INDIVIDUAL, FAMILY, SCHOOL, AND COMMUNITY PREDICTORS FOR DEPRESSION AND SELF-ESTEEM: A COMPARATIVE STUDY BETWEEN ASIAN AND LATINO ADOLESCENTS

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ABSTRACT

INDIVIDUAL, FAMILY, SCHOOL, AND COMMUNITY PREDICTORS FOR DEPRESSION AND SELF-ESTEEM: A COMPARATIVE STUDY BETWEEN ASIAN AND LATINO ADOLESCENTS

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The purpose of this study was to identify the predictors within the family, school, and community environments of Hispanic and Asian adolescents' that may predict mental health (depression and self-esteem). Another aim was to compare the significant predictors of depression and self-esteem between Hispanic and Asian adolescents. This study used secondary data from Wave II of the Children of Immigrants Longitudinal Study (CILS). The target population was 2,114 students (1,008 Hispanics and 1,106 Asians) who were about to graduate from high school and 1,213 parents. Hierarchical multiple regression analyses were conducted to examine the associations between environmental variables and mental health (depression and self-esteem) in Latino and Asian adolescents, as well as the additional effects of predictors in a sequential way. In terms of predicting depression, gender and family cohesion were significant predictors for both Hispanic and Asian adolescents. Ethnic differences were observed in the effects on self-esteem. For the Hispanic sample, family cohesion, perceptions of school quality, perceptions of school safety, and perceptions of neighborhood safety were significant predictors. Along with the Hispanic group, family cohesion, perceptions of school quality, and perceptions of school safety were also significant predictors for the Asian sample.

However, perception of neighborhood safety was not a significant predictor for Asian adolescents. Practice implications for effective interventions and recommendations for future study were suggested based on the findings of this study.

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CHAPTER 1

INTRODUCTION

In the United States (U.S.), ethnic minorities now constitute more than 36% of the total population (U.S. Census Bureau, 2011), specifically Latino and Asians make up one fifth of the population (U.S. Census Bureau, 2010). They are expected to continue to increase, from 19% in 2005 to approximately 40% of the total U.S. population by 2050 (Passel & Cohn, 2008). Among adolescents who are second generation immigrants (those with at least one immigrant parent) over half (51%) and 23% of all adolescents in the U.S. are Hispanic or Asian (Child Trends Data Bank, 2011). Because of the increasing numbers of ethnic minority youths, the behavioral, social, and psychological problems related to cultural adjustments have been rising as well, and this has become an important issue in the U.S. (Carvajal, Hanson, Romero, & Coyle, 2002; Guerrero, Hishinuma, Andrade, Nishimura, & Cunanan, 2006).

Depression and self-esteem have been regarded as fundamental mental health problems across all ethnic groups in the U. S. among youths, but this is especially true of Latinos and Asians (National Institutes of Mental Health, 2000; Russell, Crockett, Shen, & Lee, 2008). In 2007, 36.4% of Hispanic adolescents reported higher instances of depressive feelings compared with African American (29.2%) and Caucasian adolescents (26.2%) (Children's Memorial Research Center, 2009). In addition, Asian and Asian Pacific Islander American youth had the lowest levels of self-esteem as compared with African Americans, Hispanics, and Native Americans with a total 18,612 adolescents sampled (Dukes & Martinez, 1994). It is apparent from these results that depression and self-esteem among Hispanic and Asian adolescents are major public health issues that need to be addressed.

To date, a lot of studies have been conducted to identify predictors of psychiatric disorders among ethnic minorities. Although investigators have found various predictors of

depression and self-esteem among ethnic minority youths, the effects of their perceptions of school and neighborhood safety on their mental health were examined much less than other individual or family related predictors. In addition, numerous studies have focused only on some independent influences of predictors on ethnic minority youths' psychological adjustments (Branje, Hale, Frijns, & Meeus, 2010; Chung, Chen, Greenberg, & Heckhausen, 2009; Juang & Alvin, 2010; Way & Robinson, 2003). Furthermore, few comparative studies were conducted targeting the Latino and Asian communities, though they are the fast growing populations in the U.S.

The goal of this study is to verify the predictors which are influential in the depression and low self-esteem of Latino and Asian adolescents. The second goal of this study is to compare any differences in the significant predictors on depression and self-esteem in Latino verses Asian adolescents. To achieve these goals, this study intends: (1) to examine associations between demographic (gender and family income), family (family cohesion), school (perceptions of school quality, perceptions of school safety, and perceived school discrimination), and community (perceptions of neighborhood safety, and perceived discrimination) variables and mental health (depression and self-esteem) among Hispanic and Asian adolescents in the U.S.; (2) to test the additional effects of predictors on mental health (depression and self-esteem) among two youth ethnic groups in a sequential way, according to the additions of several predictor variables which can account for increases in variation, by using hierarchical multiple regression analyses; (3) to compare the significant predictors of depression and self-esteem within Hispanic and Asian adolescents. The findings of the study may provide an empirical basis and contribute to creating effective social work interventions for Latino and Asian adolescents and increase their psychological well-being.

This chapter begins with describing the growing Hispanic and Asian populations in the U.S. Then, a brief overview of mental health among them is presented. Last, the significance of the study is described.

1.1 Growing Latino and Asian populations in the U.S.

Asian and Hispanic populations are continuously increasing, and are currently the largest ethnic minority groups in the U.S., constituting 16.3% of the total U.S. population (U.S. Census Bureau, 2011a). Mexicans constitute 65.5%, Puerto Ricans form the second largest subgroup (9%), and Cuban Americans are the third largest (3.6%) racial group in the U.S (Pew Hispanic Center, 2011). More than 50% of the growth in the U.S. population since 2000 has been due to the increase of the Hispanic populations (U.S. Census Bureau, 2011a). From 2008 through 2050, Hispanic populations are projected to increase from 47 million to 133 million (CNN, August 13, 2008; U.S. Census Bureau, 2008). In 2010, 23.1% of children (under age 18) in the U.S. were Latino, either born in Mexico or having at least one parent of Mexican origin, which was a 38.8% increase from 2000 to 2010 (Dailymail, April 6, 2011; U.S. Census Bureau, 2011b). In addition, researchers predict that Hispanic growth could outpace the estimates due mostly to illegal immigration (Pew Hispanic Center, 2009)

Asian Americans/Pacific Islanders are the second fastest growing minority group in the U.S. after Hispanics (U.S. Census Bureau, 2010). Currently, more than 10 million Asian Americans are residing in the U.S. and they have been gradually increasing in numbers over the past few decades (Barnes & Bennett, 2002). Asians constituted less than 1% of the U.S. population in 1970 (Rhee, Chang, & Rhee, 2003), but they had increased to 4.8% of the total population by 2010 (U.S. Census Bureau, 2011a). Asian adolescents constitute 4.3% of the U.S. population under age 18, which is an increase of 31.2% from 2000 and 2010 (Dailymail, April 6, 2011; U.S. Census Bureau, 2011b). By 2021, the Asian American populations are expected to increase from 5.1% to 9.2% or 15.5 million to 40.6 million (CNN, August 13, 2008). According to the increases of Latino and Asian immigrant families in the U.S., research is needed to take into account the social and cultural contexts of Hispanic and Asian immigrants and identify the risk predictors that are related to their well-being.

1.2 Latino Adolescents and Mental Health

Latino adolescents in the U.S. are exposed to numerous challenges such as lower socioeconomic status (SES) and cultural maladjustments that put them at risk for psychological difficulties (Gonzales, Germa´n, Fabrett, & Meza, 2012). Higher depression and lower self-esteem are considered the primary mental health problems among Hispanic adolescents. According to previous studies, Hispanic Americans showed significantly higher depression rates than Whites, African Americans, and Asian Americans (Céspedes, & Huey, 2008; Choi, Meininger, & Roberts, 2006; Healthy People, 2010). Likewise, more Hispanic adolescents (34%) also reported higher levels of depression than Caucasian (26.5%) and African American (28.8%) adolescents (Centers for Disease Control, 2003). Although Latino youths have reported higher numbers of depressive symptoms compared to same age groups of other ethnicities, it has not known exactly how cultural factors contribute to them (Céspedes & Huey, 2008; Twenge & Nolen-Hoeksema, 2002). Higher rates of depression among Hispanic adolescents are associated with more psychological and behavioral problems. Those who are depressed were more likely to experience than non-Latino Whites lower academic achievement, higher rates of substance use, and more exposure to violence (Carvajal, Hanson, Romero, & Coyle, 2002), and they have also shown higher rates of suicidal ideation (Garcia & Saewyc, 2007).

Hispanic adolescents also reported lower self-esteem than African-American and White adolescents (Adams, Kuhn, & Rhodes, 2007; Bachman, O'Malley, Freedman-Doan, Trzesniewski, & Donnellan, 2011; Bankston III. & Min, 2002; Twenge & Crocker, 2002). Another study showed that male Hispanic adolescents showed higher self-esteem than the same age group of male European Americans, and lower self-esteem than male African Americans (Gray-Little & Hafdahl, 2000). However, this finding seems to vary depending on the Hispanic subgroups. Mexican Americans exhibited significantly lower self-esteem than Cuban Americans (Twenge & Crocker, 2002); and Puerto Rican adolescents showed similar levels of self-esteem compared to European American adolescents (Erkut, Szalacha, Coll, & Alarcon, 2000).

In studies investigating utilizations of mental health services by Latino youth with mental health problems, researchers demonstrated that Latino adolescents received less mental treatment services than Caucasians and African American adolescents (Alegría et al., 2002; Choi, Meininger, & Roberts, 2006; Cummings & Druss, 2011; Hoberman, 1992; Thomas, Temple, Perez, & Rupp, 2011). For example, only 5% of Hispanic immigrant teens received counseling services in 2006, despite the fact that 9% of them were at risk of clinical depression as found in the sample of research (Chapman & Perreira, 2007). It was demonstrated that few Latino adolescents have a source for regular medical care or access to health insurance (North Carolina Institute of Medicine, 2003).

1.3 Asian Adolescents and Mental Health

In numerous previous studies, Asian Americans showed lower self-esteem and a higher prevalence of depressive symptoms than other ethnic groups (Bachman, O'Malley, Freedman-Doan, Trzesniewski, & Donnellan, 2011; Bae & Brekke, 2003; Bankston III. & Min, 2002; Rhee, Chang, & Rhee, 2003; Twenge & Crocker, 2002). In another study, 17% of Asian American adolescents reported higher depression than African American adolescents (15%) and lower depression than Hispanic (22%) and Caucasian (18%) youths. Among Asian immigrants in the U.S., Korean immigrants, who are one of the fastest growing groups, reported higher rates of depression than immigrants from other Asian ethnic groups (Bernstein, Lee, Park, & Jyoung, 2008). In the latest study, researchers found that Asian students had higher depression rates than other ethnic groups, but with similar risk factors as Caucasians (Song, Ziegler, Arsenault, Fried, & Hacker, 2011).

Researchers found the ethnic differences in scores on measures of self-esteem as participants reflected their cultural perspectives, such as individualism and collectivism, on the questionnaires. Asian participants who have cultural backgrounds of Collectivism and Confucianism responded to surveys with similar concerns such as being self-critical, modesty, group harmony, a sense of connectedness, and conformity (Cai, Brown, Deng, & Oakes, 2007; Kim & Markus, 1999; Twenge & Crocker, 2002; Yamagishi, Hashimoto, & Schug, 2008). They

were less willing to respond to positively worded items than European Americans (Bae & Brekke, 2003; Chao, 1995). In addition, Asian Americans who were raised in Collectivism-based societies were more concerned with social networking (Interpersonal or group relationships) than in shaping self-esteem compared to European Americans raised in Individualism-based societies (Choi, 2002; Kang, Shaver, Min, & Jang, 2003; Russell, Crockett, Shen, & Lee, 2008; Wang & Ollendick, 2001). For this reason, Bachman, O'Malley, Freedman-Doan, Trzesniewski, and Donnellan (2011) concluded that cultural differences in reporting styles for self-reporting questionnaires may affect the group differences in self-esteem.

Furthermore, they have shown that Asian adolescents with major depression were often inadequately diagnosed (Gwynn et al., 2008), and less likely to use mental health services (Cummings & Druss, 2011; Hoberman, 1992; Leong & Lau, 2001). In the research of Cummings and Druss (2011) the adjusted percentage of Asians (19%) who received mental treatment was lower than Caucasians (40%), African Americans (32%), and Hispanics (31%).

1.4 Significance of the Study

It has been established through a growing body of empirical studies that family, school, and community environments surrounding ethnic minority adolescents significantly affected their psychological well-being. Many studies have been conducted to identify the associations between psychiatric disorders of ethnic minorities and demographic characteristics such as family, school, and community environments. Although investigators determined that depression and self-esteem of ethnic minority youths were affected by various environmental predictors, the influences of perceptions of school and neighborhood safety on their psychological adjustment were relatively unknown compared to other environmental predictors. In addition, studies have limited the additional effects of family, school, and community related predictors on depression and self-esteem among Hispanic and Asian adolescents, according to additions of environment variables. A number of studies have primarily focused on an independent influence (i.e. family, school, or perceived discrimination) or a couple of additional influences excluding neighborhood environments (i.e. family-school, school-peer, family-peer-school) of ethnic minority youths'

psychological adjustments (Branje, Hale, Frijns, & Meeus, 2010; Chung, Chen, Greenberg, & Heckhausen, 2009; Juang & Alvarez, 2010; Way & Robinson, 2003). Furthermore, although several researchers have tried to compare the correlations between depression and self-esteem among various ethnic groups, the sample size was small (Gonzales et al., 2011; Way & Robinson, 2003). As well, few researchers focused on an in-depth comparative study targeting Latinos and Asians which are the fastest growing population in the U.S.

