

ABSTRACT

Title of dissertation: MATERNAL MENTAL HEALTH,
EDUCATION, ACCULTURATION, AND
SOCIAL SUPPORT AS PREDICTORS OF
THE PARENTING OF ASIAN AMERICAN
AND ASIAN IMMIGRANT MOTHERS

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Currently 5% of the American population is of Asian descent, and Asian families are among the fastest growing groups of immigrant families in the United States. However, the family science literature has few studies of the parenting practices of Asian American and Asian immigrant mothers, including factors that may contribute to differences in the way these parents are raising their children. To address this gap, the current study used an ecological/risk and resiliency framework to examine factors that may predict the parenting involvement, parenting practices, and parenting aggravation of mothers from Asian heritage. Specifically, this study examined the role of three potential protective factors--maternal education, acculturation, and social support--and one potential risk factor, maternal depressive symptoms, in predicting mothers' expectations for their children's academic achievement, involvement in children's home and school

activities, provision of cognitive stimulation and emotional support, use of harsh discipline, and aggravation in the parenting role.

This study employed secondary data analysis using data from the Early Childhood Longitudinal Studies Kindergarten Class of 1998-1999, Third Grade Database. The sample included 462 mothers of Asian descent who were born in the United States or foreign countries, and who had a third grade child. Mothers were interviewed by telephone or in person. Multiple regression analyses examined the role of maternal depression, education, acculturation, and social support in predicting the seven measures of parenting. Findings revealed that more depressive symptoms were predictive of greater parenting aggravation and lower emotional support for the child. Higher maternal education was linked to higher academic expectations and greater cognitive stimulation of the child, as well greater family involvement in school activities. One measure of acculturation, mother's use of English in the home, was associated with greater school involvement, lower use of harsh discipline, and less parenting aggravation. Finally, social support emerged as one of the strongest predictors of parenting behavior, and was related to more involvement in home and school activities, more cognitive stimulation and emotional support, and less use of harsh discipline. Implications of the findings for fostering positive parenting among mothers of Asian heritage are discussed.

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AMERICAN AND ASIAN IMMIGRANT MOTHERS

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DEDICATION

This dissertation is dedicated to my beloved grandfather, Lian-Ying Ji, who rested in peace in 2002 when I began my graduate study in the United States. He did not have a chance to be educated at school, but he had hundreds of stories to tell and share with me. His humor, love, care, and even his temper created a source of happiness for my childhood. Since I was his favorite granddaughter, he often asked me whether I would attend his funeral. I always said “Yes, I will.” However I failed my promise because I was living far, far away on another side of the earth.

I would like to dedicate this dissertation to the memory of my dear grandfather.

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CHAPTER I: INTRODUCTION

The United States has been a destination for immigrants from other countries throughout its history. In contrast to the early immigration wave from 1901 to 1910 in which most immigrants were from European countries, recent immigrants have come primarily from Latin America and Asian nations (Hernandez, 2004). For example, the number of American citizens who were born in China increased from 529,837 in 1990 to 988,857 in 2000, representing an increase of 87 percent (Grieco, 2004). Currently, around 5% of the American population is of Asian descent (U. S. Census Bureau, 2004).

Asian Americans were termed the “model minority” by social demographers in the 1960s and were praised by the media because of their achievements in income, education, and family stability, as well as their low crime rates (Winnick, 1990). Much of the success of some Asian families can be attributed to the fact that their parents were well educated and had high academic expectations for their children (Fan, 2001; McCarthy & Vernez, 1997). However, many Asian American and Asian immigrant families have experienced the same stressors as other immigrant families, such as discrimination, poverty, mental health problems, and the challenges of adjusting to a predominantly Caucasian culture (Lee, 1996; Liu & Li, 2006). Immigrant Asian families with children and adolescents have faced particular stresses due to language barriers and the problems of parenting their children within a new, unfamiliar environment (Deepak, 2005).

A large body of research demonstrates that parenting and parenting involvement play a major role in children’s academic achievement and socioemotional development (e.g. Bradley & Caldwell, 1995; Bronstein et al., 1996; Fan, 2001; Holmbeck, Paikoff, &

Brooks-Gunn, 1995; Jeynes, 2003; Maccoby & Martin, 1983; Slater & Power, 1987). Research has found that parents' provision of warmth, structure, and control, as well as their involvement in children's school and home activities, contributes to their children's personal adjustment and academic success (Melby & Conger, 1996; Rhee, Chang, & Rhee, 2003; Wagner, Cohen, & Brook, 1996). However, there is currently very little research about the parenting practices of Asian American parents, including those from immigrant backgrounds. Few studies have examined factors that may contribute to differences in the way that Asian parents are raising their children and becoming involved in children's formal education. Information is needed about individual, family, and community level factors that predict the ways in which Asian Americans parent their children, including their academic expectations for children, involvement in children's home and school activities, provision of cognitive stimulation and emotional support, use of harsh discipline, and aggravation in the parenting role. Such data would assist educators and practitioners in designing interventions to enhance positive parenting within this growing cultural group.

One variable that may influence the parenting practices of Asian American and Asian immigrant mothers is maternal mental health. Maternal depression has been linked to a number of negative parenting outcomes, such as withdrawal, irritability, harshness, and low warmth (Bosquet & Egeland, 2001; Ehrle, Moore, & Brown, 1999; Jacob & Johnson, 1997). A second variable that may influence parenting is maternal education. Previous studies have demonstrated that education has an important influence on parenting behavior, parenting involvement, and parenting aggravation, as well as children's academic performance and social development (Jeynes, 2003; Rhee et al.,

2003; Simons, Whitbeck, Conger, & Melby, 1990). A third variable that has been linked with parenting outcomes is acculturation, measured by such factors as the language spoken in the home and length of residency in the United States (Dinh, Roosa, Tein, & Lopaz, 2002). Several studies have found that higher levels of acculturation in American society reduce communication barriers, cultural misunderstandings, and frustrations experienced by immigrants from other nations (e.g., Buki, Ma, Strom, & Strom, 2003). However, greater acculturation may also result in families losing some of the strengths of their original culture, such as the focus on the welfare of the larger family and the interdependency of family members (Phillips, 1996). Still another variable that has been associated with maternal parenting practices, involvement, and use of physical discipline is social support. Studies of European American and African American parents have found that mothers with more social support have greater access to positive parenting models and feel less socially isolated in their parenting, which fosters greater use of nurturant parenting strategies and less use of harsh, punitive discipline (McLoyd, 1990; Weinraub & Wolf, 1983). However the current literature does not address the impact of social support on Asian American and Asian immigrant parenting.

To address the scarcity of studies on parenting in families of Asian heritage, this study examined maternal mental health, education, acculturation, and social support as predictors of the parenting involvement, parenting practices, and parenting aggravation of Asian American and Asian immigrant mothers. Asian American mothers are defined as those born in the U.S. or those who have acquired citizenship status, whereas Asian immigrant mothers are defined as those residing in the U.S. but do not have citizenship at the time of this investigation. The current study will use an ecological/resiliency

theoretical framework (Bronfenbrenner, 1986; Fraiser, Kirby, & Smokowski, 2004) to investigate the role of potential risk and protective factors at the individual, family, and community levels. Specifically, this study examined the contribution of the independent variables of maternal depressive symptoms, maternal education, family acculturation, and social support in predicting Asian American/Asian immigrant mothers' expectations for their children's academic achievement, involvement in children's home and school activities, provision of cognitive stimulation and emotional support, use of harsh discipline, and aggravation in the parenting role. Parenting aggravation is a measure of stress in the parenting role and assesses feelings of frustration with the demands of parenting.

This study employed secondary data analysis using data primarily from the Early Childhood Longitudinal Study Kindergarten Class (ECLS-K) of 1998-99, Third Grade Database. The ECLS-K is an ongoing study that focuses on children's early school experiences beginning with kindergarten and following children through the 12th grade; currently data has been collected through grade 5. The study collects information from children, parents, school teachers, and school administrators to describe children's status at entry to school, and it follows their transition to higher grades. All of the data used regarding Asian mothers in this study were collected when their children were in third grade in 2002, with the exception of the acculturation data which were collected when children were in kindergarten.

CHAPTER II: REVIEW OF LITERATURE

Ecological Theoretical Framework

Ecological theory can be used to examine the influence of individual, family, community, and sociocultural level factors on Asian American and Asian immigrant mothers' parenting practices and family involvement in their children's education. Ecological theory was developed by Urie Brofenbrenner (1979) in the 1970s and has guided many studies investigating the impact of multiple factors on individual behavior. Ecological theory states that development is the product of an individual's interaction with his/her immediate environment and larger social systems (Brofenbrenner, 1986). According to the ecological model, the individual is embedded in four subsystems that are shown in the following figure:

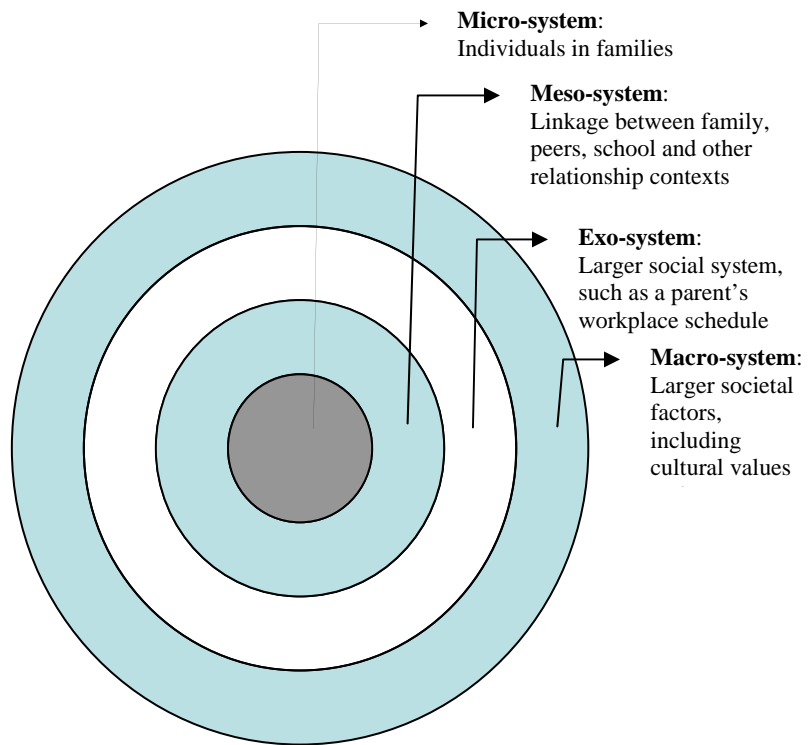


Figure 1. Brofenbrenner's Ecological Model of Human Development

The innermost circle represents the microsystem of the individual. The microsystem refers to individual's immediate setting and contains the structures with which an individual has direct contact. Within the microsystem, an individual with unique characteristics interacts with his/her direct environment such as the family, school, or neighborhood. At this level, relationships are bi-directional. For example, a child's parent may affect his/her beliefs and behaviors; however, the child also affects the parent's beliefs and behaviors. The second layer, the mesosystem, provides connections between structures of the individual's microsystem (Berk, 2000). For example, interactions between a child's teacher and his/her parents occur at the microsystem level. The exosystem defines a larger environmental system in which the individual may not function directly, but experiences the impact of exosystem factors. Examples include a parent's workplace or a parent's interactions with community level support systems. The outermost layer in the individual's environment is the macrosystem. This layer is comprised of cultural values, customs, and laws which have an impact on all other systems. For example, East Asian (e.g., Chinese, Korean, Japanese) culture emphasizes the importance of education and formal schooling, which results in Asian American parents having high expectations for their children's academic success in the United States (Fan, 2001).

Ecological theory emerged from the study of children's development and emphasizes interactions between individuals and their environments. A child initially interacts with members of his/her family, and then increasingly interacts with neighborhood institutions (e.g., schools) and the larger community. According to ecological theory, the study of child development requires looking not only at the child's

individual characteristics (e.g., temperament, intelligence), but also the social and cultural context in which the child develops. Adopting ecological theory, numerous studies have reported that parenting practices influence children’s academic performance and social development (e.g., Bradley & Caldwell, 1995; Bronstein et al., 1996; Carr & Wilson, 1997; Desimone, 1999; Fan, 2001; Griffith, 1996; Holmbeck et al., 1995; Maccoby & Martin, 1983; Seginer, 2006; Slater & Power, 1987; Thorkildsen & Stein, 1998). However, few studies focus on parents and examine the ecological environment that may influence their individual parenting practices. It is important to examine how factors at the individual, family, community, and societal level affect parents’ academic expectations of their children, involvement in children’s activities, provision of cognitive stimulation and emotional support, use of harsh discipline, and aggravation in the parenting role. An ecological model examining potential influences on parenting practices and parenting involvement is shown in Figure 2.

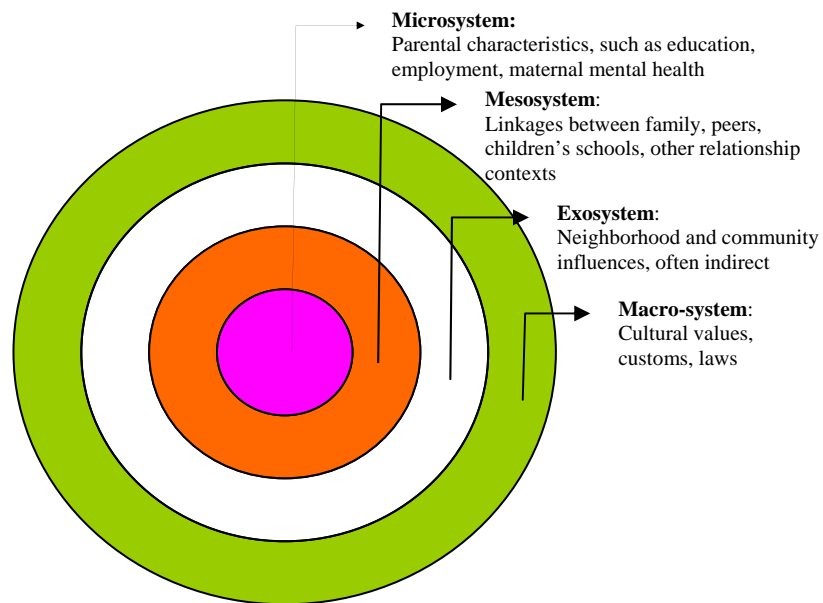


Figure 2. Ecological Model of Factors Influencing Maternal Parenting Practices

The parent's microsystem includes parental characteristics and components of the immediate environment that directly influence a parent's functioning and parenting behavior, such as parental education, employment, and mental health. For example, one parental characteristic, maternal depression has been linked with tendencies to engage in hostile, unresponsive, disorganized, and less competent parenting (Murray, 1997; Murray & Cooper, 1997). Maternal education is another microsystem variable that has been linked to parenting, with higher education related to more optimal parenting outcomes (Jeynes, 2003; Rhee et al., 2003). The parent's mesosystem includes family functioning variables, including those variables that influence the interaction between parents and their immediate environments, such as their workplaces or their children's schools. For example, levels of family acculturation, measured by the use of English in the home may affect a parent's ability to communicate with teachers and become involved in children's home and school activities (Buki, et al., 2003). At the exosystem level, variables such as social support may have indirect or direct influences on parenting behaviors. Parents have varying access to instrumental and emotional support from a wide range of sources, including nuclear and extended family members, neighbors, teachers, coworkers, religious leaders, and other members of their communities. One study (Ceballo & McLoyd, 2002), for example, found that mothers with more access to social support were less likely to rely on punitive parenting strategies. Finally, at the macrosystem level, cultural values, inequities, and social policies are important influences on parental functioning. For example, racism may reduce employment options for immigrant parents, which lead to limited resources and inconvenient work hours that restrict parents' involvement with their children's schools.

Risk and Resiliency

Ecological theory provides insight into the interaction among individual, family, community, and larger societal level systems, and their effects on individual development and behavior. Within each level of the ecological model, there are risk factors that may negatively influence behavior, and there are protective factors that may foster resiliency (Fraser et al., 2004).

Risk and resiliency theory emerged from a longitudinal study of children who were born into poverty, but experienced different outcomes as they grew older (Werner & Smith, 2001). This study found that approximately two-thirds of the children growing up in poverty developed serious problems in adolescence and adulthood, such as dropping out of school; delays in physical, cognitive and social development; unemployment; and mental health problems. Yet the remaining one third “developed and matured into competent, caring adults” (Johnson & Wiechelt, 2004, p. 659). These dramatically different outcomes increased researchers’ curiosity about the causes of such differences and created an interest in the concept of “resilience.” However, the concept of resiliency did not receive widespread attention until the last twenty-five years (Brooks & Goldstein, 2002; Reivich & Shatte, 2002).

Historically, research on risk and resiliency focused on infants and young children. However, some studies have also examined factors that threaten or protect adolescents from problems such as drug abuse (Luthar, 1991), alcohol problems (Copello, Orford, & Velleman, 2000), and family stress (McCubbin & McCubbin, 1989). More recently, researchers have extended the studies to examine how multiple risk and protective factors interact dynamically to influence adult behavior (Johnson & Wiechelt,

2004). Risk and resiliency theory provides a broader ecological perspective for investigating the predictors of parenting and parenting involvement in Asian American parents.

According to Garmezy (1993), resilience is not invulnerability, but rather, the ability to bounce back under adversity. Walsh (1998) noted that resilience is forged through interdependence with others. In this study, resiliency is defined as a comprehensive ability to cope with stress and overcome adverse conditions. It is developed within an ecological environment, through direct and indirect interaction with others.

Resiliency theory also contributed to the language of risk and protective factors. There have been many definitions of risk factors, but Masten (1994) defined “risk” as an event or circumstance that would hinder an individual’s normal functioning. Arrington and Wilson (2000) point out that a risk is a critical event such as a divorce, an illness, or some other trauma. In contrast to the term “risk factor,” the definition of “protective factor” usually refers to a specific circumstance or behavior that facilitates positive outcomes despite stressful conditions. Masten (1994) reviewed longitudinal and cross-sectional research on resilience in several areas and identified some protective factors for children and youth, such as connections to other competent adults, good intellectual skills, socioeconomic advantages, self-efficacy, self-worth, and hopefulness.

In previous research on risk and resiliency, most studies have targeted populations of infants and children. There are relatively few studies that focus on adults, and especially parents. However, drawing on research that examines the impact of risk and protective factors on children, it is possible to study risk and protective factors that

influence parenting behaviors. For example, parental risk factors may include poor mental health, low social support, poverty, and low educational attainment. Protective factors might include positive mental health, advanced education, flexible work environments, and strong formal and informal social support. Higher acculturation, as defined by the mother's use of English or longer residency in the United States, may also be a protective factor because it enables parents to interact with their child's teachers, to have more knowledge about their schools, and to help children with homework and participate in school activities.

The current study utilized a combined ecological/risk and resilience theoretical framework. According to the ecological model, adults' parenting behaviors and parenting involvement are influenced by individual, family, community, and societal level systems (Bronfenbrenner, 1986). Within each of these levels, there are risk and protective factors that may contribute to more optimal or less optimal parenting practices. Specifically, this study examined the role of maternal mental health, education, acculturation, and social support in predicting parenting practices, parenting involvement, and parenting aggravation of Asian American and Asian immigrant mothers. The following sections review research on the parenting of mothers of Asian descent, followed by research on key study variables that may influence the parenting behaviors of Asian American and Asian immigrant mothers.

Parenting Practices, Parenting Involvement, and Parenting Aggravation

Family researchers have emphasized the importance of studying parenting because it is a strong predictor of children's competence and psychosocial development (Bradley & Caldwell, 1995; Bronstein et al., 1996; Holmbeck, et al., 1995; Slater & Power, 1987). Some researchers have examined parenting by focusing on specific values, behaviors, and attitudes involved in raising children, while others have measured parenting style along separate key dimensions such as warmth and control (Lim & Lim, 2003; Maccoby & Martin, 1983).

