian families compared to western parents, there is very limited research on the mechanism through which parenting involvement and adjustment may be affected by these cultural elements during cultural adaptation. The current study filled in this gap by focusing on the transition process during acculturation, and exploring the linkage between cultural cognitions, parenting cognitions, and parenting involvement and adjustment in an immigrant population undergoing cultural changes. The findings add to the existing literature on acculturation and parenting, as it revealed the pathways in which acculturation changes parenting practices through its impact on parenting cognitions. This study also advances the research on acculturation and parenting adjustment, as it is the first to explore how cultural cognitions, such as individualism and collectivism, impact parenting stress through its influence on parenting satisfaction. While many studies have documented that the value of collectivism may lead to higher parenting satisfaction (Bornstein & Cote, 2004; Han, 2007; Ren & Hyun, 2002), there is no research that has attempted to explore its implication on parenting stress in immigrant population.

Moreover, the current study differentiates grandparent support from other family support in order to demonstrate its unique role in shaping the parenting adjustment among Chinese immigrant parents, and how acculturation may change its impact on parenting stress. While a number of research has suggested grandparent support could have a unique stress-buffering effect for Chinese parents, and appears to be more helpful than other sort of social support or support when it comes to parental adjustment (e.g., Arnold et al., 2011; Chi et al., 2011; Liu et al., 2012; Gao et al., 2010; Greenfield, 2011; Zhang, 2016), many previous studies tend to group it together with other family support in parenting research. This study adds to the small number of studies which separated grandparent support from other family support for analysis to highlight its unique impact on buffering parenting stress during early

years of childrearing.

Furthermore, this study extends previous work on parenting adjustment, as it highlighted the unique influence of Chinese cultural identity on the association between child difficult behavior and parenting stress. The emphasis on obedience, shyness, and behavioral restraint in Chinese parenting philosophy has been widely documented, however, almost no research has examined whether these cultural cognitions may change parents stress reaction to child behavior. The current study is the first to document the impact of Chinese identity on the association between difficult child behavior and parenting stress during the acculturation process.

Overall, this study targets a unique immigrant population, and provides valuable insight into the mechanisms through which cultural cognitions may affect parental involvement and adjustment through parenting cognitions among acculturating immigrant communities. Meanwhile, it also highlights the role of grandparent support and child difficult behavior, which are two understudied topics in this line of research.

Notwithstanding these strengths, the current study also has its limitations. First, the study was based on non-random sampling, which will limit the generalizability of the finding to larger Chinese immigrant population. Snowball sampling was used in this study as it has been proven to work best in recruiting large sample in Chinese population (e.g., Lu & Gatua, 2014; Ojeda et al., 2011; Suh et al., 2009). Snowball technique utilizing personal strings for recruitment appeared to be the most effective way to obtain a large number of participants for Chinese immigrants as there is established trust between them. However, utilizing personal network for recruitments also presents some limitations. Homogeneity of samples may be the biggest concern. As many participants are acquaintances of each other, their experiences, or even beliefs and values may be similar. Thus, it may prevent the researcher from capturing the full diversity of Chinese immigrants. Although the researcher has made effort to utilize

other online recruitment method (Amazon Turk) in combination with snowball technique for the purpose of gathering more quality data, the generalizability of the findings to larger Chinese immigrant population should still be cautious, as Chinese immigrant mothers in the United States presents much more heterogeneity. Moreover, it should be noted that the two samples (snowball vs. Mturk) appeared to be different on some study variables. Future research should consider how different data sampling techniques might influence the samples and the results of Chinese parenting.

Second, the study utilized a cross-sectional design. The utilization of cross-sectional data prevented the interpretation of causality. It should be noted that the current study cannot determine causal relationship between cultural cognitions, parenting cognitions, behavior and stress. Longitudinal research is needed to test the directionality of the relationship, i.e., whether changes in cognitions lead to changes in behavior and adjustment, or the other way around. For the current study, it is framed this way because the essence of the model is how changes in cultural cognitions may translate into adaptations in parenting behaviors. However, it should be noted that the research is correlational so it cannot rule out the other possibility. Future research utilizing a longitudinal design is needed to further explain the possible cause and effect relationship between these variables.

In addition, the current study was merely based on mothers' self-reports. It should be noted that the reliance on self-reports also presents its limitations. First, the magnitude of relationship may be inflated due to some general personality traits or shared-method variance. Besides, social desirability bias may also be a concern, particularly for Chinese immigrant mothers. Since parental supervision and devotion is particularly valued in Chinese parenting philosophy, Chinese mothers may feel more pressure to report any undesirable parenting behavior, or may tend to over-report "good behavior". The researcher has attempted to alleviate this issue by including a preamble explaining that the data will only be used for

research, completely confidential and no one will be able to link the response to the participant, and that immigrants interact with children in different ways and the purpose of the study is not to establish the better or worth, but an understanding of the transition process, so it is essential to respond honestly, rather than provide the best answer in your mind. However, it should still be kept in mind that social desirability bias may be a particular issue for Chinese mothers. Moreover, there could be possible issues of simply relying on self-report of perceived stress to measure parenting adjustment. Research on caregiving stress has indicated that there were differences in stress-related ratings between the self-perceived stress level and the actual stress biomarkers in caregivers (e.g., Aguilo, Garcia, Arza, Garzon-Rey, & Aguilo, 2018).

Future Directions

Overall, the process and dynamics of changes in parenting cognitions and practices in acculturating parents is complex and needs further study. Future research can extend the current study in several important ways. First, further studies are needed to replicate this present research with longitudinal data. The cross-sectional nature of the current study limits the interpretation of directionality between cultural cognitions, parenting cognitions, involvement and stress. Therefore, future research needs to utilize a longitudinal design to test the causality of this model.

Second, the characteristics of the sample limit the generalizability of the findings to larger Chinese immigrant population, thus future research should target a more diverse sample to capture a bigger picture of this population. It should be noted that the overwhelming majority of the sample was middle-class and well educated, which is not representative of the general immigrant population. Future research may attempt to reach a more heterogeneous sample to explore the issue of parenting acculturation. Besides, the

majority of the sample has been living in the United States for many years, and it would be interesting for future research to target Chinese immigrant parents who are just acculturated. Newly acculturated immigrant parents may face more value conflicts and different changing dynamics compared with this sample. In addition, this study focused on mothers with young children, future studies may also examine parenting acculturation for mothers with older children. This group may face different parenting tasks and acculturation issues, such as parent-child discrepancy in acculturation, which may also impact the parenting adaptation process.

In addition, the current data were based on parent surveys, and future research may consider adding a qualitative component to help development a better understanding of the changing identity. The findings suggested that Chinese cultural elements seemed to be more important in affecting the adaptation of parenting among Chinese immigrant mothers, rather than the U.S. cultural elements. However, it is also possible that the existing measures of acculturation failed to capture the meaningful American cultural factors that may affect parenting outcomes. It should be noted that the operationalization and measurement of acculturation appear to be very inconsistent in the previous literature, and there has been no consensus on how to measure changing cultural identity. Utilizing a qualitative method may help complement the limitations of the existing measures and uncover more relevant cultural themes related to this issue, which can lead to a more comprehensive understanding of the acculturative transition process for immigrant parents.

Moreover, as there has been very limited work on the acculturation of parenting in Chinese immigrant population, many further variables should be considered in future research. For example, grandparents are an important component of Chinese family structures, and more research is needed to shed light on their functions and interactions with the family in the context of grandchild rearing. Further studies may broaden the domain of

extended-family related factors to provide a more complete picture of the role of extended family in parenting acculturation for Chinese immigrant families. For instance, future research may disentangle different types of grandparent support for analysis. In traditional Chinese culture, extensive instrumental support, such as help with childcare and housekeeping, or financial support, is expected from the grandparents during early years of childrearing, while emotional support is not emphasized. It will be interesting to examine whether the influence of different sort of grandparent support tend to differ in affecting parenting adjustment. While Grandparents may increase social support, there could also be many extended-family related stressors. The current study has controlled for parent-grandparent relationship, and did not examine the unique role of parent-grandparent conflict in this issue. Research suggested that parents and grandparent relationship may affect the effectiveness of the grandparent support in reducing parenting stress (Apfel & Seitz, 1991; Zhang, 2016). Considering the well-documented daughter-in-law and mother-in-law conflicts in Chinese cultures (e.g., Chan, Levy, Chung & Lee, 2002; Gao et al., 2010; Yan Du, 2013; Zhang, 2016), it will be interesting to further explore the unique role of parent-grandparent conflict in affecting parenting stress, particularly the conflicts regarding childrearing beliefs and practices, and role ambivalence in power between mother-in-law and daughters-in-law in Chinese culture. Besides, future research may also explore the differences between paternal and maternal grandparents, and potential strains in Chinese culture. Historically, paternal grandparents were considered to be normative sources of childcare, while maternal grandparents were referred to as “outside grandparents” in China. However, the status and roles of maternal and paternal grandparents have gradually changed in contemporary Chinese kinship system with respect to grandparental childcare. While the one-child policy has challenged the traditional model of patrilineality and strengthened the connections between young mothers and their families of origin, maternal grandparents have become increasingly

involved in grandchild care in China (Zhang, 2016). It would be interesting to further look into the potential pressure and role strains for maternal and paternal grandparents when it comes to childcare responsibility in contemporary Chinese family structure.

