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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

# THE IMPACT OF FRIENDS ON NEWLY IMMIGRANT CHILDREN'S EMOTIONAL AND BEHAVIORAL ADJUSTMENT

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

PSYCHOLOGY

by

Ayse Cici Gokaltun

2012

To: Dean Kenneth G. Furton
College of Arts and Sciences

This dissertation written by Ayse Cici Gokaltun, and entitled The Impact of Friends on Newly Immigrant Children's Emotional and Behavioral Adjustment, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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ABSTRACT OF THE DISSERTATION

THE IMPACT OF FRIENDS ON NEWLY IMMIGRANT CHILDREN'S EMOTIONAL AND BEHAVIORAL ADJUSTMENT

by

Ayse Cici Gokaltun

Florida International University, 2012

Miami, Florida

Professor Mary J. Levitt, Major Professor

Immigration disrupts an individual's support network; however, the stresses of the immigration process increase the need for social support. The presence of social support becomes essential for immigrant children and adolescents to cope with these important transitional circumstances. Friends are both sources of social support and models for behavior. Furthermore, friendship networks are known to have a significant influence on youths' functioning. Literature suggests that peer relations become more important in adolescence and friend support is related to child and adolescent well-being. Thus, friend relationships may be particularly important for immigrant youths who experience disruption in their friendship networks during the process of migration to another country. In addition to friendship networks and support, friend characteristics also need to be taken into consideration as important factors for immigrant youth adjustment. My study involved analyses of the effects of friend support and friend problem behaviors on emotional and behavioral functioning for elementary, middle, and high school age newly immigrant children and adolescents.

Immigrant children and adolescents (N = 503) were interviewed at schools by interviewers fluent in participants' languages. Structural Equation Modeling (SEM) analyses revealed that friend support and friend problem behaviors were related to children's self-esteem and externalizing behaviors. In addition, friend problem behavior alone predicted children's psychological symptoms and depression scores. Furthermore, age/grade was found to be a moderator for the relation between friend problem behavior and immigrant youth behavioral adjustment such that compared to elementary and high school cohorts, middle school youths showed more externalizing behaviors when they had friends performing problem behaviors.

Results supported the idea that both friend support and friend behavior are related to newly immigrant youths' emotional and behavioral adjustment. This study informs further research and interventions concerning the development of programs to facilitate immigrant youths' adjustment by revealing friendship factors related to their adaptation.

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# CHAPTER I

## Introduction

Immigration is a unique transition where the stresses of immigration increase the need for social support while the immigration itself disrupts the individual's support network. Immigrants experience substantial non-normative life transitions that require considerable adaptation and children and adolescents are especially vulnerable populations, considering the developmental tasks that they also face as normative factors during this process.

The capacity of immigrant children and adolescents to cope with the important transitional circumstances of immigration is thought to be facilitated by the presence of social support (Levitt, 2005; Levitt, Lane, & Levitt, 2005). Although the school adaptation of immigrant youth has received more attention in the literature, findings on the behavioral and emotional adjustment of immigrant children and adolescents are mainly focused on parent-child relationships. On the other hand, friendship networks are known to have a substantial impact on child and adolescent functioning. Friends are both sources of social support and models for behavior.

Research points out that peer relations increase in importance in adolescence and friend support is related to child and adolescent well-being (Levitt, 2005). Similarly, literature suggests that interactions with peers influence the social, emotional, and cognitive functioning of children beyond the impact of family, school, and neighborhood (Rubin, Bukowski, & Parker, 2006). Friendship improves the self-esteem and well-being of individuals and friends support each other to cope with life stresses and developmental transitions (Hartup & Stevens, 1999). However, friends who endorse or exhibit

problematic behaviors may promote negative behavior in their youthful friends (Rubin, Fredstrom, & Bowker, 2008). Therefore, friend relationships may have particular importance for immigrant children and adolescents who experience disruption in their friendship networks in the process of migration to another country.