Based on these gaps in previous studies, this study will provide information using the predictors of family, school, and community environments to determine if these significantly affect the levels of depression and low self-esteem among Latino and Asian youths, through the analysis of the data gathered in a large sample size. By testing for additions of blocks of variables, this study will contribute to identifying the additional effects of the demographic-family, the demographic-family-school, and the demographic-family-school-community. The results of this study show how much the relative importance of predictors has on the above models, and how these can provide researchers with much better predictions of mental health than previous studies that examined independent associations. In addition, the findings of the comparative ethnic study will provide social workers with better cultural perspectives which may be helpful for them in utilizing comparative approaches based on ethnic differences. More comprehensive and comparative understandings of the associations between multiple levels of predictors and mental health will be helpful for social workers and clinical program developers working with Latinos and Asians to create and improve upon more culturally appropriate, effective, and financially efficient intervention programs. In addition, the findings of this study will be the empirical foundation for enhancing the quality of social work services and establishing social policies for the ethnic minority groups in the U.S.

CHAPTER 2

LITERATURE REVIEW

This chapter begins with an overview of the studies regarding the relationships between demographic variables of Hispanic and Asian adolescents in immigrant families and mental health (depression and self-esteem). Next, studies that examined the association between immigrant youths' mental health (depression and self-esteem) and family cohesion, school environments (perceptions of school safety, perceptions of school quality, and perceived school discrimination), and community environments (perceptions of neighborhood safety and perceived discrimination) is explored.

2.1 Demographic Variables and Mental Health

2.1.1 Gender and Mental Health

Studies regarding gender differences on the mental health of adolescents have found that females show higher levels of depression (Marcotte, Fortin, Potvin, & Papillon, 2002; Lyons, Carlson, Thurm, Grant, & Gipson, 2006; Mendelson, Kubzansky, Datta, & Buka, 2008; Twenge & Nolen-Hoeksema, 2002) and lower levels of self-esteem (Bachman, O'Malley, Freedman-Doan, Trzesniewski, & Donnellan, 2011; Erkut, Szalacha, Coll, & Alarcon, 2000; Harter, 2000; Marcotte, Fortin, Potvin, & Papillon, 2002). Gender differences in the level of self-esteem might be due to the role of gender-typed characteristics, depressive symptoms, coping skills for stressful life events (Marcotte et al., 2002), a response bias (Maehr & Nicholls, 1980), and the perception of physical appearance (Harter, 2000).

Females and males experience depressive symptoms differently. While males with depressive symptoms are more likely to be irritable, tired, and have difficulty sleeping, females are more likely to have feelings of worthlessness, sadness, and excessive guilt (Cochran & Rabinowitz, 2000). In addition, there are different effects of depression based on gender. Men

with depression are more likely than females to turn to alcohol or drugs (National Institutes of Mental Health, 2000), and women with depression are more likely to attempt suicide (Kochanek, Murphy, Anderson, & Scott, 2004).

Studies comparing gender differences and the effects of depression and self-esteem among Hispanic and Asian minority groups have also shown consistent findings as compared to the general population (Hiott, Grzywacz, Arcury, & Quandt, 2006; Lyons, Carlson, Thum, Grant, & Gipson, 2006; Thomas, Temple, Perez, & Rupp, 2011). According to the research done among immigrant Latinos, 12% of female adolescents were typically at greater risk of depression, while 5% of male adolescents were at higher risk of depression (Chapman & Perreira, 2007). As well, the self-esteem scores for Hispanic and Asian males were slightly higher than that of females (Adams, Kuhn, & Rhodes, 2007; Bachman, O'Malley, Freedman-Doan, Trzesniewski, & Donnellan, 2011; Henriques & Calhoun, 1999). Hispanic male students showed a slight decrease in depression scores over time, but showed no changes for female students (Twenge & Nolen-Hoeksema, 2002).

Researchers have explained the possible reasons of gender differences on mental health problems among Hispanic and Asian adolescents. The higher rate of Latino girls' depression is associated with higher feminine gender role issues and poorer body image (Lyons, Carlson, Thurm, Grant, & Gipson, 2006). Another study explained that the female experience tends to create greater family separation stress than for males, which is correlated with higher rates of depression (Hiott, Grzywacz, Arcury, & Quandt, 2006).

2.1.2 Family Income and Mental Health

The influences of family income on the psychological well-being of immigrant adolescents have continually been underlined by numerous studies. Researchers have found that SES is associated negatively with depressive symptoms (Perez-Stable, Miranda, Munõz, & Ying, 1990; Wallen, 1992) and positively with self-esteem among adolescents in immigrant families (Gonzales, Coxe, Roosa, White, Knight, Zeiders, & Saenz, 2011; Guerrero, Hishinuma, Andrade, Nishimura, & Cunanan, 2006; Sapolsky, 2004; Tarshis, Jutte, & Huffman, 2006;

Wadsworth & Achenbach, 2005). Living with low income and in a poor neighborhood are also chronic stressors which are related to mental health because family members have the stress of living with less money than they need and with fewer resources (Siefert, Bowman, Heflin, Danziger, & Williams, 2000; Wadsworth et al., 2008). In previous studies, poverty-related stress is associated with various psychological problems such as depression, anxiety, and aggression (Murali & Oyebode, 2004; Santiago, Wadsworth, & Stump, 2011; Wadsworth et al., 2008).

The findings of an association between family income and mental health among Latino and Asian adolescents were divided. In general, Latino and Asian children and adolescents in low-income families reported high rates of depression and low self-esteem (Corcoran & Franklin, 2002; Tarshis, Jutte, & Huffman, 2006; Wong, 2001; Zheng, 2002; Choi, 2002; Robert, 1999). With respect to the Hispanic population, low-income Hispanic adolescents were at a particularly high risk for depression (Blazer, Kessler, McGonagle, & Swartz, 1994; Roberts, Roberts, & Chen, 1997). For example, Mexican American youths with low SES showed more depressive symptoms than their peers who are not in low income families (Roberts, Roberts, & Chen, 1997). According to the research of Gonzales et al. (2011), low SES in Mexican-American families affected parental affection, which mediated the effects of the contextual influences on adolescent's mental health. Several studies also reported the positive correlation between income and self-esteem among Latino adolescents (Corcoran & Franklin, 2002; Rhodes, Rodffman, Reddy, & Fredriksen, 2004; Ruiz, Roosa, & Gonzales, 2002; Twenge & Crocker, 2002).

Asian youths in low income families showed mental health problems (Choi, 2002; Guerrero, Hishinuma, Andrade, Nishimura, & Cunanan, 2006; Wong, 2001; Zheng, 2002). For example, Filipino adolescents with economic hardships showed higher rates of depression (Guerrero et al., 2006; Song, Ziegler, Arsenault, Fried, & Hacker, 2011). In the study of self-esteem among Asian Americans, SES had a small but significant relationship on the level of self-esteem (Twenge & Campbell, 2002).

2.2 Family Environments and Mental Health

2.2.1. Family Cohesion and Mental Health

Several family factors are crucial in moderating the depressive symptoms of adolescents in the immigrant family. Positive family factors such as family involvement, parental monitoring, attachment to parents, and a positive parent–child relationship all serve to buffer against emotional distress symptoms (Kliewer et al., 2004; Self-Brown et al. 2006). Among them, family cohesion is defined as family members' emotional connectedness and plays a significant role as a protective and mediating factor for healthy adolescent psychological functioning (Ackard, Neumark-Sztainer, Stody, & Perry, 2006; Juang, & Alvarez, 2010; Leidy, Guerra, & Toro, 2010; Marsiglia, Kulis, Parsia, Villar, & Garcia, 2009; Rivera et al., 2008; Singh, Lundy, Haymes, & Caridad, 2011).

Hispanic and Asian adolescents who experience the affective quality of the parent-adolescent relationship have reported lower levels of psychological distress. In many of the studies conducted, the relationship between family cohesion and psychological adjustments among Latino groups, family cohesion (warmth, acceptance, and closeness) was associated with adolescents' mental health (Greenberger, Chen, Tally, & Dong, 2000; Rivera et al., 2008; Shek, 1998; Vazsonyi & Belliston, 2006). For example, in the studies of Latino adolescents, positive family relationship can reduce emotional distress (Rivera et al., 2008) and anxiety problems (Singh, Lundy, Haymes, & Caridad, 2011).

For Asian adolescents, family support and family cohesion were strong protective factors against psychological difficulties (Greenberger & Chen, 1996; Guerrero, Hishinuma, Andrade, Nishimura, & Cunanan, 2006; Juang & Alvarez, 2010; Way & Robinson, 2003). Asian adolescents who perceive lower family support reported low self-esteem over time (Way & Robinson, 2003). Greater family cohesion buffered the negative effects of discrimination in Asian American families, while family conflict exacerbated the negative effects of discrimination, which is correlated with poorer psychological adjustment such as loneliness, depression, and

anxiety (Juang & Alvarez, 2010). In addition, family cohesion is related to increased use of mental health services in Asian American families (Ta, Holck, & Gee, 2010).

2.3 School Environments and Mental Health

2.3.1 Perceptions of School Quality and Mental Health

Another fundamental support system that has been examined regarding the psychological well-being of immigrant adolescents is school environments (Chung, Chen, Greenberger, & Heckhausen, 2009; Greene, Way, & Pahl, 2006; Hamilton, Marshall, Rummens, Fenta, & Simich, 2011; Suárez-Orozco, 2010). Students' perceptions of being valued and cared for in the school play a role in promoting school adjustment (Payne, Gottfredson, & Gottfredson, 2003) and socio-emotional adjustment such as peer self-esteem and depression (Brand, Felner, Shim, Seitsinger, & Dumas, 2003).

In previous studies, different findings regarding perceptions of school climate among Hispanic adolescents exist. Some researchers have suggested that ethnic minority youths have negative perceptions of their school climate (Battistich, Solomon, Kim, & Watson, 1995; Koth, Bradshaw, & Leaf, 2008; McNeely, Nonnemaker, & Blum, 2002). School teachers and advisors are predisposed to view ethnic minority students as having negative attitudes and worse demeanors relative to Caucasian students (Ferguson, 2000; Skiba, Michael, Nardo, & Peterson, 2000). The school staff's perceived demeanor of ethnic minority students may lead to an unequal distribution of punishment to students (Kupchik & Ellis, 2008; McCarthy & Hoge, 1987). However, some researchers indicated that Hispanic students show favorable perceptions of school climate (Arum, 2003; Kupchik & Ellis, 2008). Kupchik and Ellis (2008) found a result contrary to their hypothesis that Hispanic students perceive similar fairness in school with Caucasian students, while African American students perceive less fairness than Caucasian youths.

Prior literature which examined the effects of school climate on mental health among Hispanic and Asian youths showed consistent results in both groups. Adolescents who perceive a negative school climate reported significantly lower levels of self-esteem (Walsh, Harel-Fisch,

& Fogel-Grinvald, 2010; Way & Robinson, 2003). In addition, school quality and peer support are negatively related with depressed moods (Chung, Chen, Greenberger, & Heckhaysen, 2009; Rosenbloom & Way, 2004; Stone & Han, 2005). For example, Latino and Asian adolescents who reported higher levels of positive peer interactions and teacher support showed lower levels of depression and higher levels of self-esteem (Brand, Felner, Shim, Seitsinger, & Dumas, 2003).

2.3.2 Perceptions of School Safety and Mental Health

Adolescents' sense of safety within school settings affects their psychological well-being (National Research Council, 1993). As well, exposure to violence among adolescents within school settings has been associated with negative psychological health outcomes (Brunstein, Marrocco, Kleinman, Schonfeold, & Gould, 2007; Danielson et al., 2006; Rigby, 2003). Adolescents who were victimized or exposed to violence have trouble with low self-esteem (Graham, Bellmore, & Mize, 2006; Lopez, Dubois, 2005) and experience greater levels of depression (Ivarsson, Broberg, Arvidsson, & Gillberg, 2005).

Exposure to violence and perceptions of safety in school settings are significant factors for ethnic minority adolescents that affect their mental health and how they adapt to school life. Even though Hispanic students felt somewhat safe in school and were less harassed by their peers (Juvonen, Nishina, & Graham, 2006), Latino and Asian students felt less safe than Black and White students, and Latino students perceived the least amount of safety in middle school (Perone, 1998). For example, Latino students indicated a greater fear of attack at school and on the way of school (Bastian & Taylor, 1991).

Hispanic and Asian students' experiences of safety problems at school are important for their psychological adjustment. Latino and Asian adolescents who experience more safety problems showed greater depression and lower levels of self-esteem (Brand, Felner, Shim, Seitsinger, & Dumas, 2003). Studies regarding perceptions of safety among ethnic minority students and those outcomes were seldom explored in the school related literature. Moreover,

little research has focused on the psychological effect of perceptions of school safety among Hispanic and Asian adolescents.

2.3.3 Perceptions of School Discrimination and Mental Health

Experiences of discrimination in school are a common phenomenon among ethnic minority students (Stone & Han, 2004), such as being treated rudely and unfairly, being made fun of, or being insulted (Banks, Kohn-Wood, & Spencer, 2006; Gee, Spencer, Chen, Yip, & Takeuchi, 2007). Ethnic/racial discrimination in school settings is not limited to any specific ethnic group (Bellmore, Nishina, You, & Ma, 2012). Researchers have examined that perceived discrimination from teachers or counselors is positively associated with self-esteem and negatively associated with depressive symptoms (Paul, 2011; Way & Robinson, 2003). Ethnic minority students who experience peer ethnic discrimination reported higher levels of depressive feelings (Brody et al., 2006; Grossman & Liang, 2008) and lower self-esteem (Fisher, Wallace, & Fenton, 2000).

Studies on the effects of discrimination for Hispanic students have similar findings. Perceived unfair treatment is correlated with greater depression (Romero & Roberts, 2003; Umana-Taylor & Updegraff, 2007) and lower self-esteem (Edwards & Romero, 2008; Fisher, Wallace, & Fenton, 2000; Greene, Way, & Pahl, 2006). Perceptions of discrimination were higher in male students, primary language brokers, and among adolescents in schools with more ethnically diverse student bodies (Benner & Graham, 2011). Among Asian students, ethnic discrimination is associated with an increased risk of depression and anxiety disorder (Gee, Spencer, Chen, Yip, & Takeuchi, 2007; Lee, 2005; Noh & Kaspar, 2003).