Baumrind (1971) identified three types of parenting based on control and nurturance: authoritative, authoritarian, and permissive. The authoritative style is characterized by loving, understanding, firm, and demanding behavior. In contrast, the authoritarian style is defined by parental behaviors that are firm, punitive, and unaffectionate. Permissive parents are often nurturant toward their children, but give their children a great deal of freedom and do not demand mature behavior.

Several other researchers have also defined key aspects of parenting, including support, structure, and control (Koblinsky, Morgan, & Anderson, 1997; Maccoby & Martin, 1983; Slater & Power, 1987). The first construct, parental support, includes variables such as nurturance, warmth, and affection that create an environment in which children feel accepted and comfortable. The second construct is structure, which includes parental attempts to maintain consistency and provide organization in the child's environment. The last construct is control, which addresses the amount of authority the parent exerts over the child, including the use of physical or harsh discipline techniques.

Other components of parenting assessed by family researchers are parenting involvement and parenting aggravation. Parenting involvement has been examined in a variety of ways, including parental expectations and parental involvement in children's activities. Parenting expectations have been defined as the parent's view about a child's ability to achieve academically (Fan, 2001; Riley, 2003). Parenting involvement has been described as the parent's engagement in home and school activities to advance children's education and development (Fan, 2001; Seginer, 2006; Trusty & Pirtle, 1998). Research on parental involvement has assessed parental expectations toward children's academic performance and engagement in home learning activities, parent-teacher communication, and participation in school events (Baker & Stevenson, 1986; Epstein, 1990). One study identified four dimensions of parental involvement, including home discussion, home supervision of the child, communication with the school, and participation in school activities (Sui-Chu & Willms, 1996).

Another measure of parenting, parenting aggravation, has been defined as parental irritation with the demands of childrearing (U.S. Department of Health and Human Services/USDHHS, 2005). The National Survey of Children's Health revealed that approximately 8% of the parents of children aged 0-17 experienced high parenting aggravation (USDHHS, 2005), defined as a score 11 or higher on a scale from 4 to 16. The percentage of parents experiencing high parenting aggravation increased as children moved from preschool (6.7%) to elementary school (7.4%), to adolescence (9.7%). Lower levels of family income are also associated with higher levels of parenting aggravation (USDHHS, 2005). For example, a national survey conducted in 1997 showed that 9% of all children lived with a parent who felt highly aggravated, but 14% of

parents in low income families were highly aggravated as compared to 6% of parents in families with higher incomes (Moore, Ehrle & Brown, 1999).

Studies of families in Western nations have documented a strong link between parenting practices, parenting involvement, and child outcomes. For example, researchers have found that children and adolescents whose parents are authoritative exhibit more socially competent behavior than those whose parents use authoritarian or permissive styles (Miller, Cowan, Cowan, Hetherington, & Clingempeel, 1993; Weiss & Schwartz, 1996). In general, children of authoritarian and permissive parents are less independent, less motivated to achieve, less responsible, and less assertive than those raised by authoritative parents (Spera, 2005). Previous studies have also found that parents who employ more positive parenting practices, such as support, structure, and reasonable control, have children with better school performance (Bronstein et al., 1996; Melby & Conger, 1996), higher self-esteem (Rhee et al., 2003), and better mental health (Wagner et al., 1996) than children whose parents use less positive parenting methods. Some studies have also linked parenting involvement with children's academic achievement (Desimone, 1999; Jeynes, 2003). For example, parental expectations of children's academic performance have been found to be positively related to children's grades, IQ scores, scholastic aspirations, and achievement motivation (Beyer, 1995). However, one meta-analysis of 25 empirical studies of parental involvement and child outcomes revealed that factors such as parental home supervision have only a weak relationship to children's academic achievement (Fan, 2001).

Asian Parenting Practices

Although there has been extensive research on parenting in Western cultures, relatively little is known about the parenting practices of mothers and fathers from Asian backgrounds. The scarcity of this research is surprising given that Asian Americans are one of the fastest growing ethnic minority groups in the United States (Grieco, 2004). The term Asian American covers a variety of national, cultural, and religious heritages (Feng, 1994). Asian American families comprise more than 29 distinct subgroups. The four major groups are: 1) East Asian, including Chinese, Japanese and Korean; 2) Southeast Asian, including Thai, Vietnamese, and Malaysian; 3) South Asian, including Indians and Pakistanis; and 4) Pacific Islanders, including Hawaiians and Samoans (Pang, 1990). These groups differ in origins, language, customs, and religions. For example, East Asian culture is strongly influenced by Confucianism, most South Asians are Islam or Hindu, and Pacific Islander groups (not included in the current study) have diverse tribal cultures.

Confucianism has had a profound influence on Asian families and parenting, particularly in the Asian countries of China, Japan, Korea, and Vietnam (Murphey, 2001). Confucian philosophy stresses the value of education. One of Confucius's disciples, Zi Xia, states "*xue er you ze shi*" (学而优则仕), highlighting the strong relationship between successful academic performance and leadership in politics (Luo, 2007). Academic achievement is perceived as the route to power, wealth, and high social standing.

Confucianism advocates a hierarchical order in the family and society, with family interests taking precedence over personal interests (Shek, 2006). Individuals are

expected to assume certain roles and fulfill specific responsibilities, with parenting roles defined by gender. Mothers address the emotional needs of the family and fathers are the disciplinarians and providers of material support. A Chinese saying “strict father, kind mother” (严父慈母, *Yan Fu Ci Mu*) describes parenting in Chinese society by highlighting the combination of discipline and caring (Zhao, 2001). There is a famous proverb: *Zi Bu Jiao, Fu Zhi Guo* (子不教, 父之过), which means “if children are not disciplined, it is the father’s fault” (Zhao, 2001). The term for discipline, “*jiao*,” implies education and guidance. Another Chinese parenting philosophy, “*guan*” or “training,” includes strong elements of control, discipline and love (Chao, 1994). The Pakistanis in South Asia have a similar term, “*tarbiat*,” which describes “training” the child to become a mature adult (Stewart, Bond, Kennard, Ho, & Zaman, 2002).

Unlike American culture that values individual growth, development and achievement, Asian culture places a high value on family, integrity, and harmony. In American culture, many parents provide a loving and supportive environment to foster children’s self-esteem, independence, and personal accomplishments (Jung, 1998). However, under Confucian culture, there is an emphasis on filial piety, where children are expected to bring honor to the family and care for their aging parents (Shek, 2006). The emphasis in Asian culture is not on the individual but on the integrity of the family. Parents provide a disciplined environment and children are expected to be respectful, compliant, and diligent in their studies (Li, 2001). Personal satisfaction is achieved through honoring one’s roles, meeting obligations, and living a harmonious family life.

Countries with large Muslim populations, such as India, Pakistan, and Bangladesh also emphasize that family and community welfare are as important as individual well-

being (Crozier & Davies, 2006). Muslim families emphasize strong family ties, specific roles and obligations of children and parents, a strong sense of duty, and the importance of education.

Although the Asian subgroups have many different heritages, they share a number of similarities when parenting their children. For example, a majority of Asian families place a high value on education, self-discipline, hard work, respect for authority, reliance on social support from the extended family, and fulfillment of role-related family responsibilities (Chao, 2001; Chao & Tseng, 2002; Garcia Coll et al., 2002; Julian, McKenry & McKelvey, 1994; Li, 2001; Lin & Fu, 1990; Papps, Trimboli, & Trimboli, 1994; Tamis-LeMonda, Wang, Koutsouvanou, & Albright, 2002). Asian families from many different nations, including China, Korea, Japan, Bangladesh, and Pakistan, are also similar in holding high expectations for their children's academic achievement (Fan, 2001; Julian et al., 1994; Crozier & Davies, 2006).

Previous research on Asian American, European and African American families has investigated the relationships between parenting practices, such as warmth, control, and involvement and adolescent academic achievement and social adjustment (Kim & Rohner, 2002; Papps, Trimboli, & Trimboli, 1994). Studies with Chinese children confirm the relationship between adolescent perceptions of parental warmth and child emotional adjustment (Chen, Liu, & Li, 2000; Chen, Rubin, & Li, 1995; Kim & Ge, 2000; Riley, 2003). For example, Riley (2003) investigated the relationship between perceived parental warmth, pressure to achieve, and adolescent depression and anxiety among 997 high school students in Beijing. Parental warmth was found to be a protective factor, buffering the negative effect of parental pressure on adolescent depression.

One way in which many Asian parents seek to control children's behavior is through the practice of physical discipline. Most Asian countries and Asian cultures accept spanking as an appropriate form of discipline. For example, an old saying: "*No spanking, no achievement*" (不打不成才, bu da bu cheng cai) vividly describes Asians' traditional value system regarding spanking (Zhao, 2001). The concept of "*guan*" includes use of both parental monitoring and spanking as methods of physical and emotional control (Chao, 1994).

Several studies have found that Asian parents are more authoritarian, controlling, and directive, and exhibit lower levels of warmth in parenting their children, than are Western parents (Chen, Wu, Chen, Wang, & Cen, 2001; Leung, Lau, & Lam, 1998; Lin & Fu, 1990; Quoss & Zhao, 1995; Ran, 2001). However, Wu (1985) argued that Chinese parental control is not motivated by a desire to dominate the child, but by a wish to develop a productive citizen who maintains harmonious interpersonal relations. From 1971 to 1973, Wu carried out anthropological fieldwork in Papua, New Guinea, studying both locally born Chinese mothers and mothers born in Hong Kong. Findings indicated that Chinese parents' scolding or spanking was often followed by emotionally supportive messages to reassure the child of the parent's love. Chao and Tseng (2002) also indicated that high levels of restrictiveness and structure that characterize Chinese parents are combined with high maternal involvement, sacrifice and nurturance. Maternal warmth and affection are seen to have a positive influence on children's social and cognitive development.

Recently, Wu and Qi (2004) examined Asian American parenting practices using the ECLS-K database of kindergarten children. The researchers found that Asian

American parents used some parenting practices that were similar to European, Hispanic, and African American parents in disciplining their children, including discussing the consequences of misbehavior and avoiding the use of spanking. It was speculated that these parenting behaviors may reflect acculturation, or the influence of social desirability. Some Asian parents may have reduced their use of spanking after learning that American parenting experts discourage this type of physical discipline. On the other hand, after discovering that spanking is often considered “abusive” in the United States, some parents may have chosen to conceal their use of spanking in order to look more desirable or positive to the researchers.

There is widespread agreement among researchers and educators that Asian American parents have high expectations for their children’s academic achievement (Fan, 2001; Mau, 1997). However, research also indicates that Asian American parents are less involved in their children’s education than Caucasian American parents (Garcia Coll, et al., 2002). One study by Mau (1997) compared parental involvement in high school students’ school work among White, Asian immigrant, and Asian American families. Mau found that Asian immigrant and Asian American parents had higher academic expectations for their adolescents than White parents, but White parents were more likely than the other groups to attend their children’s school functions.

As in the literature on non-Asian families, a few studies have attempted to determine if there are links between Asian or Asian American parenting practices and specific child outcomes. For example, a Chinese study by Chen, Dong, and Zhou (1997) found that authoritative parenting was positively associated with Chinese children’s social and school adjustment and authoritarian parenting was related to lower school

performance and higher child aggression. However, Steinberg, Dornbusch, and Brown (1992) reported that Asian American parents, who often adopt authoritarian parenting styles, have children with high academic achievement. One national study of eighth graders from Asian, White, Hispanic, and African American families found that parent involvement explained considerably less of the achievement of Asian students as compared to students from the other three ethnic groups; the only parent involvement variable that was a significant predictor of children's grades was having a parent who checked homework (Desimone, 1999).

Predictors of Asian American Parenting

The existing literature includes few studies of Asian American parenting practices. Moreover, some of these studies suggest that parents of Asian descent employ high levels of control and physical discipline in parenting their children (e.g. Chen et al., 1997; Lin & Fu, 1990), whereas a more recent study (Wu & Qi, 2004) indicates that Asian American parents are using disciplinary practices similar to the majority Caucasian culture. Some of the discrepancies in these findings may be due to factors such as the failure to consider or control for participants' education or socioeconomic status. For example, Chao (1994) limited her sample to well-educated middle and upper-class Chinese immigrants, while Chen et al. (1997) and Wu and Qi (2004) described a sample of Chinese parents and Asian parents from a wider range of educational and socioeconomic backgrounds. A number of previous studies have found that middle- and upper-class parents are more involved in their children's education than low income parents (Desimone, 1999; Fan, 2001; Hong & Ho, 2005; Jeynes, 2003). More affluent Asian American parents may also have more knowledge than poorer Asian American

parents of the parenting practices that are considered desirable by U.S. educators and parenting experts.

Previous studies of Asian American parenting have also failed to control for the age of the child. Yet parents generally adjust their parenting strategies to the age and developmental status of their children. For example, parents of preschoolers and kindergartners often read to children and teach them basic skills (e.g., alphabet, numbers), parents of elementary age children typically monitor homework, and parents of junior and senior high school students often provide adolescents with motivational support (Seginer, 2006). Similarly, parental involvement with the child's school generally shifts from helping with classroom activities in the preschool, kindergarten, and early elementary school years to parent-teacher contact, attendance at school activities, and participation in parent-teacher organizations during the middle school, junior high, and senior high school years (Dinh et al., 2002; Epstein, 1990, 2001).

Clearly, Asian American and Asian immigrant parents are likely to vary in their levels of parent expectations and involvement, as well as in parenting behaviors such as use of warmth, cognitive stimulation, and physical discipline. However, currently little is known about the individual, family, or community level factors that may predict differences in parenting among this group. The current study addressed this gap in the literature by focusing on four predictors of parenting behavior and involvement in a sample of Asian American mothers of third grade children. Specifically, the study examined the role of maternal depressive symptoms, education, acculturation, and social support in predicting parenting outcomes. This study also controlled for other variables that may influence parenting behavior and involvement, such as family income and

number of adults in the household (family level variables), and gender of the child. The following section reviews the literature on each of the four target variables that may predict the parenting practices of this under-investigated group of Asian American parents.

Maternal Depressive Symptoms

At the individual level, one factor that seems likely to affect the parenting practices and parent involvement of Asian American mothers is maternal mental health, and particularly maternal depression. Depression is a common psychological disorder in the United States, affecting 10% of adults annually (NIMH, 2005). Depression has been defined as a pervasive and impairing illness that is characterized by persistent sadness, and feelings of hopelessness, helplessness, fear, low appetite, disturbed sleep, and social withdrawal (American Psychiatric Association, 1994). It affects the mood, mind, body, and behavior of both men and women, but women experience depression at almost twice the rate of men, especially during women's childbearing years (Lennon, Blome, & English, 2001; Lovejoy, Graczyk, O'Hare, & Neuman, 2000).

Rates of parental depression vary not only with gender, but also with differences in socioeconomic status, education, and racial and ethnic background (Wessel & Xtria, 2000). With respect to socioeconomic status, some studies indicate that poverty and economic disadvantage put mothers at the greatest risk for depression (Pettersen & Albers, 2001). For example, one study of 193 low-income African American mothers with preschool-age children found that 47% of the sample had clinical levels of depressive symptoms (McGroder, 2000). Lower levels of education have also been linked to higher levels of depressive symptoms (Wessel & Xtria, 2000). Mothers with

less schooling may be more likely than better-educated mothers to lack confidence in their parenting skills and to feel less control over their children's development (Coyne, Kahn, & Gotlib, 1987).

Research has also examined the relationship between maternal depression and race and ethnicity. For example, some studies found that the prevalence of depression among African American women is higher than among White American women (USDHHS, 1999). In contrast, other research indicated that depression is significantly higher in European Americans than in African Americans and Mexican Americans (Riolo, Nguyen, Greden, & King, 2005). On two studies of depression among Chinese Americans, Hsu et al. (2005) found Chinese American attending primary care clinics had a major depressive disorder rate of 7% and Yeung et al. (2004) found the prevalence of depression was 19.6%. However, the literature provides very little information about the rates of maternal depression in Asian American mothers.

There is a large body of literature that documents relationships between maternal depression and children's cognitive and psychosocial development (Cummings, Keller, & Davies, 2005; Dawson et al., 2003; Koblinsky, Kovalanka, & Randolph, 2006; Petterson & Albers, 2001). For example, one recent, 20-year longitudinal study examining the links between parental depressive disorder and child psychopathology found that parental depression was a consistent risk factor for major depressive disorder and anxiety disorder in offspring (Pilowsky, Wickramaratne, & Nomura, 2006). Possible causal relationships between maternal depression and child adjustment problems include genetic transmission (e.g., O'Connor, McGuire, Reiss, Hetherington, & Plomin, 1998), observational learning

resulting from exposure to depressive symptoms (e.g., Murry, Bynum, Brody, Willert, & Stephens, 2001), and impaired parenting (Downey & Coyne, 1990).

Many previous studies have focused on the parenting behaviors of depressed and nondepressed mothers. Researchers found that depressed mothers of infants were more likely than nondepressed mothers to have low involvement with their children, to talk less to their children, to have difficulty encouraging children's language abilities, and to have problems setting limits for children's behavior (Field, 1995; Gotlib & Goodman, 1999). Other research also found that depressed mothers were less sensitive to their children's needs (Ehrle et al., 1999), less likely to engage in mutual communication (Albright & Tamis-LeMonda, 2002), and more likely to use harsh discipline (Bosquet & Egeland, 2001) than their nondepressed cohorts. Lovejoy et al. (2000) reviewed observational studies examining parenting and maternal depression, and they found that depression was strongly associated with negative maternal affect, irritability, and hostility toward children. However, maternal depression did not predict parenting behaviors or mother-child relationship quality in several other studies of low-income, working-class, and middle-class African American parents (Bluestone & Tamis-LeMonda, 1999; Brody & Flor, 1998; Taylor, Roberts, & Jacobson, 1997). For example, in one study investigating determinants of parenting among working-class and middle-class African American mothers with children aged 5 to 12, Bluestone and Tamis-LeMonda (1999) did not find depression to be a significant predictor of the quality of mother-child relationships.

Other studies focusing on depression and parenting found that depressed mothers provided less warmth and cognitive stimulation for their children than nondepressed mothers. For example, Lyons-Ruth, Lyubchik and Wolfe (2002) found that depressed

mothers were less likely to cuddle, play with, read to, or play music for their children; were less likely to provide regular daily routines for their children; were more aggravated by their children; and were more likely to demonstrate verbal or physical aggression toward children under age 3. Another recent study conducted by Murray et al. (2006) indicated that mothers who were experiencing depression had more difficulties than nondepressed mothers in providing scholastic support for their children. The researchers divided parental scholastic support into four dimensions: promotion of mastery, promotion of representational understanding, provision of emotional support, and coercive control. Using a community sample of 702 women and their children aged 8 years, the researchers found that higher levels of depression were predictive of more coercive control, less emotional support, and less promotion of mastery motivation and representational understanding. Findings also revealed that middle class parents had better patterns of homework support than other parents, which is consistent with results of previous studies (Lareau, 1987, Lareau & Horvat, 1999). Mothers and fathers in the study had similar levels of involvement in children's out-of-school activities, but mothers spent more time in school activities and helping their children with school-related work.

Another study examined relationships between maternal depressive symptoms and parenting in low-income, inner-city mothers of 18-24 month-old toddlers (Albright & Tamis-LeMonda, 2002). The sample included White, African American, and Latina mothers, but the majority of mothers were Latina. The investigators divided parenting into three dimensions: provision of age-appropriate play materials, organization of the home environment, and quality of mother-child interactions. Results revealed that higher maternal depressive symptoms were related to poorer quality mother-child interaction.

More depressed mothers were less sensitive, less engaged, and less gentle with their children than mothers with fewer depressive symptoms. However, maternal depressive symptoms were not found to be related to mothers' provision of play materials and organization of the home environment for toddler-age children.

Other studies of family process models examined the pathways of maternal depression in influencing parenting behavior and child outcomes (Cummings et al., 2005; Simons, Lorenz, & Wu, 1993). For example, Cummings et al. (2005) used a community sample of 235 mothers and fathers of kindergarten children to investigate pathways of maternal depressive symptoms and parenting practices. Findings indicated that greater maternal depression was related to increased marital conflict and insecure marital attachment; more depressive symptomology was also associated with less maternal warmth and greater use of control behaviors with children.