As for native born youth, friendships function to offer guidance, protection, and emotional support for immigrant youth (Suarez-Orozco, Suarez- Orozco, & Todorova, 2008). Immigrant children have also reported that many of their peers modeled positive behaviors; others, however, distracted them from performing optimally in school. As peer conformity and need to belong to a group are related to the development of a sense of self in middle childhood and adolescence, these children often obey the rules of their friend network, which in turn impacts their emotions and behaviors. When immigrant students' school environment is unsafe and occupied by gangs, students have shown lower self esteem and higher depressive symptoms (Portes & Rumbaut, 2001). Therefore, although the number of friends in the network and support from friends may be important for immigrant youth adjustment, friend characteristics also need to be taken into consideration.

### *Significance and Purpose of the Study*

Whereas extant friendship literature is focused largely on middle-class Euro-American youths, there is a lack of literature addressing the impact of friends on the adjustment of newly immigrant youths at different age levels. A few studies have suggested that social network disruption, social support and behaviors of support providers may have an impact on immigrant youth adaptation (Fuligni, 1998; Suárez-Orozco, Suárez-Orozco, & Todorova, 2008). The aim of my study is to investigate the

relation of friend support and friend behaviors to the emotional and behavioral adjustment of the youths involved in a project to study immigrant child and adolescent adaptation and to determine whether these effects vary by age/grade level (elementary school age, middle school age, high school age).

Postmigration adaptation becomes an essential subject to investigate as the number of immigrant families in the United States has been increasing in recent years. In addition, childhood and adolescence are periods including considerable developmental change; however, immigrant children experience additional burdens during the immigration process that may influence their functioning. There is a fundamental need for research focused on the adaptation of immigrant children of different ages and on the role of friendship relations in their adaptation.

Moreover, research conducted so far has been focused mainly on second generation immigrants born in the U.S. or on those of the first generation who had lived in the United States several years (Levitt, Lane, & Levitt, 2005). By assessing the role of friendship in the emotional and behavioral adjustment of children and adolescents within the initial years of their arrival, this study contributes to the current literature about the experiences that these youths have with their peers in the earlier stages of adaptation. The results will contribute to our knowledge of how immigrants at different age levels respond psychologically and emotionally to their postmigration environment. My dissertation will provide a guideline for identifying immigrant youths with behavioral and emotional problems.

The knowledge obtained from this study regarding immigrant youth's adjustment will be expected to be particularly important for school-based interventions and

interventions targeting immigrant children and adolescents. The research will contribute to information that will help practitioners target peers within the immigrant youth's network who might provide support or model positive behaviors. Knowledge obtained from this research should also help practitioners to identify immigrant children and adolescents whose networks involve peers with problem behaviors and the youths who may need support from other professional resources. In sum, by determining the friendship factors related to adaptation, this study will inform further research, along with interventions concerning  the development of programs to facilitate immigrant youth adjustment.

# CHAPTER II

## Literature Review

This chapter contains a review of existing empirical and theoretical literature that provides the foundations for this study and highlights the importance of the study. The conceptual content is based on the literature on child and adolescent emotional and behavioral adjustment and peer influence in this adjustment process. Particularly, the following literature review includes research findings and theoretical perspectives on *immigration and immigrant child adjustment following immigration*, *the impact of peer support on youth emotional and behavioral adjustment, the relation between friend behavior and emotional and behavioral adjustment, and the impact of friends on immigrant child emotional and behavioral adjustment.* Following the review of the literature, the overall research aim and specific hypotheses of this study will be outlined.

### *Immigration and Immigrant Youth Adaptation*

The United States has been continually receiving immigrants from all cultures and countries. According to the U.S. Census Bureau, 38.5 million foreign born people lived in the United States, representing 1 in 8 residents, in 2009. In addition, this population increased by 7.4 million persons, or by about 24 percent between 2000 and 2009. Among those, 53 percent of all foreign born individuals were from Latin America. The foreign-born from Latin America represented over 65 percent of the foreign-born population in New Mexico (78 percent), Florida (75 percent), Texas (73 percent), and Arizona (69 percent) (U.S. Census Bureau, American Community Survey, 2010.) As a result, children with foreign-born parents represent one of the fastest growing populations in the United

States. Therefore adjustment of immigrant children to the American culture has become an essential topic for social scientists, policy makers and practitioners to investigate. The main topics of interest are the academic achievement and behavioral and emotional adjustment of these youths for these professionals (Fuligni, 1998; Harris, 1999). Although studies regarding immigrant adults are prevalent, research regarding preadolescence and adolescence is rare. However, attention to this population has been increasing recently (Fuligni, 1998; Gold & Amthor, 2011; Kao, 2000; Levitt, Lane, & Levitt, 2005). In addition, there have been many studies focusing on the academic functioning of immigrant children and adolescents; however, fewer studies have paid attention to the emotional and behavioral functioning of immigrant youths (Fuligni, 1998; Suarez-Orozco, 1987; Suarez-Orozco, 2002).