Besides, future studies could examine factors outside family that may help Chinese immigrant maintain Chinese identity and collectivism. For example, factors such as immigrant parents' social networks and their interactions with other parents may affect their parenting and cultural cognitions during cultural adaptations. Future research may also take into account factors such as visa status and evolution of technology, and explore their impact on cultural adaptation and parenting of immigrants. The visa statuses of immigrant parents and grandparents may significantly affect parents' access to grandparents as a source of childcare. Immigrants with temporary or permanent visa could also have very different experience with respect to childrearing and parenting in the United States (Jasso, Massey, Rosenzweig, & Smith, 2005). Technology may also largely influence the experience of immigrant parents during the acculturation process nowadays. For example, social media networks make it much easier to maintain the ties to traditional Chinese culture for Chinese immigrant parents. Parents could easily get in touch with their relatives and fellow parents living in their home country, which could help them maintain connections to home culture and obtain suggestions and support with respect to childrearing from their culture of origin.

Furthermore, the current study revealed an interesting phenomenon about cultural identity, support and relationship. While strong Chinese identity may bring higher level of grandparent support and family support, it may not necessarily be beneficial for family relationships. On the contrary, while U.S. identity was not linked with grandparent or family support, it was associated with better spouse and parent-grandparent relationships. Future research may further explore this interesting topic to uncover the complex relationship between cultural identity, support and relationship.

An additional suggestion for future studies is to utilize other involvement variable to better capture parental involvement. The current study used both time involvement and role involvement, however, only parental role involvement appeared to be a good outcome variables. It is possible that time spent with young children does not characterize meaningful differences in parenting. Future studies may consider to develop more appropriate measures for parental involvement with young children to better characterize the changing parenting practices in parenting acculturation research.

This study has important implications for developing, implementing and evaluating support and intervention services with Chinese immigrant families. It shows that Chinese identity, collectivism, grandparent support play an important role in the parenting acculturation in Chinese immigrant mothers with young children. Therefore, in terms of intervention efforts with Chinese immigrant parents who are undergoing cultural adaptation, cultural cognitions, as well as the relationship with the larger family system should be highlighted.

Appendix

Table 1. Descriptive statistics for demographic variables (N=256)

Variables	Percent	<i>M</i>	<i>SD</i>
1. Age	—	36.71	6.21
2. Length of stay in US	—	6.84	4.49
3. Number of children	—	1.54	.70
4. Education		—	—
Less than college	11%		
College or higher	89%		
5. Employment		—	—
Unemployed	8%		
Employed	92%		
6. Family income		—	—
Below \$40,000	22%		
Above \$40,000	78%		
7. Child gender		—	—
Male	66%		
Female	34%		
8. Marital status		—	—
Married	67%		
Single	32%		
Divorced	1%		
9. Reason for immigration		—	—
Education	47%		
Work	38%		
Family	15%		
10. Co-residence with grandparent		—	—
Yes	71%		
No	29%		
11. Grandparent providing most childcare		—	—
Yes	37%		
No	63%		
12. Paternal/Maternal Grandparent		—	—
Paternal	54%		
Maternal	46%		

Table 2. Correlations and descriptive statistics for main study variables (N=256)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Chinese identity		.10	-.09	.31**	.34**	.12	.11	.39**	.11	-.10	.19**	.48**	.11	.30**	.07	.08
2. US identity			.13	.04	.09	-.12	-.08	-.11	-.02	.10	.04	.07	.20**	.08	.23**	-.04
3. Individualism				-.12	-.10	.04	-.05	-.16*	.09	.08	.05	-.10	.16*	.11	.15*	.03
4. Collectivism					.14*	.36**	.10	.15*	.03	-.29**	.10	.28**	.04	.20**	.08	.09
5. Parental investment						.09	.06	.38**	-.10	-.16*	-.09	.10	.11	.08	.12	-.06
6. Parental satisfaction							-.09	.07	-.46**	-.69**	-.57**	.19**	.15*	.27**	.17*	-.49**
7. Time involvement								.06	.06	.12	.17*	-.09	-.14*	-.08	-.13	.16*
8. Role involvement									.12	-.23**	-.05	.37**	.12	.13	.02	-.15*
9. Child difficult behavior										.40**	.64**	.07	-.16*	-.11	-.20**	.71**
10. General parenting stress											.46**	-.33**	-.11	-.28**	-.13	.48**
11. Parenting stress-child												-.13	-.12	-.09	-.11	.60**
12. Grandparent support													.19**	.42**	.22**	-.02
13. Parent-Gp relationship														.20**	.24**	-.15*
14. Family support															.21**	-.28**
15. Spouse relationship																-.16*
16. Depression																
<i>M</i>	4.74	3.83	5.52	6.54	6.50	5.25	8.86	3.35	.93	2.16	2.75	5.20	2.22	3.52	3.22	1.28
<i>SD</i>	.74	.67	1.43	1.23	.71	.65	4.91	.66	.45	.79	.70	1.06	0.81	1.02	0.81	0.62
Range	1-6	1-6	1-9	1-9	1-8	1-8	—	1-5	0-2	1-5	1-5	1-7	1-4	1-5	1-4	1-4

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

Table 3. Results of t-tests comparing two samples on main study variables

Variables	M Turk (n=125)		Snowball (n=131)		t
	M	SD	M	SD	
Chinese identity	4.72	.75	4.76	.74	-.30
US identity	3.77	.73	3.89	.62	-1.47
Individualism	5.50	1.28	5.54	1.58	-.19
Collectivism	6.60	1.22	6.48	1.24	.46
Parental investment	6.48	.84	6.52	.58	-.30
Parental satisfaction	5.31	.55	5.19	.74	1.52
Time involvement	9.13	5.06	8.59	4.76	.85
Role involvement	3.20	.60	3.50	.72	-2.38*
Child difficult behavior	.93	.43	.93	.47	-0.05
General parenting stress	2.32	0.98	2.00	0.70	2.71*
Parenting stress-child	2.98	.82	2.52	.58	3.14*
Grandparent support	5.25	1.12	5.14	1.00	.85
Family support	3.55	1.03	3.49	1.01	.51
Depression	1.32	0.58	1.24	0.66	1.37

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

Table 4: Variables predicting parental role involvement (N=256)

Variables	Model 1			Model 2		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
1: Education	-.14	.03	-.12	-.07	.02	-.06
Income	-.06	.02	-.05	-.02	.01	-.02
Marital status	-.09	.05	-.03	-.03	.02	-.04
Number of children	.19	.02	.20*	.17	.02	.16 [†]
2: Chinese identity				.35	.04	.37**
Parental investment				.39	.06	.35**
R^2		.06			.30	
F for change in R^2		1.86			11.53**	

[†] $p < .1$. * $p < .05$, ** $p < .01$

Note: Controlling for maternal education, family income, marital status, and number of children.

Table 5: Mediation by sense of investment on the relationship between Chinese identity and parental role involvement (N=256)

Effect	B	SE	95% CI	
			Lower	Upper
Total	.59**	.08	.43	.76
Direct	.35**	.07	.20	.49
Indirect (mediation)	.24**	.05	.16	.34

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

Note: Controlling for maternal education, family income, marital status, and number of children.

Table 6: Variables predicting general parental stress (N=256)

Variables	Model 1			Model 2		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
1: Education	-.12	.02	-.10	-.10	.01	-.11
Income	-.10	.01	-.11	-.09	.03	-.06
Marital status	-.15	.04	-.13	-.14	.04	-.12
Number of children	.19	.02	.20*	.18	.01	.18*
Depression	.61	.12	.56**	.57	.11	.52**
2: Collectivism				-.14	.11	-.19*
Parental satisfaction				-.64	.09	-.59**
R2		.32			.48	
F for change in R2		10.62**			21.16**	

† $p < .1$. * $p < .05$, ** $p < .01$

Note: Controlling for maternal education, family income, marital status, number of children, and maternal depression.

Table 7: Mediation by parental satisfaction on the relationship between collectivism and parenting stress (N=256)

Effect	B	SE	95% CI	
			Lower	Upper
Total	-.53**	.08	-.69	-.38
Direct	-.14*	.04	-.21	-.04
Indirect (mediation)	-.39**	.07	-.53	-.25

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

Note: Controlling for maternal education, family income, marital status, number of children, and maternal depression.

Table 8: Moderation by Chinese identity on the relationship between grandparent support and parenting stress (N=256)

Variables	Model 1			Model 2		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
1: Education	-.10	.06	-.09	-.03	.02	-.02
Income	-.11	.10	-.06	-.07	.08	-.05
Marital status	-.15	.02	-.15 [†]	-.10	.03	-.09
Number of children	.26	.05	.23*	.18	.06	.16 [†]
Depression	.65	.13	.59**	.60	.12	.56**
General family support	-.16	.03	-.16 [†]	-.12	.08	-.15 [†]
2: Grandparent support				-.40	.04	-.38**
Chinese identity				-.11	.02	-.11
Grandparent support X Chinese identity				-.28	.06	-.26*
<i>R</i> ²		.35			.45	
<i>F</i> for change in <i>R</i> ²		11.52**			19.24**	

[†] $p < .1$. * $p < .05$, ** $p < .01$

Note: Controlling for maternal education, family income, marital status, number of children, maternal depression, and general family support.

Table 9: Moderation by gender, Chinese identity & gender by Chinese identity on the relationship between child difficult behavior and parenting stress (N=175)

Variables	Model 1			Model 2		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
1: Education	-.06	.03	-.03	-.10	.02	-.11
Income	-.07	.05	-.04	-.12	.03	-.12
Marital status	-.19	.02	-.17 [†]	-.17	.03	-.15 [†]
Number of children	.13	.05	.12	.09	.01	.11
Depression	.69	.14	.62**	.44	.10	.40**
General family support	-.10	.08	-.06	-.13	.02	-.13
Child Temperament	.40	.01	.39**	.30	.05	.27*
2: Difficult behavior				.40	.04	.38**
Gender				.05	.02	.03
Chinese identity				.18	.03	.17 [†]
Difficult behavior X Gender				.11	.06	.08
Difficult behavior X Chinese identity				.28	.07	.24*
Gender X Chinese identity				-.08	.03	-.06
Difficult behavior X Gender X Chinese identity				-.14	.05	-.12
R^2		.47			.68	
F for change in R^2		15.51**			25.31**	

[†] $p < .1$. * $p < .05$, ** $p < .01$

Note: Controlling for maternal education, family income, marital status, number of children, maternal depression, general family support and child temperament.