In an effort to investigate the relationship between maternal depression and parenting behaviors, Lovejoy et al. (2000) conducted a meta-analysis of 46 observational studies. They categorized parenting behavior along dimensions of negative, disengaged, and positive behaviors. Negative behaviors included hostile affect or coercive actions on the part of the mother, such as threatening gestures, negative facial expression, expressed anger, or intrusiveness. Disengaged behavior was described as the mother showing neutral affect or lack of involvement, such as withdrawal, ignoring the child, or gaze aversion. Positive behavior included interacting with the child in a pleasant, enthusiastic, affectionate fashion. The meta-analysis found that depression was most strongly associated with negative behaviors such as hostility toward the child, somewhat linked to disengagement, and weakly related to pleasant social interaction. Results also revealed

that overall, young children, and especially infants, experienced the most impaired parenting related to maternal depression, including hostile, coercive behavior and disengagement. Socioeconomic status moderated the association between depression and positive parenting behavior; specifically, depression was not associated with lowered levels of positive parenting behavior unless the mother was dealing with high economic stress.

In summary, many previous studies have demonstrated significant associations between maternal depressive symptoms and impaired parenting behaviors (e.g., Lovejoy et al., 2000; Lyons-Ruth et al., 2002). Mothers with more depressive symptoms have been found to exhibit less warmth, lower emotional support, less sensitivity, more irritability, and more use of harsh discipline than mothers with fewer symptoms (Ehrle et al., 1999). However, much of the past research has focused on mothers of infants and toddlers. In addition, few studies have examined how maternal depression is related to the mother's involvement in her children's school activities. Finally, there has been an absence of research on maternal depression and the parenting behaviors of Asian Americans and Asian immigrants. Very little is known about the prevalence of depression in this population group, or the relationships between depressive symptoms and parenting behavior among mothers of Asian heritage.

Additional studies are needed to explore the relationship between maternal depressive symptoms and parenting practices in Asian American and Asian immigrant mothers, especially mothers of school-age children. Based on the existing literature, it is expected that Asian American/Asian immigrant mothers with more depressive symptomology will personally or have family members who exhibit less involvement in

their children's home activities, less involvement in school activities, and less cognitive stimulation of their child than mothers with fewer depressive symptoms. Mothers with more depressive symptoms are also predicted to provide less emotional support, use more harsh discipline, and express more parenting aggravation than their peers with fewer depressive symptoms.

Maternal Education

At the individual level, maternal education is a second factor that may be a significant predictor of Asian American/Asian immigrant mothers' parenting practices, parenting involvement, and parenting aggravation. Maternal education has been defined in terms of the specific degrees or diplomas, or the total number of years that a mother has completed in school or other educational institutions (U.S. Census Bureau, 2007).

Previous studies reveal that the educational attainment of children's parents, and especially the education of the mother, is an important factor that influences parenting practices and parental involvement, as well as children's development and academic performance (Chao, 1996; Jeynes, 2003; Rhee et al., 2003; Simons et al., 1990). For example, in an early study that investigated the determinants of the parenting behaviors of 7th graders, Simons et al. (1990) interviewed husbands and wives in 64 White families from a largely rural, Midwestern county. Findings revealed that education was significantly related to the mother's parenting practices, with lower levels of education associated with less positive parenting. It is interesting to note that education was not related to the father's parenting behavior. Highly educated mothers in the study were more likely to prepare for parenthood by taking courses or reading books on parenting and child development than women with limited education. However, highly educated

fathers were no more likely than fathers with lower education to acquire information on recommended parenting practices.

In a recent review of the effects of socioeconomic status on parenting, Hoff, Laursen, and Tardif (2002) found consistent positive effects of parent education on all aspects of parenting, including parenting styles, beliefs, and childrearing philosophies. These findings indicated that more educated mothers used more language in the home and provided a more cognitively stimulating home environment than their less educated peers.

Among immigrant and ethnic minority families, lower levels of maternal education have been linked with poorer English proficiency and limited knowledge of children's school, academic subjects, homework, and developmental needs (Chen & Luster, 2002; Grieco, 2004; Seginer, 2006). For example, in a qualitative study investigating Hispanic parent involvement, Pena (2000) found that parents with lower education levels were usually less involved in school and children's schoolwork than parents with higher education levels. Parents with less education reported that they often did not understand school procedures and policies, and they hesitated to express their concerns to the school staff (Pena, 2000). Another survey examining parenting involvement among Chinese immigrant parents had similar results, with less educated parents exhibiting less involvement in school activities, classroom activities, and children's homework (Ji, Koblinsky & Wang, 2006). Moreover, parents with less education often did not know how to read and interpret their children's report card so they had no clear understanding of how well their children were progressing in school.

Lower levels of education are also associated with poverty or financial stress, factors that increase parental stress and may contribute to less positive parenting behaviors, such as low nurturance, inconsistent discipline, high control, and low parental warmth (Conger et al., 2002). Some studies have linked poor education with maternal psychological distress, including depressive symptoms (e.g., Jackson, Brooks-Gunn, Huang, & Glassman, 2000; Wessel & Xtria, 2000). Using data from an ongoing study of 93 single Black mothers of preschoolers who were employed in low-wage jobs, Jackson et al. (2000) examined how maternal education, economic conditions, and the availability of instrumental support are related to maternal psychological functioning, parenting, and child development. The results indicated that maternal educational attainment was positively associated with earnings and less financial strain, and directly related to maternal depressive symptoms. Financial strain, together with lower educational levels, predicted elevated levels of depressive symptoms. However, maternal education was not found to be directly associated with maternal emotional support and intellectual stimulation ($p < .10$).

The majority of previous studies examining Asian American parenting and its determinants have failed to examine the variable of parental or maternal education (Chao, 1996; Riley, 2003; Wu & Qi, 2004). Education is treated as a control variable in many of these studies, and there is no investigation of the relationship between maternal education and parenting practices or parenting involvement. Moreover, some studies of Asian American parents have focused on more affluent, educated immigrant families (e.g., Chao, 1994), while others have focused on largely low-income, less educated populations (e.g., Ji et al., 2006). The current study will be unique in investigating Asian American

and Asian immigrant families in which mothers have varied levels of educational attainment. This study will add to the literature on education and parenting in ethnic minority families by examining maternal education as a predictor of Asian American and Asian immigrant families' parenting practices, parenting involvement, and parenting aggravation. Based on most previous research, it is expected that Asian American/Asian immigrant mothers with more education will personally or have family members who exhibit greater involvement in their children's school activities and provide more cognitive stimulation of their child than mothers with less education. More educated mothers are also predicted to have higher academic expectations, provide more emotional support, use less harsh discipline, and feel less parenting aggravation than their less educated peers.

Acculturation

A third variable that may be a significant predictor of Asian American mothers' parenting practices, parenting involvement and parenting aggravation is acculturation. Acculturation can be defined as an individual's adoption of the norms and behavior patterns of a surrounding culture, including the knowledge and values of the dominant culture (Princeton, 2006). Acculturation involves adapting and adopting mainstream beliefs, emotions, values, and communication systems, and is measured by variables such as the number of years of living in the host country, the use of the host country language, and the degree of adopting values and norms of the dominant culture (Berry, 1990).

Models of acculturation have been categorized as linear, two-dimensional and multidimensional. Early linear and unidirectional models of acculturation focus on assimilation and adoption of Anglo-American cultural characteristics. These models

assume that acculturation to American culture involves the process of replacing the immigrant's ethnic culture with the dominant Euro-American culture (Gordon, 1964). According to these models, immigrant families go through stages of acculturation that can be viewed as different positions along a continuum of adapting to the new culture.

Later two-dimensional and multi-dimensional models of acculturation focus on segmented assimilation and sociocultural context. These perspectives suggest that the process of acculturation involves various directions of change as well as personal choices affecting individual outcomes (Abraido-Lanza, Armbrister, Florez, & Aguirre, 2006). For example, bicultural individuals may use their native language to interact with family and friends and may use English to communicate with English-only speakers (Miranda, Estrada, & Firpo-Jimenez, 2000).

One frequently used measure of acculturation is the family's use of the host country language (Gonzales, Deardorff, Formoso, Barr, & Barrera, 2006; Marin & Gamba, 1996). In the U.S., speaking English is an important factor that influences parenting and parenting involvement of immigrant parents. Parents who speak and understand English appear better able to learn about recommended American parenting practices, better able to communicate with their children's teachers and participate in school activities, and better able to help children with school assignments. Immigrant children generally learn English much faster than adults and English often becomes their language of preference, whereas many immigrant parents continue to use their native tongues (Ying, 1999). Through attending school and interacting with other children, immigrant children also gain social skills and behaviors associated with American culture, and lose some of their parents' language and cultural beliefs. If parents continue

to show preference for the language of their original culture, meaningful communication between parents and children may decline. Thus, parenting may become very challenging for immigrant parents who do not learn to use English with their children. Tseng and Fuglini (2000) found that adolescent children of immigrant parents in northern California reported more relational difficulties with their parents when their language preference was different than that of their parents.

Asian and Western cultures are distinct from one another, and a majority of Asian languages belong to a different system than Western languages (Upton & Lee-Thompson, 2001). When immigrants from Asia choose to live in the United States and make it as second home, the process of acculturation generally begins. However, according to Ramirez (1983), this process is segmented or bidirectional, versus unidirectional. Immigrants bring resources to the host country, such as financial capital, political capital (e.g., legal status at entry), and social capital (e.g., social networks, family cohesiveness), which contribute to the outcomes experienced by parents and children. Skill in speaking English can be considered as one indicator of human capital.

It appears likely that both extent of acculturation, and particularly the ability to use the English language, will have an impact on Asian American mothers' parenting practices and parenting involvement. Among Asian American families, such as those from Chinese, Korean, and Japanese backgrounds, there remains a hierarchical structure to the family, with fathers maintaining authority and emotional distance and mothers directly involved in child-rearing (Uba, 1994). Mothers who have stronger English speaking skills can continue to fulfill their cultural child-rearing role, and they should be

more effective because of their ability to understand the parenting knowledge and practices of American culture.

Although there has been a large influx of Asian immigrants to the United States, only a few studies have examined the impact of acculturation on parenting. Lin and Fu (1990) found that immigrant Chinese parents fall between the Chinese in Taiwan and European Americans on the measure of parental control. This finding suggests that immigrant Chinese mothers may be in the process of adjusting to the parenting values and practices of the United States. In another study examining the influence of immigration on parental behavior and adolescent distress in Chinese families residing in the U.S. and Australia, Chiu, Feldman, and Rosenthal (1992) compared Chinese adolescents from Hong Kong, immigrant Chinese adolescents (in the U.S. and Australia), and Caucasian adolescents (also in the U.S. and Australia) in terms of their perception of parental warmth, control, and involvement. Findings indicated that parental warmth remained very stable in spite of the immigration experience, but there were changes in Chinese immigrant adolescents' perceptions of parental control and involvement several years after arriving in Western countries. Specifically, immigrant adolescents perceived greater parental control and more parental involvement in youth decision-making after the move to a new country. The researchers hypothesized that parental acculturation may result in more rule-setting, and/or that adolescents may have become more sensitive to parental authority as they grew older.

Researchers have also examined the impact of acculturation on other parenting behaviors. For example, Buki et al. (2003) examined the relationship between mother and child gaps in acculturation and parenting and child outcomes in a sample of 95

Chinese immigrant mothers. Mothers were an average age of 28 at time of arrival in the U.S. and had been residents for an average of 14 years. The researchers found that immigrant mothers who perceived larger acculturation gaps between themselves and their children had more difficulty communicating with their children and experienced more uncertainty and less satisfaction in the parenting role.

Other researchers have failed to find a relationship between acculturation and maternal parenting behaviors. For example, Hulei (2003) investigated whether acculturation was linked to mother's verbosity in parenting style. Acculturation was measured with the Asian American Acculturation Scale, which included language, identity, friendships, and behaviors. Using a sample of 31 immigrant Chinese mothers and 30 Caucasian American mothers, findings revealed that immigrant Chinese mothers were more verbose with children than Caucasian American mothers. However, no relationship between acculturation level and verbosity in parenting was found. In another study, Bornstein and Cote (2004) examined acculturation and mother-infant interaction among 37 Japanese American and 40 South American mothers. The researchers failed to find significant relationships between maternal acculturation and maternal parenting behaviors such as nurturance, talking to infants, and providing infants with household play materials.

Currently almost all of our knowledge about Asian American acculturation is derived from college student samples (Chung, 2001; Go, 1999; Ownbey & Horridge, 1998) or Asian American adolescents (Crane, Ngai, Larson, & Hafen, 2005; Tsou, 2002). Sample sizes in most of these studies have been small (Tsou, 2002; Uba, 1994). Research examining the role of acculturation in the parenting practices and parenting

involvement of immigrant Asian American mothers is scarce. There are few published studies examining Asian American mothers' acculturation as a predictor of parenting practices, parenting involvement, and parenting aggravation, especially for mothers of school-age children. The proposed study will address this gap in the literature by examining these relationships with two measures of maternal acculturation available in the ECLS-K dataset: frequency of using English in the home and percentage of life spent in the U.S. The latter variable, percentage of life in the U.S., will control for the differing ages of mothers in the study and will permit identification of parents born in the United States (100% of life in U.S.) and immigrant parents (less than 100% of life in the United States).

Based on the limited research examining the role of acculturation in the parenting of Asian American and Asian immigrant families, it is hypothesized that mothers who have spent a higher percentage of their life in the U.S. and are more frequent users of English at home will have higher academic expectations for their children than those who score lower on these measures of acculturation. It is also predicted that mothers who are more acculturated will be more personally involved or have family members who are more involved in their children's school activities and will provide more cognitive stimulation to their children than less acculturated mothers. Finally, more acculturated mothers are predicted to use less harsh discipline and feel less parenting aggravation than less acculturated mothers.

Social Support

A fourth variable that may be a significant predictor of Asian American mothers' parenting practices, parenting involvement, and parenting aggravation is social support.

Social support has been defined as an individual's perception that she or he is reliably connected to others, obtains emotional and instrumental assistance when needed, and is cared for and esteemed (Koblinsky & Anderson, 1993). Two domains of social support are often investigated: structure and function (House, 1987). With respect to structure, social support can come from a variety of informal and formal sources. Informal social support can be obtained from members of an individual's informal network, such as family, friends, co-workers, and neighbors. Formal social support may come from institutions such as schools, religious institutions, social services, and mental health services (Hill, 1993). Both forms of support can aid parents in raising their children and helping children to achieve positive academic and socioemotional outcomes.

In examining the functions of social support, researchers have often identified instrumental and expressive components of support (House, 1987). House described five common functions: emotional support; instrumental aid or tangible support; information and advice; companionship; and validation. Emotional support is defined as offering care or sympathy, listening to someone, and/or being available to another person. Instrumental aid or tangible support is described as the provision of financial resources, household materials, transportation, and/or assistance with cooking, cleaning and shopping. Informational support is defined as providing information about resources or giving advice. Companionship is characterized as having a partner with whom one can share activities. Finally, validation is defined as providing praise or positive affirmations to another. All of these functions of social support may assist mothers in raising their children, making decisions to improve their children's lives, and developing self confidence in the parenting role.

A number of previous studies have examined the role of social support in the parenting practices of European and African American families (McLoyd, 1990, 1998; Unger & Wandersman, 1985). For example, research has found that African American mothers with higher levels of social support are generally more nurturant and consistent in their parenting, and less likely to use punitive strategies such as scolding and ridiculing, than mothers with less social support (McLoyd, 1990; Weinraub & Wolf, 1983).

Still other studies have examined whether social support can serve a protective role, moderating the impact of negative life stressors on adults' psychological well-being and parenting practices (Campbell & Lee, 1992; Taylor, Casten, & Flickinger, 1993). For example, McLoyd (1990, 1998) found that emotional and practical support from extended family members and friends may improve African American mothers' parenting behaviors by protecting against depression and fostering positive parent-child relations. Using a sample of low-income, African American mothers, Tyler (2004) investigated the role of maternal social support in moderating the relationship between maternal depression and preschooler's behavior problems. Findings indicated that social support moderated the role between maternal depressive symptoms and the children's externalizing behavior problems. When level of social support increased for mothers with less severe depressive symptomology, children had fewer externalizing behavior problems.

There is currently a significant body of research examining the role of social networks and the effects of social support in African American, Latino American, and Caucasian American families (Hashima & Amato, 1994; Letiecq & Koblinsky, 2003;

McLoyd, 1990; Raikes & Thompson, 2005). One study, conducted by Jayakody, Chatters and Taylor (1993), investigated kin as providers of emotional and parenting assistance among a representative sample of single and married African American mothers aged 18 or older. Findings revealed that 80% of these African American mothers received emotional support from their extended families. Other research reveals that African American mothers have larger family networks than white mothers and receive more support from extended family than European American mothers (Kim & McKenry, 1998). In one study, Stevens (1988) examined the relationship between social support provided by kin and professionals and maternal parenting skills with a sample of African American teenage mothers, African American adult mothers, and White adult mothers. Findings revealed that Black teenage mothers who obtained advice and assistance with parenting problems from their extended family members were more skillful parents than those without this social support; for White mothers, the use of formal support was a significant predictor of parenting skills.

Like African American parents, Hispanic parents tend to have large, close-knit social networks (MacPhee, Fritz, & Miller-Heyl, 1996; Zambrana, Silva-Palacios, & Powell, 1996). However, compared to European American parents, Hispanic parents may receive less emotional support from their extended families. In one study investigating ethnic variations in social networks and parenting, MacPhee et al. (1996) examined differences among Hispanic, American Indian, and Anglo parents/guardians of 2-5 year-olds in rural Colorado. Results indicated that Hispanic parents had a smaller number of people who provided emotional aid than European American parents, and were more likely than European Americans to use punishment and control in parenting.

Other studies have examined the role of social support in reducing parents' potential for harsh, abusive parenting practices, such as child abuse and maltreatment. One classic study, for example, showed that child maltreatment was positively correlated with isolation from family members and from community supports (Garbarino, 1976). Garbarino and Sherman (1980) also investigated two neighborhoods that were similar in terms of economic, social, and racial characteristics but varied dramatically in rates of child maltreatment. The researchers found that the neighborhood with the higher risk for child abuse was a socially impoverished setting in which parenting was marked by fewer social exchanges and less use of supportive neighborhood resources.

Although numerous studies suggest that social support may be an important predictor of positive parenting, a few studies have failed to find relationships between social support and maternal parenting practices. For example, Raikes and Thompson (2005) investigated whether social support and personal efficacy predict parenting stress among low income mothers. The sample included total 65 mothers of children enrolled in an Early Head Start program, including European American (n = 32), African American (n = 16), Eastern European (n = 11), and Hispanic, Native American and Asian (n = 6) mothers. Findings revealed that social support was not related to parenting stress, nor did social support moderate the effect of income on parenting stress. An earlier study involving infants and one of their parents also failed to find a relationship between social support and parent involvement or parent-infant attachment (Fortner-Wood, 1998) for the full group of families. However, among the subgroup experiencing significant negative stress, social support was related to higher parental involvement.

Another study, conducted by Kim and McKenry (1998), compared social support and social network patterns in European American and three large U.S. ethnic minority groups: Asian Americans, African Americans, and Hispanics. Using a large national data set, the researchers found differences in the salient social activities and social networks of the four groups. Asian Americans were more likely than other groups to spend a social evening with friends and relatives; Asian American and European Americans were most likely to engage in group recreation; African Americans and European Americans were more likely to visit a bar or tavern; and African Americans were most likely to attend a church-related social event. When questioned about who they would go to if they had to borrow \$200 for an emergency, African American, Hispanic, and Asian Americans were more likely than European Americans to ask children or their own parents for money, and were less likely than European Americans to ask for a loan from friends, neighbors, co-workers, siblings or other relatives. These findings suggested that Asian Americans, like the other two ethnic minority groups, were most likely to seek financial support from extended family.