In the research that targets immigrant youth, there are some inconsistencies regarding immigrant youth adjustment and well-being. It had been expected that immigrants would show lower adjustment because of the struggles caused by the process of immigration; however, literature suggesting better adjustment of immigrant children has led to the term "the immigration paradox" (Vega & Rumbaut, 1991). Some studies have reported that youths from immigrant families showed healthier adjustment, including fewer psychological and behavioral problems, and higher academic achievement compared to their peers from American-born families. Both first and second generation immigrants have been found to be less likely to engage in risky and delinquent behaviors, such as drug and alcohol use (Fuligni, 1998). Similarly, with regard to emotional and behavioral adjustment, youths from immigrant families show equal self-esteem and fewer psychosomatic symptoms and less psychological distress compared to

their native-born peers (Fuligni, 1998; Kao, 2000). On the other hand, some researchers have reported lower self-esteem and more depression among immigrant children. For example, a Miami-San Diego Project addressed the relationships between the immigrant child and parent language conflict and behavioral problems. Particularly, Nicaraguan youths who experienced acculturation and language conflicts with their parents have been found to show lower self-esteem; perceived discrimination was also found to be related to low self-esteem among Cuban youths (Gil & Vega, 1996).

Although the comparison of immigrant children with native-born peers is one line of research, it has also been shown that differences emerge when immigrant youths are compared among themselves. Overall, for example, immigrant youths from Central and South America have been found to perform better in schools and experience different problems than other minorities, such as African-Americans, Mexican-Americans, and Native Americans. Children from immigrant Chinese families have been reported as showing less risky behaviors than children from Latin American families (Harris, 1999). The reason for the adjustment differences between these populations isthought to be that parents from Latin America are generally less educated and work in lower paying occupations and, in turn, they cannot provide their children with better opportunities (Fuligni, 1997, 1998). Likewise, Gold and Amthor (2011) also reported that Mexican-origin youths are more prevalent in problematic schools, which leads them to show lower math performance, mental health, and interpersonal functioning.

The reasons for lower adjustment have been addressed as socioeconomic conditions of immigrant families, neighborhood environments, problematic school environments, strong ethnic identity, length of time in the United States, involvement

with U.S. born peers, and the age at the time of immigration (Fuligni, 1998; Harris, 1999; Portes & Rumbaut, 2001; Portes & Rumbaut, 2005; Rumbaut, 2005; Suarez-Orozco, 1987). Adjustment of immigrant children and adolescents is reported to be negatively related to their involvement with U.S. born peers and length of stay in the U.S. The age of the immigrants at the time of the immigration has been pointed out as another factor. First generation youths who came to the U.S. at later ages performed fewer problem behaviors (Harris, 1999).

On the other hand, the overall better adjustment of immigrant children and adolescents has been explained by high achievement orientation of immigrant children and families, family obligations, and ethnic identity. Immigrant children are thought to have higher achievement motivation because their families value education and also they perceive that they have better opportunities in the new land from which to benefit (Fuligni, 1997; Suarez-Orozco, 1987). They are thought to be successful academically because of these factors. Performing well academically usually predicts better psychological and behavioral outcomes, and less involvement in risky behaviors for immigrant youths, as focusing on education prevents them from getting involved in risky activities (e.g., by spending more time for education related activities) (Fuligni, 1997). Family obligations are also associated with better adjustment of immigrant youths. In general, immigrant youths come from collectivistic cultures and they give priority to responsibilities towards their families. Therefore, they pay more attention to education and perform more positive behaviors with their families and peers to save their families' reputation (Fuligni, 1998; Fuligni, Tseng & Lam, 1999; Kiang & Fuligni, 2009). However, if they strictly obey these rules, it may impact their adjustment negatively as a

consequence of high perceived pressure (Fuligni, 1998). In addition, strong ethnic identity has been pointed out to be related to better adjustment; however, the literature regarding this subject is complex and inconsistent.