There were some differences between Hispanic and Asian adolescents in perception of peer discrimination. Asian adolescents reported less teacher or school staff discrimination than Latino adolescents (Coker et al., 2009; Fisher, Wallace, & Fenton, 2000; Huynh & Fuligni, 2010). Hispanic youth often experience marginalization in schools, especially regarding relationships with teachers (Rosenbloom & Way, 2004; Szalacha, Erkut, Coll, Alarcon, Fields, & Ceder, 2003; Valenzuela, 1999; as cited in Stone & Han, 2004). Asian American reported that their school

faculty, teaching assistants, and peers are more likely to disrespect them and treat them unfairly as compared to other ethnic groups (Ancis, Sellacek, & Mohr, 2000; Grossman & Liang, 2008; Rosenbloom & Way, 2004). Moreover, Asian American high school students expressed higher levels of physical and verbal harassment by their peers than that of Latino youth because teachers preferred the Asian American students based on their model minority beliefs (Green, Way & Pahl, 2006; Rosenbloom & Way, 2004). Furthermore, according to a longitudinal study, adolescents who perceived discrimination by peers or teachers in high school continually identify discrimination by adults after graduation of high school (Greene, Way, & Pahl, 2006). Such peer and adult discrimination in school were significantly associated with decreased self-esteem and increased depressive symptoms among ethnic minority adolescents over time (Green, Way, & Pahl, 2006; Schulz et al., 2006; Seaton & Yip, 2009).

2.4. Community Environments and Mental Health

2.4.1. Perceptions of Neighborhood Safety and Mental Health

Another important factor that has been examined regarding mental health among ethnic minority adolescents is neighborhood context. The characteristics of a neighborhood may affect adolescents' health through stressful or dangerous neighborhood conditions such as crime, violence, and drug use (Theall, Sterk, & Elifson, 2009). Perceptions of neighborhood environments are significant determinants of adolescents' health with the physical neighborhood environments (Aneshensel & Sucoff, 1996; Haan, Kaplan, & Camacho, 1987; Smith, Hart, Watt, Hole, & Hawthorne, 1998). Some studies have suggested that individuals with positive perceptions of neighborhood safety are less likely to have depressive symptoms, anxiety (Aneshensel & Sucoff, 1996; Ross & Jang, 2000), and emotional distress (Wilson et al., 2004).

A number of researchers have found that exposure to violence is associated with adolescents' internalizing emotional problems such as depression and anxiety (Fitzpatrick et al., 2005; Hammack, Richards, Luo, Edlynn, & Roy, 2004; Ivarsson, Broberg, Arvidsson, & Gillberg, 2005; Lambert, Ialongo, Boyd, & Cooley, 2005; Margolin, 2005) and low self-esteem (Graham, Bellmore, & Mize, 2006; Lopez & Dubois; 2005). However, the impact of community violence on

mental health must be described within its cultural context. Several studies have demonstrated that exposure to violence in the neighborhood was not associated with Mexican and Asian American adolescents' internalizing behaviors such as feeling depressed and low self-recognition (Chen, 2010; Ho, 2008; Roosa et al., 2010). Chen (2010) indicated that female Asian Americans having prior internalizing behaviors only showed subsequent internalizing symptoms when they were actually exposed to violence. In addition, Vietnamese and Cambodian adolescents who were exposed to community violence reported higher trauma-related and externalizing symptoms, but only violence victimization showed higher internalizing symptoms (Ho, 2008). Roosa et al. (2010) also found that Mexican American early adolescents have a weak relationship between neighborhood disadvantage and psychological adjustment.

However, few studies have examined the effects of perceptions of neighborhood safety on mental health among ethnic minority adolescents. Several studies investigating ethnic groups indicated the associations between perceptions of neighborhood safety and ethnic diversity in classroom (Juvonen, Nishina, & Graham, 2006) and self-reported health (Bossarte, Swahn, & Breiding, 2009). In the study examining the association between perceptions of neighborhood safety and drug use, the levels of depression and self-esteem did not mediate the increases in drug use (Theall, Sterk, & Elifson, 2009).

2.4.2 Perceived Discrimination and Mental Health

Researchers examining the effects of discrimination on ethnic minority groups have found that it is correlated with impoverished psychological well-being (Gee, Spencer, Chen, Yip, & Takeuchi, 2007; Lee, 2005; Major, Quinton, & McCoy, 2002; Noh & Kaspar, 2003). One of the reasons that racial discrimination may have a negative impact on ethnic minorities' mental health is that perceptions or experiences of discrimination may break the immigrants' former idealized and positive perspective toward the U. S. (Sandhu & Asrabadi, 1994). As well, experiencing discrimination can create unique sources of chronic race-related stress that may contribute negatively to mental health (Banks, Kohn-Wood, & Spencer, 2006; Brown et al., 2000;

Mays, Cochran, & Barnes, 2007; Harrell, 2000; Lee, 2005; Szalacha et al., 2003; Fisher, Wallace, & Fenton, 2000).

Among Hispanic and Asian adolescents, discrimination is one of the major risk factors of mental health problems such as depression, low self-esteem, and distress (Berkel et al., 2010; Coker et al, 2009; Fisher, Wallace, & Fenton, 2000; Greene, Way, & Pahl, 2006; Juang & Alvin, 2010; Mesch, Turjeman, & Fishman, 2008; Neto, 2006; Romero & Roberts, 2003b). Ethnic minorities may have many challenges because they may be discriminated against other ethnic groups based on cultural barriers or language (Edwards & Romero, 2008; Romero & Roberts, 2003). Hispanic and Asian immigrant adolescents experience more peer and adult discrimination than adolescents from European backgrounds (Huynh & Fuligni, 2010).

The studies that have examined links between perceived discrimination and self-esteem among Latino groups show mixed results. Some researchers demonstrated a non-significant association between the perception of discrimination and the mental health of Latino groups (Mesch, Turjeman, & Fishman, 2008; Shorey, Cowan, & Sullivan, 2002; Szalacha et al., 2003). However, other researchers have suggested that perceived discrimination in Hispanic adolescents has positive associations on depressive symptoms (Berg et al., 2011; Coker et al., 2009; Greene, Way, & Pahl, 2006) and negative associations on self-esteem (Armenta & Hunt, 2009; Fisher, Wallace, & Fenton, 2000; Greene et al., 2006; Umaña-Taylor, Vargas-Chanes, Garcia, & Gonzales-Backen, 2008). Perceived discrimination is also associated with a lower sense of personal control which is related to greater distress and lower self-esteem (Branscombe & Ellemers, 1998; Ruggiero & Taylor, 1995, 1997). Therefore, there may be direct and indirect relations between perceived discrimination and mental health among Latino groups.

Asian youths have experienced many kinds of discrimination in the United States (Constantine, Kindaichi, Okazaki, Gainor, & Baden, 2005; Rahman & Rollock, 2004). Among Asian Americans, perceptions of ethnic/racial discrimination have been linked to an increased risk of psychological distress. A growing body of studies reported that higher levels of perceived discrimination were significantly associated with lower self-esteem (Barry & Grilo, 2003; Greene,

Way, & Pahl, 2006; Lam, 2007; Wong et al., 2003) and higher depression (Benner & Kim, 2009; Gee, Spencer, Chen, Yip, & Takeuchi, 2007; Lee, 2005; Noh, Kaspar, & Wickrama, 2007; Yip, Gee, & Takeuchi, 2008). Distress from ethnic/racial discrimination also predicted Chinese adolescents' depressive symptoms (Grossman & Liang, 2008).

2.5 Summary and Gaps of the Previous Study

These above discussed literature findings are important in understanding the major predictors affecting the psychological well-being among Latino and Asian adolescents in the U.S. Mental health of Latino and Asian youths was affected by various environmental factors surrounding them. Overall, both ethnic groups showed similar findings. According to the previous studies, female adolescents have higher depression and lower self-esteem than male adolescents. Family income also caused higher depressive symptoms and lower self-esteem. Family cohesion, perceptions of school quality, and perceptions of school safety were positively associated with self-esteem and negatively associated with depression among adolescents of both ethnic groups. Higher perceived school and community discrimination positively affected higher depressive symptoms and lower self-esteem.

However, there are several gaps in the previous studies. First, the influences regarding the perceptions of school and neighborhood safety on psychological adjustment among Latino and Asian adolescents were somewhat overlooked compared to individual, family, and other school and community predictors (i.e. perceived school discrimination). Few schools and community safety findings make it hard for studies to predict those effects on mental health among Hispanic and Asian youths. In addition, researchers focused on urban schools and neighborhoods that served communities of low SES. Furthermore, few studies compared only Hispanic and Asian groups, which are the predominant ethnic populations in the U.S. Although this has been examined in several comparative studies including various ethnic groups, the sample sizes were small and/or the discussion of the studies provided general findings and implications for all immigrant or ethnic minority groups. Last but not least, few studies have

examined the effects of including all family, school, and community level predictors of depression and self-esteem among Latino and Asian adolescents.

In order to fill the gaps found in previous studies, this study added community environment variables to the previous study model to examine the associations between mental health and all levels of environments (family, school, and community). Study participants were gathered to create a relatively large sample size compared to previous studies, and they were selected from Hispanic and Asian origin backgrounds. By conducting a comparative study of only Hispanic and Asian adolescent groups, this study will contribute to identifying not only differences in the influential predictors of mental health, but also to suggest more culturally appropriate intervention strategies than other previous general immigrant studies.

CHAPTER 3

CONCEPTUAL FRAMEWORK

Depression and self-esteem among Hispanic and Asian adolescents from immigrant backgrounds are not affected by one or two predictors, but by a combination of individual characteristics, family, school, and community environments. Therefore, depression and self-esteem of these ethnic minority youths can be accounted for by the application of an ecological theory which recognizes “the several layers of overlapping contextual influences that shape developmental processes and person-environment transactions over time” (Gonzales et al., 2011, p. 98). This chapter begins with an examination of the ecological systems theory and explains the correlation between mental health (depression and self-esteem) and individual, family, school, and community predictors. Finally, it concludes with several research hypotheses.

3.1 Ecological Systems Theory

The ecological systems theory was developed by Bronfenbrenner in 1979 for accounting for variations in child development. Bronfenbrenner (1979) insisted that human behavior can be understood by investigating both the internal factors of an individual as well as their external environments. This theoretical model explains that human development reflects the influence of multiple levels of environmental systems and their dynamic interactions; micro-, meso-, exo-, macro-, and chrono system (Bronfenbrenner, 1979). In Bronfenbrenner’s (1979) conceptualization, environmental factors can be categorized according to their level of influence. The most basic unit of analysis, the microsystem, includes individuals, families, and schools. The mesosystem, which provides the connection between the structures of the adolescents’ microsystem, includes neighborhoods. The exosystem includes organizations such as state government. The macrosystem encompasses such pervasive influences as economic, political, cultural and social status. The last level, the chronosystem, involves the dimension of time such

as the timing of a parent's death, acculturation, or the physiological changes that stem from getting older (Paquette & Ryan, 2001).

As described by Bronfenbrenner (1979), the Ecological Systems Theory encourages researchers not only to study individuals' social and emotional functioning as predictors of depression and self-esteem, but also to find the importance of distal factors such as perceptions of neighborhood safety and discrimination from within the community. In addition, this framework also integrates findings from multiple theoretical perspectives such as biological, psychological, and sociocultural (Le, Muñoz, Ippen, & Stoddard, 2003). Thus, the Ecological Systems Theory may provide researchers with a useful framework for examining efforts to find multiple levels of predictors of immigrant adolescents' depression and self-esteem.

In the micro level, individual characteristics such as gender, ethnics, and SES may directly affect an individual's mental health. For example, female ethnic minorities are vulnerable to depression (Céspedes, & Huey, 2008; Choi, Meininger, & Roberts, 2006; Lyons, Carlson, Thurm, Grant, & Gipson, 2006; Marcotte, Fortin, Potvin, & Papillon, 2002; Mendelson, Kubzansky, Datta, & Buka, 2008; Twenge & Nolen-Hoeksema, 2002). Realatively, few Hispanic and Asians are diagnosed mental health problems and receive treatment services (Cummings & Druss, 2011; Thomas, Temple, Perez, & Rupp, 2011; Wadsworth et al., 2008; Way & Robinson, 2003). As well, adolescents in low income families are more likely to experience psychological problems including poverty-related stress, higher depression, and/or lower self-esteem (Concoran & Franklin, 2011; Choi, 2002; Robert, 1999; Tarshis, Jutte, & Huffman, 2006; Wong, 2001; Zheng, 2002). Researchers also suggest a significant ecological correlation between psychological well-being and family functioning (Meyers, Varkey, & Aguirre, 2002). In addition, Herman, Merrell, Reinke, and Tucker (2004) reported that school environments play an important role in fostering the psychological health of school-aged children. In the mezzo level, the interrelationships between two or more micro-systems (i.e., adolescents' peer group relationship, teacher or school staff support, and parent-teacher relations) influenced depression and self-esteem among ethnic minority adolescents (Chung, Chen, Greenberger, &

Heckhausen, 2009; Rosenbloom & Way, 2004; Stone & Han, 2005). In the exo level, parent's perceptions of neighborhood safety, or a lack of social support for immigrant parents, may be risk factors for children's physical/mental health and physical activities (Carver, Timperio, & Crawford, 2008; Lumeng, Appugliese, Cabral, Bradley, & Zuckerman, 2006). In the macro level, adolescents' perceptions of societal and ethnic discrimination positively affected their depression and negatively affected their self-esteem (Berkel et al., 2010; Coker et al, 2009; Fisher, Wallace, & Fenton, 2000; Greene, Way, & Pahl, 2006; Mesch, Turjeman, & Fishman, 2008; Neto, 2006; Perez, Fortuna, & Alegria, 2008; Szalacha et al., 2003). In summary, Bronfenbrenner's Ecological Systems Theory explains environmental factors and their interaction as playing a significant role in the psychological well-being of immigrant adolescents.