Given that Asian culture emphasizes family and kinship, it appears likely that the availability of social support will have a major, positive influence on Asian American parenting practices. However, as a result of immigrating to a new country with different cultural values, immigrant Asian parents are at risk of facing weaker social support networks than those built in their country of origin. Some families may continue to experience strong emotional and instrumental support, whereas others may struggle with a sense of isolation stemming from poverty, language barriers, neighbors from different cultures, and the challenges of adjusting to a new community (Liu & Li, 2006).

In summary, many studies have examined the role of social support in the parenting practices of European American, African American, and Latino mothers. In the majority of cases, social support was directly related to parenting behaviors, or indirectly related through buffering the impact of negative life stressors (e.g., mental illness, poverty) on specific parenting behaviors. However, research on social support and its relationship to parenting in the Asian immigrant and Asian American population is very scarce. This study will be one of the first to examine the role of social support as a predictor of Asian American and Asian immigrant mothers' parenting practices. Based on limited previous research, it is hypothesized that mothers with greater (versus less) social support will personally or have family members who exhibit more involvement in their children's school activities and provide more cognitive stimulation for their child. It is also expected that mothers with greater social support will provide more emotional support, use less harsh discipline in parenting, and feel less aggravation in parenting than mothers with less social support.

Purpose of the study

The purpose of this study is to use an ecological/risk and resiliency framework to examine various factors that may predict the parenting of Asian American and Asian immigrant mothers of third grade children. Specifically, this study will investigate the role of three potential protective factors, maternal education, acculturation, and social support, and one potential risk factor, maternal depressive symptoms, in predicting mothers' academic expectations for their children, involvement in children's home and school activities, provision of cognitive stimulation, provision of emotional support, use of harsh discipline, and aggravation in the parenting role. Three other demographic

factors---family income, number of adults in the home, and sex of the third grade child--- will serve as control factors. The proposed study may provide valuable information about parenting that family life educators and policymakers can use to promote positive parenting practices and parenting involvement in families of Asian descent. Figure 3 presents the conceptual model of ecological factors used to predict parenting outcomes.

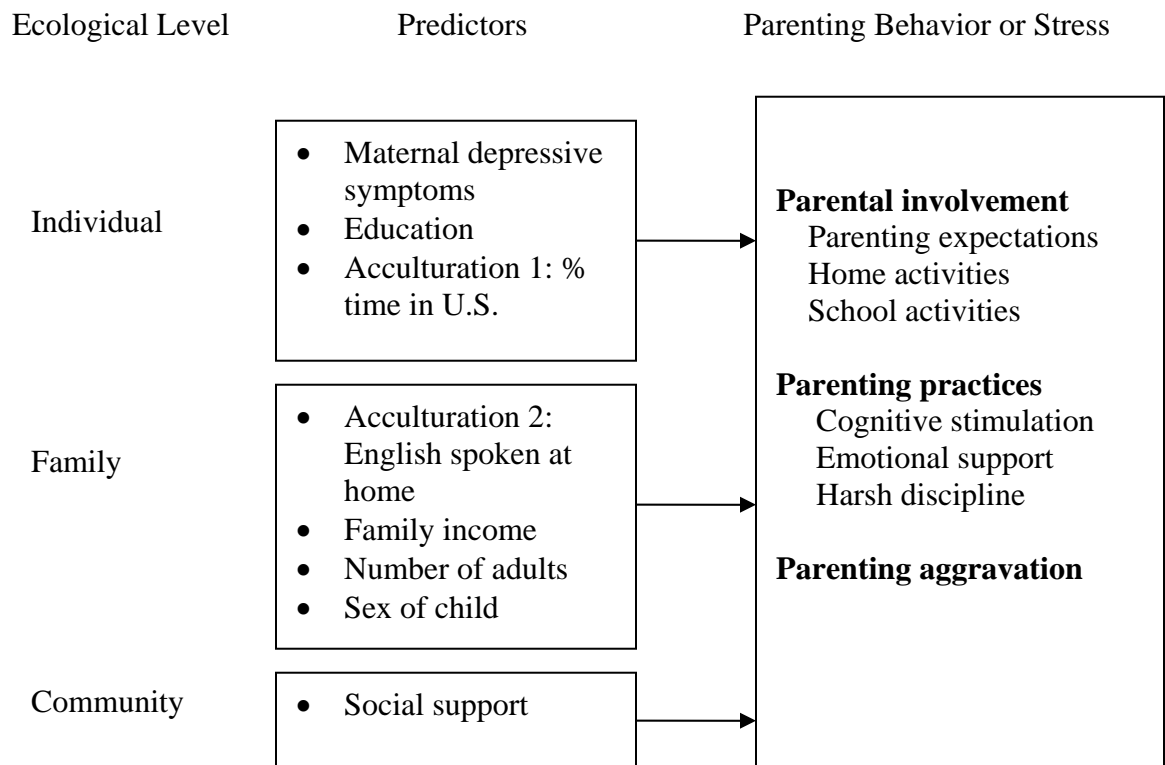


Figure 3. Conceptual Model for the Study

Operational Definition of Variables

Independent Variables

Maternal depressive symptoms: The mother's level of depressive symptomology, which includes feelings of sadness, loneliness, fear, and loss of appetite.

Maternal education: The mother's highest grade of school, or highest degree or diploma.

Acculturation: The percentage of a mother's life spent living in the United States, and the extent to which the mother uses English with her child in the home.

Social support: The perceived amount of instrumental and expressive/emotional support that mothers received from family members, friends, and others to handle various problems (e.g., need for emergency childcare, financial loan, advice about a child's school problem).

Control Variables

Adults in home: The number of adults in the household.

Family income: The total household income of the participating mother.

Sex of child: Sex of the mother's third grade child, male or female.

Dependent Variables

Expectations for child's academic achievement: The highest level of education that the mother expects her third-grade child to achieve.

Involvement in home activities: The frequency with which the mother or another family member engages in home activities with her child, such as telling stories, playing games with her child, involving her child in household activities, or engaging in sports together.

Involvement in school activities: The frequency with which a mother or another family member participates in school activities, such as attending parent-teacher conferences, attending school functions, and volunteering in the child's school.

Cognitive stimulation: The frequency with which a mother or another family member engages in various practices to foster her child's learning, including provision of

books in the home, reading to children, and exposing the child to cultural resources (e.g., libraries, museums, concerts).

Emotional support: The mother's display of warmth and affection toward her child, including behaviors that promote physical, verbal, and emotional closeness (e.g., hugging, praising child).

Use of harsh discipline: The frequency with which the mother spansks her child over a one week period in response to her child's misbehavior.

Parenting aggravation: The mother's feelings of frustration with the demands of parenting, which includes factors such as being bothered by the child or feeling she has to give up more of her life to meet the child's needs.

Hypotheses

Based on theory and previous research, the following hypotheses are made:

1. Maternal depression will predict a significant amount of the variance in Asian American and Asian immigrant mothers' parenting involvement, parenting practices, and parenting aggravation. Specifically, mothers with higher levels of depressive symptoms will personally or have family members who exhibit 1) less involvement in home activities, and 2) less involvement in school activities, and 3) less cognitive stimulation; and will personally exhibit 4) less emotional support, 5) more use of harsh discipline, and 6) more parenting aggravation than mothers with lower levels of depressive symptoms.
2. Maternal education will predict a significant amount of the variance in Asian American/Asian immigrant mothers' parenting involvement, parenting practices, and parenting aggravation. Specially, mothers with higher levels of education will have

- 1) higher academic expectations for their child; will personally or have family members who exhibit 2) more involvement in school activities and 3) more cognitive stimulation of their child; and will personally exhibit 4) less emotional support, 5) more use of harsh discipline, and 6) more parenting aggravation than mothers with lower levels of education.
3. Acculturation will predict a significant amount of the variance in Asian American and Asian immigrant mothers' parenting involvement, parenting practices, and parenting aggravation. Specifically, mothers who have spent a higher percentage of their lives in the U.S. and speak more English to their children in the home will have 1) higher academic expectations for their child; will personally or have family members who exhibit 2) more involvement in school activities and 3) more cognitive stimulation of their child; and will exhibit 4) more use of harsh discipline, and 5) more parenting aggravation than mothers who have spent a higher percentage of their lives in the U.S. and speak more English to their children in the home.
4. Social support will predict a significant amount of the variance in Asian American/Asian immigrant mothers' parenting involvement, parenting practices, and parenting aggravation. Specifically, mothers who receive greater social support will personally or have family members who exhibit 1) more involvement in home activities, 2) more involvement in school activities, and 3) more cognitive stimulation; and will exhibit 4) more emotional support, 5) less use of harsh discipline, and 6) less parenting aggravation than mothers who receive less social support.

CHAPTER III. METHODOLOGY

Sample

The proposed study utilized a secondary data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), Third Grade and Kindergarten database (U.S. Department of Education, National Center for Education, 2002). The ECLS-K is an ongoing study that focuses on children's early school experiences beginning with kindergarten and following children through middle school; currently data have been collected through grade 5. The ECLS-K collects information from children, parents, school teachers, and school administrators and describes children's status at entry into school and their progression through the 12th grade. The study is the first to collect national data from both public and private kindergarten programs and the children who attend them.

A nationally representative sample of approximately 22, 000 children enrolled in about 1,000 kindergarten programs during the 1998-1999 school year were selected to participate in the ECLS-K study. The sample consisted of children from different racial-ethnic and socioeconomic backgrounds, including an oversampling of Asian American and Asian immigrant children and private school kindergartners (Hausken, 2006). The total available data for the base year included 17,401 children, and there were 837 Asian American children or Asian immigrant children.

The sample for the present study was drawn from parents interviewed in the child's third grade year. A total of 213 of the 837 families (including both mothers and fathers as respondents) dropped out before the collection of third grade data; four additional families were eliminated due to duplicate cases. Another 59 cases were

excluded because the respondents were fathers or other types of caregivers. The total sample for this study was 462 Asian American/Asian immigrant mothers of third grade children. This number does not include “Hawaiian/Pacific Island” mothers because the original design separated this group from parents from “Asian countries”. Data on maternal depressive symptoms, maternal education, social support, one measure of acculturation (% of lifetime in the U.S.), family demographics, and all parenting variables were collected on Asian mothers in 2002 when their children were in third grade. Data for the second acculturation measure, extent of English spoken in the home, were collected when children were in kindergarten because these data were not collected in 2002.

Measures

Independent Variables

Maternal Measures

Demographic background. Demographic items on the ECLS-K addressed such factors as maternal age, maternal employment, maternal education, marital status, citizenship status, age of the target child, sex of the target child, number of children in the home, and number of adults in the home.

Maternal depressive symptoms. Maternal depressive symptoms were assessed with a short form of the Center for Epidemiological Studies Depression Scale (CES-D, Radloff, 1977). This study used 12 of the 20 items on the full scale (see Appendix A). The CES-D asks mothers to respond to questions such as, “How often during the past week have you felt that you were bothered by things that don’t usually bother you?” “Felt depressed?” or “Felt sad?” Mothers responded using a 4-point Likert scale that includes

1 = “never,” 2 = “some of the time,” 3 = “moderate amount of time,” and 4 = “most of time.” Mother’s responses were recoded to create a scale ranging from 0-3 (e.g., 1 recoded as 0, 2 recoded as 1). Total scores ranged from 0 to 36, with higher scores indicating more depressive symptoms. Given that a score of 16 or above on the full CES-D is considered clinically significant for depressive symptoms (Radloff, 1977), one can estimate the clinical cutoff for the short form in this study to be 13 or higher. The CES-D has repeatedly demonstrated high internal consistency with Cronbach’s alphas ranging from .86 to .90 (Ensel, 1986). The CES-D has been widely used with ethnic minority populations, including Asian American parents, and has shown strong reliability and validity with the latter sample (Yen, Robins, & Lin, 2000).

Maternal education. Maternal education was measured by using one ECLS-K item that asked the mother the highest grade she completed in school and the degrees she received. For example, items included: never went to school, first grade, high school, or bachelor’s degree. These data were recoded to create a continuous variable of maternal years of education, with a range from 0 to 20 years. For example, 0 = “never went to school,” 1 = “completed first grade,” 2 = “completed second grade,” 12 = “high school (with diploma or GED),” or “high school plus vocational/technical program (but no diploma),” 13 = “Vocational/technical program after high school or some college but no degree, 14 = “Associate’s degree in college,” 16 = “Bachelor’s degree in college,” 17 = “graduate or professional school, but no degree,” 18 = “Master’s degree (MA, MS),” 20 = “Doctoral degree (Ph.D., Ed.D.)” or “Professional degree after bachelor’s degree (e.g., Medicine/MD, Dentistry/DDS, Law/JD/LLB).”

Acculturation. Acculturation was measured in this study by using two items (see Appendix B). The first item was the percentage of a mother's life spent in the U.S. For mothers not born in the U.S., this percentage was calculated with the following formula:

$$(Mother's\ current\ age - age\ that\ mom\ moved\ to\ the\ U.S.) / mother's\ current\ age$$

For example, if a mother's current age is 35, and she moved to the U.S. when she was 28, then the percentage of her life spent in the U.S is $(35-28)/35 = .2$. Thus, this mother spent 20% percent of her life in the U.S. Mothers born in the U.S. checked the answer "not applicable" for the question "age that mother moved to the U.S." This response was coded as 0. Then using the above formula, mothers who were born in the U.S. had spent 100% of their lives in the U.S.

The second measure of acculturation asked about the extent to which mothers spoke English in the home. Specifically, mothers responded to a question in the kindergarten interview about their use of English with their children. Mothers responded on a 4-point scale with the following responses: 1 = "never speak Non-English language," 2 = "sometimes speak a Non-English language," 3 = "often speak a Non-English language," and 4 = "very often speak a Non-English language." Items were reverse recoded, so that the higher score represented higher use of English with her child in the home. Because these data were not collected in the third grade, data on use of English were collected from mothers' kindergarten interviews. It was assumed that these patterns of English use continued over the following two to three years.

Social support: Social support was assessed with a 6-item, study-specific social support scale (see Appendix C). This scale included items assessing emotional support, such as "if my child is sick, friends or family will call or come by to check on how things

are going;” information/advice, such as “If I have troubles or need advice, I have someone I can talk to;” and instrumental support, such as “If I have an emergency and need cash, family or friends will loan it to me.” Mothers responded to these items on a three-point scale that includes: 1 = “never true,” 2 = “sometimes true” and 3 = “always true.” Mother’s responses were recoded (e.g. 1 recoded as 0, 2 recoded as 1, 3 recoded as 2) and summed together, creating a total score with a range from 0 to 12. High scores indicate a high level of social support.

Dependent Variables

Parenting Measures

Seven dimensions of parenting were examined in this study. These include parental expectations for children’s schooling, involvement in home activities, involvement in school activities, cognitive stimulation, emotional support, harsh discipline style, and parenting aggravation.

Parental expectations of the child. Parental expectations of the child were measured by one question: “How far in school do you expect {Child} to go?” Parents responded on a 6-point scale with the continuum including 1 = “less than high school,” 2 = “graduate from high school,” 3 = “attend two or more years of college,” 4 = “finish a four-or five-year college degree,” 5 = “earn a master’s degree or equivalent,” and 6 = “Ph.D., MD., or other advanced degree.”

Maternal and family involvement in home activities with child. Maternal and family involvement in home activities with their third grade child was measured with a study-specific measure (see Appendix D). This 10-item scale measured the number of times in a typical week that the mother or another family member engaged in activities

with her child at home, including such activities as telling stories to the child, playing games with the child, or exercising or playing sports together. Mothers responded on a 4-point Likert scale including 1 = “not at all,” 2 = “once or twice,” 3 = “3-6 times,” 4 = “every day.” All these items are recoded (e.g. 1 = “not at all” recoded as “0,” 2 recoded as “1,” 3 recoded as “2”) and summed to create a total score with a range from 0 to 30. Higher scores indicate more involvement.

Maternal and family involvement in school activities. Maternal and family involvement in the child’s school activities was measured with a study-specific measure (see Appendix E). This eight-item scale included items such as a parent’s or family member’s participation in open houses, PTA/PTO meetings, and school events, participation in volunteer and school fundraising activities, as well as meeting teachers. Mothers responded using a dichotomous format (yes/no). “Yes” was coded as “1” and “no” was coded as “0.” Responses to all items were summed to create a total score with a range from 0 to 8.

Cognitive stimulation. Cognitive stimulation was measured using a subscale of the Home Observation for Measurement of the Environment-Short Form that was developed for use in the National Longitudinal Survey of Youth/Mother-Child Supplement (Baker & Mott, 1989). The current study used the Middle Childhood HOME-SF for children aged 6 to 9 years old (see Appendix F). This scale consisted of 14 items that were taken from the NLSY, such as a parent or another family member reading to children, taking children to a play or concert, children’s participation in dance lessons, and visits to cultural institutions. Mothers responded on a dichotomous (yes/no) format with values of 1 and 2, which were recoded to 1 (yes) and 0 (no). Responses to

the 14 items were summed to create a total score, with higher scores indicating greater cognitive stimulation.

The HOME has been used as an assessment tool for children and families from diverse cultural backgrounds and across a broad spectrum of socioeconomic levels (Bradley, Corwyn, & Whiteside-Mansell, 1996). A previous study has shown good internal consistency reliability for the total HOME with a Cronbach's alpha of .90 (Bradley et al., 2001).

Emotional support. Emotional support/warmth was measured with a study-specific measure that assesses mother's affectionate behaviors and her feelings of being close to her child (see Appendix G). Items on this four-item scale include showing the child love and engaging in hugging, kissing, and praising the child. Each of the items was rated by parents on a four-point scale that included: 1 = "completely true," 2 = "mostly true," 3 = "somewhat true," and 4 = "not at all true." Data were recoded by reversing scores so that high scores indicated a high level of emotional support; the new scale began with 0 rather than 1 (i.e., 4 recoded as 0, 3 recoded as 1, 2 remained as 2, and 1 recoded as 3). After recoding, all of the items were summed to create a total score with a range from 0 to 12, with higher scores indicating more emotional support.

Use of harsh discipline. Maternal use of harsh discipline was measured with four items from the HOME-SF (see Appendix H). The section on discipline in the ECLS-K was introduced with the statement, "Most children get angry with their parents from time to time. If {Child} got so angry that (he/she) hit you, what would you do?" This study used four items from a longer list of possible responses as a measure of harsh discipline. These items included: "Would you spank (him/her)," "hit (him/her) back," "make fun of

(him/her),” and “yell at {Child} or threaten (him/her)?” Parents responded to each item with a dichotomous format (yes or no). “Yes” was coded “1” and “No” was coded “0.” And responses to the four items were summed, with a possible score of 0 to 4, and a higher score indicated greater use of harsh discipline.

Parenting aggravation. The Aggravation in Parenting Scale was developed for the ECLS-K by Child Trends, Inc. to measure a parent’s sense of stress in the parenting role (see Appendix I). The four items used in this study assessed mother’s feelings of being bothered or angry in parenting her child, such as whether she felt her child was harder to care for than most, and whether she felt she was giving up much of her life to meet her child’s needs. Mothers responded on a four-point scale including 1 = “completely true,” 2 = “mostly true,” 3 = “somewhat true,” and 4 = “not at all true.” These items were reverse coded with “not at all true” as 0 (i.e., 4 recoded as 0, 3 recoded as 1, 2 remained 2, and 1 recoded as 3) to create a total score with a range from 0 to 12.

Procedure

The ECLS-K employed a multistage probability sample design to select a nationally representative sample of children attending kindergarten in 1998-99. The primary sampling units (PSUs) were geographic areas consisting of counties or groups of counties. The second-stage units were schools within sampled PSUs. The third and final stage units were students within schools. For each sampled school, the field staff obtained a complete list of kindergarteners enrolled, taking special care that no child was excluded from the list because of disability or language problems. The ECLS-K formed two independent sampling strata within each school to oversample Asian and Pacific Island (API) students. One sample contains API students and the other sample consists

of all other students. As noted earlier, this study only included Asian but not Pacific Island students. In general, the target number of children sampled at any one school was 24. Once the sampled children were identified, parent information was obtained from the school. Field staff contacted parents or guardians to gain parental consent for the child assessment and for the parent interview.