To summarize, a growing literature supports the notion that immigration can be seen as a very significant process that is related to youths' psychological and behavioral functioning in many contexts. In general, the immigration process itself has been found to be related to adolescent adjustment, but different factors have been addressed to explain this fact. Difficulties in this process show themselves in various ways, such as lower academic achievement, involvement with risky behaviors, or problems in relations with peers or family members. Various factors have been pointed out so far as the predictors of immigrant youths' adjustment, such as parent-child relations, ethnic identity formation, parent-child language differences and higher achievement orientation (Fuligni, 1998; Gil & Vega, 1996; Rumbaut, 2008; Suarez-Orozco, 1987). However, influences of peers in this adjustment have been addressed rarely. Thus, the remainder of the literature review will focus on the impact of peers on youth emotional and behavioral outcomes in general, followed by the impact of peers on immigrant child adaptation in particular.

### *Friend Influence on Child and Adolescent Adjustment*

Peer relationships provide children with an important developmental context that determines the behaviors, attitudes and choices that influence their life span adaptation (Rubin, Bukowski, & Parker, 2006). Peer networks determine the status of the children within their network and rules for behaviors. Peer groups share similar motivation, at least for academic achievement. Extensive literature shows the impact of peer relations on youth emotional and behavioral adjustment. Similar to adults, children and

adolescents who have friends usually think positively about themselves and others (Bowker & Rubin, 2009; Hartup & Stevens, 1999). On the other hand, isolation in middle childhood has been found to be related to internalizing and externalizing behaviors (Fingerman, Brown, & Blieszner, 2011). Being withdrawn in childhood is related to both contemporaneous and future internalizing problems, such as low self-esteem, anxiety, loneliness, and depressive symptoms. In addition, the impact of friendship on internalizing behaviors has been explained by different underlying mechanisms. For example, friendship has been found to be the moderator for depression for victimized children; that is, young adolescents who were victimized and who had friends showed lower levels of depression. However, it has also been found to be the mediator for the relationship between acceptance and depression and loneliness; peer acceptance was a predictor for friendship which, in turn, predicted less depression and loneliness (Rubin, Bukowski, & Parker, 2006). Furthermore, rejection and acceptance by peers are important factors that influence youth adjustment. It has been demonstrated that rejected children perform more negative and fewer positive behaviors; however, accepted children show the opposite trend (Rubin, Bukowski, & Parker, 2006). Peer rejection in childhood predicts delinquency, conduct disorder, attention difficulties, and substance abuse in adolescence (Rubin, Bukowski, & Parker, 2006).

In the following section the impact of peers on child and adolescent functioning will be examined in two parts: friend support and friend behavior. First, the importance of friend support for emotional adjustment of children and adolescents will be explained. Friend social support in this study will be addressed from the Convoy Model Perspective. Thus, The Convoy Model Perspective will be described, and, following that, the

relationship between peer social support and youth behavioral adjustment will be addressed. Then, the impact of friend behavior on child and adolescents adjustment will be introduced. Finally, the importance of friend support and behavior depending on youths' developmental stage will be described.

*Friend Support and Child and Adolescent Adjustment*

*Friend Support and Emotional Adjustment.* Social relations have considerable impact on self-concept. Children are thought to develop their working models of self depending on their experiences with attachment figures. On the other hand, self-perceptions are also impacted by various social relationships other than attachment figures (Levitt et. al, 2005). Beginning in middle childhood, approval or rejection by peers is associated to self-regard. Then, friendship may have a unique impact on self-concept, because when children have close, supportive and positive relationships with their peers they perceive themselves as competent and valued (Franco & Levitt, 1998).