Figure 1: Hypothesis 1



Figure 2: Hypothesis 2



Figure 3: Hypothesis 3

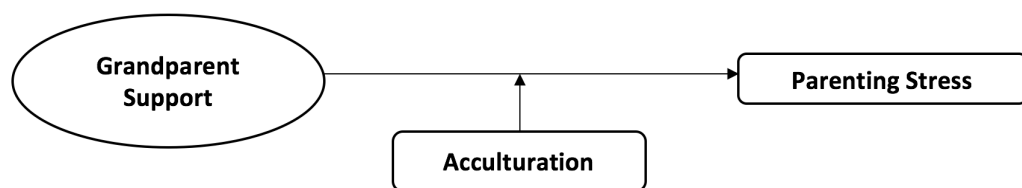


Figure 4: Hypothesis 4

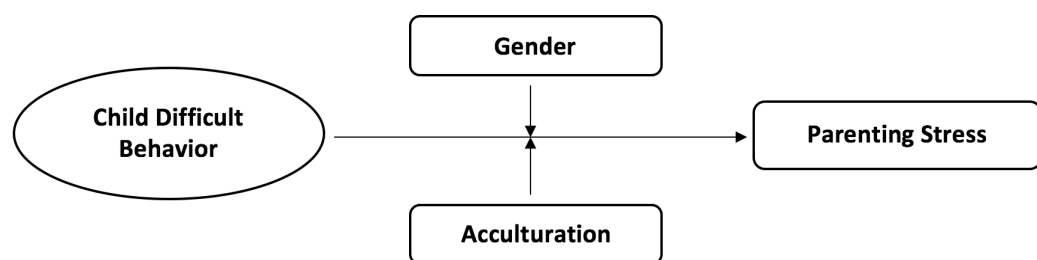


Figure 5: Mediation by sense of investment on the relationship between Chinese identity and parental role involvement (N=256)

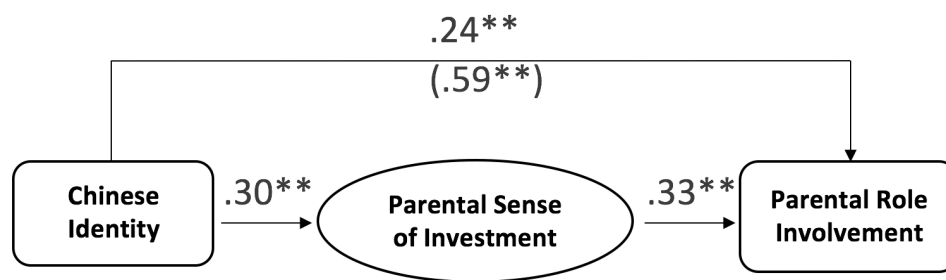
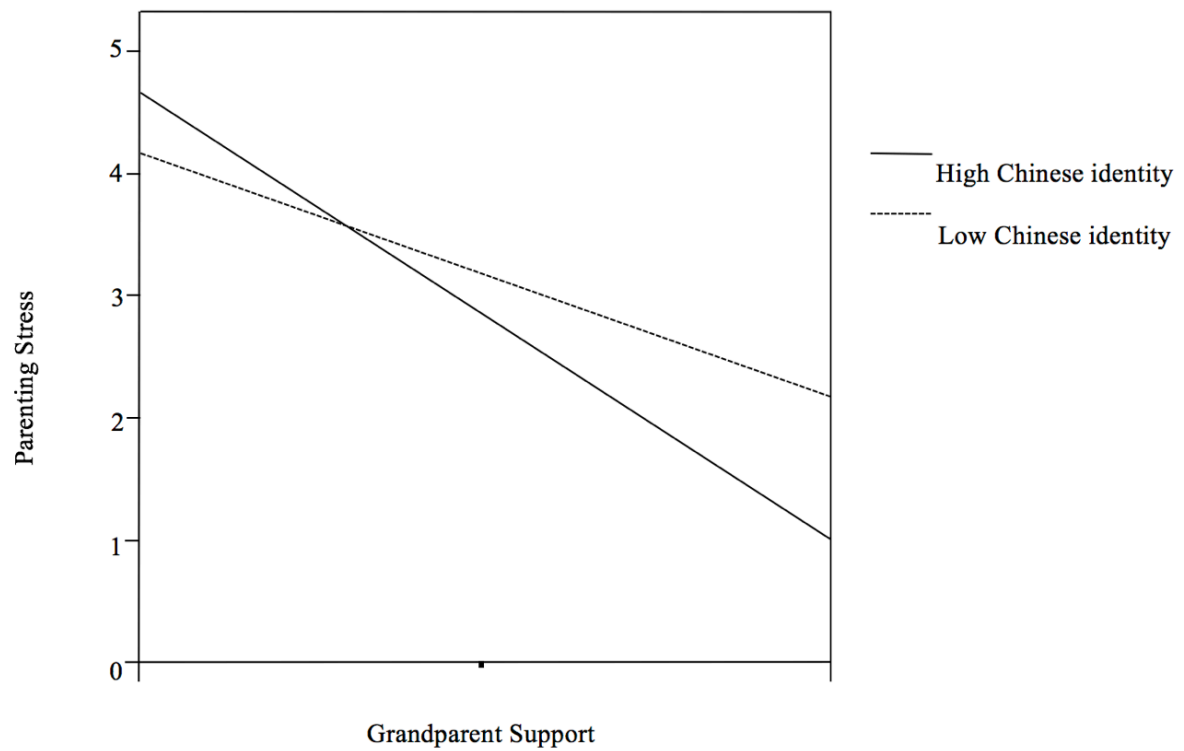


Figure 6: Mediation by parental satisfaction on the relationship between collectivism and parenting stress (N=256)

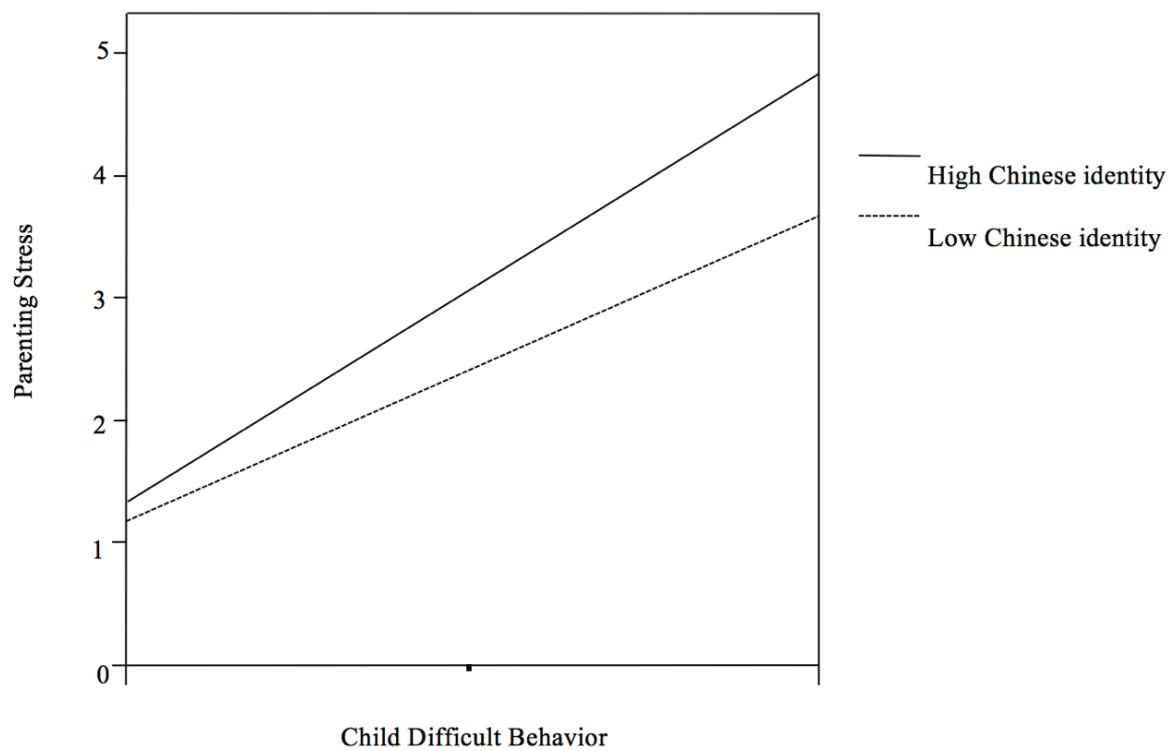


Figure 7: Interaction of grandparent support and Chinese identity on parenting stress



Note: High and low Chinese identity represents a median split of the Chinese identity variable.

Figure 8: Interaction of child difficult behavior and Chinese identity on parenting stress



Note: High and low Chinese identity represents a median split of the Chinese identity variable.

**Research Participants Needed for A Survey Study
On
Parenting of Chinese Immigrants Mothers**

Chinese immigrant mothers are being sought to participate in a survey study on parenting and acculturation issues. You are eligible to participate in this study if you meet all of the following criteria:

- Are a first-generation Chinese immigrant mother
- Have a child aged 0-5 years

You will be asked to complete surveys regarding your parenting, acculturation, and background information, which will take around 20 minutes. You can choose to take the survey in English or Chinese. Data collection will be done in private. You will complete the survey in your private time and place using the link below.