The ECLS-K has been collecting information from children and their parents, teachers, and schools. Data have been collected in a variety of formats, including one-on-one assessments, computer-assisted telephone interviews, and self-administered paper and pencil questionnaires. To collect information from the parents, including the mothers sampled in this study, a trained interviewer phoned the parents at their homes and conducted a 45-50 minute interview. Mothers responded to questionnaires about their mental health, education, acculturation, and social support as well as their parenting practices, parenting involvement, and parenting frustration. For all of the parenting variables except cognitive stimulation and parental involvement in home and school activities, the mother responded about her own parenting behavior. On the variable of involvement in home and school activities and cognitive stimulation, the questionnaire asked about the parenting of both the mother and others in her family. Computer assisted interviewing methods were used to record the parent's answers. If the child's family did not have a telephone, the interview was conducted in person.

Parents' or guardians' participation in the ECLS-K was voluntary. The National Center for Education Statistics has taken steps to minimize the likelihood that an individual, school, teacher, parent, or child participating in the study can be identified. The current study used the ECLS-K Third Grade and Kindergarten Public Data files.

Every case is assigned an identification number, and there is no way to connect data to individual participants.

Data Analysis Plan

Descriptive statistics, including means, standard deviations, and percentages, were generated to summarize the demographic characteristics of all mothers in the sample. Means, standard deviations, and frequencies were also calculated for all maternal measures, as appropriate. Cronbach's coefficient alphas were computed to examine the internal consistency of the social support measure, the depressive symptoms measure, and many parenting measures. Bivariate analyses were conducted to examine the relationships among all independent and dependent variables.

To test the study hypotheses, multiple regression analyses were used to determine the extent to which the independent variables of maternal depressive symptoms, maternal education, acculturation, and social support were predictors of the seven dependent variables. Family income, number of adults in the household, and sex of child were entered into the equations as control variables because of their prior association with maternal parenting practices. Seven different regression analyses were conducted, one for each dependent variable. The seven dependent variables included: maternal expectations, maternal or family involvement in children's home activities, maternal or family involvement in children's school activities, cognitive stimulation, emotional support, use of harsh discipline, and parenting aggravation.

CHAPTER IV: RESULTS

Demographic Characteristics of the Sample

This sample of Asian American and Asian immigrant mothers was drawn from a national dataset, the Early Childhood Longitudinal Study, Third Grade. Table 1 presents the demographic characteristics of the sample. These data include means and standard deviations for the mother's current age, years of education, number of children in the home, and number of adults in the home. Additionally, the table presents the frequencies and percentages for the respondent's relationship to the child (biological mother, other mother), mother's marital status, current employment status, country of birth, citizenship status, income group, and the sex of child.

As displayed in Table 1, the sample consisted of 462 Asian American and immigrant mothers. Asian American mothers were defined as born in the United States or holding U.S. citizenship. The sample includes 293 (63.5%) Asian American and 154 (33.3%) Asian immigrant mothers, with data missing for 3.2% of the sample. About 82% of mothers were born in an Asian country and 17% were born in the U.S. Overall, approximately 64% of the mothers were U.S. citizens at the time of the study. The average mother had lived in the U.S. for 22 years. Ages of Asian American/Asian immigrant mothers ranged from 25 to 54 years, with a mean age of 39.3 years. On average, the mother's household had 2.5 children and 2.3 adults in residence. Mothers completed an average of 14 years of education. Approximately 81% of mothers were married. Employment data revealed that 53% worked full time and 20% worked part-time (under 35 hours/week). Approximately 20% had family incomes less than \$25,000, 31% had incomes \$25,000 to \$49,999, 15% had incomes \$50,000 to \$74,999, and 35%

Table 1

Demographic Characteristics of Sample Mothers

Demographic Characteristic	N	Mean (SD)	Range
Mother's age in years	460	39.29 (5.22)	25-51
Mother's education in years	458	14.06 (3.47)	0-20
Number of children in the household	462	2.49 (1.25)	1-10
Mother's years of living in U.S.	446	21.87 (10.96)	4-51
Adults in home	462	2.32 (0.84)	1-8

	N	% of Total Sample
Mother's country of birth		
U.S.	76	16.5%
East Asia	82	16.7%
China (Tai Wan & Hong Kong)	42	8.1%
Japan	10	2.2%
Korea, (South& North)	30	6.4%
Southeast Asia	187	40.8%
Cambodia	12	2.6%
Thailand	7	1.6%
Vietnam	28	6.1%
Laos	38	8.2%
Indonesia	2	.5%
Malaysia	6	1.4%
Philippines,	89	19.3%
Singapore	5	1.1%
South Asia	65	14.3%
India	47	10.2%
Bandladesh	2	.5%
Nepal	1	.2%
Pakistanis	7	1.5%
Sri Lanka	6	1.4%
Afghanistan	2	.5%
Other Countries	40	10.1%
Refused	7	1.6%

Table 1 (continued)

Demographic Characteristics of Sample Mothers

Demographic Characteristic	N	Percentage
Relationship to child		
Biological mother	460	99.6%
Other type of mother	2	.4%
Mother a U.S. citizen?		
Yes	217	47.0%
No	154	33.3%
Not applicable (Born in U.S.)	76	16.5%
Marital status of mother		
Married	376	81.4%
Separated	12	2.6%
Divorced	39	8.5%
Widowed	5	1.0%
Never married	26	5.7%
Maternal employment status		
35 hours or more per week	245	53.1%
Less than 35 hours per week	92	20.0%
Looking for work	11	2.3%
Not in the labor force	101	21.9%
Maternal educational status		
Never went to school	9	2.0%
Less than middle school	8	1.7%
Middle to high school	63	13.2%
High school/GED	65	14.1%
Some college, no degree	64	13.8%
Associate degree	38	8.3%
Bachelor's degree	154	33.4%
Graduate or professional- school, no degree	10	2.1%
Master's degree	32	6.9%
Doctoral degree/Professional degree (Ph.D., M. D.)	16	3.5%

Table 1 (continued)

Demographic Characteristics of Sample Mothers

Demographic Characteristic	N	Percentage
Maternal household income		
\$25,000 or less	89	19.5%
\$25,000 to \$49,999	141	30.5%
\$50,000 to \$74,999	70	15.3%
Above \$75,000	160	34.7%
Child's Sex		
Male*	255	55.2%
Female**	207	44.8%

* Coded as "1," ** coded as "2"

had incomes above \$75,000. Finally, 55% of mothers had boys and 45% had girls.

Missing Data and Weights

The ECLS-K data set had missing values for Asian American and Asian immigrant mothers for both maternal education and family income. Maternal education had 55 missing values and family income had 82 missing values in the third grade interview. In such cases, missing values in the third grade dataset were replaced by values from the base kindergarten year. This method was considered more accurate than using a mean substitution method since it draws from actual data on the mother and her family at an earlier point in time (and is available in this longitudinal study).

In cases where there was missing information for the independent variables, listwise deletion was used to delete the cases. Since this process resulted in deletion of less than 5% of the total sample, this method was considered appropriate since it would have little impact on the results. In order to retain cases where there were missing values for a specific dependent variable, the NVALID function in SPSS was used. NVALID only excludes cases with missing values on all scale items. The NVALID function calculated a mean score for each dependent measure based on the number of items to which the mother responded. Using the following formulas, these mean scores were created and used in the final regression model:

$$\text{Mean scores} = \text{Sum (items)}/\text{NVALID (items)}$$

Since Asian American children were an over-sampled population in this study, weights were calculated for the analyses. A total sample weight was calculated for the third grade parent interview and each parent in the current sample was assigned a weight. The mean weight value was 175.2798. A normalized weight was created using the

following equation: $Newt = \text{Each Parent's Sample Weight}/175.2798$. Multiple linear regressions were run with the weighted cases.

Reliability of Study Measures

Cronbach's coefficient alphas were computed to examine the internal consistency of seven study measures (see Table 2). The Chronbach's alpha for the CES-D was .89. The alpha for the study-specific social support measure was .85. For the dependent variables, the alpha value for the study-specific home involvement measure was .68. The alpha for the study-specific school involvement scale was .61. The alpha for cognitive stimulation, measured by HOME-SF, was .62. The alpha for the study-specific emotional support measure was .73. The alpha for the parenting aggravation measure, developed by Child Trends, was .62. Although a few of these measures have alpha values that are below the standard acceptable range of .70, they are likely to be affected by the small number of items in each measure and are similar to alphas obtained in previous studies.

Scores on Study Measures

Table 2 also presents means and standard deviations for mothers' scores on a shortened form of the CES-D and study measures of acculturation (percentage life spent in the U.S, mother's use of English with the child at home), social support, parenting involvement, parenting practices, and parenting aggravation.

The CES-D measured mothers' depressive symptomology, with lower scores indicating lower levels of depressive symptoms. Asian American and Asian immigrant mothers' mean score on the CES-D was 4.55 (SD = 5.44) with a range from 0 to 36. Approximately 70% of mothers reported at least one symptom of clinical depression.

Table 2

Mothers' Scores on Predictor and Parenting Measures

Measurements	Number of Items	Sample Range	Measure Range	Mean	Standard Deviation	Coefficient Alpha
Depressive symptoms	12	0-36	0-36	4.55	5.44	.89
Education (years)	1	0-20	0-20	14.06	3.47	NA
Percentage life in US	1	.08-1.00	0-1.0	.56	.27	NA
Spoke English at home	1	1-4	1-4	2.52	1.20	NA
Social support	6	0-12	0-12	9.69	2.82	.85
Maternal expectations	1	2-6	1-6	4.56	.98	NA
Home involvement	10	3-30	0-30	15.13	4.67	.68
School involvement	8	0-8	0-8	5.50	1.76	.61
Cognitive stimulation	14	0-12	0-14	6.29	2.48	.62
Emotional support	4	4-12	0-12	10.34	1.97	.73
Use of harsh discipline	4	0-3	0-4	.33	.63	NA
Aggravation	4	0-10	0-12	2.39	2.16	.62

Given the clinical cutoff for the short form of the CES-D in this study was 13 or higher, the average mother in this study displayed a relatively low level of depressive symptoms. Only 7% of the mothers who participated had a score of 13 or above, indicating a high risk for clinical depression. Social support scores in this study ranged from 0 to 12, with higher scores indicating the receipt of more support in parenting. Study participants had a mean score of 9.69 (SD = 2.82), suggesting the average mother had strong support.

Overall, the average mother in this study had spent 56% of her life in the U.S. The range of time in the U.S. for mothers in this study was from 8% to 100%. With respect to English spoken to children in the home, the average mother's score of 2.5 indicated that she spoke an Asian language to her child at home from "sometimes" to "often."

In assessing parenting and parenting involvement, Asian American and Asian immigrant mothers were asked about maternal expectations for the child's academic achievement; maternal or other family members' home involvement, school involvement, and cognitive stimulation; and maternal emotional support, use of harsh discipline, and feelings of aggravation in parenting. Mother's expectation for her child's academic achievement ranged from 2 to 6, with a mean of 4.56, indicating that the average mother expected her child to achieve an education between a bachelor's and a master's degree or equivalent. Mothers' or other family members' home involvement total score ranged from 3 to 30, with a mean of 15.13 (SD = 4.67). The total score for mothers' or family members' school involvement ranged from 0 to 8, with a mean of 5.50 (SD = 1.7). In terms of mothers' or family members' cognitive stimulation of their children, total scores ranged from 2 to 10, with a mean score of 6.29 (SD = 2.48), just below the midpoint of

the scale. For the emotional support measure, total scores of mothers in this study ranged from 4 to 12, with a mean of 10.34 (SD = 1.97), placing the average mother at the high end of the scale. The total score for aggravation ranged from 0 to 10, with a mean of 2.39 (SD = 2.16), indicating the average mother had a low level of aggravation. Mothers were also asked about their discipline style, and specifically whether they engaged in spanking, hitting a child back (who hit the mother), making fun of the child, and yelling at or threatening the child. The total score for mother's use of harsh discipline ranged from 0 to 3, with a mean of .33 (SD = .63). This score indicated that the average mother did not use harsh discipline with her child, using less than one of the four harsh discipline techniques over a week long period.

Bivariate Relationships among Variables

Table 3 presents a correlation matrix depicting the relationships between all study variables. Maternal depressive symptoms, an independent variable measured by the CES-D, were significantly negatively correlated with other independent variables including the mother's education ($r = -.15, p < .01$), and social support ($r = -.10, p < .05$), and with the control variables of family income ($r = -.20, p < .01$) and number of adults in the home ($r = -.15, p < .01$). Maternal depressive symptoms were also significantly negatively correlated with mother's speaking English to her child ($r = -.14, p < .01$) and positively correlated with mother's percentage time in the U.S ($r = .13, p < .01$). Mothers with higher depressive symptoms had lower education, were less likely to speak English to their child, spent a higher percentage of their lives in the U.S, had lower social support and family income, and lived with fewer adults in their home. Maternal depressive symptoms were also significantly negatively correlated with emotional support for her

Table 3

Bivariate Relationships Between Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Predictors															
1. Maternal Depression	----														
2. Maternal Education	-.15**	----													
3. Percent time in U.S.	.13**	.03	----												
4. Speaking English	-.14**	.21**	.38**	----											
5. Social Support	-.10*	.00	.12*	.10*	----										
Control variables															
6. Family income	-.20**	.55**	.04	.16**	-.03	----									
7. Number of adults	-.15**	-.11*	-.10*	-.05	.20**	.12**	----								
8. ¹ Sex of child	-.09	.05	-.02	-.03	-.03	.03	.04	----							
Outcomes															
9. Expectations	.08	.24**	-.19**	.01	.04	.19**	.10*	-.03	----						
10. Home Involvement	-.08	.08	-.05	-.03	.15**	.09*	.11*	.03	.03	----					
11. School Involvement	.07	.40**	.10*	.32**	.11*	.40**	-.07	.02	.21**	.18**	----				
12. Cognitive Stimulation	-.05	.36**	.01	.12*	.13**	.40**	.09*	.08	.24**	.28**	.34**	----			
13. Emotional support	-.27**	.03	-.04	-.01	.31**	.10*	.17**	.05	.07	.33**	.11*	.09	----		
14. Use harsh discipline	.03	.10*	.04	-.08	-.19**	.00	-.18**	-.14**	-.01	-.12**	.07	.02	-.24**	----	
15. Aggravation	.22**	-.12**	-.07	-.13**	-.01	-.22**	.02	.06	.06	.05	-.08	.03	-.10*	.05	----

¹Child's sex: 1 = boys, 2 = girls* $p < .05$ ** $p < .01$

child ($r = -.27, p < .01$) and positively correlated with parenting aggravation ($r = .22, p < .01$). Mothers with more depressive symptoms provided their children with less emotional support and expressed more parenting aggravation.

Maternal education, the second independent variable, was significantly positively correlated with mother's use of English with her child ($r = .21, p < .01$) and the control variable of family income ($r = .55, p < .01$). More educated mothers were more likely to speak English to their children and had higher incomes. Maternal education was significantly negatively correlated number of adults in home ($r = -.11, p < .05$). Thus, more educated mothers had fewer adults living with them. Maternal education was significantly positively correlated with several dependent variables, including maternal expectations for their child's academic achievement ($r = .24, p < .01$), school activity involvement ($r = .40, p < .01$), cognitive stimulation ($r = .36, p < .01$), and mother's use of harsh discipline ($r = .10, p < .05$). More educated mothers had higher academic expectations for their child, more maternal or family member involvement in school activities, more maternal or family member engagement in cognitive stimulation, and used harsher discipline. Maternal education was significantly negatively correlated with another dependent variable, parenting aggravation ($r = -.12, p < .01$). The more years of education that a mother attained, the fewer feelings of aggravation she had in the parenting role.

Maternal acculturation was measured by two variables: mother's percentage of time in the U.S. and mother's speaking of English to her child at home. Mother's percentage of time spent in the U.S. was significantly positively correlated with use of English with her child at home ($r = .38, p < .01$) and social support ($r = .12, p < .05$), and

was negatively associated with the number of adults in the home ($r = -.10, p < .05$). Mothers who had spent more of their lives in the United States spoke more English at home and had higher social support, but fewer adults living with them in their home. Percentage of time in the U.S. was significantly negatively related to mother's expectations about her child's academic achievement ($r = -.19, p < .01$) and significantly positively correlated with school involvement ($r = .10, p < .05$). Thus, the greater the percentage of time the mother had spent in the U.S. the lower her expectations for her child's academic achievement (compared to less time in the U.S.) but the more she and family members were involved in children's school activities. Mother's use of English with her child was significantly positively correlated with social support ($r = .10, p < .05$) and family income ($r = .16, p < .01$). Maternal use of English with her child at home was also significantly positively correlated with school involvement ($r = .32, p < .01$) and cognitive stimulation ($r = .12, p < .05$), but significantly negatively correlated with parenting aggravation ($r = -.13, p < .01$). Mothers who spoke more English with their child had families that were more likely to attend school activities and provide children with cognitive stimulation, and were less likely to feel aggravated in parenting.

Social support, the final independent variable, was significantly positively associated with number of adults in the home ($r = .20, p < .01$). Social support was also significantly positively associated with home activity involvement ($r = .15, p < .01$), school involvement ($r = .11, p < .05$), cognitive stimulation ($r = .13, p < .01$), and emotional support ($r = .31, p < .01$). Mothers with higher social support had families that were more involved in home and school activities and provided more cognitive stimulation, and they provided more emotional support to their child. Mother's social

support also was significantly negatively correlated with mother's use of harsh discipline ($r = -.19, p < .01$). The more social support that a mother received, the less she used harsh discipline.

The control variable of family income was significantly positively related to another control variable, number of adults at home ($r = .12, p < .01$). Family income was also significantly positively correlated with maternal expectations for children's academic achievement ($r = .19, p < .01$); maternal or other family members' home involvement ($r = .09, p < .05$), school involvement ($r = .40, p < .01$), and cognitive stimulation ($r = .40, p < .01$); maternal emotional support ($r = .10, p < .05$), and was negatively related to maternal aggravation in the parenting role ($r = -.22, p < .01$).

Another control variable, number of adults in the home was significantly positively related to expectations for children's academic achievement ($r = .10, p < .05$); maternal or other family members' home involvement ($r = .11, p < .05$) and cognitive stimulation ($r = .09, p < .05$); maternal emotional support ($r = .17, p < .01$); and negatively related to maternal use of harsh discipline ($r = -.18, p < .01$). The control variable of child's sex was significantly negatively related to maternal use of harsh discipline ($r = -.14, p < .01$). Given the coding, this relationship means that mothers of boys used more harsh discipline than mothers of girls.

In examining the relationships among dependent variables, mother's expectations for her child's academic achievement were significantly positively related to maternal or other family members' school involvement ($r = .21, p < .01$) and cognitive stimulation ($r = .24, p < .01$). Maternal or other family members' involvement in home activities was significantly positively related to school involvement ($r = .18, p < .01$), cognitive

stimulation ($r = .28, p < .01$) and emotional support ($r = .33, p < .01$), and negatively related to use of harsh discipline ($r = -.12, p < .01$). School involvement was significantly positively related to cognitive stimulation ($r = .34, p < .01$) and emotional support ($r = .11, p < .05$). Mother's emotional support of her child was significantly negatively related to her use of harsh discipline ($r = -.24, p < .01$) and feelings of aggravation in the parenting role ($r = -.10, p < .05$). Mothers who were more emotionally supportive of their children used less harsh discipline and were less aggravated in parenting.

Regression Models

A major objective of this study was to identify factors that may predict Asian American and Asian immigrant mothers' parenting involvement, parenting practices, and parenting aggravation. Multiple linear regression analyses were used to examine significant predictors of the parenting variables.