Friendship may also play a role with respect to other aspects of psychological adjustment of children and adolescents. Friends are seen as essential sources of social support in middle childhood and adolescence, providing not only esteem support, but also other functions, such as improved problem solving. Along with these functions of social support, the opportunities to share pleasurable activities with friends can enhance psychological adjustment. In addition, friendship quality has been found to be related to self esteem and other aspects of psychological functioning and wellbeing (Bowker & Rubin, 2009; Franco & Levitt, 1998; Rubin, Bukowski, & Parker, 2006). Thus, close, supportive, qualitatively satisfying friendship is expected to impact psychological wellbeing by increasing self-esteem and providing pleasure, and to provide buffering

effects when negative events take place by reinforcing esteem and improving problem solving skills.

Conversely, literature shows an association between poor peer relationships and depressive symptoms (Vernberg, 1990). Chronically friendless children have been rated as less socially skilled, less mature, and displaying more withdrawn and anxious behaviors in a summer camp study (Rubin, Bukowski & Parker, 2006).

Thus perceived peer support is associated with fewer depressive symptoms, less psychological disturbance and greater self-esteem in middle childhood and adolescence (Franco & Levitt, 1998; Levitt, Guacci-Franco, & Levitt, 1993; Venberg, 1990; Way & Robinson, 2003). Youths who report greater satisfaction with their friends also report feeling better about themselves (Way & Robinson, 2003). Studies have also indicated that gender may moderate this relationship. Some studies suggest that support from friends is associated to higher self-esteem and lower depression across genders, others have demonstrated the association between friend support and lower depression symptoms only for girls and, in other studies, friend support and adjustment have been related only for boys (Rueger, Malecki, & Demaray, 2010).

Although a positive association between peer support and youth adjustment is expected, there are mixed findings related to this subject. Some studies have indicated that peer support is related to lower distress, but other studies have demonstrated that peer support may be related to higher levels of distress and problem behaviors (Rueger, Malecki, & Demeray, 2008). One of the potential explanations for these findings is that previous studies have used different definitions for peer support. Some have differentiated “classmates” from “friends” when measuring peer support; others have

measured support from these two sources under one category. In addition, some studies have assessed only friend support, but addressed it as peer support. Overall, literature suggests that peers in general, such as classmates, versus close friends provide different levels of support and have differential impacts on the adjustment of children and adolescents. Particularly, classmate support has been found to be more strongly related to positive outcomes, such as psychological and school adjustment and socially adaptive behaviors than close friend support (Rueger, Malecki, & Demaray, 2008; Rueger, Malecki, & Demaray, 2010). Rueger, Malecki, and Demaray (2008) have shown that support from classmates has been related to almost all adjustment scores for both boys and girls, even after accounting for support from close friends. Particularly, classmate support has predicted lower depression and better social skills for girls, and higher leadership for boys, in a sample of 6$^{th}$ to 8$^{th}$ grade students above and beyond support from close friends, parents, and teachers. Close friend support was not associated with adjustment for boys, and it was negatively related to social skills for girls.

Rueger, Maleckin and Demaray (2010) have conducted another study in order to assess the independent and unique effects of different sources of support on the adjustment of middle school students, both concurrently and longitudinally. Results demonstrated that both lower classmate and lower close friend support predicted concurrent depression symptoms and lower self-esteem, but only classmate support predicted lower anxiety scores for both genders. When they measured the unique impact of peer support on youth adjustment, classmate support was the unique concurrent predictor for depression, anxiety, and self-esteem scores, and the unique longitudinal predictor for depression and self esteem scores for boys.

A few studies have been focused on friendship of ethnically diverse individuals. For example, in a study conducted by Way and Robinson (2003) the impacts of family and friend support and school environment on the psychological well-being of low-income Black, Latino, and Asian American adolescents was investigated longitudinally. Friend support at Time 1 did not predict changes in self-esteem and depressive symptoms. The authors concluded that the sample size was small in this study (N=100) and friend support was almost a significant predictor for the change in self-esteem scores over time. They further claimed that with a larger sample this association could be significant. In another study, Rodriguez, Mira, Myers, Morris, and Cardoza (2003) have found that friend support influenced the psychological well-being of Latino college students more than family support. In addition, only friend support was found by Rodriguez et al. (2003) to be associated with lower distress level. Furthermore, using the social convoy model procedure, Levitt, Guacci-Franco, and Levitt (1993) have investigated the association between social support and self-concept, sociability and mood among 333 Hispanic-American, Anglo/European American, and African-American children and adolescents. Friend support was positively associated with sociability/mood scores for African-American students.