Participation in this study is entirely voluntary and the information provided will be kept confidential. Thank you for your assistance.

To take the survey, please use the following link:

https://syracuseuniversity.qualtrics.com/jfe/form/SV_0Pax8RszRTRvbCd

For more information, please contact:

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问卷研究-中国移民母亲的教育和跨文化适应问题

诚招被试

为进行一项研究“中国移民母亲的教育和跨文化适应问题”的问卷研究，研究者正在招收被试。研究需要的被试为中国移民妈妈。如果您满足以下条件，就可以参加本次研究：

- 您是一位第一代中国移民妈妈
- 您有一个 0 到 5 岁的孩子

本次研究需要您填写一份问卷，问卷内容包括您做家长和跨文化适应的经历，以及您的背景信息，大约需要 20 分钟左右完成。您可以选择使用中文或者英文完成问卷。数据收集将会在私下进行。你将在自己方便的私人时间和地点使用下面的链接完成问卷。

本次研究的参与完全自愿，您可以选择参加或不参加研究。谢谢您的帮助！

如果您愿意参与问卷调查，请点击以下链接填写问卷：

https://syracuseuniversity.qualtrics.com/jfe/form/SV_0Pax8RsZRTbVbCd

如果您需要其他信息，请联系：

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DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY SCIENCE

426 WHITE HALL, SYRACUSE, NY 13244. PH 315-443-2757

Parenting in Chinese Immigrant Mothers: Cultural Cognitions, Parenting Cognitions, Parental Involvement, Parenting Stress, Grandparent Support and Child Difficult Behavior

My name is Kai Sun and I am a PHD student in Human Development and Family Science at Syracuse University. I would like to ask if you are willing to participate in a survey study aimed to understand how the parenting of Chinese immigrant mothers may be changed during the acculturation process. The participation in the study is voluntary, so you may choose to participate or not.

Research Procedures:

I am interested in studying how parenting beliefs and behaviors may be affected by the acculturation process. As a participant of the study, you will be asked to complete a survey which is confidential and anonymous, which will take around 20 minutes.

All data will be kept strictly confidential. No personal information will be linked to your survey response. A number will be assigned to your survey for tracking purpose only. Only the research team will have access to the data collected. The data will be stored in a personal computer owned by the researcher and will be password protected.

By participating in this study, you will help us to understand the parenting of Chinese immigrant mothers during the acculturation process. This information will contribute to the literature in acculturation and parenting adjustment.

There are no foreseeable physical risks to participants. Risks that may be involved in participation in the study are no greater than the risks that you may encounter in your everyday lives. If you feel any motional discomfort during the study, you may withdraw from this study at any time without penalty. If you begin to feel emotional discomfort and want to seek help, you may contact the Syracuse University Counseling Center at 200 Walnut Place, Syracuse, New York 13244-5040, Ph: 315-443-4715.

The participation in this study is voluntary. So if you do not wish to participate, you have the right to refuse to participate, without penalty. If you decide to participate and later no longer want to continue, you have the right to withdraw from the study at any time, without penalty.

If you have any questions, concerns, complaints about the research, feel free to contact Kai Sun at 144 White Hall, Syracuse, NY 13244. E-mail: ksun02@syr.edu. Ph: 315-807-8661. If you have any questions or concerns about your rights as a research participant, or you have questions, concerns, or complaints that you would like to talk to someone other than the researcher, please contact the Syracuse University Institutional Review Board at 315-443-3013.

Please print a copy of this consent document for your own record.

By clicking “I consent” I confirm that I am 18 years of age or older, and I agree to participate in this research study.



DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY SCIENCE

426 WHITE HALL, SYRACUSE, NY 13244. PH 315-443-2757

问卷研究-中国移民母亲的教育和跨文化适应问题

被试您好！我是孙开，目前是美国雪城大学人类发展和家庭科学方向的一名博士生。我正在为一项名为中国移民母亲的教育和跨文化适应问题的问卷研究招收被试。参与本次研究是完全自愿的，您可以选择参与或者不参与研究。

研究步骤:

我的研究目的是分析移民母亲在跨文化适应过程中教育观念和行为的改变。如果您参加本次研究，您将会被要求完成一份问卷（问卷为匿名，您填写的信息会严格保密）。

研究数据将被严格保密。您的个人信息不会和问卷回答有任何联系。我们将会给每个被试分配一个数字号码，用来追踪您的录像。所有数据都会被严格保密。只有研究小组才能够看到您的数据资料。研究数据将会被保存在研究者家中有密码保护的电脑里。

通过参与本次研究，您将帮助研究者了解中国移民母亲在跨文化适应中的教育观念和行为习惯。这些信息将丰富中国移民在亲子教育方面的学术资料。

本次研究对被试没有可预见性的身体伤害。研究可能带来的风险不会超过您在日常生活中可能遇到的风险。如果您开始觉得情绪不适，您随时可以退出研究，不会承担任何责任或遭受任何惩罚。如果您开始感到情绪不适，并希望得到帮助，您可以联系雪城大学咨询中心（地址：200 Walnut Place, Syracuse, New York 13244-5040, 电话：315-443-4715）。

参与本次研究是完全自愿的，如果您不愿意参加，您有权拒绝，不会承担任何责任或遭受任何惩罚。如果您决定参与，但之后不想继续，您也有权利随时退出研究，不会承担任何责任或遭受任何惩罚。

如果您有任何关于此项研究的问题，担忧或者抱怨，请联系研究者（孙开，地址：144 White Hall, Syracuse, NY 13244, E-mail: ksun02@syr.edu, 电话：315-807-8661）。如果您有任何关于被试权利的问题和担忧，或者您有任何问题，担忧或者抱怨，希望诉诸研究者之外的人，请联系雪城大学的研究审核部门（电话315-443-3013）。

请把这份文件打印保存。

如果您年满十八岁，并且愿意参加这项研究，请点击继续。

Dear participant,

Thank you for your interest in the “Parenting in Chinese Immigrant Mothers” study. Please see attached a flyer which provides a brief overview of the study conducted at Syracuse University.

If you know other Chinese immigrant mothers with a child aged 0-5 who you think may be interested in participating in this study, please pass on the flyer to them.

Participation in this study is entirely voluntary and the information provided will be kept confidential. Thank you for your assistance.

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144 White Hall
Syracuse University
Syracuse 13244
Ph: 315-807-8661
E-mail: ksun02@syr.edu

尊敬的被试，

感谢你有兴趣参加这项关于中国移民母亲的演技。附件中有关于这项雪城大学研究的详细信息。

如果您认识其他中国移民妈妈、孩子年龄在 0 到 5 岁之间、可能对这项研究有兴趣，麻烦您将附件信息发给他们。

本次研究的参与完全自愿，您可以选择参加或不参加研究。谢谢您的帮助！

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Asian American Multidimensional Acculturation Scale (AAMAS)

Instructions: Use the scale below to answer the following questions. Please circle the number that best represents your view on each item.

	Not very		Somewhat		Very	
	1	2	3	4	5	6
1. How well do you speak the language of						
a. Chinese?	1	2	3	4	5	6
b. English?	1	2	3	4	5	6
2. How well do you understand the language of						
a. Chinese?	1	2	3	4	5	6
b. English?	1	2	3	4	5	6
3. How well do you read and write in the language of						
a. Chinese?	1	2	3	4	5	6
b. English?	1	2	3	4	5	6
4. How often do you listen to music or look at movies and magazines from						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
5. How much do you like the food of						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
6. How often do you eat the food of						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
7. How knowledgeable are you about the history of						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
8. How knowledgeable are you about the culture and traditions of						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
9. How much do you practice the traditions and keep the holidays of						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
10. How much do you identify with						
a. Chinese?	1	2	3	4	5	6
b. Americans?	1	2	3	4	5	6
11. How much do you feel you have in common with people from						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
12. How much do you interact and associate with people from						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6

13. How much would you like to interact and associate with people from						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6
14. How proud are you to be part of						
a. Chinese culture?	1	2	3	4	5	6
b. American culture?	1	2	3	4	5	6
15. How negative do you feel about people from						
a. China?	1	2	3	4	5	6
b. the United States?	1	2	3	4	5	6

亚洲美国人多重维度文化适应量表

指导语：请用下列数字回答量表中的问题。请圈出最能代表您观点的数字。

	不很		一般		非常	
	1	2	3	4	5	6
1. 您____说得怎么样？						
a. 中文	1	2	3	4	5	6
b. 英语	1	2	3	4	5	6
2. 您对____的语言有多了解？						
a. 中文	1	2	3	4	5	6
b. 英语	1	2	3	4	5	6
3. 您____的读写能力如何？						
a. 中文	1	2	3	4	5	6
b. 英语	1	2	3	4	5	6
4. 您多久会听____的音乐，或看____的电影和杂志？						
a. 中国	1	2	3	4	5	6
b. 美国	1	2	3	4	5	6
5. 你对____的食物喜爱程度如何？						
a. 中国	1	2	3	4	5	6
b. 美国	1	2	3	4	5	6
6. 您多久吃一次____的食物？						
a. 中国	1	2	3	4	5	6
b. 美国	1	2	3	4	5	6
7. 您对____的历史有多了解？						
a. 中国	1	2	3	4	5	6
b. 美国	1	2	3	4	5	6
8. 您对____的文化和传统有多了解？						
a. 中国	1	2	3	4	5	6
b. 美国	1	2	3	4	5	6
9. 您经常实践____的传统，或过____的节日吗？						
a. 中国	1	2	3	4	5	6
b. 美国	1	2	3	4	5	6
10. 您认同自己是____吗？						
a. 中国人	1	2	3	4	5	6
b. 美国人	1	2	3	4	5	6
11. 您觉得您和____有多少共同点？						
a. 中国人	1	2	3	4	5	6
b. 美国人	1	2	3	4	5	6

12. 你和____交往多吗?						
a. 中国人	1	2	3	4	5	6
b. 美国人	1	2	3	4	5	6
13. 你喜欢和____交往吗?						
a. 中国人	1	2	3	4	5	6
b. 美国人	1	2	3	4	5	6
14. 你对成为____文化的一份子感到骄傲吗?						
a. 中国	1	2	3	4	5	6
b. 美国	1	2	3	4	5	6
15. 您对____负面印象多吗?						
a. 中国人	1	2	3	4	5	6
b. 美国人	1	2	3	4	5	6

INDIVIDUALISM AND COLLECTIVISM SCALE

Use the scale below to answer the following questions. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. All items are answered on a 9-point scale, ranging from 1= never or definitely no and 9 = always or definitely yes.