3.2. Research Hypotheses

Depression and self-esteem of Latino and Asian adolescents are not affected by a single predictor. Thus, it should be analyzed through a combination of individual, family, school, and community environments. The previous literatures and conceptual framework verified that the predictors of Hispanic and Asian adolescents are various and multi-dimensional. Therefore, guided by the Ecological Systems Theory, the current study explored the effects of family, school, and community environmental predictors on depression and self-esteem among Latino and Asian adolescents. As well, this study intends to compare the significant predictors on mental health of each Hispanic and Asian group.

- Hypothesis 1: Latino female adolescents have higher depression and lower self-esteem than Latino male adolescents.
- Hypothesis 2: Asian female adolescents have higher depression and lower self-esteem than Asian male adolescents.
- Hypothesis 3: Lower family income is significantly correlated with higher depression and lower self-esteem in Latino adolescents.
- Hypothesis 4: Lower family income is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

- Hypothesis 5: Lower family cohesion is significantly correlated with higher depression and lower self-esteem in Latino adolescents.
- Hypothesis 6: Lower family cohesion is significantly correlated with higher depression and lower self-esteem in Asian adolescents.
- Hypothesis 7: Lower perception of school quality is significantly correlated with higher depression and lower self-esteem in Latino adolescents.
- Hypothesis 8: Lower perception of school quality is significantly correlated with higher depression and lower self-esteem in Asian adolescents.
- Hypothesis 9: Lower perception on school safety is significantly correlated with higher depression and lower self-esteem in Latino adolescents.
- Hypothesis 10: Lower perception on school safety is significantly correlated with higher depression and lower self-esteem in Asian adolescents.
- Hypothesis 11: Higher perceived school discrimination is significantly correlated with higher depression and lower self-esteem in Latino adolescents.
- Hypothesis 12: Higher perceived school discrimination is significantly correlated with higher depression and lower self-esteem in Asian adolescents.
- Hypothesis 13: Lower perception on neighborhood safety is significantly correlated with higher depression and lower self-esteem in Latino adolescents.
- Hypothesis 14: Lower perception on neighborhood safety is significantly correlated with higher depression and lower self-esteem in Asian adolescents.
- Hypothesis 15: Higher perceived societal discrimination is significantly correlated with higher depression and lower self-esteem in Latino adolescents.
- Hypothesis 16: Higher perceived societal discrimination is significantly correlated with higher depression and lower self-esteem in Asian adolescents.
- Hypothesis 17: Higher perceived ethnic discrimination is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

- Hypothesis 18: Higher perceived ethnic discrimination is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

CHAPTER 4

METHODOLOGY

This chapter covers the description of data, information of variables used in the study, and descriptions of the analyses used. These descriptions provide clarification and validation for how the concepts are operationalized and why particular analyses were applied.

To achieve the purpose of this study, the Children of Immigrants Longitudinal Study (CILS) from 1995-1996 (Wave II) was used. The CILS is a longitudinal data set consisting of three waves, but only waves I and II include depression and self-esteem scales; thus, we determined to study Wave II, the latest data set of the two waves.

4.1 Sample Description

In Wave II of the Children of Immigrants Longitudinal Study (CILS), a total of 4,288 students (2,070 males and 2,218 females) who were about to graduate from high school and 2,442 parents (919 males and 1,517 females) participated. The samples were recruited in forty-nine schools in the metropolitan areas of Miami/Ft. Lauderdale and San Diego. For the present study sample, we chose a purposive sample by filtering in only Hispanic and Asian groups. There were totally 2,114 students and 1,213 parents in the sample population. In the Hispanic group, there were 1,008 students (453 males and 555 females) and 469 parents (146 males and 323 females). In the Asian group, 1,106 students (528 males and 578 females) and 744 parents (388 males and 356 females) participated in the study. Probability sampling was used to select the samples.

4.2 Data Collection

This is a secondary data analysis of Hispanic and Asian adolescents and parent respondents participating in the Children of Immigrants Longitudinal Study (CILS). The CILS is a longitudinal study designed to study the adaptation process of the second generation in

immigrant families. The targets were United States-born children who have at least one foreign-born parent or who immigrated to the U. S. at an early age. In 1992, the first survey was conducted with total 5,262 adolescents (77 different nationalities) attending the 8th and 9th grades in schools in the metropolitan areas of Miami/Ft. Lauderdale in Florida and San Diego, California. Three years later, the first follow-up survey was conducted which retrieved 4,288 respondents who were about to graduate from high school. In a parental survey conducted together with the follow-up survey, 46 percent (N = 2,442) of the original students sampled were interviewed. During 2001-2003, a final follow-up was conducted with 3,613 respondents (averaged 24 years old), representing 84.3 percent of the first follow-up and 68.9 percent of the original sample.

The survey of Wave II was conducted using face-to-face interviews and paper and pencil interviews (PAPI). The PAPI was collected using youth and parent questionnaires (Youth Adaptation and Growth Questionnaire II and Parental Interview Questionnaire). Interviews were conducted in school, while questionnaires were completed by some students who had moved to other areas or dropped out. The questionnaires were completed in two ways; either filled by a member of the survey team directly during home visits, or by mailed to the respondents along with instructions in stamped envelope. In a few student cases, telephone interviews were conducted for those who had returned to their country of origin. All parental interviews were conducted in their own language by utilizing trained bilingual interviewers.

4.3 Measures

The follow-up questionnaire (Youth Adaptation and Growth Questionnaire II) from CILS consisted of 126 multiple-choice questions. The variables used in this study were depression, demographic characteristics (gender and family total income/past year), family cohesion, perceptions of school quality, perceptions of school safety, perceived school discrimination, perceptions of neighborhood safety, and perceived discrimination (societal discrimination and ethnic discrimination). Items of each measure are included in Table 4.1.

4.3.1 Demographic Characteristics

To verify demographic characteristics of participants, gender, self-reported race, and family's total income for the past year were used. The questions are as follows: "What is your sex?" (Q6) ("1 = Male", "2 = Female), and "What was the total income of your family from all sources last year?" (P56) ("1 = None" to "15 = 200000 or More").

4.3.2 Family Cohesion

Three items were selected to analyze family cohesion: "Family members like to spend free time with each other" (Q88); "Family members feel very close to each other" (Q89); and "Family togetherness is very important" (Q90). This was used along with the computed data of family cohesion (C18) which already existed in the SPSS file of CILS. The response categories were "1 = Never", "2 = Once in a while", "3 = Sometimes", "4 = Often", and "5 = Always." These questions were taken from the study of Rivera et al. (2008). They selected these three questions from the Family Relations-Cohesion Scale. A higher scale rate means higher family cohesion. The family cohesion metric was found to be highly reliable (3 items; $\alpha = .84$).

4.3.3 Perceptions of School Quality

These questions were selected based on the items Stone and Han (2005) used in their study. They used four items ($\alpha = 0.75$) to figure the overall quality of the teaching supportive climate. The questions/statements are "Teaching is Good" (Q9), "Teachers are interested in students" (Q10), "Students are graded fairly" (Q15), and "Discipline is fair" (Q16). The four items were summed to create the measure. The response categories were "1= Agree a lot", "2 = Agree a little", "3 = Disagree a little", and "4 = Disagree a lot." For convenient analysis, all of these items were reversed ("1 = Disagree a lot" to "4 = Agree a lot") and computed.

4.3.4 Perceptions of School Safety

Responses to these four items were used to measure perceptions of school safety. These questions/statements are the following; "I don't feel safe at this school" (Q11), "Disruptions by other students get in the way of my learning" (Q12), "Fights often occur between different racial or ethnic groups" (Q13), and "There are many gangs in school" (Q14). The possible answers for each question were "1 = Agree a lot", "2 = Agree a little", "3 = Disagree a

little", and "4 = Disagree a lot." All questions were combined for convenient analysis. Cronbach's alpha for the perceptions of school safety was .66.

4.3.5 Perceived School Discrimination

To assess perceived school discrimination, three items were used. Originally, a superordinate question, "Have you ever felt discriminated against?" (Q85) is asked before the three questions. If adolescents responded "yes" to the question, six subordinate questions were then asked. However, the superordinate (main) question was not used to avoid overlap of the questions for assessing ethnic discrimination (Q86d, Q86e, and Q86f). Thus, adolescents were only asked three subordinate questions if they ever felt discriminated by teachers (Q86a), students (Q86b), and counselors (Q86c) by using "yes-no" response formats. All the responses were reversed ("No = 0", "Yes = 1") for convenience. Cronbach's alpha for the perceptions of school discrimination was .41.

4.3.6 Perceptions of Neighborhood Safety

Parents were asked if the following were a problem in your neighborhood: "Different racial or cultural groups who do not get along with each other?" (P109); "Little respect for rules, laws and authority?" (P110); "Assaults and muggings?" (P111); "Delinquent gangs or drug gangs?" (P112); and "Drug use or drug dealing in the open?" (P113). The response categories of five questions were "1 = Not a problem", "2 = Somewhat of a problem", and "3 = A big problem." For convenient analysis, all of these items were reversed (1 = A big problem to 3 = Not a problem) and computed. The perception of neighborhood safety was found to be highly reliable (5 items; $\alpha = .89$).

4.3.7 Perceptions of Discrimination

Six questions were chosen based on items in the study of Medvedeva (2010). The researcher divided the questions into societal discrimination and ethnic discrimination. To measure perceptions of societal discrimination, respondents were asked three questions; "There is racial discrimination in economic opportunities in the U.S."; "There is much conflict between different racial and ethnic groups in the U.S."; "Americans generally feel superior to

foreigners." The answers possibilites ranged from "1 = Agree a lot" to "4 = Disagree a lot." For convenient analysis, all of these items were reversed (1 = Disagree a lot to 4 = Agree a lot) and computed. Cronbach's alpha for the societal discrimination items was .55.

As already explained in the perceived school discrimination variable, the questions have a superordinate question (Q85), but it was not used to avoid duplication. Therefore, to assess the ethnic discrimination 3 questions were used; "Have you ever felt discriminated by White Americans in general" (Q86d); 'by Latinos in general" (Q86e); and "by Black Americans in general" (Q86f), using "yes-no" response formats. All the responses were reversed ("No = 0", "Yes = 1") for convenience. All items were computed. Cronbach's alpha for the ethnic discrimination items was .55.

4.3.8 Depression

The Center for Epidemiologic Studies Depression Scale (CES-D) consisting of 20 items is commonly used for general populations to measure depressive symptoms. The CES-D has a well-established reliability and has proved valid for gathering data for research among general populations (Radloff, 1977). To measure depression of adolescents in this study, four questions from the CES-D were used. These were selected from among the 20 items because they provided a brief and representative measure of the multidimensional concept of the full CES-D (Rumbaut, personal communication, November 26, 2004; as cited in Ying & Han, 2007). The items were as follows: During the last week, "I felt sad" (Q114); "I could not get going" (Q115); "I did not feel like eating; my appetite was poor" (Q116); and "I felt depressed" (Q117). The response categories consisted of four-point Likert-type scale, with "0: rarely, less than once a week"; "1 = some of the time, 1 or 2 days a week"; "2 = occasionally, 3 or 4 days a week; and "3 = most of the time, 5-7 days a week." The four items were summed to create the depression score. The possible range of scores was from 0 to 12, with higher scores indicating higher levels of depression. The CILS data yielded a standardized alpha coefficient of .75 for use of the 4-item CES-D.

4.3.9 Self-esteem

The Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1979) was used to measure adolescent self-esteem. Five items were positively worded (e.g. “I am a person of worth”) and other five were negatively worded (e.g. “I feel I do not have much to be proud of.”). The items were coded on a four-point Likert-type scale with “1 = Agree a lot”; “2 = Agree a little”; “3 = Disagree a little”; and “4 = Disagree a lot”. The positive items were reverse-coded so that a higher score reflected greater self-esteem. All the responses were summed to create the self-esteem score. The possible range of scores was from 10 to 40, with higher scores reflecting higher levels of self-esteem. The CILS data yielded a standardized alpha coefficient of .84 for use of the 10-item RSE.

4.4 Data Analyses

This study used descriptive statistics to identify the demographic characteristics of immigrant adolescents. Frequency and percentage were calculated for analyzing a categorical variable (gender), and means and standard deviations were computed for analyzing continuous variables (family income, family cohesion, perceptions of school quality, perceptions of school safety, perceived school discrimination, perceptions of neighborhood safety, and perceived discrimination). To compare the differences of race/ethnicity and gender, a chi-square was performed. An independent T-test was conducted for verifying the differences of race/ethnicity and other variables (family income, family cohesion, perceptions of school quality, perceptions of school safety, perceived school discrimination, perception on neighborhood safety, perceived discrimination, depression, and self-esteem). Pearson’s Correlations were performed twice to find out each correlation between all variables in the study. The first time, it was conducted for the Hispanic adolescent group to identify variables that were correlated with depression and self-esteem. The second time, it was conducted for the Asian adolescent group. Finally, hierarchical multiple regression analyses were conducted twice to identify the relationships between the dependent variables (depression and self-esteem), and between several independent variables in a sequential way.