*The Convoy Model Perspective.* The data in the present study were gathered from the convoy model perspective. This perspective is grounded in attachment and social role theories (Kahn & Antonucci, 1980). The social convoy is defined as a network of relationships that provides support to individuals across the life span. The social convoy develops from early attachment relationships in infancy, and expands to include other significant persons as the individual develops (Franco & Levitt, 1998; Levitt, 2005). The

convoy functions optimally to afford the exchange of support in the form of affective support, self affirmation, and direct aid. The individual's emotional attachments to the particular persons and roles of these persons in the target person's life determine the inclusion of the individuals in the convoy. A visual convoy diagram includes a series of concentric circles. Persons to whom the individual is emotionally attached and who occupy important roles in the individual's life are likely to be included in the inner circle and to provide higher support. However, individuals with less strong emotional bonds, such as friends and extented family members, are likely to be included in the outer circles and provide less support. Children and adolescents interact with diverse individuals, such as family, extended family, and peers, and their relationships with these individuals change across time. Peers become more important in early adolescence, and then they are included more often in the convoy and provide more support in adolescence and young adulthood (Franco & Levitt, 1997; Franco & Levitt, 1998; Levitt, 2005; Levitt, Weber, &, Guacci, 1993).

According to the Convoy Model, supportive interactions with convoy members provide a secure base for the individual's well being. Similar to adults, the supportiveness of children's networks is associated with positive psychological adjustment. Especially, support received from the inner circle members of the convoy is related to individuals' self-esteem (Levitt, Guacci-Franco, Levitt, 1993).

Although studies of convoy development in childhood and adolescence are rare, various studies have generally found support from convoy members to be related to psychological adjustment (Franco & Levitt, 1997; Levitt, 2005). However, this support sometimes may have negative influences in the adjustment of youths. In a study of social

support on 4th and 6th grade students' emotional adjustment (with an aggregated measure of self-esteem, loneliness, and depression, Levitt, Bustos, Crooks, Hodgetts, Milevsky, & Levitt, 2002), the results indicated that having a best friend in the inner circle of the convoy was related to lower adjustment. This study also showed that the inclusion of different types of relationships, rather than the number of persons, in the inner circle was related to better adjustment. The authors suggested that normatively children have family members in the inner circle in this age period, and including friends may indicate the absence of family support. Similarly, Sabatelli and Anderson (1991) have also emphasized the importance of coexistence of positive friend and parent support on emotional functioning; they also claim that youths rely on peer support when parent support is not available, especially under stressful circumstances. In addition, Fuligni and Eccles (1993) demonstrated that early adolescents with parents who were assertive, restrictive, and who provided few opportunities to be involved in decision making for their youth, showed higher extreme peer orientation and peer advice seeking.

*Friend Support and Behavioral Adjustment.* The impact of peer support on youth emotional functioning has been addressed in various studies, but few studies have focused on behavioral adjustment. In addition, the literature points out mixed findings regarding behavioral outcomes, because aggressive children or adolescents who perform negative behaviors do not always receive lower support from their peers (Rubin, Bukowski, & Parker, 2006).

Some research shows that peer support may buffer children from stress related maladjustment. Wasserstein and La Greca (1996) conducted a study with 96 ethnically diverse children from the fourth to the sixth grade to test the moderator effect of peer

support on the negative impact of family conflict on children's behavior problems. They found that close friend support was not directly related to behavior problems, but it was related to lower behavioral problems in the high family discord group. Children from families with higher marital conflict and higher close friend support showed lower behavior problems.

Rueger, Malecki, and Demaray (2008) conducted a study to investigate gender differences in the association between perceived social support and youth adjustment among 246 students in 6th through 8th grades. Support from peers had an impact on the adjustment of both genders, but there were some gender differences. Support from classmates was only related to leadership behaviors for boys, but it was negatively related to hyperactivity, aggression and conduct problems for girls. However, support from close friends was positively related to aggression and conduct problems for girls. According to the authors, these findings highlight the importance of studying the peer culture of friendship while studying the impact of friend support. Also, as girls consistently report their peers as support providers more than boys, girls may be more influenced by peers, especially in negative peer environments (Rueger, Malecki, and Demaray, 2008; Martinez, Aricak, Graves, Peters-Myszak, and Nellis, 2011). In addition, some other studies have indicated a positive relation between friend support and externalizing behaviors for boys and girls (Kerr, Preuss, & King, 2006) and higher rates of delinquent behaviors for boys (Licitra-Kleckler and Waas, 1993).