Regression model 1: Expectations for children's academic achievement

Table 4 presents results of a linear regression model examining the predictive effects of maternal depressive symptoms, education, acculturation, and social support on mother's expectations about her child's academic achievement. This model explains 14% of the variance in mother's expectations about her child's academic achievement ($R^2 = .14, p < .001$). As hypothesized, mother's education was a significant predictor of expectations about her child's academic achievement ($p < .001$). Mothers with higher levels of formal education had significantly higher academic expectations for their third grader's achievement than mothers with lower levels of education. A second hypothesis was that mothers with higher levels of acculturation, as measured by percentage of life in

Table 4

Multiple Regression Analysis Examining Predictors of Maternal Expectations for Child's Academic Achievement (N = 425)

Parameter	<i>B</i>	<i>SE</i> ¹	<i>Beta</i>	<i>t</i>	<i>p</i>
Depressive symptoms	.388	.105	.177	3.676	.001
Social support	.102	.103	.048	.995	.320
Maternal education	.074	.017	.254	4.460	.001
Speaking English	.012	.042	.014	.276	.783
Percentage years in U.S.	-.834	.184	-.228	-4.532	.001
Family income	.015	.019	.046	.802	.423
Number of adults in home	.144	.058	.122	2.479	.014
Sex of child ²	-.030	.090	-.015	-.328	.743
Constant	3.207	.322		9.951	.001

F (8, 416) = 8.591, *p* < .001

*R*² = .14

¹Standard Error

²Male = 1, Female = 2

the U.S. and use of English with the child in the home, would have higher academic expectations for her child. Contrary to this hypothesis, use of English in the home was not predictive of higher academic expectations. Percentage of life in the U.S. was a significant predictor of mother's academic expectations for her child ($p < .001$) but in the opposite direction of the prediction. Mothers who had spent a lower percentage of their lives in the U.S. had higher academic expectations for their child.

No hypotheses were made about the association between maternal depressive symptoms and academic expectations for her child. However, results revealed that depressive symptoms were also a significant predictor of academic expectations ($p < .001$). Asian American and Asian immigrant mothers who exhibited more depressive symptoms had higher academic expectations for their child than those with fewer symptoms. A final significant predictor of academic expectations was the control variable of number of adults in the home ($p < .05$); mothers with more adults in the home had higher academic expectations of their third grade child.

Regression model 2: Maternal and family members' home activity involvement

Table 5 presents results of the regression model examining the predictive effects of maternal depressive symptoms, education, acculturation, and social support on maternal and family members' involvement in home activities with their child. This model explains only 4% of the variance in home activity involvement and was at the borderline of significance ($p < .052$). It was hypothesized that maternal depressive symptoms would be a significant predictor of involvement in home activities, with more depressive symptoms associated with lower home activity involvement. Contrary to predictions, depressive symptoms were not a significant predictor. However, results were

Table 5

Multiple Regression Analysis Examining Predictors of Home Activity Involvement

(*N* = 425)

Parameter	<i>B</i>	<i>SE</i> ¹	<i>Beta</i>	<i>t</i>	<i>p</i>
Depressive symptoms	-.052	.052	-.051	-1.001	.318
Social support	.128	.050	.130	2.549	.011
Maternal education	.005	.008	.039	.639	.523
Speaking English	-.022	.020	-.058	-1.067	.287
Percentage years in U.S.	-.052	.090	-.031	-.581	.562
Family income	.004	.009	.030	.484	.629
Number of adults in home	.025	.028	.045	.875	.382
Sex of child ²	.037	.044	.041	.845	.399
Constant	1.215	.158		7.698	.001

F (8, 416) = 1.946, *p* > .052

*R*² = .04

¹Standard Error

²Male = 1, Female = 2

consistent with a second hypothesis about home involvement. As hypothesized, social support was a significant predictor of involvement in home activities with the child ($p < .011$). Mothers with more social support, as compared to those with less support, were personally involved or had family members who were engaged in more home activities with their child.

Regression model 3: Maternal and family members' school activity involvement

Table 6 presents results of the regression model examining the predictive effects of maternal depressive symptoms, education, acculturation, and social support on maternal and family members' school activity involvement. The model explains 30% of the variance in school activity involvement ($R^2 = .30, p < .001$). As hypothesized, mother's education, one measure of acculturation (mother's use of English with her child), and social support were significant predictors of mothers' or other family members' involvement in children's school activities. Consistent with one hypothesis, maternal education was a significant predictor ($p < .001$), with more educated mothers in families that participated in more school activities, such as going to school open houses, attending parent-teacher conferences, and volunteering at the school. As hypothesized, mother's use of English was also a significant predictor ($p < .001$); mothers who spoke more English to their children in the home either personally or had family members who participated in more school activities. However, contrary to expectations, the second measure of acculturation, percentage of time in the U.S. was not a significant predictor of school involvement. Consistent with the third hypothesis, social support was a significant predictor ($p < .001$) of school involvement; mothers with more social support had families that participated in more school activities. A fourth hypothesis was that

Table 6

Multiple Regression Analysis Examining Predictors of School Activity Involvement (N = 425)

Parameter	<i>B</i>	<i>SE</i> ¹	<i>Beta</i>	<i>t</i>	<i>p</i>
Depressive symptoms	.059	.022	.120	2.762	.006
Social support	.071	.021	.146	3.373	.001
Maternal education	.014	.003	.220	4.265	.001
Speaking English	.032	.009	.173	3.710	.001
Percentage years in U.S.	-.025	.038	-.030	-.666	.506
Family income	.022	.004	.300	5.729	.001
Number of adults in home	-.034	.012	-.128	-2.892	.004
Sex of child ²	.011	.018	.024	.590	.555
Constant	.158	.066		2.407	.017

F (8, 416) = 21.001, *p* < .001

*R*² = .30

¹Standard Error

²Male = 1, Female = 2

depressive symptoms would be a significant predictor of maternal and family involvement in school activities, with higher depressive symptoms associated with less school involvement. While this variable was significant ($p < .006$), it was in the opposite direction from the hypothesis. Specifically, mothers with more depressive symptoms were found to be more personally involved or have family members who were more involved in school activities than those with fewer depressive symptoms.

Finally, two control variables, family income ($p < .001$) and number of adults in the home ($p < .004$), were found to be significant predictors of mothers' or family members' school involvement. Mothers with higher family income and fewer adults in their home were more likely to personally or have family members who participated in their children's school activities than those with lower income and more adults in residence.

Regression model 4: Parental cognitive stimulation

Table 7 presents results of the regression model examining the predictive effects of maternal depressive symptoms, education, acculturation, and social support on cognitive stimulation. This model explains 19% of the variance in mothers' or other family members' cognitive stimulation of the child ($R^2 = .19, p < .001$). Contrary to one hypothesis, maternal depressive symptoms were not a significant predictor of cognitive stimulation. As hypothesized, maternal education was a significant predictor of cognitive stimulation ($p < .001$). The more years of education that mothers received, the higher level of cognitive stimulation mothers or family members provided to their child. A third hypothesis was that mothers with higher levels of acculturation, including a higher

Table 7

Multiple Regression Analysis Examining Predictors of Cognitive Stimulation (N = 425)

Parameter	<i>B</i>	<i>SE</i> ¹	<i>Beta</i>	<i>t</i>	<i>p</i>
Depressive symptoms	.018	.018	.046	.977	.329
Social support	.046	.018	.123	2.632	.009
Maternal education	.010	.003	.199	3.585	.001
Speaking English	.005	.007	.037	.736	.462
Percentage years in U.S.	-.028	.031	-.044	-.892	.373
Family income	.014	.003	.249	4.423	.001
Number of adults in home	.006	.010	.031	.653	.514
Sex of child ²	.034	.015	.097	2.186	.029
Constant	.045	.055		.823	.411

F (8, 416) = 11.856, *p* < .001

*R*² = .19

¹Standard Error

²Male = 1, Female = 2

percentage of time spent in the U.S. and greater use of English with the child at home, would personally or have family members who provided more cognitive stimulation to their child. Contrary to the hypothesis, neither of these two measurements of acculturation predicted level of cognitive stimulation. As hypothesized, the final independent variable of social support was found to be a significant predictor of mother's or family members' cognitive stimulation ($p < .01$). As predicted, the more social support that mothers received, the more cognitive stimulation they or family members provided to their third grade children.

Finally, two control variables, family income ($p < .001$) and child's sex ($p < .05$) were found to be significant predictors. Mothers with higher family income personally or had family members who provided more cognitive stimulation to their children than mothers with lower family income; mothers or family members provided more cognitive stimulation for daughters than sons.

Regression model 5: Maternal emotional support

Table 8 presents results of the regression model examining the predictive effects of maternal depressive symptoms, education, acculturation, and social support on mother's emotional support for their children. This model explains 17% of the variance in mother's emotional support ($R^2 = .17, p < .001$). It was hypothesized that mothers with higher levels of depressive symptoms would exhibit less emotional support toward their children. As expected, maternal depressive symptoms were a significant predictor of mother's emotional support ($p < .001$). The more depressive symptoms mothers had, the less emotional support they provided to their third graders. Contrary to a second

Table 8

Multiple Regression Analysis Examining Predictors of Maternal Emotional Support (N = 424)

Parameter	<i>B</i>	<i>SE</i> ¹	<i>Beta</i>	<i>t</i>	<i>p</i>
Depressive symptoms	-.253	.050	-.240	-5.048	.001
Social support	.265	.049	.256	5.399	.001
Maternal education	.001	.008	.010	.173	.863
Speaking English	.007	.020	.018	.363	.717
Percentage years in U.S.	-.081	.088	-.046	-.926	.355
Family income	.003	.009	.017	.294	.769
Number of adults in home	.043	.028	.076	1.566	.118
Sex of child ²	.062	.043	.066	1.456	.146
Constant	2.064	.153		13.489	.001

F (8, 415) = 10.437, *p* < .001

*R*² = .17

¹Standard Error

²Male = 1, Female = 2

hypothesis that maternal education would be predictive of emotional support, the analyses did not support this prediction. A final hypothesis was that social support would be predictive of maternal emotional support, with higher social support associated with mothers providing more emotional support to their children. Consistent with this hypothesis, social support was found to be a significant predictor ($p < .001$). Mothers who received more social support from their family, friends, and others provided greater emotional support to their children, including various types of physical and verbal affection, than mothers with lower social support.

Regression model 6: Mothers' use of harsh discipline

Table 9 presents results of the regression model examining the predictive effects of maternal depressive symptoms, education, acculturation, and social support on maternal use of harsh discipline. This model explains 10% of the variance in maternal use with mothers who had more education using less harsh discipline methods. Results revealed that maternal education was a significant predictor of harsh discipline, but in the opposite direction than was expected ($p < .05$). Specifically, mothers with higher levels of education were more likely than those with less education to use harsh discipline methods, such as spanking, yelling, or threatening their children in handling a child's tantrum.

A third hypothesis concerning acculturation was that spending a higher percentage of life in the U.S. and speaking more English to children at home would be predictive of using less harsh discipline. As hypothesized, mothers' speaking English at home was a significant predictor of discipline techniques ($p < .01$); mothers who spoke

Table 9

Multiple Regression Analysis Examining Predictors of Maternal Use of Harsh Discipline

(*N* = 415)

Parameter	<i>B</i>	<i>SE</i> ¹	<i>Beta</i>	<i>t</i>	<i>p</i>
Depressive symptoms	.001	.017	.002	-.048	.962
Social support	-.042	.017	-.123	-2.481	.014
Maternal education	.006	.003	.122	2.038	.042
Speaking English	-.020	.007	-.156	-2.900	.004
Percentage years in U.S.	.060	.030	.103	1.973	.049
Family income	.000	.003	-.005	.074	.941
Number of adults in home	-.026	.010	-.134	-2.615	.009
Sex of child ²	-.053	.015	-.169	-3.561	.001
Constant	.229	.053		4.280	.001

F (8, 406) = 5.800, *p* < .001

*R*² = .10

¹Standard Error

²Male = 1, Female = 2

more English with their children were less likely than those speaking less English to use the harsh discipline methods. Percentage of life in the U.S. was also a significant predictor of mother's use of harsh discipline ($p < .05$), but in the opposite direction of the prediction. Mothers who had spent a higher percentage of their lives in the U.S were more likely to use harsh discipline methods than those who had spent less time living in the U.S. The final hypothesis was that social support would be a significant predictor of harsh discipline use, with more support associated with less use of harsh methods. This hypothesis was confirmed ($p < .05$); the more social support that a mother received, the less she used harsh discipline methods with her third grade child. Two control variables were also significant predictors of using harsh methods, number of adults in the household ($p < .01$) and sex of child ($p < .001$). With more adults in the household, mothers used less harsh discipline when their children got angry with them. Results also revealed that mothers used harsher discipline methods with their sons than with their daughters when handling a child's tantrum.

Regression model 7: Maternal feelings of parenting aggravation

Table 10 presents the results of the regression model examining the predictive effects of maternal depressive symptoms, education, acculturation, and social support on mother's feelings of aggravation in parenting her child. This model explains 13% of variance in mother's aggravation. As hypothesized, maternal depressive symptoms were a significant predictor of mother's feelings of aggravation ($p < .001$); mothers with more depressive symptoms experienced more aggravation in parenting their third graders than mothers with fewer depressive symptoms. A second hypothesis was that years of maternal education would significantly predict of aggravation, with more educated

Table 10

Multiple Regression Analysis Examining Predictors of Maternal Parenting Aggravation

(*N* = 424)

Parameter	<i>B</i>	<i>SE</i> ¹	<i>Beta</i>	<i>t</i>	<i>p</i>
Depressive symptoms	.265	.059	.220	4.518	.001
Social support	-.006	.058	-.005	-.102	.919
Maternal education	.008	.009	.047	.819	.413
Speaking English	-.069	.023	-.155	-2.976	.003
Percentage years in U.S.	-.005	.103	-.002	-.048	.962
Family income	-.040	.010	-.224	-3.832	.001
Number of adults in home	.041	.032	.062	1.259	.209
Sex of child ²	.099	.050	.091	1.980	.048
Constant	.686	.180		3.822	.001

F (8, 415) = 7.583, *p* < .001

*R*² = .13

¹Standard Error

²Male=1, Female=2

mothers expressing fewer feelings of aggravation than less educated mothers. Contrary to this hypothesis, maternal education was not predictive of parenting aggravation. It was further hypothesized that maternal acculturation, as measured by percentage of life in the U.S and use of English in the home would be a significant predictor of parenting aggravation. Consistent with this hypothesis, mother's use of English was a significant predictor of maternal aggravation ($p < .01$); mothers who spoke more (versus less) English to their child at home felt less aggravation in parenting their third grade child. However, the second acculturation measure, percentage of time in the U.S., was not a significant predictor of parenting aggravation. The final hypothesis was that social support would be a significant predictor of mother's aggravation, with less social support associated with more aggravation. However, social support was not found to be a significant predictor.

Results also revealed that two control variables were significant predictors of parenting aggravation, family income ($p < .001$) and child sex ($p < .05$). Mothers who had higher levels of family income were less aggravated in parenting than mothers with lower family income. Mothers of daughters expressed more parenting aggravation than mothers of sons.

Table 11 presents a summary of all study hypotheses, organized according to the major independent variables used to predict the parenting behaviors of Asian American and Asian immigrant mothers: maternal depressive symptoms, maternal education, acculturation, and social support.

Table 11

Hypotheses and Results

Hypothesis	Results
Maternal depressive symptomology will predict a significant amount of the variance in parenting involvement, practices, and aggravation. In comparison to mothers with fewer depressive symptoms...	
Hypothesis 1: Mothers with more depressive symptoms will personally or have family members who exhibit less involvement in home activities.	Not supported
Hypothesis 2: Mothers with more depressive symptoms will personally or have family members who exhibit less involvement in school activities.	Not supported; depression was a significant predictor but in the opposite direction: Mothers with more depressive symptoms were more involved in school activities.
Hypothesis 3: Mothers with more depressive symptoms will personally or have family members who provide less cognitive stimulation.	Not supported
Hypothesis 4: Mothers with more depressive symptoms will provide less emotional support.	Supported
Hypothesis 5: Mothers with more depressive symptoms will use more harsh discipline.	Not supported
Hypothesis 6: Mothers with more depressive symptoms will feel more parenting aggravation.	Supported

Maternal education will predict a significant amount of the variance in parenting involvement, practices, and aggravation. Compared to mothers with less education...	
Hypothesis 7: Mothers with more education will have higher academic expectations of their child.	Supported
Hypothesis 8: Mothers with more education will personally or have family members who exhibit more involvement in school activities.	Supported
Hypothesis 9: Mothers with more education will personally or have family members who provide more cognitive stimulation.	Supported
Hypothesis 10: Mothers with more education will provide more emotional support.	Not supported
Hypothesis 11: Mothers with more education will use less harsh discipline.	Not supported; maternal education was a significant predictor but in the opposite direction: Mothers with more education used more harsh discipline.
Hypothesis 12: Mothers with more education will feel less parenting aggravation.	Not supported
Acculturation will predict a significant amount of the variance in parenting involvement, practices, and aggravation. Compared to mothers who spent more time in the U.S. and speak less English to the child...	

<p>Hypothesis 13a: Mothers who have spent a higher percentage of their lives in U.S. will exhibit higher academic expectations of their child.</p> <p>Hypothesis 13b: Mothers who speak more English to their child at home will exhibit higher academic expectations of the child.</p>	<p>Not supported; mother's percentage of life in the U.S. was a significant predictor but in the opposite direction: Mothers with a higher percentage of life in the U.S. had lower academic expectations of their child.</p> <p>Not supported</p>
<p>Hypothesis 14a: Mothers who have spent a higher percentage of their lives in U.S. will personally or have family members who engage in more school activities.</p> <p>Hypothesis 14b: Mothers who speak more English to their child at home will personally or have family members who engage in more school activities.</p>	<p>Not supported</p> <p>Supported</p>
<p>Hypothesis 15a: Mothers who have spent a higher percentage of their lives in the U.S. will personally or have family members who provide more cognitive stimulation.</p> <p>Hypothesis 15b: Mothers who speak more English to their child in the home will personally or have family members who provide more cognitive stimulation.</p>	<p>Not Supported</p> <p>Not Supported</p>
<p>Hypothesis 16a: Mothers who have spent a higher percentage of their lives in U.S. will use less harsh discipline.</p> <p>Hypothesis 16b: Mothers who speak more English to their children in the home will use less harsh discipline.</p>	<p>Not supported; mother's percentage of life spent in the U.S. was a significant predictor, but in the opposite direction: Mothers who spent a higher percentage of their lives in the U.S used more harsh discipline.</p> <p>Supported</p>

<p>Hypothesis 17a: Mothers who have spent a higher percentage of their lives in U.S. will feel less parenting aggravation.</p> <p>Hypothesis 17b: Mothers who speak more English to their children in the home will feel less parenting aggravation.</p>	<p>Not supported</p> <p>Supported</p>
<p>Social support will predict a significant amount of the variance in parenting involvement, practices, and aggravation. Compared to mothers who receive less social support...</p>	
<p>Hypothesis 18: Mothers who receive more social support will personally or have family members who exhibit more involvement in home activities.</p>	<p>Supported</p>
<p>Hypothesis 19: Mothers who receive more social support will personally or have family members who exhibit more involvement in school activities.</p>	<p>Supported</p>
<p>Hypothesis 20: Mothers who receive more social support will personally or have family members who provide more cognitive stimulation.</p>	<p>Supported</p>
<p>Hypothesis 21: Mothers who receive more social support will show more emotional support.</p>	<p>Supported</p>
<p>Hypothesis 22: Mothers who receive more social support will use less harsh discipline.</p>	<p>Supported</p>
<p>Hypothesis 23: Mothers who receive more social support will feel less parenting aggravation.</p>	<p>Not supported</p>

CHAPTER V: DISCUSSION

The current study utilized an ecological/risk and resilience theoretical framework to examine various factors that might predict the parenting of Asian American and Asian immigrant mothers of third grade children. Specially, the model examined the role of three potential protective factors: maternal education, acculturation, and social support and one potential risk factor, maternal depressive symptoms, in predicting mother's parenting behaviors. The study focused on several dimensions of parenting in mothers of Asian heritage, including maternal academic expectations for the child, involvement in the child's home and school activities, provision of cognitive stimulation and emotional support, use of harsh discipline, and aggravation in the parenting role.