Table 4.1 Analytic Variable Construction

Variables				Response Categories	Cronbach's Alpha
Individual	Gender	V206	Gender	1=Male, 2=Female	
	Race	V323A	Self-reported race	3=Asian, 5=Hispanic	
	Family income	P56	Parent family total income/past year	1=None to 15=200000 or More	
Family	Family cohesion	V288	Family likes spend time together	1=Never, 2=Once in a while, 3=Sometimes, 4=Often, 5=Always	.84
		V289	Family members feel close		
		V290	Family togetherness important		
School	PSQ	V209	Teaching is good	1=Agrees a lot, 2=Agrees a little, 3=Disagrees a little, 4=Disagrees a lot	.75
		V210	Teachers interested in students		
		V215	Students graded fairly		
		V216	Discipline is fair		
	PSS	V211	Don't feel safe in school	1=Agrees a lot, 2=Agrees a little, 3=Disagrees a little, 4=Disagrees a lot	.66
		V212	Student disruptions prevent learning		
		V213	Fight between racial/ethnic groups		
		V214	Many gangs in school		
	PSD	V286A	Respondent discriminated by teachers	1=Yes, 2=No	.41
		V286B	Respondent discriminated by students		
		V286C	Respondent discriminated by counselors		
Community	PNS	P109	Neighborhood problem/racial group conflict	1=Not a problem , 2=Somewhat of a problem , 3=A big problem	.89
		P110	Neighborhood problem/no respect-rules/laws		
		P111	Neighborhood problem/assaults, muggings		
		P112	Neighborhood problem/gangs		
		P113	Neighborhood problem/drug use/dealing		
	PD SD	V279	Racial discrimination in U.S.	1=Agrees a lot, 2=Agrees a little, 3=Disagrees a little, 4=Disagrees a lot	.55
		V281	Much race conflict in U.S.		
		V284	Americans feel superior		
	PD ED	V286D	Respondent discriminated by white Americans	1=Yes, 2=No	.55
		V286E	Respondent discriminated by Latinos		
		V286F	Respondent discriminated by African Americans		
Depression		V314	Felt sad past week	1=Rarely, 2=Some of the time, 3=Occasionally, 4=Most of the time	.75
		V315	Couldn't get going past week		
		V316	Didn't feel like eating past week		
		V317	I felt depressed past week		
Self-esteem		V301-V310	I am a person of worth, I have a number of good qualities, I'm inclined to feel I'm a failure, I do things as well as other people, I do not have much to be proud of, I take a positive attitude toward myself, I am satisfied with myself, I wish I had more respect for myself, I certainly feel useless at times, At times I think I am no good at all.	1=Agrees a lot, 2=Agrees a little, 3=Disagrees a little, 4=Disagrees a lot	.84

CHAPTER 5

RESULTS

Preliminary data analysis is described before investigating the hypotheses. It begins with determining the reliability of the Alpha coefficient for each variable that was used in this study. Descriptive statistics are explained on all study measures. Next, the process of examining the correlation between dependent variables (depression and self-esteem) and independent variables (family cohesion, perceptions of school safety, perceptions of school quality, perceived school discrimination, perceptions of neighborhood safety, and perceived discrimination) is discussed. Following this, hierarchical multiple regression analyses were conducted to test the theory-based hypotheses. The models were analyzed in four steps for each environmental group. The sequence of steps in each hierarchical multiple regression was based on Bronfenbrenner's Ecological Systems theory. This is an ecological understanding of human development in which the proximal influences on development are entered before the distal influences (Bronfenbrenner, 1979). Through these analyses, independent and additional effects of predictors on mental health in both Hispanic and Asian adolescents were examined. Finally, the relationships between the dependent variables (depression and self-esteem) and independent variables are reported by presenting the results of the hypothesis.

5.1 Preliminary Analysis

5.1.1 Reliabilities

Reliability analyses were conducted to study the psychometric properties of measurement scales and of each variable that was used in the present study. Cronbach's Alpha internal consistency reliabilities were computed. The Cronbach's Alpha of the dependent variables (depression and self-esteem) were .75 and .84, respectively. The Cronbach's Alphas of family cohesion, school quality, and parent's perception of neighborhood safety were higher

than .70. However, the Cronbach's Alphas of perceptions of school safety, perceived school discrimination, and perceived discrimination (societal discrimination and ethnic discrimination) were lower than .70. The reliability values ranged from a low of .41 for perceived school discrimination to a high of .89 for parent's perception of neighborhood safety (see Table 5.1).

Table 5.1 Reliability Coefficient Alphas for Items Administrated

Variables	# of Items	Cronbach's Alpha
Depression	4	.75
Self-esteem	10	.84
Family Cohesion	3	.84
Perceptions of School Quality	4	.75
Perceptions of School Safety	4	.66
Perceived School Discrimination	3	.41
Perception of Neighborhood Safety	5	.89
Perceived Discrimination:		
(Social Discrimination)	3	.55
(Ethnic Discrimination)	3	.55

5.1.2 Demographic Variables

Table 5.2 presents the demographic and socioeconomic characteristics of study respondents. As shown in Table 5.2, the total sample in the study consisted of 2,114 adolescents, with 1,106 Asian and 1,008 Hispanic adolescents. There were 453 males (44.9%) and 555 females (55.1%) in the Hispanic groups, and 528 males (47.7%) and 578 females (52.3%) in the Asian groups. There were no statistically significant differences in the measured family income between the Hispanic (M = 9.35, SD = 2.38) and Asian (M = 9.51, SD = 2.25) groups (See Table 5.2).

5.1.3 Comparison of Variables in Hispanic and Asian Adolescents

With regard to family cohesion, Hispanics (*M* = 3.74, *SD* = .98) rated slightly higher than the Asian group (*M* = 3.53, *SD* = .97). Family cohesion and race/ethnicity were found to be significantly associated: *t* = -5.08, p = .000.

The results show that the Hispanic group (*M* = 8.20, *SD* = 2.51) had higher perceptions of school quality than the Asian group (*M* = 7.88, *SD* = 2.25). There was a significant relationship between perceptions of school quality and race/ethnicity: *t* = 3.10, p = .002.

The Asians (*M* = 9.63, *SD* = 2.58) showed higher perceptions of school safety than did the Hispanic group (*M* = 8.55, *SD* = 2.74). Significant group differences in perceptions of school safety and race/ethnicity were also found (*t* = -9.18, p = .000).

The results suggest that Asians (*M* = 1.08, *SD* = .92) have a higher perceived school discrimination than the Hispanic group (*M* = .94, *SD* = .87). The relationship of perceived school discrimination and race/ethnicity were statistically significant (*t* = 2.75, p = .006).

In respect to perceived discrimination, the results were divided into societal discrimination and ethnic discrimination because the answering items are not identical each other. The result showed that Asians (*M* = 5.47, *SD* = 1.59) had higher societal discrimination than the Hispanic group (*M* = 5.40, *SD* = 1.64). In addition, Asians (*M* = .91, *SD* = .87) also showed higher ethnic discrimination than the Hispanic group (*M* = 1.04, *SD* = 1.06). Ethnic discrimination and race/ethnicity were found to be significantly related (*t* = 2.49, p = .013); while societal discrimination and race/ethnicity were not significantly related (*t* = -1.03, p = .30).

The Asians (*M* = 1.70, *SD* = .64) showed higher depression than the Hispanic group (*M* = 1.61, *SD* = .61). There was a significant relationship between depression and race/ethnicity (*t* = 3.58, p = .000).

In addition, with regard to self-esteem, Hispanics (*M* = 3.51, *SD* = .48) showed higher self-esteem than the Asian group (*M* = 3.24, *SD* = .53). Self-esteem and race/ethnicity were found to be significantly associated: *t* = -12.40, p = .000.

No group differences in perception on neighborhood safety, or perceived societal discrimination were found. These results suggest that race/ethnicity really does have an effect on family cohesion, perceptions of school quality, perceptions of school safety, perceived school discrimination, perceived ethnic discrimination, depression, and self-esteem.

Table 5.2. Descriptive Characteristics of the Sample and Study Variables

Variable	Hispanic (n = 1,008)	Asian (n = 1,106)	χ^2 or t-value
Gender			
Male	453(44.9%)	528(47.7%)	
Female	555(55.1%)	578(52.3%)	
Family Income	9.35(2.38)	9.51(2.25)	t = 1.18
Family Cohesion	3.74(.98)	3.53(.97)	t = -5.08***
PSQ	8.20(2.51)	7.88(2.25)	t = 3.10**
PSS	8.55(2.74)	9.63(2.58)	t = -9.18***
PSD	.94(.87)	1.08(.92)	t = 2.75**
PNS	6.28(2.40)	6.13(2.12)	t = 1.10
PD			
(SD)	5.40(1.64)	5.47(1.59)	t = -1.03
(ED)	.91(.87)	1.04(1.06)	t = 2.49*
Depression	1.61(.61)	1.70(.64)	t = 3.58***
Self-esteem	3.51(.48)	3.24(.53)	t = -12.40***

Note. PSQ: Perceptions of School Quality. PSS: Perceptions of School Safety. PSD: Perceived School Discrimination. PNS: Perceptions of Neighborhood Safety. PD: Perceived Discrimination. SD: Societal Discrimination. ED: Ethnic Discrimination.
* p <.05. ** p <.01. *** p <.001

5.2 Bivariate Analysis

5.2.1. Relationships between All Variables Proposed in the Study

A Pearson's correlation coefficient was performed to assess the relationship between all the variables proposed in the study. Table 5.3 presents the results of the correlation analysis,

showing significant relationships between the variables. In both the Hispanic and the Asian groups, family cohesion, perceptions of school quality, and perceptions of school safety were significantly associated with adolescents' mental health (depression and self-esteem). Between the predictor variables, family cohesion was significantly related to school variables; and school variables were significantly related to community variables (see Table 5.3).

For the Hispanic sample, family income negatively correlated with gender (r = -.103, p = .029). Perceptions of school quality were positively associated with gender (r = .062, p = .050) and family cohesion (r = .225, p = .000). Perceptions of school safety were positively related to family cohesion (r = .073, p = .023) and perceptions of school quality (r = .242, p = .000). Perceptions of school discrimination were negatively correlated with perceptions of school quality (r = -.153, p = .000) and perceptions of school safety (r = -.103, p = .017). Perception on neighborhood safety was positively associated with family income (r = .271, p = .000) and perceptions of school safety (r = .162, p = .001); and negatively associated with perceptions of school discrimination (r = -.061, p = .342). Perception on societal discrimination was negatively related to perceptions of school quality (r = -.065, p = .043) and perceptions of school safety (r = -.137, p = .000). Perception on ethnic discrimination was positively correlated with perceptions of school discrimination (r = .086, p = .046) and perception on societal discrimination (r = .180, p = .000). Depression was positively correlated with gender (r = .22, p = .000), perceived school discrimination (r = .14, p = .001), perceived societal discrimination (r = .12, p = .000), and perceived ethnic discrimination (r = .16, p = .000). Conversely, depression had negative correlations with family cohesion (r = -.19, p = .000), perceptions of school quality (r = -.17, p = .000), perceptions of school safety (r = -.12, p = .000), and perception on neighborhood safety (r = -.10, p = .040). Self-esteem was positively related to family cohesion (r = .27, p = .000), perceptions of school quality (r = .19, p = .000), perceptions of school safety (r = .20, p = .000), and perception on neighborhood safety (r = .21, p = .000); while it was negatively related to perceived ethnic discrimination (r = -.09, p = .036) and depression (r = -.46, p = .000).

For the Asian sample, perceptions of school quality were positively correlated with family cohesion (r = .186, p = .000). Perceptions of school safety were positively related to gender (r = .120, p = .000), family income (r = .106, p = .005), family cohesion (r = .087, p = .004), and perceptions of school quality (r = .220, p = .000). Perceptions of school discrimination were negatively correlated with gender (r = -.075, p = .035), perceptions of school quality (r = -.294, p = .000), and perceptions of school safety (r = -.135, p = .000). Perception on neighborhood safety was positively associated with perceptions of school safety (r = .117, p = .001) and family income (r = .133, p = .000); and negatively associated with perceptions of school quality (r = -.080, p = .03). Perception on societal discrimination was positively correlated with perceptions of school discrimination (r = .181, p = .000) and negatively correlated with perceptions of school safety (r = -.209, p = .000). Perception on ethnic discrimination was positively related to perceptions of school discrimination (r = .241, p = .000), and societal discrimination (r = .238, p = .000); and negatively related to gender (r = -.090, p = .012), perceptions of school quality (r = -.127, p = .000), and perceptions of school safety (r = -.115, p = .001). Depression was positively correlated with gender (r = .14, p = .000), perceived school discrimination (r = .08, p = .023), perceived societal discrimination (r = .07, p = .028) and perceived ethnic discrimination (r = .08, p = .032). Depression had negative correlations with family cohesion (r = -.21, p = .000), perceptions of school quality (r = -.16, p = .000), and perceptions of school safety (r = -.14, p = .000). Self-esteem was positively associated with family cohesion (r = .26, p = .000), perceptions of school quality (r = .17, p = .000), perceptions of school safety (r = .19, p = .000); and negatively related to depression (r = -.42, p = .000).

Table 5.3. Bivariate Correlations Among Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Gender	—	-.10*	-.02	.06*	-.01	.08	-.02	-.02	.03	.22**	-.05
2. Family Income	-.01	—	.04	-.02	.05	.03	.27**	.00	.00	-.01	.03
3. Family Cohesion	-.02	-.01	—	.23**	.07*	-.01	.05	-.03	-.01	-.19**	.27**
4. PSQ	.04	.01	.19**	—	.24**	-.15**	.07	-.06*	-.08	-.17**	.19**
5. PSS	.12**	.11**	.09**	.22**	—	-.10*	.16**	-.14**	-.07	-.12**	.20**
6. PSD	-.08*	-.03	-.01	-.29**	-.14**	—	-.06	.03	.09*	.14**	-.06
7. PNS	-.06	.13**	-.01	-.08*	.12**	-.02	—	-.02	-.06	-.10*	.21**
8. PSD	-.01	.04	-.04	-.03	-.21**	.18**	-.03	—	.18**	.12**	-.02
9. PED	-.09*	.02	.02	-.13**	-.12**	.24**	.01	.24**	—	.16**	-.09*
10. Depression	.14**	.02	-.21**	-.16**	-.14**	.08*	-.02	.07*	.08*	—	-.46**
11. Self-esteem	-.06	.05	.26**	.17**	.19**	-.05	.05	-.01	.00	-.42**	—

Note. PSQ: Perceptions of School Quality. PSS: Perceptions of School Safety. PSD: Perceived School Discrimination. PNS: Perceptions of Neighborhood Safety. PD: Perceived Discrimination. SD: Societal Discrimination. ED: Ethnic Discrimination. Hispanic correlations are above the diagonal; Asian correlations are the below diagonal. * p <.05. ** p <.01.