1 (never or definitely no)	2	3	4	5	6	7	8	9 (always or definitely yes)
1. _____								
2. _____								
3. _____								
4. _____								
5. _____								
6. _____								
7. _____								
8. _____								
9. _____								
10. _____								
11. _____								
12. _____								
13. _____								
14. _____								
15. _____								
16. _____								

个人主义-集体主义量表

请用下列数字回答以下问题。请在每个观点前写下最能代表您观点的数字。数字 1-9 分别代表您对观点的认同程度，1 代表从不或绝对不，9 代表总是或绝对是。

1 (从不或绝对不)	2	3	4	5	6	7	8	9 (总是或绝对是)
1. _____								
2. _____								
3. _____								
4. _____								
5. _____								
6. _____								
7. _____								
8. _____								
9. _____								
10. _____								
11. _____								
12. _____								
13. _____								
14. _____								
15. _____								
16. _____								

Self-Perceptions of the Parental Role Scale

Please read each set of statements. Decide whether statement A OR statement B best reflects you. After choosing either statement A or statement B, then write down a number to indicate how true that statement is for you.

Sense of Investment

1 (sort of true)	2	3	4 (really true)
A: _____	Some parents don't think too much about how to parent; they just do it,		
B: _____	but other parents try to learn as much as they can about how to parent		
A: _____	Some parents want to learn everything possible about being a parent,		
B: _____	but other parents feel that they already know all they need to know about parenting		
A: _____	Some parents do a lot of reading about how to be a good parent,		
B: _____	but other parents don't spend much time reading about parenting		
A: _____	Some parents feel it's a must to keep up with the latest childrearing advice and methods,		
B: _____	but other parents would rather deal with their children on a day-to-day basis with what they already know		

Parental Satisfaction

1 (sort of true)	2	3	4 (really true)
A: _____	Being a parent is a satisfying experience to some adults,		
B: _____	but for other adults, being a parent is not all that satisfying		
A: _____	For some parents, children mostly feel like a burden,		
B: _____	but for other parents, their children are a main source of joy in their lives		
A: _____	Some adults are more content being a parent than they ever thought possible,		
B: _____	but for other adults, being a parent hasn't fulfilled them like they had hoped it would		
A: _____	Some people feel they end up making too many sacrifices for their children,		
B: _____	but for other parents, there are more rewards than sacrifices in rearing children		
A: _____	Some adults would hesitate to have children if they had it to do over again,		
B: _____	but given the choice, other adults wouldn't think twice before having children		
A: _____	Some parents often wish they hadn't had children,		
B: _____	but other parents rarely regret having had children		
A: _____	Some parents resent the fact that having children means less time to do the things they like,		
B: _____	but other parents don't mind having less free time for themselves		
A: _____	Some mothers and fathers aren't sure they were suited to be parents,		
B: _____	but parenting comes easily and naturally to other parents		
A: _____	Some mothers and fathers think that they are not very effective parents,		
B: _____	but other mothers and fathers think they are pretty capable as parents		
A: _____	Some parents often can't figure out what their children need or want,		
B: _____	but other parents seem to have a knack for understanding what their children need or want		
A: _____	Some parents feel that they are doing a good job of providing for their children's needs,		
B: _____	but other parents have doubts about how well they are meeting their children's needs		
A: _____	Some parents have clear ideas about the right and wrong ways to rear children,		
B: _____	but other parents have doubts about the way they are bringing up their children		

家长角色的自我认知量表

请阅读以下每组描述。请从每组的 A 和 B 中选出一个更适合描述您的选项。在选择出 A 或者 B 后，请用数字在您的选择前说明该项在多大程度上能准确描述您。

投资意识

1 (差不多如此)	2	3	4 (确实如此)
A: _____	有些家长不太想如何做父母;他们只是做, ,		
B: _____	但另外一些家长尽可能多得学习如何做父母。		
A: _____	有些家长希望了解做父母的一切事情,		
B: _____	但另外一些家长觉得他们已经知道他们需要知道的关于养育子女的一切了。		
A: _____	有些家长会大量阅读学习如何当父母,		
B: _____	但另外一些啊集中不会花很多时间阅读如何当父母。		
A: _____	有些家长觉得必须经常跟进最新的育儿经验和方法,		
B: _____	但另外一些家长宁愿每天用自己已知的经验去养育孩子。		

亲职满意度

1 (差不多如此)	2	3	4 (确实如此)
A: _____	做父母对一些成年人来说是一种令人感到满足的经历,		
B: _____	但对另外一些成年人来说, 做父母不那么让人感到满足。		
A: _____	对有些成年人来说, 孩子大多时候像是负担,		
B: _____	但对另外一些成年人来说, 孩子是他们生活中主要的快乐来源。		
A: _____	有些成年人感觉做父母比他们想象的更让人满足,		
B: _____	但对另外一些成年人来说, 做父母不如他们想象中那么更让人满足。		
A: _____	有些成年人感觉他们为孩子牺牲得太多了,		
B: _____	但对另外一些成年人来说, 养育孩子的得大于失。		
A: _____	如果有机会从头来过, 有些成年人会犹豫是否要孩子,		
B: _____	但另外一些成年人, 面对同样的选择, 会毫不犹豫地仍然要孩子。		
A: _____	有些父母希望自己从来不曾有过孩子,		
B: _____	但另外一些父母从不曾后悔要孩子。		
A: _____	有些父母因为有孩子后做自己喜欢的事情的时间少了而感到厌烦,		
B: _____	但另外一些父母并不介意属于自己的时间变少了。		
A: _____	有些父母不确定他们是否适合做父母,		
B: _____	但对另外一些人来说, 成为父母是非常自然而简单的事情。		
A: _____	有些父母觉得自己养育孩子的能力不佳,		
B: _____	但另外一些父母觉得自己有能力做好父母。		
A: _____	有些父母往往不清楚自己孩子的需要,		
B: _____	但另外一些父母似乎很擅长理解自己孩子的需要。		
A: _____	有些父母觉得他们能很好得满足孩子的需要,		
B: _____	但另外一些父母怀疑自己是否能很好得满足孩子的需要。		
A: _____	有些父母很清楚育儿方法的对错,		
B: _____	但另外一些父母对自己的育儿方法有所怀疑。		

Parental Responsibility Scale

How many hours do you spend per day performing the following childcare? Please write down number of hours.

- 1) Attending to basic physical needs (e.g., feeding, bathing, dressing, carrying, holding, cuddling, hugging, comforting the child, putting children to sleep) _____
- 2) Play activities: involvement in recreational or educational activities (e.g., engagement with toys, reading, singing, talking, listening, teaching, helping children learn, telling stories, and physical games) _____
- 3) Outings: taking the infant places (e.g., stores, restaurants, playgrounds) _____

家长职责量表

您每天要花多少小时的时间来完成下列的育儿任务？请在每项后面写下小时数。

- 1) 照顾孩子的基础生理需求（例如喂食，洗澡，穿衣，抱孩子，哄孩子，拥抱，安慰，哄孩子入睡）_____
- 2) 教育或娱乐活动（例如陪孩子玩玩具，读书，唱歌，交谈，聆听，教孩子，帮助孩子学习，讲故事，玩游戏）_____
- 3) 带孩子外出（例如去商店，餐厅，运动或游戏场地）_____

Role Involvement Scale

Below is a series of statements concerning your involvement in the parent role. Please indicate the degree to which you agree or disagree with each statement using the following scale:

1 = Fully Disagree 2 = Disagree 3 = Neutral or mixed 4 = Agree 5 = Agree strongly

- 1) _____ The most important things in my life involve my role as a parent.
- 2) _____ My role as a parent role is only a small part of who I am.
- 3) _____ I am very involved in my role as a parent.
- 4) _____ Most of my interests are centered around my child
- 5) _____ Most of my personal life goals are child oriented.
- 6) _____ My child is very central to my existence.

角色投入量表

下列是关于你在家长角色中投入度的描述。请在每一项前面用下列数字标明你对描述的认同程度。1 代表完全不同意，2 代表同意，3 代表中立或者态度不明，4 代表同意，5 代表强烈同意。

- 1) _____ 做父母是我人生中最重要的事情之一。
- 2) _____ 做父母只是我生命中的一小部分。
- 3) _____ 我将大量精力投入到做父母中。
- 4) _____ 我的大部分兴趣都是以孩子为中心的。
- 5) _____ 我的大多数生活目标都是为了孩子设定的。
- 6) _____ 孩子对我的存在来说非常关键。

Parenting Stress Index Short Form

This is a questionnaire designed to determine stress levels of parents. Even if the questions do not seem to apply, they can be answered on the scale from “strongly agree” to “strongly disagree”. Please try to answer all of the questions by choosing the response that best reflects your feelings. Please rate the items using the following 5-point scale.