The current study is unique in focusing on the under-investigated group of mothers of Asian heritage. Although a large body of literature has documented the major role that parenting and parenting involvement play in children's academic achievement and social-emotional development (e.g., Bradley & Caldwell, 1995; Fan, 2001; Jeynes, 2003), there are very few studies that focus on the parenting practices of Asian American and Asian immigrant mothers. In particular, studies have failed to identify factors that may contribute to differences in the way that Asian families are raising their children and becoming involved in children's formal education. This study provided an opportunity to examine Asian American and Asian immigrant mothers' parenting practices and parenting involvement by using data from a national representative dataset: the Early Childhood Longitudinal Studies Kindergarten Class (ECLS-K) of 1998-99, Third Grade Database.

The major purpose of the current study was to examine selected individual, family, and community level factors that predict the parenting of Asian American and Asian immigrant mothers. Because there are so few studies of this group, it is important to consider characteristics of the sample. This study provides information about the education, mental health, acculturation, and social support of a national study of mothers of Asian heritage who have third grade children. Acculturation is examined at the individual level, as the percentage of time a mother has lived in the U.S. and at the family level by examining the extent to which the mother speaks English to her child at home. Findings also examine numerous measures of parenting, from the academic expectations a mother has for her child; to maternal and family involvement in school activities, home activities, and cognitive stimulation; to maternal emotional support and use of harsh discipline; and finally, to maternal frustration in the parenting role.

Ecological theory emphasizes the importance of examining human behavior within a broader social context (Bronfenbrenner, 1979). The limited existing literature on Asian parenting addresses very different populations, from studies of well-educated Chinese families living in the U.S. and Canada (e.g. Chao, 1994; Dyson, 2001) to literature reviews that include less educated, low income immigrant Asian families living in American cities (Fan, 2001; Ji et al., 2006). A few studies include national samples of American and Asian immigrant families, such as the National Longitudinal Survey of Youth/Mother-Child Supplement (Hong & Ho, 2005), but these studies obtained data that are much older than data collected in the ECLS-K. The opportunity to use a recent dataset with a nationally representative sample of Asian American and Asian immigrant parents of elementary-age children may provide valuable information about the current

parenting behaviors of mothers that share this cultural background, as well as predictors of these behaviors.

Characteristics of Mothers

It is important to consider demographic and other characteristics of Asian American and Asian immigrant mothers of third grade children who participated in this longitudinal study. The overwhelming majority of study mothers (99.6%) were biological mothers of their children. More than 81% of mothers in this study were married, a finding that is similar to data from a 2005 Census report indicating that 84% of Asian children are living with two married parents (Child Trends, 2007). Given that only two-thirds (67%) of children under 18 in the U.S. lived with married parents in 2006 (U.S. Census Bureau, 2007), the Asian and Asian immigrant mothers in this study have a higher marriage rate than mothers in the general U.S. population.

Mothers in this study were an average of 39 years of age and had two to three adults living in their household. Because most of the mothers were married, one of these adults was generally the mother's husband. Participants in this study had an average of 2.5 children, a birth rate that is slightly higher than the average of two children in U.S. families in 2002 (Klein, 2007). The Asian American and Asian immigrant mothers in this study averaged 14 years of education, which is the equivalent of an associate college degree or post secondary degree. Approximately 46% of participating mothers had completed a bachelor's degree or higher, a much higher percentage than the 27% of American adults who have a bachelor's degree (U.S. Census Bureau, 2004). This high level of education is consistent with 2004 U.S. Census Bureau report which shows that Asians were the racial/ethnic group with the highest proportion of people with a

bachelor's degree or higher; in 2004, 49% of Asian adults in the U.S. held a bachelor's or a more advanced degree (Longley, 2007).

It is also interesting to note that eight out of ten (82%) of the mothers of Asian heritage in this study were born in a foreign country. Approximately one third of mothers in the current sample did not have U.S. citizenship status. In another recent study, two-thirds (66%) of Asian American adults were foreign born (Roysircar & Maestas, 2003). Mothers in the current study had children who entered kindergarten in 1998-99, with third grade data collected in 2001. The high percentage of foreign born participants in the ECLS-K data set reflects the rapid growth of Asian immigrants to the U.S. within recent years (Grieco, 2004).

The Asian American and Asian immigrant mothers in this study also had a high rate of employment in the U.S. labor force. More than half (53%) of mothers in the current sample were working full-time and an additional 20% were working part-time. Thus, almost three quarters (73%) of the mothers were working outside the home when their children were attending third grade. This percentage is higher than the average rate of mothers of school-age children employed in the U.S. labor force, reported by the U.S. Census to be 67% in 2000 (Hernandez, 2004).

In examining the household income of study mothers, it was found that approximately 20% reported an income of less than \$25,000 annually, 31% an income from \$25,000 to \$49,999, 15% an income from \$50,000 to \$74,999, and 35% an income above \$75,000. This data can be compared with US Census data for 2000, where 29% of the US population had household income less than \$25,000, 29% had household income between \$25,000 and \$50,000, 19% had household income between \$50,000 to \$75,000,

and 23% had household income above \$75,000 (Census Scope, 2007). Thus, the Asian American and Asian immigrant mothers in this study were members of families that were wealthier than the general U.S. population. Overall, findings indicate that the current sample of Asian and Asian immigrant mothers were more likely to be married, were more educated, were more likely to be employed, and had higher household incomes than mothers in the larger U.S. population.

Mental Health, Acculturation, and Social Support of Study Mothers

Although the major purpose of this study was to examine predictors of Asian American and Asian immigrant mothers' parenting, it is also important to examine the mothers' overall levels of mental health and social support, and two indicators of their acculturation, in the larger sample. This information provides a context for interpreting the study's findings concerning the prediction of maternal involvement, parenting practices, and parenting aggravation.

Current findings revealed a low incidence of depressive symptomology among study mothers, with only 7% of mothers considered at risk for clinical depression. This percentage is below the average 10% of mothers who are reported to suffer depression annually (NIMH, 2005), but similar to the 7% rate found among Chinese American men and women in a previous study of primary care patients (Hsu et al., 2005). The rate of depressive symptoms for mothers of Asian heritage in this study is also far below that found in some studies of mothers from other racial/ethnic groups in the U.S. In two previous community studies, 41% to 47% of African American low income mothers of preschoolers were considered at high risk for clinical depression (McGroder, 2000; Tyler, 2004).

In the current study, 70% of mothers exhibited at least one symptom of depression, but the average mother exhibited a low level of depressive symptoms. These findings may be influenced, at least partially, by the fact that mothers had a higher than average rate of marriage, a higher than average rate of employment, and a higher than average family income. Thus, the Asian American and Asian immigrant mothers did not experience some of the stressors of mothers from other racial/cultural groups in previous studies (McGroder, 2000; Tyler, 2004).

This study utilized two measures of Asian American and Asian immigrant mother's acculturation: percentage of mother's life spent in the U.S. and the extent to which the mother spoke English to her child in the home. Results showed that mothers averaged 56 percent of their lives in the U.S. The average mother had spent 22 years in the U.S., so she would have immigrated from an Asian country at 17 years of age. All of the mothers in the study had spent at least four years in the U.S. Thus, the large majority of mothers in the sample were not recent immigrants.

On the second measure of acculturation, English spoken to the child at home, mothers responded with a wide range of responses, with some mothers speaking to their child only in Asian languages and other mothers speaking English to their child very often. The average mother reported speaking English in the home at the midpoint between "sometimes" and "often." Thus, most mothers spoke and understood at least some English, even though they may have chosen to also speak the Asian language at home. It should be noted that many Asians who immigrate to the U.S. are educated middle-class professionals with at least some knowledge of English when they arrive

(Zinn & Eitzen, 2004). One can assume that some mothers wish their children to develop skills in speaking both English and Asian languages.

Finally, study mothers reported on the level of social support they received from family members, friends, and others to provide help in such areas as child care, transportation, school problems, financial assistance, and personal advice. On average, mothers reported a high level of social support (almost 10 on a scale of 0 to 12). This finding is consistent with Asian values of collectivism and the importance of family (e.g. Chao & Tseng, 2002; Julian et al., 1994). In Asian families, adults expect to receive both instrumental and emotional support from their immediate families, extended family members, and close friends (e.g. Liu & Li, 2006).

Predictors of Asian American and Asian Immigrant Mothers' Parenting

The major goal of this study was to use an ecological/risk and resilience framework (Bronfenbrenner, 1986; Fraser et al., 2004) to examine factors that might predict the parenting of Asian American and Asian immigrant mothers. Consistent with this theoretical framework, factors at the individual level (maternal depressive symptoms, education, percentage of life in the U.S.), family level (maternal use of English with the child in her home), and community level (social support) were found to predict parenting behaviors and feelings of aggravation. The study found that each of these variables had an impact on at least one measure of parenting involvement, parenting practices, or parenting aggravation. Overall, maternal depression was found to be a risk factor, maternal education and social support played a protective role, and one measure of acculturation, maternal use of English in her home, was also found to be a protective factor related to the parenting of Asian American and Asian immigrant mothers.

Maternal Depressive Symptoms

In this study, it was hypothesized that maternal depressive symptomology would predict Asian American and immigrant mothers' or family members' parenting involvement, parenting practices, and parenting aggravation. Higher levels of maternal depressive symptoms were expected to predict less involvement in home and school activities, less cognitive stimulation and emotional support, more use of harsh discipline, and more parenting aggravation. Consistent with the two of the study's hypotheses, mothers with more depressive symptoms in this study provided less emotional support to children and exhibited more parenting aggravation than mothers with fewer depressive symptoms. These findings are consistent with other studies of Caucasian, African American, Hispanic and other ethnic minority families that found higher depressive symptoms linked to lower maternal warmth and emotional support for children (e.g. Cummings et al., 2005; Lovejoy, et al., 2000; Lyons-Ruth et al., 2002). Current findings extend previous research by showing that higher depressive symptoms are associated with less maternal nurturance and affection and more irritation and frustration in the parenting role among Asian American and Asian immigrant families. Although only a low percentage of mothers of Asian heritage in the study were at risk for clinical depression, having more depressive symptoms was associated with a lower quality of emotional relationship between the mother and her child.

Contrary to predictions, maternal depressive symptoms did not predict mothers' or family members' involvement in home activities and cognitive stimulation, or mothers' use of harsh discipline. Mothers with higher levels of depressive symptoms were no more likely than mothers with lower symptoms to personally or have family

members engage in home activities with their children, such as chores, reading and exercise; to provide children with cognitively stimulating experiences, such as trips to museums and art or music lessons; or to use harsh discipline techniques such as spanking, threatening, or yelling at their child.

Although these findings contradicted the hypothesis, they are consistent with some other studies that failed to find a significant association between depressive symptoms and maternal involvement in home activities. For example, Albright & Tamis-LeMonda (2002) conducted a study examining the relationships between maternal depressive symptoms and parenting in low-income, White, African American, and Latina mothers of 18-24 month-old toddlers. As in the current study, mothers with more depressive symptoms were significantly less sensitive, engaged, and gentle with their children than mothers with fewer depressive symptoms. However, maternal depressive symptoms were not found to be related to mothers' provision of play materials and organization of the home environment for their toddler-age children. Thus, depression was related to the emotional quality of the mother's relationship with her child but not her involvement in providing the child with stimulating home activities.

A larger meta-analysis study of depression and parenting by Lovejoy et al. (2000) also found that maternal depression was most strongly associated with negative behaviors such as hostility toward the child, somewhat linked to disengagement, and weakly related to pleasant social interaction. The meta-analysis further revealed that young children, especially infants, experienced the most impaired parenting related to maternal depression. Current results are consistent with this analysis, showing that depressive symptoms were linked to lower emotional support and feelings of aggravation, even in a

sample of older, school age children. However, there was no relationship between depressive symptoms in mothers of Asian heritage and their personal or family members' engagement in home activities or cognitive stimulation of their children. In the larger meta-analysis study, socioeconomic status was also found to moderate the association between depression and positive parenting behavior; specifically, depression was not associated with lowered levels of positive parenting behavior unless the mother was dealing with high economic stress. The higher than average socioeconomic status of mothers of Asian heritage in this study may have helped to buffer any of the negative effects of maternal depressive symptoms on mothers' and family members' engagement in home activities and cognitive stimulation of children.

Although maternal depressive symptoms were linked to poorer emotional support and feelings of parenting aggravation in this study, they were not related to mothers' use of harsh discipline. This finding may be due to the fact that the Asian American and Asian immigrant mothers in this study reported very low levels of harsh discipline practices (average of .33 on a scale of 0-4). Of mothers who used any harsh discipline technique, the highest number used "yell at or threaten the child" compared to spanking, hitting, and making fun of the child. The low level and limited variability in mothers' use of harsh discipline seems likely to have affected the lack of a significant relationship between maternal depressive symptoms and harsh discipline techniques.

One surprising finding was that maternal depressive symptoms were a significant predictor of school involvement, but in the opposite direction that was expected. Mothers with more depressive symptoms were more personally involved or had family members who were more involved in children's school activities, such as attending school open

houses and teacher conferences, than mothers with fewer depressive symptoms. One possible explanation for this relationship is that mothers with more, as compared to fewer, depressive symptoms were more anxious or bothered about their children's performance in school. Mothers with more depressive symptoms may have been more affected by the high societal expectations for Asian children's school performance (Lee, 1996). If mothers with more depressive symptoms were more anxious about children's school achievement, they might have become more involved in school activities, such as parent teacher conferences, science fairs, and other school events.

Maternal Education

Maternal education was a second factor hypothesized to be a significant predictor of Asian American and Asian immigrant mother's parenting involvement, parenting practices, and parenting aggravation. Higher levels of maternal education were expected to predict higher academic expectations for the child, more involvement in school activities, and more cognitive stimulation and emotional support of children. It was further hypothesized that higher levels of maternal education would predict less harsh discipline and less parenting aggravation.

As hypothesized, maternal education was a significant predictor of three aspects of parenting: maternal academic expectations for her child, maternal and family involvement in school activities, and maternal and family members' cognitive stimulation of the child. Mothers with more years of education had higher expectations for their children's academic achievement, had families more involved in children's school activities, and engaged their children in more cognitively stimulating activities, such as trips to zoos and historic sites and music, dance, and arts lessons. These findings are

consistent with previous studies involving a wide range of cultural groups that also linked higher maternal education to higher academic expectations for children, greater school involvement, and more intellectual stimulation (e.g., Fan, 2001; Jeynes, 2003; Seginer, 2006; Simons et al., 1990).

The current findings suggest that mothers with more years of education recognize the benefits of formal schooling, are motivated by their educational experiences, and set high academic expectations for their children. These mothers or their family members may feel comfortable interacting with their children's schools and enjoy a range of cultural activities. Therefore, it is not surprising that Asian American and Asian immigrant mothers with higher (versus lower) levels of education personally participated or had family members who participated in more school activities, had more cognitively stimulating materials in their homes (e.g., dictionary, calculator), and provided their children with a wider range of stimulating cognitive experiences, such as lessons, trips, and recreational activities.

Contrary to expectations, maternal education was not a significant predictor of the emotional support that mothers of Asian heritage provided to their children. This finding is similar to one found by Jackson et al. (2000), who examined the relationship between maternal education and children's emotional support in a sample of low income African American mothers. In both the current and the previous study, maternal education was not significantly related to the mother's emotional support of her child. In this study, Asian American and Asian immigrant mothers exhibited very high levels of emotional support for their children (averaging 10.3 on a scale of 0-12). Thus, no matter what their

education level, study mothers reported showing a high level of physical affection and caring behavior toward their children grade child.

As in the case of emotional support, maternal education did not prove to be a significant predictor of parenting aggravation. This finding was not surprising because mothers, on average, expressed a low level of parenting aggravation (2.3 on a scale of 0-12) and there was little variability in their responses. Overall, the mothers of Asian heritage in this study showed little frustration with parenting and did not feel angry with their child or bothered by the responsibilities of parenting. Maternal reports of low parenting aggravation are consistent with the high levels of emotional support that mothers in this study reported providing to their children. Again, the mothers' low level of parenting stress may be tied to their high likelihood of marriage and their higher than average rates of education and family income, as compared to the overall U.S. population. One previous study found higher family income to be related to lower parental aggravation (USDHHS, 2005).

Finally, this study hypothesized that higher levels of maternal education would be predictive of lower use of harsh discipline. Although maternal education was a significant predictor of harsh discipline, results were in the opposite direction than expected. Mothers of Asian heritage with more education used more harsh discipline. It should be remembered mothers, overall, used very few harsh discipline practices (.33 on a scale of 0-4). Since more years of education was also predictive of higher academic expectations for children, perhaps well educated mothers were more likely to yell at or threaten their third grade children when they did not do their homework or work hard on their cultural lessons (music, arts, and dance). Such mothers may have been stricter than

lower educated mothers in making sure that their children were serious about their studies.

Acculturation

Acculturation was a third factor hypothesized to predict Asian American and Asian immigrant mothers' parenting involvement, parenting practices, and parenting aggravation. Acculturation was measured by two indicators: the percentage of the mother's life spent in the U.S. and the mother's use of English with her child in the home. As noted earlier, most mothers in the study were not recent immigrants, even though a third did not hold citizenship status. All of Asian American and Asian immigrant mothers interviewed had spent a minimum of four years in the U.S. In this study, it was hypothesized that mothers who had spent a higher percentage of their lives in the U.S. and spoke more English to their children at home would exhibit higher academic expectations, would personally or have family members who engaged in more school activities, provide more cognitive stimulation, use less harsh discipline, and express less parenting aggravation than mothers who spent less time in the U.S. and spoke less English to children at home.

Current findings did not support the hypothesis that more acculturated mothers would have higher academic expectations for their third grade children. Maternal use of English in the home was not a significant predictor of mother's academic expectations. Percentage of life spent in the U.S. was a significant predictor of mothers' academic expectations for her child, but in the opposite direction than was expected. Specifically, mothers who had spent a higher percentage their life in the U.S. had lower academic expectations for their children. Although this finding was surprising, it may be due to the

fact that Asian values and Confucian doctrines consider education to be the key means for acquiring personal advancement, higher social status, and respect (e.g. Lin & Fu, 1990; Riley, 2003). Many parents from East and Southeast Asia work hard to help their children achieve, organizing their home lives to promote studying on a daily schedule and planning academically-oriented activities for the weekends (e.g. Chen, Lee, Stevenson, 1996). The success of the whole family is reflected in student's academic success. In contrast, American culture emphasizes individualism and diversity; with high academic achievement as only one indicator of success (Lin & Fu, 1990). Thus, the longer the percentage of time mothers spent in the U.S., the more mothers may value other types of success, such as artistic or business achievements that do not require advanced academic degrees. Mothers who have spent less time in the U.S. may be more likely to limit their expectations of success to academic work, and thus hold higher academic expectations for their children. Consistent with this view, one recent study found that parental expectations for academic achievement are higher in China than in the United States (e.g. Chen, et al., 2000).

As hypothesized, findings revealed that mothers who spoke more English to children at home were more personally involved or had family members who were more involved in school activities than mothers who spoke less English at home. Mothers with greater skills in speaking and understanding English should be better able to communicate with their children's teachers, and probably felt more comfortable participating in teacher conferences, classroom events, school fundraising, and other volunteer school activities. In contrast, percentage of life in the U.S. was not a significant predictor of involvement in school activities. Several other factors in addition

to English spoken at home, such as maternal education and social support, were found to be more strongly related to school involvement.

Contrary to expectations, the two measures of acculturation in this study failed to predict mother's cognitive stimulation of her child. Engagement in cultural activities (e.g., plays, museums), enrolling children in creative and dramatic arts, and keeping educational or cultural resources (magazines, newspapers) in the home were found to be related to mother's education, but not the two measures of acculturation. However, it should be noted that a majority of the activities on this scale were concerned with the arts and sports/recreation, rather than academic activities (e.g., math class, summer school). Possibly, Asian American and Asian immigrant mothers' level of acculturation is more strongly related to their stimulation of academic and intellectual activities.