Overall, depression and self-esteem were significantly negatively correlated. In both groups, there were significant associations between depression and gender, family cohesion, perceptions of school quality, perceptions of school safety, perceived school discrimination, perceived societal discrimination, perceived ethnic discrimination and self-esteem. In addition, self-esteem was significantly correlated with family cohesion, perceptions of school quality, perceptions of school safety, and depression. Consequently, in both the Hispanic and the Asian groups, higher family cohesion, perceptions of school quality, and perceptions of school safety were significantly related to the adolescents' psychological well-being.

5.3 Multivariate Analysis

Hierarchical multiple regression analyses were performed to test the independent effects, and additional effects in a sequential way, of demographic and contextual variables on mental health (depression and self-esteem), according to additions of a set of predictor variables. The models were assessed for the total sample and each ethnic/race group (Hispanic and Asian). The VIF for variables were close to zero, so there were no multicollinearity issues. The model was analyzed in four Steps for each group. The sequence of the Steps was based on an ecological understanding of human development (Bronfenbrenner, 1979). The proximal environment variables were entered before the distal environment variables. In the first Step, demographic variables (gender and family income) were entered into the regression equation. In the second Step, family factors (family cohesion) were entered. In the third and fourth Steps, school environmental factors (perceptions of school quality, perceptions of school safety, perceptions of school discrimination), and community environmental factors (perceptions of neighborhood safety, perceptions of societal discrimination, perceptions of ethnic discrimination) were entered into the regression, respectively.

For the purpose of the study, it was determined that the size of the betas for each variable and the size of the R^2 change as an additional variable are added to the models. As well, the betas will be used to make interethnic comparisons.

5.3.1 Predictors of Depression

5.3.1.1 Predictors of Depression in Hispanic Adolescents

For the Hispanic group, gender and family cohesion were significant predictors on depression over the entire Steps. Overall, Hispanic female adolescents experience higher depression than Hispanic male adolescents. In Step 1, there was a significant variation by gender of 6% (β = .23, t = 3.53, p < .001). From Step 2 to Step 4, results indicated significant effects for gender and family cohesion. In Step 2, the family cohesion variable was added and there was a significant effect for gender that indicated a significant relationship with depression (β = .22, t = 3.40, p < .001). Adolescents who reported a higher level of family cohesion also indicated significantly lower depression (β = -.17, t = -2.57, p < .05). The 3% of the variance was predicted in Step 2. As well, in Step 3, including school related predictors, gender and family cohesion were each significant predictors of depression, β = .22, t = 3.40, p < .001 , and β = -.14, t = -2.14, p < .05, respectively. The addition of the third block adds 2% of the accounted for variance. In Step 4 after the addition of community predictors, the results also revealed a significant effects based on gender (β = .21, t = 3.22, p < .001) and family cohesion (β = -.15, t = -2.27, p < .05). The 4% of variance accounted for went up from 7.5% to 9.8%. Addition of the school and community variables did not significantly affect depression in the Hispanic group. The best fitting model for predicting depression is a linear combination of gender and family total income (R = .23, R^2 = .05, F (2,226) = 6.554, p < .01). These results were not consistent from Hypothesis 4 to Hypothesis 10, which predicted the negative influences of school and community environments on depression among the Hispanic adolescents.

5.3.1.2 Predictors of Depression in Asian Adolescents

For the Asian group, as well as the Hispanic group, gender and family cohesion only significantly affected depression through whole Steps. Asian female adolescents have higher depression rates than Asian male adolescents. Step 1, gender, significantly correlated with depression, β = .12, t = 2.73, p < .01. The 2% of the variance was predicted in Step 1. In Step 2, after the addition of family cohesion, gender indicated a significant relationship between

depression, β = .11, t = 2.52, p < .05. The results also indicated a significant negative effect for family cohesion on depression. Adolescents who reported higher levels of family cohesion also indicated significantly lower depression, β = -.20, t = -4.53, p < .001. The largest variance was expected in Step 2, $_{\Delta}R^2$ = .04. As well, in Step 3, gender was a significantly influencing variable on the level of depression, β = .13, t = 3.01, p < .01. Those who reported higher family cohesion reported significantly lower depression, β = -.20, t = -4.43, p < .001. The 3% of the variance was anticipated in Step 3. Last, in Step 4, adolescents with higher levels of family cohesion reported less depressive symptoms, β = -.20, t = -4.45, p < .001. This was the same result of family cohesion (β = -.20) through Step 2 to Step 4, regardless of the addition of school or community variables. Gender also significantly affected depression, β = .14, t = 3.05, p < .01. Addition of the school and community variables did not significantly improve prediction in the Asian group ($_{\Delta}R^2$ = .003, F(3,473) = .435, p = .728). The best fitting model for predicting depression is a linear combination of gender, family total income, and family cohesion (R = .24, R^2 = .05, F (1,479) = 20.543, p < .001). It was hypothesized that family, school, and community environments would correlate with Asian adolescents' depression. However, the results showed that school and community environments variables did not significantly affect Asian adolescents' rates of depression. Compared with Hispanic adolescents, Asian adolescents were less influenced by gender and more influenced by family cohesion on depression than Hispanic youths.

5.3.1.3 Predictors of Depression in Total Group

For total groups, the results were different from the result of each group. Gender and family cohesion were significant predictors on depression of total groups in Step 1 ($_{\Delta}R^2$ = .03) and Step 2 ($_{\Delta}R^2$ = .04). However, in Step 3 including school variables, all of school variables (perceptions of school quality, perceptions of school safety, and perceptions of school discrimination) were significantly affected depression, providing differences for each group's results. Perceived school discrimination (β = .08, p < .05) was significantly positive as associated with depression; and perceptions of school quality and perceptions of school safety

(both β = -.08, $p < .05$) were significantly and negatively correlated. The 3% of the variance was predicted by gender, family cohesion, and school environment variables in Step 3. In Step 4, after the addition of community environment variables, gender (β = .16, $t = 4.36$, $p < .001$), family cohesion (β = -.18, $t = -5.08$, $p < .001$) and perceptions of school quality (β = .08, $t = 1.98$, $p < .05$) show a significant relationship with depression, though not showing much of an increase of the proportions of variance, $_{\Delta}R^2 = .01$. The addition of the community variables did not significantly affect depression rates in the total group. The best fitting model for predicting depression is a linear combination of gender, family income, and family cohesion ($R = .30$, $R^2 = .09$, F (1,708) = 61.29, $p < .001$).

5.3.2 Predictors of Self-esteem

5.3.2.1 Predictors of Self-esteem in Hispanic Adolescents

For the Hispanic group, family cohesion, perceptions of school quality, perceptions of school safety, and perceptions of neighborhood safety were significant predictors for adolescents' self-esteem. In Step 1 to Step 3, gender was significantly associated with self-esteem. In other words, Hispanic female adolescents had lower self-esteem than Hispanic male adolescents before the school-related variables were added. However, with the addition of the school variables, gender was a no longer a significant predictor of self-esteem. In Step 1, there was a significant effect for gender (β = .15, $p < .05$), showing 2% of the variance. In Step 2, the family cohesion variable was added, gender (β = .13, $t = 2.01$, $p < .05$) and family cohesion (β = .31, $t = 4.96$, $p < .001$) showed significant relationships with self-esteem. The main variance ($_{\Delta}R^2 = .10$) was predicted in Step 2. In Step 3, including school-related variables, gender, family cohesion, perceptions of school quality, and perceptions of school safety were significant for increases in self-esteem. Male students (β = -.13, $t = -2.08$, $p < .05$) showed higher self-esteem than female students. Adolescents with higher family cohesion (β = .26, $t = 4.21$, $p < .001$), higher perceptions of school quality (β = .20, $t = 3.10$, $p < .01$), and perceptions of school safety (β = .15, $t = 2.35$, $p < .05$) showed higher self-esteem. The 7% of variance was predicted in Step 3. In Step 4, that added community variables, results showed that gender was not

significantly correlated with self-esteem as it was previously. Family cohesion (β = .26, t = 4.33, p < .001), perceptions of school quality (β = .22, t = 3.55, p < .001), and perception on neighborhood safety (β = .26, t = 4.15, p < .001) have a strongly positive and significant relationship on self-esteem. Perceptions of school safety (β = .15, t = 2.39, p < .05) was also significant for increases in self-esteem. The 7% of variance accounted for went up from 16.6% to 22.2%. The best fitting model for predicting self-esteem is a linear combination of gender, family income, and family cohesion (R = .35, R^2 = .11, F (1,224) = 24.584, p < .001). The results were consistent with the hypothesis that family, school, and community environments would correlate with Hispanic adolescents' self-esteem.

5.3.2.2 Predictors of Self-esteem in Asian Adolescents

For the Asian group, unlike the Hispanic group, community environments did not significantly affect adolescents' self-esteem. However, family cohesion, perceptions of school quality, and perceptions of school safety significantly affected the self-esteem of the Asian adolescents. Although there were no significant relationships between gender and self-esteem, Asian female adolescents had lower self-esteem than Asian male adolescents. In Step 1 there was no significant effect on self-esteem. The 1% of the variance was predicted in Step 1. In Step 2, after the addition of family cohesion, only family cohesion (β = .25, t = 5.73, p < .001) was indicated as having a significant relationship on self-esteem. The largest variance ($_{\Delta}R^2$ = .06) was predicted in Step 2. In Step 3, family cohesion, perceptions of school quality and perceptions of school safety were significantly influencing variables on the level of self-esteem. Those who reported higher family cohesion (β = .24, t = 5.51, p < .001) reported significantly higher self-esteem. Adolescents who perceived greater school quality (β = .14, t = 2.96, p < .01) and school safety (β = .10, t = 2.13, p < .05) also showed higher self-esteem. The 4% of the variance was anticipated in Step 3. Last, in Step 4, there were similar results for family cohesion (β = .24, t = 5.49, p < .001), perceptions of school quality (β = .14, t = 2.91, p < .01), and perceptions of school safety (β = .10, t = 2.24, p < .05) with Step 3. Regardless of the addition of community environment variables, there was no significant relationship between community

variables and self-esteem. The result of Step 4 demonstrated that Asian adolescents were not significantly affected by neighborhood safety and discrimination. Especially, neighborhood safety was not significantly correlated with the self-esteem of Asian adolescents, unlike Hispanic adolescents. Addition of the community variables did not significantly improve the prediction of low self-esteem in the Asian group ($_{\Delta}R^2$ = .004, F (3,474) = .759, p = .518). The best fitting model for predicting self-esteem is a linear combination of gender, family income, and family cohesion (R = .27, R^2 = .07, F(1,480) = 32.864, p < .001). It was hypothesized that family, school, and community environments would correlate with Asian adolescents' self-esteem. However, the results showed that community environments variables did not significantly affect Asian adolescents' self-esteem, while family cohesion and school related variables were significant. Comparing to the Hispanic adolescents, Asian adolescents' self-esteem was not significantly influenced by neighborhood safety.

5.3.2.3 Predictors of Self-esteem in Total Group

For total group, gender and family cohesion were significant predictors on self-esteem in Step 1 ($_{\Delta}R^2$ = .01) and Step 2 ($_{\Delta}R^2$ = .08). In Step 3, including school variables, it was noted that there were significant effects on self-esteem related to perceptions of school quality (β = .12, t = 3.23, p < .001) and perceptions of school safety (β = .17, t = 4.74, p < .001). The 6% of the variance was predicted in Step 3. After the addition of community related variables, Step 4, societal discrimination (β = .09, t = 2.58, p < .01) also showed a significant effect on self-esteem of the total group, showing not much of an increase of the proportions of variance, $_{\Delta}R^2$ = .01. The best fitting model for predicting self-esteem is a linear combination of gender, family income, and family cohesion (R = .30, R^2 = .09, F (1,708) = 61.290, p < .001).

Table 5.4 Hierarchical Multiple Regression of Depression on Predictors

	Total (*N* = 2,114)				Hispanic (*n* = 1,008)				Asian (*n* = 1,106)			
Predictors	B	SE	β	$_{\Delta}R^2$	B	SE	β	$_{\Delta}R^2$	B	SE	B	$_{\Delta}R^2$
Step 1												
Gender	.20	.05	.16***		.27	.08	.23***		.16	.06	.12**	
Family Income	.01	.01	.04	.03	.02	.02	.07	.06	.01	.01	.02	.02
Step 2												
Gender	.18	.05	.14***		.26	.08	.22***		.15	.06	.11*	
Family Income	.01	.01	.04		.02	.02	.08		.00	.01	.01	
Family Cohesion	-.12	.02	-.20***	.04	-.10	.04	-.17*	.03	-.13	.03	-.20***	.04
Step 3												
Gender	.20	.05	.16***		.26	.08	.22***		.17	.06	.13**	
Family Income	.01	.01	.05		.02	.02	.09		.01	.01	.02	
Family Cohesion	-.12	.02	-.18***		-.08	.04	-.14*		-.13	.03	-.20***	
PSQ	.02	.01	-.08*		-.02	.02	-.10		-.02	.01	-.08	
PSS	-.02	.01	-.08*		-.01	.01	-.04		-.02	.01	-.08	
PSD	.06	.03	.08*	.03	.03	.04	.05	.02	.06	.03	.09	.03
Step 4												
Gender	.20	.05	.16***		.24	.08	.21***		.18	.06	.14**	
Family Income	.01	.01	.05		.03	.02	.12		.01	.01	.02	
Family Cohesion	-.12	.02	-.18***		-.08	.04	-.15*		-.13	.03	-.20***	
PSQ	-.02	.01	-.08*		-.03	.02	-.11		-.02	.01	-.08	
PSS	-.02	.01	-.07		-.00	.01	-.02		-.02	.01	-.07	
PSD	.04	.03	.07		.02	.04	.03		.05	.03	.07	
PNS	-.01	.01	-.04		-.03	.02	-.12		-.00	.01	-.01	
PD												
(PSD)	.01	.01	.03		.02	.02	.06		.01	.02	.02	
(PED)	.04	.02	.07	.01	.08	.05	.11	. 04	.03	.03	.05	.00

Note. PSQ: Perceptions of School Quality. PSS: Perceptions of School Safety. PSD: Perceived School Discrimination. PNS: Perceptions of Neighborhood Safety. PD: Perceived Discrimination. SD: Societal Discrimination. ED: Ethnic Discrimination. * p <.05. ** p <.01.