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

Parental Distress

1. _____ I often have the feeling that I cannot handle things very well
 2. _____ I find myself giving up more of my life to meet my child's needs than I ever expected
 3. _____ I feel trapped by my responsibilities as a parent.
 4. _____ Since having my child I have been unable to try new and different things
 5. _____ Since having my child I feel that I am almost never able to do things that I like to do
 6. _____ I am unhappy with the last purchase of clothing I made for myself
 7. _____ There are quite a few things that bother me about my life
 8. _____ Having a child has caused more problems than I expected in my relationship with my spouse
 9. _____ I feel alone and without friends
 10. _____ When I go to a party I usually expect not to enjoy myself
 11. _____ I am not as interested in people as I used to be
 12. _____ I don't enjoy things as I used to
-

Difficult Child

1. _____ There are some things my child does that really bother me a lot
 2. _____ My child generally wakes up in a bad mood
 3. _____ I feel that my child is very moody and easily upset
 4. _____ My child does a few things that bother me a great deal
 5. _____ My child reacts very strongly when something happens that my child doesn't like
 6. _____ My child gets upset easily over the smallest thing
 7. _____ My child's sleeping and eating schedule was much harder to establish than I expected.
 8. _____ I have found that getting my child to do something or stop doing something is:
1) Much harder than I expected. 2) Somewhat harder than I expected. 3) About as hard as I expected.
4) Somewhat easier than I expected. 5) Much easier than I expected.
 9. _____ Think carefully and count the number of things which your child does that bothers you.
 10. _____ My child turned out to be more of a problem than I expected.
 11. _____ My child makes more demands on me than most children.
 12. _____ My child seems to cry more often than most children.
-

亲职压力指数

下面的问卷是用来调查亲职压力水平的。即使有些问题不适用于您的情况，您也可以回答是否同意这些说法。请尽量回答所有问题，选出最能代表您观点的回复。请用 1-5 来作答，1 代表强烈不同意，2 代表不同意，3 代表不确定，4 代表同意，5 代表强烈同意。

	强烈不同意	不同意	不确定	同意	强烈同意
	1	2	3	4	5
亲职愁苦					
1. _____	我经常感觉我不能很好得处理事情				
2. _____	我发现自己放弃了比预期中更多的人生去满足我孩子的需要				
3. _____	我觉得自己受困于做父母的职责中				
4. _____	自从有了这个小孩，我就不太可能去尝试新鲜、不同的事情了				
5. _____	自从有了这个小孩，我就不太可能做自己喜欢的事情了				
6. _____	我不满意我上一次给自己买的衣服				
7. _____	我对生活中的不少事情感到困扰				
8. _____	孩子给我和伴侣关系造成的麻烦超出了我的预期				
9. _____	我感觉孤单，没有朋友				
10. _____	当我参加聚会时，我并不期望自己开心				
11. _____	我对以前感兴趣的人失去了兴趣				
12. _____	我不再喜欢以前喜欢的事情了				
困难儿童					
1. _____	我的小孩做的有些事情让我很困扰				
2. _____	我的小孩一般醒来后的情绪很不好				
3. _____	我感觉我的小孩很情绪化，且容易沮丧				
4. _____	我的小孩做的某些事情让我非常困扰				
5. _____	我的小孩对不喜欢的事情反应非常强烈				
6. _____	即使很小的事情也能让我的小孩非常沮丧				
7. _____	对我的小孩来说，建立饮食作息时间表比我想象的更难				
8. _____	我发现让我的小孩做某些事情或者不做某些事情：				
	1) 比我想象中难很多 2) 比我想象的难一些 3) 和我想象的一样难				
	4) 比我想象的简单一些 5) 比我想象的简单很多				
9. _____	仔细得想象，数一数您孩子做过的让你困扰的事情				
10. _____	我的小孩比我想象的要更麻烦				
11. _____	我的小孩似乎比别的小孩要求更多				
12. _____	我的小孩似乎比别的小孩哭闹得更多				

Child Behavior Checklist –Externalizing behavior

Please rate your child for how true each item is now or within the past 6 months using the following scale:

0=not true (as far as you know)

1=somewhat or sometimes true

2=very true or often true of the child (based on the preceding two months)

Aggressive & Destructive Behavior

1. Can't stand waiting; wants everything now	0	1	2
2. Cruel to animals	0	1	2
3. Defiant	0	1	2
4. Demands must be met immediately	0	1	2
5. Destroy his/her own things	0	1	2
6. Destroy things belonging to his/her family or other children	0	1	2
7. Disobedient	0	1	2
8. Mean	0	1	2
9. Doesn't seem to feel guilty after misbehaving	0	1	2
10. Disturbs other	0	1	2
11. Easily frustrated	0	1	2
12. Gets in many fights	0	1	2
13. Hits others	0	1	2
14. Hurt animals or people without meaning to	0	1	2
15. Angry Moods	0	1	2
16. Physically attacks people	0	1	2
17. Punishment doesn't change his/her behavior	0	1	2
18. Screams a lot	0	1	2
19. Selfish or won't share	0	1	2
20. Not Liked	0	1	2
21. Stubborn, sullen, or irritable	0	1	2
22. Teases a lot	0	1	2
23. Temper tantrums or hot temper	0	1	2
24. Uncooperative	0	1	2
25. Wants a lot of Attention	0	1	2

儿童行为量表

以下是描述你孩子的项目。只根据最近半年内的情况描述。每一项目后面都有三个数字（0，1，2），如你孩子明显有或经常有此项表现，圈 2；如你孩子偶尔有这些表现，圈 1；如无这些表现，圈 0。

攻击性或违纪行为：

- | | | | |
|-------------------|---|---|---|
| 1. 坐立不安活动过多 | 0 | 1 | 2 |
| 2. 自私、不与人分享 | 0 | 1 | 2 |
| 3. 虐待动物 | 0 | 1 | 2 |
| 4. 虐待、欺侮别人或吝啬 | 0 | 1 | 2 |
| 5. 需要别人经常注意自己 | 0 | 1 | 2 |
| 6. 破坏自己的东西 | 0 | 1 | 2 |
| 7. 破坏家里或其他儿童的东西 | 0 | 1 | 2 |
| 8. 不听话 | 0 | 1 | 2 |
| 9. 常常打人 | 0 | 1 | 2 |
| 10. 有不良行为后不感到内疚 | 0 | 1 | 2 |
| 11. 毫无缘由得伤害他人或者动物 | 0 | 1 | 2 |
| 12. 惩罚无法改变其行为 | 0 | 1 | 2 |
| 13. 经常打架 | 0 | 1 | 2 |
| 14. 容易沮丧 | 0 | 1 | 2 |
| 15. 挑衅或不服从 | 0 | 1 | 2 |
| 16. 不被其他儿童喜欢 | 0 | 1 | 2 |
| 17. 对别人身体进行攻击 | 0 | 1 | 2 |
| 18. 经常尖叫 | 0 | 1 | 2 |
| 19. 要求必须马上得到满足 | 0 | 1 | 2 |
| 20. 固执、绷着脸或容易激怒 | 0 | 1 | 2 |
| 21. 常常生气 | 0 | 1 | 2 |
| 22. 打扰他人 | 0 | 1 | 2 |
| 23. 常戏弄他人 | 0 | 1 | 2 |
| 24. 乱发脾气或脾气暴躁 | 0 | 1 | 2 |
| 25. 不合作 | 0 | 1 | 2 |

Instructions: please answer the following questions with reference to the grandparents who provide the most care to your child.

指导语：请对您家中照顾孩子最多的祖父母回答下列问题。

Perceived Grandparent Support Scale

We are interested in how you feel about the support you receive from your children's grandparents when it comes to childrearing. Read each statement carefully. Indicate how you feel about each statement by circling the number that best represents your view on each item.

When it comes to childrearing:	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
1. My children's grandparents really try to help me.	1	2	3	4	5	6	7
2. I get the emotional help & support (practical/financial) I need from my children's grandparents.	1	2	3	4	5	6	7
3. I can talk about my problems with my children's grandparents.	1	2	3	4	5	6	7
4. My children's grandparents is willing to help me make decisions.	1	2	3	4	5	6	7

领悟家庭支持量表

我们想知道您对于孩子的祖父母在育儿方面为您提供的帮助有何感想。请认真阅读下列陈述。请圈出最能代表您感受的数字。

关于育儿问题：	极不同意	很不同意	稍不同意	中立	稍同意	很同意	极同意
1. 我孩子的祖父母能切实具体得给我帮助	1	2	3	4	5	6	7
2. 在我需要的时候，我能够从孩子的祖父母活得情感上或者实质性（体力或金钱）的帮助。	1	2	3	4	5	6	7
3. 我能与孩子的祖父母谈论我的难题	1	2	3	4	5	6	7
4. 我孩子的祖父母心甘情愿协助我做各种决定	1	2	3	4	5	6	7

Parent-Grandparent Relationship

1. Please rate your relationship with your children's grandparents on the following scale ranging from 1 (not getting on well at all) to 4 (getting on very well).

Not getting on well at all

Getting on very well

1

2

3

4

代际关系

1. 请评价您和孩子祖父母的关系， 1 代表关系很不好， 4 代表关系很好。
- | | | | | |
|-------|---|---|---|------|
| 关系很不好 | | | | 关系很好 |
| 1 | 2 | 3 | 4 | |

Spouse Relationship

1. Please rate your relationship with your spouse/partner on the following scale ranging from 1 (not getting on well at all) to 4 (getting on very well).