To conclude, while an impact of peer support has been shown for the emotional and behavioral functioning of children and adolescents, there are some inconsistent findings in the literature. Potential explanations for these mixed findings have been a)

differences in operational definitions of peer support in different studies, b) methodological differences, such as using different measurements in different studies or within the same study, and c) differences in statistical analyses conducted in different studies, such as analyzing independent or unique impacts of sources of social support (Rueger, Malecki, and Demaray, 2010). Studies showing a negative impact of peer support on emotional and behavioral adjustment point out the importance of observing peer group culture and friend behaviors. The next section will focus on the impact of friend behaviors on child and adolescent adjustment.

*Friend Behavior and Child and Adolescent Adjustment*

Although the social support and companionship functions of friendship may support positive developmental outcomes, these outcomes are related to who one's friends are (Hartup & Stevens, 1999). Literature regarding the impact of peer interaction on behavior predominantly focuses on peer deviance and its consequences, more than peer competence and its consequences (Hartup, 2005). Thus, the following section will introduce the findings about how peer characteristics, especially antisocial behaviors, have an impact on youths' emotional and behavioral outcomes.

Literature suggests that the types of friends children have or the groups in which they are involved influence their adaptation (Rubin, Bukowski, & Parker, 2006). Children and adolescents tend to establish friendships with others who are behaviorally, emotionally, developmentally, and racially similar to themselves. These similarities between friends lead both to negative and positive consequences that vary from one child to another. When two prosocial or achievement oriented children become friends, they socialize with each other in a prosocial way. In this case, friends can be a protective

factor. However, having friends may become a risk factor when aggressive or antisocial youths are engaged with other aggressive and antisocial peers, as they socialize in a maladaptive way (Hartup, 1999; Haselager et al., 1998; Rubin, Fredstrom, & Bowker, 2008). It has been shown that especially aggressive youths have a tendency to have aggressive peers as their best friends compared to non-aggressive youths. Research shows that having aggressive or deviant friends is associated with increasing aggressive or antisocial behaviors in adolescents (Ciairano, Rabaglietti, & Beyers, 2007; Rubin, Fredstrom, & Bowker, 2008). In addition, youths who are involved in at least one mutual antipathy develop more aggressive and antisocial behaviors than youths who are not involved in this sort of relationship (Hartup, 2005). Therefore, the characteristics of friends, such as being antisocial or socially withdrawn, are important to determine the developmental significance of having friends (Hartup & Stevens, 1999).

As a consequence of youths' relationships with antisocial peers, their antisocial behaviors often increase, because antisocial peers are not positive role models; they have poor social skills and relationships with them involve more conflicts, deviant behavior and talk, and lack intimacy (Hartup & Stevens, 1999). Thus, children who have aggressive friends influence each other through reinforcement and enticement which, in turn, increase each other's aggression. Studies show that when youths have stable relationships with others with behavior problems, their problem behaviors increase during the transition from childhood to adolescence (Hartup & Stevens, 1999). Therefore, friendship networks which support maladjusted behaviors might increase the possibility of performing negative behaviors for youths.

Different explanations have been suggested to explain the relationship of peer behaviors to the adjustment of children and adolescents. Hartup (1999, 2005) claims that various moderators and mediators need to be taken into consideration when attempting to explain the complex impact of relationship with peers on individual behavior. According to him, characteristics of socializing agents and characteristics of individuals being socialized are essential moderators for behavioral change. However, these factors also frequently interact in determining behavioral consequences. In addition, some studies show that the impact of delinquent friends on an individual child is moderated by friendship quality. When a child has a high quality friendship with a delinquent peer, this may increase for her/him the probability of performing delinquent behavior (Hartup & Stevens, 1999; Ciairano, Rabaglietti, & Beyers, 2007). Furthermore, Fuligni, Eccles, Barber, and Clements (2001) observe that extreme peer orientation for adolescents may increase the possibility to engage with deviant peer groups. Youths with extreme peer orientation may place more importance on approval from peers and, when they associate with deviant peers, they may perform risky behaviors in order to elicit approval from their friends. Similarly, relationships with these peers may reinforce adolescents' prior tendencies toward problem behaviors. In conclusion, several factors, particularly the characteristics of one's friends, and the quality of one's relationships with them, determine whether friendships are protective or risky for one's development.