Table 5.5 Hierarchical Multiple Regression of Self-esteem on Predictors

	Total (*N* = 2,114)				Hispanic (*n* = 1,008)				Asian (*n* = 1,106)			
Predictors	B	SE	β	ΔR^2	B	SE	β	ΔR^2	B	SE	B	ΔR^2
Step 1												
Gender	-.11	.04	-.10**		-.13	.06	-.15*		-.08	.05	-.07	
Family Income	.01	.01	.03	.01	.01	.01	.04	.02	.01	.01	.04	.01
Step 2												
Gender	-.09	.04	-.08*		-.11	.05	-.13*		-.06	.05	-.06	
Family Income	.00	.01	.02		.00	.01	.01		.01	.01	.05	
Family Cohesion	.15	.02	.28***	.08	.13	.03	.31***	.10	.14	.03	.25***	.06
Step 3												
Gender	-.10	.04	-.10**		-.11	.05	-.13*		-.09	.05	-.08	
Family Income	.00	.01	.01		.00	.01	-.02		.01	.01	.04	
Family Cohesion	.14	.02	.26***		.11	.03	.26***		.14	.02	.24***	
PSQ	.03	.01	.12**		.03	.01	.20**		.03	.01	.14**	
PSS	.03	.01	.17***		.02	.01	.15*		.02	.01	.10*	
PSD	-.02	.02	-.04	.06	.01	.03	.02	.07	-.01	.03	-.02	.04
Step 4												
Gender	-.10	.04	-.09**		-.09	.05	-.11		-.09	.05	-.08	
Family Income	.00	.01	-.01		-.02	.01	-.10		.01	.01	.04	
Family Cohesion	.14	.02	.26***		.11	.03	.26***		.14	.02	.24***	
PSQ	.03	.01	.12**		.04	.01	.22***		.03	.01	.14**	
PSS	.04	.01	.17***		.02	.01	.15*		.02	.01	.10*	
PSD	-.02	.02	-.04		.02	.03	.05		-.02	.03	-.03	
PNS	.02	.01	.07		.05	.01	.26***		.01	.01	.03	
PD												
(PSD)	.03	.01	.09*		.02	.02	.08		.02	.02	.06	
(PED)	-.01	.02	-.02	.01	.02	.03	.03	.07	.00	.02	.00	.00

Note. PSQ: Perceptions of School Quality. PSS: Perceptions of School Safety. PSD: Perceived School Discrimination. PNS: Perceptions of Neighborhood Safety. PD: Perceived Discrimination. SD: Societal Discrimination. ED: Ethnic Discrimination. * p <.05. ** p <.01.

5.4 Hypothesis Testing

- Hypothesis 1: Hispanic female adolescents have higher depression and lower self-esteem than Hispanic male adolescents.

  Result 1: Hispanic female adolescents have higher depression ($\beta = .21$, $p < .001$) and lower self-esteem ($\beta = -.11$, $p > .05$) than Hispanic male adolescents.

- Hypothesis 2: Asian female adolescents have higher depression and lower self-esteem than Asian male adolescents.

  Result 2: Asian female adolescents have higher depression ($\beta = .14$, $p < .01$) and lower self-esteem ($\beta = -.08$, $p > .05$) than Asian male adolescents.

- Hypothesis 3: Lower family income is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

  Result 3: Lower family income is not significantly correlated with higher depression ($\beta = .12$, $p > .05$) and lower self-esteem ($\beta = -.10$, $p > .05$) in Hispanic adolescents.

- Hypothesis 4: Lower family income is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

  Result 4: Lower family income is not significantly correlated with higher depression ($\beta = .02$, $p > .05$) and lower self-esteem ($\beta = .04$, $p > .05$) in Asian adolescents.

- Hypothesis 5: Lower family cohesion is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

  Result 5: Lower family cohesion is significantly correlated with higher depression ($\beta = -.15$, $p < .05$) and lower self-esteem ($\beta = .26$, $p < .001$) in Hispanic adolescents.

- Hypothesis 6: Lower family cohesion is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

  Result 6: Lower family cohesion is significantly correlated with higher depression ($\beta = -.20$, $p < .001$) and lower self-esteem ($\beta = .24$, $p < .001$) in Asian adolescents.

- Hypothesis 7: Lower perception of school quality is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

Result 7: Lower perception of school quality is not significantly correlated with higher depression (β = -.11, $p > .05$) but significantly correlated with lower self-esteem (β = .22, $p < .001$) in Hispanic adolescents.

- Hypothesis 8: Lower perception of school quality is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

  Result 8: Lower perception of school quality is not significantly correlated with higher depression (β = -.08, $p > .05$) but significantly correlated with lower self-esteem (β = .14, $p < .01$) in Asian adolescents.

- Hypothesis 9: Lower perception on school safety is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

  Result 9: Lower perception on school safety is not significantly correlated with higher depression (β = -.02, $p > .05$) but significantly correlated with lower self-esteem (β = .15, $p < .05$) in Hispanic adolescents.

- Hypothesis 10: Lower perception on school safety is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

  Result 10: Lower perception on school safety is not significantly correlated with higher depression (β = -.07, $p > .05$) but significantly correlated with lower self-esteem (β = .10, $p < .05$) in Asian adolescents.

- Hypothesis 11: Higher perceived school discrimination is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

  Result 11: Higher perceived school discrimination is not significantly correlated with higher depression (β = .03, $p > .05$) but significantly correlated with lower self-esteem (β = .05, $p > .05$) in Hispanic adolescents.

- Hypothesis 12: Higher perceived school discrimination is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

Result 12: Higher perceived school discrimination is not significantly correlated with higher depression (β = .07, $p > .05$) and lower self-esteem (β = -.03, $p > .05$) in Asian adolescents.

- Hypothesis 13: Lower perception on neighborhood safety is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

  Result 13: Lower perception on neighborhood safety is not significantly correlated with higher depression (β = -.12, $p > .05$) but significantly correlated with lower self-esteem (β = .26, $p < .001$) in Hispanic adolescents.

- Hypothesis 14: Lower perception on neighborhood safety is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

  Result 14: Lower perception on neighborhood safety is not significantly correlated with higher depression (β = -.01, $p > .05$) and lower self-esteem (β = .03, $p > .05$) in Asian adolescents.

- Hypothesis 15: Higher perceived societal discrimination is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

  Result 15: Higher perceived societal discrimination is not significantly correlated with higher depression (β = .06, $p > .05$) and lower self-esteem (β = .08, $p > .05$) in Hispanic adolescents.

- Hypothesis 16: Higher perceived societal discrimination is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

  Result 16: Higher perceived societal discrimination is not significantly correlated with higher depression (β = .02, $p > .05$) and lower self-esteem (β = .06, $p > .05$) in Asian adolescents.

- Hypothesis 17: Higher perceived ethnic discrimination is significantly correlated with higher depression and lower self-esteem in Hispanic adolescents.

Result 17: Higher perceived societal discrimination is not significantly correlated with higher depression (β = .11, $p > .05$) and lower self-esteem (β = .03, $p > .05$) in Hispanic adolescents.

- Hypothesis 18: Higher perceived ethnic discrimination is significantly correlated with higher depression and lower self-esteem in Asian adolescents.

  Result 18: Higher perceived ethnic discrimination is not significantly correlated with higher depression (β = .05, $p > .05$) and lower self-esteem (β = .00, $p > .05$) in Asian adolescents.

CHAPTER 6

DISCUSSION

The current study tested how family, school, and community environments might affect differences in levels of depression and self-esteem between Latino and Asian adolescents. This study also compared the significant predictors of depression and self-esteem between these two ethnic groups. The results of this study are the foundation for the purpose of this chapter. Next, the strengths of the study are described to suggest further logical areas of study. In addition, methodological limitations are discussed to clarify the generalization of the findings. Third, the implications for social work practice and future research are suggested. Last, some final conclusions are described.

6.1 Major Findings

The major findings of this study are: (1) that the demographic variable (gender) and family variable (family cohesion) were significant predictors of depression in both the Hispanic and Asian samples; (2) that family (family cohesion), school variables (perceptions of school quality and perceptions of school safety), and community variables (perceptions of neighborhood safety) are significant predictors of Hispanic adolescents' self-esteem, while only family (family cohesion) and school variables (perceptions of school quality and perceptions of school safety) are significant predictors of Asian adolescents' self-esteem.

6.1.1 Findings of Depression

This study sought to determine the significant predictors of depression in Hispanic and Asian adolescents. Both the Hispanic and Asian samples showed gender was significantly associated with adolescents' depression. The result of this study is consistent with previous studies in which female adolescents of both groups had higher rates of depression than male

adolescents of both groups (Hiott, Grzywacz, Arcury, & Quandt, 2006; Lyons, Carlson, Thurm, Grant, & Gipson, 2006; Thomas, Temple, Perez, & Rupp, 2011).

Another finding of this study is that family cohesion has a significantly negative association with depression in Hispanic and Asian adolescents. The result of the study is consistent with previous studies in which Asian adolescents who experienced higher levels of family cohesion showed relatively lower rates of depression than those who experienced lower levels of family cohesion (Greenberger & Chen, 1996; Guerrero, Hishinuma, Andrade, Nishimura, & Cunanan, 2006; Juang & Alvarez, 2010; Way & Robinson, 2003). The result with the Hispanic sample also indicated that family cohesion is negatively associated with depression. There is also agreement with previous studies in which adolescents who experience lower family cohesion have higher levels of depression (Greenberger, Chen, Tally, & Dong, 2000; Rivera et al., 2008; Shek, 1998; Singh, Lundy, Haymes, & Caridad, 2011; Vazsonyi & Belliston, 2006;). Culturally, the Asian and Hispanic groups value a sense of family closeness (Coll & García, 1995), family membership, and family support (Chao & Tseng, 2002; Ho, 1996). These cultural characteristics may increase the effects of family factors on their mental health.

Contrary to the hypotheses in this study, family income, school variables (perceptions of school quality, perceptions of school safety, and perceived school discrimination) and community variables (perceptions of neighborhood safety and perceived discrimination) were not significant predictors of depression in Hispanic and Asian adolescents. These results of the study show disagreement with the findings of previous studies where school quality was negatively related with depressed moods of Hispanic and Asian youths (Chung, Chen, Greenberger, & Heckhaysen, 2009; Rosenbloom & Way, 2004; Stone & Han, 2005). According to the result of this study, Hispanic (M = 12.12) and Asian adolescents (M = 11.79) perceived similar levels of school quality with White adolescents (M = 11.96) Thus, the results of this study may be correlated with the study of Kupchik and Ellis (2008) in which Hispanic students perceive similar fairness in school with Caucasian students. A favorable school climate, such as

fair discipline by teachers, may affect the associations between perceptions of school quality and depressive symptoms.

Inconsistent findings were also obtained in that other school variables (perceptions of school safety and perceived school discrimination) also were not significant predictors of depression in Hispanic and Asian adolescents. To date, a few studies have been conducted to determine the associations between school safety and mental health, thus there is a lack of generalization in this field. However, according to a large sample study (over 105,000 student participants), the results of this study are not consistent with the finding of the study in which Latino and Asian adolescents who perceive more safety issues show greater levels of depression (Brand, Felner, Shim, Seitsinger, & Dumas, 2003). As well, the results regarding perceived school discrimination were not in agreement with previous studies in which Hispanic and Asian students demonstrated an increased risk of depression when they perceived school discrimination (Gee, Spencer, Chen, Yip, & Takeuchi, 2007; Lee, 2005; Noh & Kaspar, 2003; Romero & Roberts, 2003b; Umana-Taylor & Updegraff, 2007). To explain the inconsistent findings with prior studies, it may well be possible that depression can be affected by other mediators within the school setting. Juvonen, Nishina, and Graham (2006) provided a possible explanation by suggesting that ethnic diversity in the classroom is associated with increased perceptions of safety resulting in psychological benefits.

This study also shows that neighborhood variables (perceptions of neighborhood safety and perceived discrimination) are not significant predictors of depression among Hispanic and Asian adolescents. The results of the current study are consistent with previous studies in which higher exposures to, or perceptions of, safety problems were not associated with greater depressive symptoms (Chen, 2010; Ho, 2008; Roosa et al., 2010). This can be explained by cultural differences because the studies examined concerning general adolescents have shown opposite results. In addition, the culturally different results may not be generalized because few studies have examined the effects of perceptions of neighborhood safety on mental health among ethnic minority adolescents.

In addition, this study indicated that perceived discrimination was not significantly associated with depression in either Hispanic or Asian adolescents. This result is generally inconsistent with a number of previous findings reporting a positive association between perceived discrimination and depression (Benner & Kim, 2009; Coker et al., 2009; Gee, Spencer, Chen, Yip, & Takeuchi, 2007; Greene, Way, & Pahl, 2006; Lee, 2005; Noh, Kaspar, & Wickrama, 2007; Yip, Gee, & Takeuchi, 2008). A possible explanation for this result is the low validity of the measures for perceptions of neighborhood safety and perceived ethnic discrimination which might cause this inconsistent result. Additional research is needed using standardized scales regarding community safety and discrimination in order to obtain more accurate findings.

6.1.2 Findings of Self-esteem

In the study examined the important predictors of self-esteem, common predictors (family cohesion, perceptions of school quality, and perceptions of school safety) and a non-common predictor (perceptions of neighborhood safety) were observed in Hispanic and Asian groups. The current study demonstrated that Hispanic adolescents who experience higher family cohesion have higher levels of self-esteem. This result is consistent with many studies examined in which Hispanic adolescents reported a significantly positive association between family cohesion and self-esteem (Greenberger, Chen, Tally, & Dong, 2000; Rivera et al., 2008; Shek, 1998; Vazsonyi & Belliston, 2006). The result with the Asian sample also indicated family cohesion is positively associated with self-esteem. There is also agreement with previous studies that suggest adolescents who experience higher family cohesion have higher levels of self-esteem (Greenberger & Chen, 1996; Guerrero, Hishinuma, Andrade, Nishimura, & Cunanan, 2006; Juang & Alvarez, 2010; Way & Robinson, 2003). As a result, family cohesion is an important predictor for self-esteem in ethnic minorities.