Not getting on well at all

1

2

3

Getting on very well

4

伴侣关系

1. 请评价您和伴侣的关系， 1 代表关系很不好， 4 代表关系很好。

关系很不好

关系很好

1

2

3

4

Family Support Scale

1. How helpful your parents and your spouse/partner's parents has been to your family during the last 3 to 6 months?

Not at all helpful	Sometimes helpful	Generally helpful	Very helpful	Extremely helpful
1	2	3	4	5

2. How helpful your spouse has been to your family during the last 3 to 6 months?

Not at all helpful	Sometimes helpful	Generally helpful	Very helpful	Extremely helpful
1	2	3	4	5

家庭帮助量表

1. 在过去的 3-6 个月里，您和您伴侣的父母对您家庭有多大帮助？

毫无帮助	有时候有帮助	一般有帮助	非常有帮助	极其有帮助
1	2	3	4	5

2. 在过去的 3-6 个月里，您的伴侣对家庭有多大帮助？

毫无帮助	有时候有帮助	一般有帮助	非常有帮助	极其有帮助
1	2	3	4	5

Center for Epidemiologic Studies Depression Scale

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

- 1=Rarely or none of the time (less than 1 day)
 2=Some or a little of the time (1-2 days)
 3=Occasionally or a moderate amount of time (3-4 days)
 4=Most or all of the time (5-7 days)

1. I was bothered by things that usually don't bother me. 1 2 3 4
2. I did not feel like eating; my appetite was poor. 1 2 3 4
3. I felt that I could not shake off the blues even with help from my family or friends. 1 2 3 4
4. I felt I was just as good as other people. 1 2 3 4
5. I had trouble keeping my mind on what I was doing. 1 2 3 4
6. I felt depressed. 1 2 3 4
7. I felt that everything I did was an effort. 1 2 3 4
8. I felt hopeful about the future. 1 2 3 4
9. I thought my life had been a failure. 1 2 3 4
10. I felt fearful. 1 2 3 4
11. My sleep was restless. 1 2 3 4
12. I was happy. 1 2 3 4
13. I talked less than usual. 1 2 3 4
14. I felt lonely. 1 2 3 4
15. People were unfriendly. 1 2 3 4
16. I enjoyed life. 1 2 3 4
17. I had crying spells. 1 2 3 4
18. I felt sad. 1 2 3 4

19. I felt that people dislike me.

1	2	3	4
---	---	---	---

20. I could not get "going."

1	2	3	4
---	---	---	---

流调中心用抑郁量表

指导语：下面是对您可能存在的或最近有过的感受的描述，请告诉我最近一周来您出现这种感受的频度。请在每一陈述前标明相应的数值，这些数值的意义如下：偶尔或无（少于1天）=1，有时（1-2天）=2，时常或一半时间（3—4天）=3，多数时间或持续（5—7天）=4

1. _____ 一些通常并不困扰我的事使我心烦。
2. _____ 我不想吃东西；我胃口不好。
3. _____ 我觉得即便有爱人或朋友帮助也无法摆脱这种苦闷。
4. _____ 我感觉同别人一样好。
5. _____ 我很难集中精力做事。
6. _____ 我感到压抑。
7. _____ 我感到做什么事都很吃力。
8. _____ 我觉得未来有希望。
9. _____ 我认为我的生活一无是处。
10. _____ 我感到恐惧。
11. _____ 我睡觉不解乏。
12. _____ 我很幸福。
13. _____ 我比平时话少了。
14. _____ 我感到孤独。
15. _____ 人们对我不友好。
16. _____ 我生活快乐。
17. _____ 我曾经放声痛哭。
18. _____ 我感到忧愁。
19. _____ 我觉得别人厌恶我
20. _____ 我走路很慢。

Children's Behavior Questionnaire, Very Short Form

Use the following scale to indicate how well a statement describes your child:

- 1 extremely untrue of your child
- 2 quite untrue of your child
- 3 slightly untrue of your child
- 4 neither true nor false of your child
- 5 slightly true of your child
- 6 quite true of your child
- 7 extremely true of your child
- 8 NA

My child:
1. _____ Seems always in a big hurry to get from one place to another.
2. _____ Gets quite frustrated when prevented from doing something s/he wants to do.
3. _____ When drawing or coloring in a book, shows strong concentration.
4. _____ Likes going down high slides or other adventurous activities.
5. _____ Is quite upset by a little cut or bruise.
6. _____ Prepares for trips and outings by planning things s/he will need.
7. _____ Often rushes into new situations.
8. _____ Tends to become sad if the family's plans don't work out.
9. _____ Likes being sung to.
10. _____ Seems to be at ease with almost any person.
11. _____ Is afraid of burglars or the "boogie man."
12. _____ Notices it when parents are wearing new clothing.
13. _____ Prefers quiet activities to active games.
14. _____ When angry about something, s/he tends to stay upset for ten minutes or longer.
15. _____ When building or putting something together, becomes very involved in what s/he is doing, and works for long periods.
16. _____ Likes to go high and fast when pushed on a swing.
17. _____ Seems to feel depressed when unable to accomplish some task.
18. _____ Is good at following instructions.
19. _____ Takes a long time in approaching new situations.
20. _____ Hardly ever complains when ill with a cold.
21. _____ Likes the sound of words, such as nursery rhymes.
22. _____ Is sometimes shy even around people s/he has known a long time.
23. _____ Is very difficult to soothe when s/he has become upset.
24. _____ Is quickly aware of some new item in the living room.
25. _____ Is full of energy, even in the evening.
26. _____ Is not afraid of the dark.
27. _____ Sometimes becomes absorbed in a picture book and looks at it for a long time.
28. _____ Likes rough and rowdy games.
29. _____ Is not very upset at minor cuts or bruises.
30. _____ Approaches places s/he has been told are dangerous slowly and cautiously.

31. _____	Is slow and unhurried in deciding what to do next.
32. _____	Gets angry when s/he can't find something s/he wants to play with.
33. _____	Enjoys gentle rhythmic activities such as rocking or swaying.
34. _____	Sometimes turns away shyly from new acquaintances.
35. _____	Becomes upset when loved relatives or friends are getting ready to leave following a visit.
36. _____	Comments when a parent has changed his/her appearance.

儿童行为问卷表

请用下列数字表示下列陈述是否能准确描述您的孩子：

- 1 =完全不符合
- 2 =非常不符合
- 3 =有些不符合
- 4 =不确定
- 5 =有些符合
- 6 =非常符合
- 7 =完全符合
- 8 =不适用

我的孩子：	
1. _____	总是好像急匆匆得从一个地方到另一个地方
2. _____	在被阻止做想做的事情时会变得非常沮丧
3. _____	绘画或涂色时注意力非常集中
4. _____	喜欢从高滑梯上滑下来或者喜欢其他冒险性活动
5. _____	对小的伤口或淤青很沮丧
6. _____	为外出或旅行准备自己需要的东西
7. _____	经常冲进新的情况里
8. _____	如果家庭计划进行得不顺利，会表现出伤心
9. _____	喜欢别人对其唱歌
10. _____	好像很容易和任何人相处
11. _____	害怕入室窃贼
12. _____	注意到父母穿了新衣服
13. _____	比起活跃的游戏，更喜欢安静的活动
14. _____	生气的时候，会保持情绪低落超过十分钟
15. _____	搭建或组合物体时非常投入，能够保持很长时间
16. _____	荡秋千的时候喜欢高而快
17. _____	无法完成任务时看起来很沮丧
18. _____	擅长听从指令
19. _____	接触新环境需要的时间很长
20. _____	感冒生病时很少抱怨
21. _____	喜欢歌曲，比如童谣
22. _____	有时在熟悉的人面前也会害羞
23. _____	沮丧时很难安慰
24. _____	能很快注意到客厅里的新物件
25. _____	精力充沛，即使是在晚上
26. _____	不怕黑
27. _____	有时会被图画书吸引，能长时间得看

28.	喜欢粗野的游戏
29.	对小伤口或淤青不感到沮丧
30.	被告知某处有危险后，会小心谨慎得接近
31.	在决定下一步做什么时，缓慢而不着急
32.	找不到想玩的东西时会生气
33.	喜欢舒缓、有韵律的活动，比如摇摆
34.	有时会害羞得回避新认识的人
35.	在喜欢的亲朋好友即将结束做客准备离开时很沮丧
36.	会对家长外表的变化进行评论

Background Information

Please fill out the following information regarding your background.

1. Age: _____(years)
2. Your educational level:
 - 1) Less than college
 - 2) College graduate or post graduate
3. Your immigration status:
 - 1) non-resident alien
 - 2) resident alien
 - 3) U.S. Citizen
4. Under what category did you migrate?
 - 1) Study
 - 2) Work
 - 3) Family
 - 4) Other (please describe) _____
5. Your employment status: Employed _____ Unemployed _____
6. Your Occupation (if applicable): _____
 Your working hours per week: _____(please write down actual number of hours spent on work. For graduate students, please write down actual number of hours spent on school-related work)
 Your work schedule: regular (8.00 am – 5.00 pm, Monday – Friday) _____non-standard work hours (e.g., shift work or weekend work)_____
7. Place of residence in China before immigration: rural____urban____
8. Did you move frequently before immigration? Yes___No___
9. Your family's combined income before taxes:
 - 1) Below \$ 400,000
 - 2) \$ 40,000 or higher
10. Your marital status:
 - 1) Single _____
 - 2) Married_____
 - 3) Divorced_____
 - 4) Widowed_____
11. How long have you lived in the United States? _____ years _____ months
12. Child gender: Male_____ Female_____
13. Is this child born as a result of
 - 1) Planned pregnancy
 - 2) Unplanned pregnancy

14. Who provides most of the childcare for the child?

- 1) I
- 2) My partner
- 3) Maternal grandmother
- 4) Maternal grandfather
- 5) Paternal grandmother
- 6) Paternal grandfather
- 7) Other relatives, friends, children in my family or nanny
- 8) Child care center
- 9) Preschool
- 10) other (please describe) ____

15. How many members live in your household?

- 1) Adults _____
- 2) Children _____ (Please list the ages of all children under 18 living in your household that you are parenting) _____
- 3) Elderly _____