Consistent with expectations, mothers who spoke more English to their children in the home were less likely to use harsh discipline and less likely to feel aggravation in the parenting role than mothers who spoke less English at home. Mothers who used more English seem more likely to be familiar with discipline styles in the U.S. that discourage use of spanking and other harsh discipline. Such mothers may adopt more constructive discipline styles, such as direct communication, withdrawing privileges, or giving a warning instead of spanking or threatening a child. These findings are consistent with previous studies which suggest that higher levels of acculturation among Chinese American and Chinese immigrant parents are associated with more authoritative (versus authoritarian) parenting practices (Chiu, et al., 1992; Lin & Fu, 1992). Similarly, mothers who speak more English may feel better prepared to deal with an arguing child,

handle behavior problems, and provide support for children's school work, instead of feeling aggravated, irritated, or overwhelmed in the parenting role.

Interestingly, the second measure of acculturation, percentage of life in the U.S. was a significant predictor of harsh discipline, but in the opposite direction as expected. Mothers who spent more of their lives in the U.S. were more likely to employ harsh discipline, such as yelling at or threatening their child. As noted earlier, these mothers also had lower academic expectations for their children than mothers who had spent less time in the U.S. It is possible that mothers who spent more of their lives in the U.S. were less tied to Asian values that narrowly focus on children's academic success, and allowed their children to engage in a wider range of activities and behaviors. However, by giving their children more freedoms, the mothers may have also had to use more types of harsh discipline (especially yelling and threatening) to control their children's behavior. Although percentage of life in the U.S. was linked to greater use of harsh discipline, it was not found to be predictive of parenting aggravation. Overall, current findings suggest that measuring acculturation is a complex process, with different indicators resulting in different outcomes in this study.

Social support

A fourth and final variable that was hypothesized to predict Asian American and Asian immigrant mother's parenting involvement, parenting practices, and parenting aggravation was social support. Mothers who received greater social support were expected to personally or have family members who exhibited more involvement in home activities, school activities, and cognitive stimulation; to provide more emotional support for their child; to use less harsh discipline; and to feel less parenting aggravation than

mothers who received less social support. As noted earlier, mothers of Asian heritage in this study reported a very high level of instrumental and emotional support from family members, friends, and others. This finding was not surprising because many Asian countries have relatively closed societies that place an emphasis on social networks (Kim & McKenry, 1998). Other studies find it common for Asian families to seek support from both extended family members and friends (e.g. Liu & Li, 2006).

As hypothesized, social support was a strong predictor of parenting outcomes in this study. Mothers with more social support were personally or had family members who were significantly more involved in home and school activities and provided more cognitive stimulation and emotional support for their children than mothers with lower social support. As predicted, mothers with higher social support also used less harsh discipline with their child than those with lower support. These findings are consistent with studies of European and African American families that also find a strong relationship between social support and positive parenting (McLoyd, 1990, 1998). For example, studies have found that African American mothers with higher social support use more nurturant and consistent parenting practices, and are less likely to use harsh discipline strategies such as scolding or making fun of their children, than mothers with less support (McLoyd, 1990; Weinraub & Wolf, 1983). One past study of harsh discipline and child maltreatment also found that high social support for mothers may protect children from these negative outcomes (Garbarino, 1976).

The strong relationship between social support and parenting practices in this study is not surprising. Mothers who have more assistance from relatives and friends with children's health, child care, school problems, transportation, and other family needs

should have more personal time or family members' time to engage in home activities and school activities with their children and to take their children to cognitively stimulating places in the community (e.g., museums, concerts, zoos). Access to advice from members of social support networks on children's school problems should increase mothers' confidence about participating in school activities. Having help with a number of child-related problems, such as child care, illnesses, and school problems, should also give mothers more time and energy to express affection and emotional support to their children, and reduce the need for them to use harsh discipline.

Contrary to one hypothesis, social support was not a significant predictor of parenting aggravation. Possibly social support does not have a direct effect on parenting aggravation, but moderates the relationship between depressive symptoms and mothers' feelings of aggravation. High social support may buffer the impact of depressive symptoms on mothers' feelings of frustration and irritation in the parenting role. However, this relationship was not examined in the present study.

Limitations

Although the current study extends existing literature by examining factors that may predict parenting involvement, parenting practices, and parenting aggravation among Asian American and Asian immigrant mothers, the research has several limitations. First, this study used secondary data analysis. The use of secondary data limited the measures available to answer study questions. For example, the measures of parenting practices in the ECLS-K examined only emotional support and cognitive stimulation, and did not address other common parenting behaviors such as parental consistency, structure, and control (e.g., Baumrind, 1966, 1971; Chao, 1994; Maccoby &

Martin, 1983; Slater & Power, 1987). There was also no opportunity to examine culture-specific parenting concepts, such as the Chinese “guan” or “training” and child monitoring (Chao, 1994; Stewart et al., 2002). Use of additional and more culturally-sensitive measures of parenting would provide more complete information about the specific ways in which maternal depression, education, acculturation, and social support predict the parenting of mothers of Asian heritage.

A second limitation was the measurement of acculturation. The ECLS-K provided only two measures that could be used to assess this concept: percentage of life spent in the U.S. and the extent to which mothers spoke English to their child in the home. There was no comprehensive scale of acculturation that measured a range of values, customs, and behaviors that are associated with adopting the norms of American culture (Berry, 1990.) The two indicators of acculturation used in this study do not seem adequate to measure the multidimensional process of acculturation. It should also be noted that there was no third grade data available on mother’s use of English in her home. Therefore, it was necessary to use kindergarten data to assess mothers’ use of English with her child. It is possible that some mothers increased their use of English over time, especially as their children entered higher grades in school and spoke more English in the family.

Another limitation in this study was the measurement of involvement in school and home activities and cognitive stimulation. On each of the ECLS-K measures of these variables, the questionnaire asked about the parenting behaviors of both the mother and other members of her family. Therefore, it was not possible to separate mothers’

parenting behaviors from those of the father, the child's grandmother, or other family members. .

In interpreting the study's findings, one should remember that the study is cross-sectional. Although the study identifies significant predictors of parenting behaviors, no causal directions can be concluded from the relationships. For example, it is not known whether maternal depression leads to parenting aggravation, whether mothers' irritation and frustration in parenting contributes to maternal depression, or whether an unknown third variable (e.g., maternal illness) is largely responsible for this relationship. Future studies will need to use longitudinal designs to explore causation.

Finally, there were some threats to the interval validity of this study related to participant reactivity. Almost all study data were collected through a telephone interview, so some mothers may have given socially-desirable responses to selected items, such as their school involvement, social support, depressive symptoms, use of harsh discipline, and parental aggravation. Participants may have responded differently if they were answering an anonymous questionnaire. In this study, mothers were also the sole reporters on their behaviors. There was no opportunity to question others about the mother's behavior, such as asking the third grade teacher about mother's involvement in school activities.

Programmatic and Policy Implications

Despite several limitations, results of the current study have important implications for educators and other family practitioners interested in promoting positive parenting among Asian American and Asian immigrant families. These findings are

important given the lack of existing literature about factors that may affect parenting involvement, parenting practices, and parenting aggravation in families of Asian heritage.

First, the study revealed that higher maternal depressive symptoms were predictive of lower maternal emotional support and higher parenting aggravation among Asian American and Asian immigrant mothers. The findings suggest that these mothers, like mothers from other cultural backgrounds, would benefit from interventions that seek to reduce mental health symptoms related to depression (e.g., loneliness, sleeplessness, the “blues”). Although the percentage of Asian and Asian immigrant mothers at risk for clinical depression was lower than in the general population (7% versus 10% in the U.S. population), research also shows that these mothers are less likely than other American mothers to seek therapy for depressive symptoms because they fear loss of face (Kung, 2004). Therefore, educational and mental health interventions to reduce depressive symptoms in this cultural group may improve the quality of mothers’ emotional relationship with her child and reduce her parenting aggravation. Family life educators should be trained to assess depressive symptoms of mothers of Asian heritage because their desire to save face and present a positive image may cause them to underreport mental health problems.

One of the key findings of this study was that social support predicted a range of positive parenting behaviors. Mothers with greater social support, as compared to those with less support, were in families that engaged in more home and school activities and provided more cognitive stimulation to children. Mothers who had higher support also provided their children with more emotional support and used less harsh discipline than their peers with less support. These findings illustrate the value of helping mothers of

Asian heritage to develop strong social support networks. These networks may be especially important for immigrant families as they face the challenges of adapting to a new culture. Family professionals working with social service agencies, school systems, churches, and informal groups should focus on helping mothers to develop the support networks that are common in Asian countries and may help mothers be better parents to their children.

Third, the current findings show that maternal education was a strong predictor of maternal and family involvement in cognitive stimulation and school activities, with more educated mothers in families that were more actively involved in their children's academic and cognitive activities. These results with an understudied group of mothers of Asian descent add to the literature demonstrating positive links between maternal education and positive parenting in the larger population. Investments in maternal education may have positive benefits for elementary-age children in Asian American and Asian immigrant families.

Finally, Asian American and Asian immigrant mothers' use of English in the home was associated with greater school involvement, less parenting aggravation, and less use of harsh discipline. These findings suggest that providing opportunities for mothers, and especially recent immigrant mothers, to learn and improve their English will increase their opportunities to actively participate in their children's formal education. English skills may also reduce mother's sense of frustration in the parenting role and use of harsh discipline, especially because mothers will be better able to communicate with children who may prefer to speak English rather than Asian languages. Schools,

churches, and other social service agencies should be encouraged to offer ESL classes for mothers with limited or no English skills.

Directions for Future Research

The current findings suggest that maternal depressive symptoms, education, acculturation, and social support may play an important role in parenting involvement and parenting practices. However, this study also highlights the need for future research. First, additional studies should include more comprehensive measures of both acculturation and parenting practices. Acculturation measures should explore a wide range of information about parental adaptation to a new culture and maintenance of the original culture, including questions about language use, values, traditions, and friendships. Measures of parenting should assess a wide range of constructs, including home and school involvement, warmth/nurturance, structure (including family routines), control, cognitive stimulation, and parental feelings of satisfaction or distress in the parenting role. Future studies of Asian parenting might also examine cultural-specific constructs, such as training and child monitoring. Measures of parenting should separate the behaviors of mothers, fathers, and other family members to assess their unique parenting practices. Efforts should also be made to study the reliability and validity of these measures with Asian American and Asian immigrant parents.

The current study focused on a representative sample of mothers of Asian heritage in the U.S. As noted, these mothers had higher marriage rates, employment rates, educational attainment, and household incomes than mothers in the general U.S. population. However, since the passage of the Hart-Cellar Act of 1965, which ended highly restrictive immigration policies, less-educated groups of Asians have also

immigrated to the U.S. (Wikipedia, 2007). Many of these less-educated, lower income Asian families reside in urban areas and are employed as low-skilled workers in restaurants, hotels, and the hospitality trade. One exploratory study reveals that many of these mothers speak limited English and have almost no interaction with their children's schools (Ji et al., 2006). Future studies should explore the relationships between maternal mental health, education, acculturation, social support, and parenting variables in this population of lower-income Asian immigrant families.

Future studies should also use more complex models to examine the possible mediating and moderating effects of individual and family variables on parenting outcomes. For example, studies might examine whether social support or family income moderates the relationship between maternal depressive symptoms and parenting involvement or parenting aggravation. Future studies might also examine whether the patterns of relationship found in this study differ for mothers and fathers, parents of sons versus daughters, and parents of children at different developmental stages (e.g., preschool, elementary age, adolescence). Finally, new studies should explore other risk and protective factors that may influence the parenting behaviors of mothers of Asian descent, such as maternal employment, religiosity/church attendance, and neighborhood safety.

Conclusion

The current study utilized an ecological/risk and resilience theoretical framework to examine the role of maternal depressive symptoms, maternal education, acculturation and social support in predicting the parenting of mothers of Asian heritage. Overall, findings support an ecological view of individual, family, and community level

influences on parenting involvement, parenting practices, and parenting aggravation. Maternal education, English spoken in the home, and social support played a protective role, as shown by their relationship to a number of positive parenting behaviors. In contrast, a greater number of maternal depressive symptoms placed mothers at risk for feeling aggravated in the parenting role and for providing low emotional support to her child. Current findings emphasize the need for educators, family therapists, and other family practitioners to introduce interventions that will enable mothers of Asian descent to obtain treatment for depressive symptoms, develop social support networks, and obtain additional education, including the opportunity to develop better English skills. Interventions that address strengths and cultural traditions of Asian American and Asian immigrant families may be especially effective in helping these mothers to become more capable, nurturing parents.

Appendix A: Short Form of Center for Epidemiological Studies Depression Scale
(CES-D)

I am going to read some statements that may relate to how you have felt about yourself and your life during the past week. For each statement I read, please indicate how often in the past week you felt or behaved this way. There are no right or wrong answers.

Would you say never, some of the time, a moderate amount of the time, or most of the time?

1	2	3	4	7	9
NEVER	SOME OF THE TIME	MODERATE AMOUNT OF TIME	MOST OF THE TIME	REFUSED	DK

How often during the past week have you:

- ___PPQ 100. Felt that you were bothered by things that don't usually bother you?
- ___PPQ 110. Felt that you did not like eating, that your appetite was poor?
- ___PPQ 120. Felt that you could not shake off the blues even with help from your family or friends?
- ___PPQ 130. Felt that you had trouble keeping your mind on what you were doing?
- ___PPQ140. Felt depressed?
- ___PPQ 150. Felt that everything you did was an effort?
- ___PPQ160. Felt fearful?
- ___PPQ170. Felt that your sleep was restless?
- ___PPQ180. Felt that you talked less than usual?
- ___PPQ190. Felt lonely?
- ___PPQ200. Felt sad?
- ___PPQ210. Felt that you could not "get going"?

Source: Radloff, L. (1977).

Appendix B: Acculturation (Study-Specific)

PLQ 080

How often does mom use NON-ENGLISH LANGUAGE in speaking to {Child}? Would you say?

NEVER.....	1
SOMETIMES.....	2
OFTEN.....	3
VERY OFTEN.....	4
NOT ASCERTAINED.....	-9
NOT APPLICABLE.....	-1

FSQ 030

How old are you? _____

FSQ 250

How old {was/were} {you/{Parent's name}} when {you/he/she} first moved to the United States?

AGE _____	
REFUSED.....	77
DON'T KNOW.....	99

Appendix C: Social Support Scale (Study-Specific)

CFQ 020

Now I am going to read some statements. Please tell me whether each statement is never true for you, sometimes true for you, or always true for you.

Would you say it is never true for you, sometimes true for you, or always true for you?

	NEVER TRUE	SOMETIMES TRUE	ALWAYS TRUE	REF	DK
a. If I need to do an errand, I can easily find someone to watch {Child}	1	2	3	7	9
b. If I need a ride to get {Child} to the doctor, friends or family will help me	1	2	3	7	9
c. If {Child} is sick, friends or family will call or come by to check on how things are going	1	2	3	7	9
d. If {Child} is having problems at school, there is a friend, relative or neighbor I can talk it over with	1	2	3	7	9
e. If I have an emergency and need cash, family or friends will loan it to me	1	2	3	7	9
f. If I have troubles or need advice, I have someone I can talk to	1	2	3	7	9

Appendix D: Involvement in Home Activities Scale (Study-Specific)

HEQ 010

Now I'd like to talk with you about {Child}'s activities with family members. In a typical week, how often do you or any other family members do the following things with {Child}?

	NOT AT ALL	ONCE OR TWICE	3-6 TIMES	EVERY DAY	REF	DK
a. Tell stories to {Child}? Would you say not at all, once or twice, 3-6 times, or every day?	1	2	3	4	7	9
b. Sing songs with {Child}	1	2	3	4	7	9
c. Help {Child} to do arts and crafts?	1	2	3	4	7	9
d. Involve {Child} in household chores, liking cooking, cleaning, setting the table, or caring for pets?	1	2	3	4	7	9
e. Play games or do puzzles with {Child}	1	2	3	4	7	9
f. Talk about nature or do science projects with {Child}	1	2	3	4	7	9
g. Build something or play with construction toys with {Child}	1	2	3	4	7	9
h. Play a sport or exercise together?	1	2	3	4	7	9
i. Practice reading, writing or working with numbers	1	2	3	4	7	9
j. Read books to {Child}	1	2	3	4	7	9

Appendix E: Involvement in School Activities Scale (Study-Specific)

PIQ 010

During this school year, have you or another adult in your household taken it upon yourself to contact {Child}'s teacher or school for any reason having to do with {Child}?

- YES..... 1
- NO..... 2
- REFUSED..... 7
- DON'T KNOW..... 9

PIQ 020

Since the beginning of this school year have you or the other adults in your household

	YES	NO
a. Attended an open house or back-to-school night?	1	2
b. Attended a meeting of a PTA, PTO, or Parent-Teacher Organization?	1	2
c. Gone to a regularly scheduled parent-teacher conference with {Child}'s teacher or meeting with {Child}'s teacher?	1	2
d. Attended a school or class event, such as a play, sports event, or science fair?	1	2
e. Volunteered at the school or served on a committee?	1	2
f. Participated in fundraising for {Child}'s school?	1	2

PIQ 060

Have you met {Child}'s teacher yet?

- YES..... 1
- NO..... 2
- REFUSED..... 7
- DON'T KNOW..... 9

Appendix F: Cognitive Stimulation Subscale (HOME-SF)

HEQ 017

In the past month, that is since {Month} {Day}, has anyone in your family done the following things with {Child}?

	YES	NO	REF	DK
a. Gone to a play, concert, or other live show?	1	2	7	9
b. Visited an art gallery, museum, or historical site?	1	2	7	9
c. Visited a zoo, aquarium, or petting farm?	1	2	7	9
d. Attend an athletic or sporting event in which {Child} was not a player?	1	2	7	9

HEQ 020

Outside of school hours in the past year, has {Child} participated in:

	YES	NO	REF	DK
a. Dance lessons?	1	2	7	9
b. Organized athletic activities, like basketball, soccer, baseball, or gymnastics?	1	2	7	9
c. Organized clubs or recreational programs like scouts?	1	2	7	9
d. Music lessons, for example, piano, instrumental music or singing lessons?	1	2	7	9
e. Art classes or lessons, for example, painting, drawing, sculpturing?	1	2	7	9
f. Organized performing arts programs, such as children's choirs, dance programs, or theater performances?	1	2	7	9

HEQ 021

Which of the following items does your family have in your home?

	YES	NO	REF	DK
a. A newspaper received on a regular basis?	1	2	7	9
b. A magazine received on a regular basis?	1	2	7	9
c. A dictionary or an encyclopedia?	1	2	7	9
d. A pocket calculator?	1	2	7	9

Appendix G: Emotional Support Scale (Study-Specific)

DWQ 010

I am going to read some statements. Please tell me whether each statement is completely true, mostly true, somewhat true, or not at all true.

	COMPLETELY TRUE	MOSTLY TRUE	SOMETIMES TRUE	NOT AT ALL	REF	DK
a. {Child} and I often have warm, close times together	1	2	3	4	7	9
b. Most of the time I feel that {Child} likes me and wants to be near me	1	2	3	4	7	9
c. Even when I'm in a bad mood, I show {Child} a lot of love	1	2	3	4	7	9
d. I express affection by hugging, kissing and praising {Child}	1	2	3	4	7	9

Appendix H: Harsh Discipline (HOME-SF)

DWQ 110

Most children get angry with their parents from time to time. If {Child} got so angry that (he/she) hit you, what would you do? Would you

	YES	NO	REFUSED	DON'T KNOW
a. Spank (him/her)	1	2	7	9
b. Hit (him/her) back	1	2	7	9
c. Make fun of (him/her)	1	2	7	9
d. Yell at (CHILD) or threaten (him/her)	1	2	7	9

Appendix I: Aggravation in Parenting Scale (Child Trends)

DWQ 010

I am going to read some statements. Please tell me whether each statement is completely true, mostly true, somewhat true, or not at all true.

	COMPLETELY TRUE	MOSTL Y TRUE	SOMETIMES TRUE	NOT AT ALL	REF	DK
a. {Child} does things that really bother me	1	2	3	4	7	9
b. I find myself giving up more of my life to meet {Child}'s needs than I even expected	1	2	3	4	7	9
c. I often feel angry with {Child}	1	2	3	4	7	9
d. {Child} seems harder to care for than most	1	2	3	4	7	9

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