Consistent findings were obtained to suggest that school variables (perceptions of school quality and perceptions of school safety), excluding perceived school discrimination, were significant predictors of self-esteem in both Latino and Asian adolescents. Also consistent

with previous studies, Hispanic and Asian adolescents were significantly and positively affected by perceptions of school quality (Walsh, Harel-Fisch, & Fogel-Grinvald, 2010; Way & Robinson, 2003) and perceptions of school safety (Brand, Felner, Shim, Seitsinger, & Dumas, 2003) in terms of their self-esteem. However, contrary to the results of other school variables, perceived school discrimination did not significantly affect the self-esteem of either ethnic group. This result did not confirm to the conclusions from previous studies which suggested that peer or teacher discrimination was a significant predictor of self-esteem in Hispanic and Asian adolescents (Edwards & Romero, 2008; Fisher, Wallace, & Fenton, 2000; Greene, Way, & Pahl, 2006).

The model which added the neighborhood variables suggested that higher perceptions of neighborhood safety significantly and positively affected higher levels of self-esteem in Hispanic adolescents. This result is inconsistent with the findings of previous studies in which neighborhood safety is not associated with self-esteem (Chen, 2010; Ho, 2008; Roosa et al., 2010). However, the result of the Asian group was different from the result of the Hispanic group. This is in agreement with previous studies in which perceptions of neighborhood safety were not a significant predictor on self-esteem of Asian adolescents (Chen, 2010; Ho, 2008; Roosa et al., 2010). To explain the different findings between Hispanic and Asian adolescents, it may well be possible that self-esteem can be affected by other mediators within the neighborhood setting. Perceptions of neighborhood safety can directly and indirectly affect Hispanic adolescents' self-esteem. For example, parents of Hispanic adolescents who perceived a safe neighborhood context had affective parenting attitudes which were associated with adolescents' self-esteem (Bamaca, Umana-Taylor, Shin, & Alfaro, 2005). Furthermore, the reason for the different result between two groups can be explained by methodological concern. One of the possible explanations is the low validity of the neighborhood safety measure. For this study, only four selected questions were used to measure perceptions of neighborhood safety. In order to consistently and accurately measure the community climate for ethnic adolescents, the use of standardized community-level measurements is required. Another possible explanation for the

inconsistent result between the two groups is that parent's responses were used to measure the association between parent's perceptions of neighborhood safety and adolescents' self-esteem, instead of using student's responses. This may prevent measuring the direct relationship between two variables.

In contrast with the stated hypothesis, demographic variables (gender and family income), perceived school discrimination, and perceived discrimination were not significant predictors of self-esteem for either Hispanic or Asian adolescents. The results for the Hispanic sample indicated that female adolescents have lower rates of self-esteem than male adolescents; and this is consistent with a growing body of other studies (Adams, Kuhn, & Rhodes 2007; Bachman, O'Malley, Freedman-Doan, Trzesniewski, & Donnellan, 2011; Henriques & Calhoun, 1999; Martinez, 1991; Martinez, 1997; Twenge & Nolen-Hoeksema, 2002). The Asian group also showed similar results with the Hispanic group, again showing agreement with previous studies in which Asian females had lower levels of self-esteem than Asian males (Adams et al., 2007; Bachman et al., 2011; Henriques & Calhoun, 1999; Martinez, 1991; Martinez, 1997).

Compared with the perceptions of neighborhood safety, perceived discrimination was not significantly associated with self-esteem in Hispanic and Asian adolescents. Prior studies indicated that those who perceive lower levels of ethnic or societal discrimination are more likely to have lower self-esteem (Berg et al., 2011; Berkel et al., 2010; Fisher, Wallace, & Fenton, 2000; Greene, Way, & Pahl, 2006; Juang & Alvarez, 2010; Romero & Roberts, 2003b; Szalacha et al., 2003; Porters & Rumbaut, 2001). The result of the current study was inconsistent with previous studies reporting a negative correlation between perceived discrimination and self-esteem. One speculation regarding this result is that the school environmental variables are a more sensitive indicator of low self-esteem than community variables for Hispanic and Asian adolescents. Another possibility that should be considered is the moderating effects. According to the study examined, coping processes regarding perceived racial discrimination, racial

minority individuals who were empowered with sufficient ethnic and emotional support showed a decrease in depression caused by perceived discrimination (Noh & Kaspar, 2003).

Overall, in spite of the additions of school and community environmental variables, only gender and family cohesion were significant predictors of depression in Hispanic and Asian adolescents; and family cohesion, perceptions of school quality, and perceptions of school safety were strongly associated with self-esteem in both groups. These findings are explained by the Bronfebrenner's Ecological Systems Theory in which family and school factors greatly affect adolescents' development just as the proximate environment surrounding them does (Bronfenbrenner, 1979).

6.2 Strengths and Limitations

6.2.1 Strengths of the Study

The current study has several strengths that set it apart from other studies which will enable it to contribute to the developing knowledge of this field. The first major strength of this study is to examine the associations between mental health and all levels of the environmental predictors (family, school, and community) among Latino and Asian adolescents. Previous studies have mainly focused on only the associations between mental health and predictors within family, school, and/or discrimination among ethnic minority adolescents, but have overlooked other school or neighborhood variables such as safety issues. Even though there is a study which examined the predictors of family, school, and community environments on mental health, the target populations are not second-generation adolescents from immigrant backgrounds (i.e., Ford, Goodman, and Meltzer, 2004). Thus, this study would be a preliminary study for identifying the influential predictors including all levels of environments on depression and self-esteem among Hispanic and Asian adolescents.

Another major strength of this study is that it is a comparative study of Latino and Asian adolescents which has a relatively large sample compared to those of previous studies. By comparing the statistically significant predictors of Latino and Asian adolescents, the findings would be helpful for researchers, politicians, and service providers to make culturally

appropriate social work services and policies that consider cultural perspectives based on their similarities and differences.

In addition, this study investigated two dependents variables (depression and low self-esteem) to determine mental health trends among ethnic minority adolescents. Depression and self-esteem are prevalent psychological problems among Latino and Asian adolescents. Therefore, the findings of study may contribute to design and implement effective preventive/intervention programs for their psychological adjustment.

6.2.2 Limitations of the Study

It is necessary to discuss the methodological limitations to clarify the generalization. The present study is limited in certain respects. First, this study was limited in terms of generalization. The target populations in this study were selected from a specific geographic area. The findings were generated specifically among Latino and Asian adolescents living in San Diego. Although this study has a large sample size, it is unclear how these findings may generalize to youth of other regions in the U.S.

Another limitation of this study is to use school-based survey data which was collected only from youths who attend school. One-in-ten Hispanics drop out of high school (Fry, 2010) and only 58% of Latino youths complete high school (Fox News Latino, 2011). Therefore, the target populations might not be representative of all teenagers in this age group.

This study was also limited with the use of cross-sectional design. Because CILS collected measures on depression and self-esteem at only the first and second wave of data collection, a longitudinal study was not able to be performed. The cross-sectional nature of the data did not allow the determination of the direction of causality. In addition, it measures only current results, so it could not be assessed for any changes in the predictive power of the family, school, and community predictors on adolescents' depression and self-esteem.

In addition, this study did not use standardized scales to measure the levels of perceptions of school or neighborhood safety issues. Also, parents answered their children's perceptions of neighborhood safety on the questionnaire instead of the adolescents themselves.

For these two reasons, the current study has less objectivity regarding the associations between adolescents' perceptions of safety and mental health.

Last, this study did not include various indicators in the family environment. Only family cohesion was examined as a family environmental variable. Family structures, familism, parenting styles, or family support may also affect depression and self-esteem in adolescents (Garcia, Skay, Sieving, Naughton, & Bearinger, 2008; Guerrero et al., 2005; Portes & Zady, 2002; Way & Robinson; 2003). Therefore, family cohesion might not be representative of all family related predictors.

6.3 Implications for Social Work Practice

The results of this study have several implications for the development of policies and practice settings aimed at providing effective services to Latino and Asian adolescents who experience higher depression and lower self-esteem. First, social workers who work for immigrant, or second-generation, adolescents need to try to build substantial information and knowledge about adolescent mental health and its predictors. As examined in this study, gender, family income, family cohesion, perceptions of school quality, perceptions of school safety, perceptions of school discrimination, and perceived societal discrimination are significant predictors of Hispanic and Asian adolescents' depression and self-esteem. Having these comprehensive understandings will improve social workers' coping skills in dealing with their ethnic minority clients.

In order to work effectively with ethnic minority adolescents, it is necessary for social workers to understand the distinctive characteristics of ethnic groups. In a previous study, adolescents reflected their cultural perspective (i.e., collectivist society) on a scale that measures their mental health outcome. A social worker could misinterpret something if he/she does not have appropriate knowledge related to various cultures and ethnicities. By understanding the culturally unique characteristics of Hispanic and Asian youth, social workers could make more culturally appropriate and effective interventions for each group to prevent higher rates of depression and low self-esteem.

Social workers need to attempt to educate stakeholders (i.e., parents, teachers, and peers) responsible for the care of adolescents. As examined in this study, depression and self-esteem of both Hispanic and Asian adolescents were significantly affected by the quality of their relationship with their parents, teachers, and peers. To build strong family cohesion, social workers may educate parents about spending more time with their children. As well, social workers may educate teachers to conduct fair discipline in class. For this, social workers need to open parent and/or teacher educational seminars for ethnic minority adolescents' mental health. In addition, distribution of pamphlets or fact sheets would be an effective, economically efficient and simple method of educating parents and teachers.

Another way to help Hispanic and Asian students is for social workers to develop some prevention or intervention programs that consider school contextual environments. Perceptions of low school quality and safety in school and neighborhood are one of the significant predictors of Hispanic and Asian students' self-esteem. Thus, social workers may develop violence prevention programs, peer support programs, and safe guardian programs for ethnic minority youths in both the school and community settings.

Finally, this study is needed to establish or change social policies to increase mental health service utilization among Latino and Asian immigrant families with low SES. Few Hispanic youths have sources of regular medical care or access to health insurance (North Carolina Institute of Medicine, 2003). Therefore, mental health service providers should try to advocate the rights of ethnic minorities in ways that will help to establish social policies for enhancing the well-being of immigrant families.

6.4 Suggestions for Future Research

Given the limited study on Hispanic and Asian adolescents' mental health, further investigation is needed. One of the major findings in the study was that gender is significantly associated with depression in both groups and self-esteem of Hispanic adolescents. However, this study did not examine gender differences or the associations between Asian and Latino's mental health and family, school, and community related variables. Thus, it is strongly

recommended that a future study be done to examine gender differences to develop more appropriate and specific strategies and interventions for boys and girls respectively.

This is needed to create a standardized scale for safety issues in the future study in order to measure the levels of perceptions of safety, and to verify the more applicable associations with mental health among Hispanic and Asian adolescents. The current study failed to accurately measure the levels of perceptions of safety among adolescents because the student's survey did not include an objective scale for safety issues, and because one of the parents responded to the questions instead of their children. Thus, a student survey including a standardized safety scale is recommended for the future study to overcome this limitation.

Another recommendation of this study is the employment of path analysis or structural equation modeling that allowed the investigator to test concurrent interrelationships between multiple variables, which allowed the testing of causal correlations between the variables. The future study may contribute to predicting potential moderating effects of the variables on depression and self-esteem by examining the direct and mediating effects of the individual, family, school, and community factors on the mental health of Hispanic and Asian adolescents.

Furthermore, in addition to the family, school, and community related predictors, a further study is needed to add the cultural predictors of mental health among ethnic minorities. The levels of acculturation and perceptions of ethnic identity have been shown to affect the levels of depression and self-esteem among Latino and Asian youths (Chung et al., 2003; Rhee, Chang, & Rhee, 2003; Romero & Roberts, 2003a; 2003b; Smokowski & Bacallao, 2007). The additions of cultural variables as predictors on mental health among ethnic groups would supplement the current study and make it more applicable as an ethnic minority study.

Although this study has a large sample size, participants were selected from a specific geographic area. To increase generalization of the findings, a future study is recommended that would be conducted nationwide. Longitudinal studies are also recommended to study changes of multiple predictors over time, the relative effects of each predictor over time, and direct inferences about the causal direction of variables' relationships.

6.5 Conclusion

This study aimed to verify the predictors which are influential in depression and low self-esteem, and to compare differences in these significant predictors among Latino and Asian adolescents. By including school and neighborhood safety variables into the study model, this study extended the work done by previous studies which examined significant predictors of mental health among ethnic minority adolescents. In addition, this study went beyond previous studies by comparing the predictors and those additional effects that was examined in a sequential way on mental health among Hispanic and Asian adolescents, which are the fast growing ethnic groups in the U.S.

The results of this study suggest that gender and family cohesion were significant predictors for depression in both Hispanic and Asian adolescents. In terms of predicting self-esteem, family, school, and community variables were significant for Hispanic adolescents, while only family and school variables were significant for Asian adolescents. In addition, as a result of examining the additional effects of predictors on mental health using hierarchical regression analyses, family and school were determined to be significant factors for the psychological well-being of Latino and Asian adolescents.

Although this study has several limitations, the results of this study contribute to providing cultural and ecological perspectives for further examination. For future study, the employment of structural equation modeling is recommended to test concurrent interrelationships between multiple variables, which would allow the testing of causal correlations between the variables. The findings of this study could provide the empirical basis for social workers who work with ethnic minority adolescents, particularly Latinos and Asians, to design and implement culturally appropriate intervention strategies to help reduce the rates of depression and low self-esteem among these groups.

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