16. Do you live with your child's grandparents now? Yes ___ No ___

If Yes, please specify which grandparent you are living with:

- 1) Maternal grandmother
- 2) Maternal grandfather
- 3) Paternal grandmother
- 4) Paternal grandfather
- 5) NA

How long have you been living together? ____ years ____ months

17. Did you live with your child's grandparents previously? Yes ___ No ___

If Yes, please specify which grandparent you are living with:

- 1) Maternal grandmother
- 2) Maternal grandfather
- 3) Paternal grandmother
- 4) Paternal grandfather
- 5) NA

How long had you been living together preciously? ____ years ____ months

18. Do you feel there is substantial Chinese community in your area?

Yes ___ No ___

19. In general, do you think that your family have access to an adequate supply of childcare services?

Yes ___ No ___

20. In general, do you think that your family has enough opportunity to interact with other Chinese?

Yes ___ No ___

背景信息

请填写以下背景信息。

1. 年龄: _____(周岁)
2. 受教育程度:
 - 1) 大学以下
 - 2) 大学毕业或以上学历
3. 移民身份:
 - 1) 非定居外国人
 - 2) 定居外国人
 - 3) 美国公民
4. 您的移民原因是:
 - 1) 学习
 - 2) 工作
 - 3) 家庭
 - 4) 其他(请描述) _____
5. 您的就业状况: 在职 _____ 不在职 _____
6. 您的职业(如适用): _____
 您每周工作时间 _____(请填写实际工作小时数; 研究生或博士生请写下用于学校相关工作和学习的小时数)
 您的工作日程: 周一至周五的正常工作时间(上午 8 点至下午 5 点) _____ 非标准的工作时间(如轮班工作或周末工作) _____
7. 移民前在中国的居住地: 农村 _____ 城市 _____
8. 您在移民前是否曾经频繁移居? 是 _____ 否 _____
9. 您每年家庭税总收入:
 - 1) 低于 40000 美元
 - 2) 40000 美元或更高
10. 您的婚姻状况:
 - 1) 单身 _____
 - 2) 已婚 _____
 - 3) 离异 _____
 - 4) 丧偶 _____
11. 您在美国居住过久了? _____ 年 _____ 月
12. 您孩子的性别是: 男孩 _____ 女孩 _____
13. 您这个孩子的出生是:

- 1) 计划内
- 2) 计划外

14. 平时承担育儿任务最多的人是：

- 1) 我
- 2) 我的伴侣
- 3) 外婆
- 4) 外公
- 5) 奶奶
- 6) 爷爷
- 7) 其他亲戚、朋友、家中的孩子或者保姆
- 8) 托儿所
- 9) 学前机构
- 10) 其他（请描述）__

15. 您家中同住的人有多少？

- 1) 大人 _____
- 2) 孩子 _____ (请列出您家中所有 18 岁以下、由您看护的孩子的年龄)
- 3) 老人 _____

16. 您是否和孩子的祖父母一起同住？是___否___

如果是，请选择您同住的祖父母是下面哪种：

- 1) 外婆
- 2) 外公
- 3) 奶奶
- 4) 爷爷
- 5) 此题不适用

您和孩子的祖父母同住多久了？___年___月

17. 您此前是否和孩子的祖父母一起同住过？是___否___

如果是，请选择您同住的祖父母是下面哪种：

- 1) 外婆
- 2) 外公
- 3) 奶奶
- 4) 爷爷
- 5) 此题不适用

您此前和孩子的祖父母同住过多久？___年___月

18. 您是否感觉周围有足够的中国人群体？

是___否___

19. 总的来说，您认为您的家庭能接触到的合适的儿童看护机构吗？

是___否___

20. 总的来说，您认为您的家庭有足够的机会和其他中国人交流接触吗？
是____ 否 ____

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EDUCATION

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RESEARCH EXPERIENCE

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- 2017 – Present **Dissertation**, Syracuse University, Advisor: Matthew Mulvaney
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In Progress:

Sun, K. & Moreno, R. P. (in preparation). Chinese Mother-child Interactions during Mathematical Tasks.

Sun, K. & Mulvaney, M. K. (in preparation). Parental and Cultural Factors in the prediction of Corporal Punishment in Chinese Parents.

CONFERENCE PRESENTATIONS

Sun, K., & Mulvaney, M. K. (2019, March). Parenting in Acculturating Chinese Immigrant Mothers: Collectivism and Chinese Identification Predict Increased Parental Investment, Involvement and Decreased Parenting Distress. Poster presentation at the International Convention of Psychological Science, Paris, France.

Sun, K., & Mulvaney, M. K. (2019, January). Parental and Cultural Factors Predict Corporal Punishment Frequency in Chinese Parents. Paper presentation at the 3rd International Conference on Childhood and Adolescence, Porto, Portugal.

Sun, K., & Moreno, R. P. (2017, April). Chinese Mother-child Interactions during Mathematical Tasks. Poster presentation at the 2017 SRCD Biennial Meeting Meeting, Austin, TX.

Sun, K., & Moreno, R. P. (2016, February). Chinese Mother-child Interactions during Informal Mathematical Tasks. Paper presentation at the 2016 Meeting of the Society for Cross-Cultural Research, Portland, OR.

Sun, K., & Hwang, W. (2015, March). The Longitudinal Impact of Work Family Conflict on Parenting Stress among Single Working Mothers. Paper presentation at the 2nd All-University Graduate Research Symposium, Syracuse, NY.

Hwang, W., & Sun, K. (2015, March). The Longitudinal Impact of Work Family Conflict on Parenting Stress among Single Working Mothers. Poster presentation at the SRCD Biennial Meeting, Philadelphia, PA.

Sun, K., & Hwang, W. (2014, November). Work Family Conflict and Parenting Stress among Single Mothers Working Nonstandard Schedules: The Moderation Effect of Grandparental Supports. Poster presentation at the 2014 SRCD Special Topic Meeting, San Diego, CA.

Sun, K., & Hwang, W. (2014, November). Work Family Conflict and Parenting Stress among Single Mothers Working Nonstandard Schedules: The Moderation Effect of Grandparental Supports. Paper presentation at the 2014 Syracuse University Student Council and Family Relations Research Symposium, Syracuse, NY

Sun, K., Zhang, Y., & Ramadoss, K. (2014, June). An Exploratory Study of Work-Family Issues among Immigrants from China. Paper presentation at the Work and Family Researchers Network (WFRN), New York, NY

TEACHING EXPERIENCE

Teaching Assistant, Human Development and Family Science, Syracuse University

- 2017 Spring **CFS 338 Human Sexuality**
Leading discussion groups for 3 hrs/week & Grading
- 2016 Spring **CFS 371 Latino Families & Children**
Facilitating in-class activities; Creating test; Grading
- 2015 Fall **CFS 204 Applied Research Methods in Child and Family Studies**
Mentoring undergraduate research
Giving independent lecture: Strategies for Analyzing Quantitative Data
- 2015 Spring **CFS 204 Applied Research Methods in Child and Family Studies**
Mentoring undergraduate research
Giving independent lecture: Literature Search & APA Format
- CFS 202 Development of Child & Youth**
Creating test & Grading
Giving independent lecture: Emotion, Temperament, and Personality Development
- 2014 Fall **CFS 363 Intro to Gerontology**
Creating test & Grading
- CFS 201 Family Development**
Mentoring undergraduate research; Grading
- 2014 Spring **CFS 363 Intro to Gerontology**
Creating test & Grading
- CFS 338 Human Sexuality**
Leading discussion groups for 3 hrs/week & Grading
- 2013 Fall **CFS 345 The Developing Infant,**
Creating test & Grading
Giving independent lecture: Toddlerhood (Twenty-four to Thirty-six Months)
- CFS 338 Human Sexuality**
Leading discussion groups for 2 hrs/week & Grading
- 2013 Spring **CFS 447 Principles & Practices in Parenting**
Setting up weekly quiz and class materials on Blackboard (online course)
- CFS 202 Development of Child & Youth**
Creating test & Grading
Giving independent lecture: Understanding Sexuality & Gender Identity
- 2012 Fall **CFS 201 Family Development**
Grading undergraduate research & tests
- CFS 371 Latino Families & Children**
Facilitating in-class activities; Creating test; Grading

2012 Spring **CFS 387 Intimate Relationship & Gender Roles**
Facilitating in-class activities; Creating test; Grading

CFS 202 Development of Child & Youth
Creating test & Grading
Giving independent lecture: Emotional Development

Assistant Teacher, Bernice M. Wright Child Development Lab School, Syracuse University

2011 Fall **Toddler Room**
Assisting teachers in developing goals for preschoolers
Carrying out small group and independent activities

PROFESSIONAL TRAINING AND WORKSHOPS:

Future Professoriate Program (2017 – 2019), Graduate School, Syracuse University
Certificate in University Teaching (expected August, 2019)
Participated in FPP meetings and University Teaching seminars

Advanced AMOS Analysis Workshop (2010), Department of Psychology, East China Normal University

PROFESSIONAL SERVICES:

Intern (2010 – 2011), Child Psychiatry, Shanghai Mental Health Center
Assessed children with mental disorder and compiled reports
Participated in a workshop on stigma reduction and family intervention

Intern (2009 – 2010), Counseling Center, East China Normal University
Provided telephone counseling
Developed questionnaires and conducted quantitative analysis

SKILLS and QUALIFICATIONS:

SPSS, AMOS, Photoshop, MS Office, Mac OS

Fluent in Mandarin Chinese, Cantonese, and English

NON-ACADEMIC EXPERIENCE:

Volunteer (2007 – 2008), Shanghai Child Care Center

Executive Chief Editor (2007 – 2009), ECNU Weekly