*Friend Influence and Child Age*

Cognitive and emotional capacities of children and the social organizations to which they are exposed, such as school, impact the development of children's close friendships. Particularly, peer relations may have different meanings and functions for

different age levels. For example, Fingerman, Brown, & Blieszner, (2011) state that peer relations provide children with an opportunity for self definition, status, and knowledge of their position in social hierarchies. Middle childhood is the period which marks the emergence of friendship (Franco & Levitt, 1998). Children's ideas about their status in their groups during middle childhood influence their beliefs about themselves over time (Fingerman, Brown, & Blieszner, 2011). Early adolescence is a time of shift in social relationships. Throughout childhood and adolescence, peers achieve increased prominence in youth's lives and, especially in adolescence, peers and friends become more important and considerable leisure time is spent with friends (Hartup & Stevens, 1999; Fingerman, Brown, & Blieszner, 2011; Fuligni, Eccles, Barber, & Clements 2001; Rueger, Malecki, & Demaray, 2008). Thus, during the adolescent period, peer relations become more extensive and intensive. As this is the period which mainly impacts adolescents' identity development, peer networks are important for this age group to develop their identities by determining their interests and popularity within their groups. Therefore, larger peer networks provide adolescents with the opportunity for social status, popularity, and sense of belonging (Fingerman, Brown, & Blieszner, 2011).

Social support is especially important during childhood, because children are both socially and physically reliant on others and this is the time when they acquire a contextual sense of self across multiple settings (Reid, Landesman, Treder, & Jaccard, 1989). Children receive support from multiple resources starting from their early ages. However, the age of the child has an impact on the sources of perceived social support. For example, preschoolers receive more support from close family members, whereas older children perceive extended family members and friends as support providers along

with close family members. Reliance on friend support increases in adolescence (Furman & Buhrmester, 1985; Levitt, Guacci- Franco, & Levitt, 1993; Levitt et al., 2005). Levitt, Guacci-Franco, & Levitt (1993) have reported that friend support contributed to self-concept at the age of 14. Behaviorally, peer relations are also likely to be important, especially in the early adolescent middle school years, as this is a peak time for peer group conformity (Hartup & Stevens, 1999). In conclusion, the ages of children and adolescents influence their perception of relationships with their peers and the impact of friends on their sense of self, interests and behaviors.

*Linking the Constructs: Friend Support, Friend Behavior, and Immigration in Children and Adolescents*

The literature focused on the impact of peers on immigrant child and adolescent adjustment will be reviewed in this section. Particularly, the impact of friend social support for optimal adjustment to the stressful transition of immigration will be addressed first. Then, limited literature on the impact of peers on immigrant youth adjustment will be reviewed.

*Friends and Immigration*

According to life-span theorists, individuals experience various normative and non-normative events over the life course (Elder, 1998). The Convey Model of social relationships (Kahn & Antonucci, 1980) investigates social relations over the life span in terms of normative and non-normative transitions in individuals' lives and in their social roles. Particularly, social networks are suggested to develop as a function of personal and situational characteristics and to change depending on normative and non-normative life transitions. Normative events include events related to maturation and aging (e.g.,

marriage, retirement) and non-normative events are events such as immigration that require considerable adaptation. In addition, ethnicity, gender, and age related developmental changes are considered to be personal influences. Situational factors consist of events related to the individuals' current life situation that change the need for support provided by social network members and cause changes in individuals' social network structures.

As explained above, personal and situational characteristics interact and determine the individuals' need for support. Both personal characteristics (e.g., developmental life stage and ethnicity) and contextual factors (e.g., socioeconomic factors, circumstances of immigration) play a significant role in immigrant adaptation (Levitt, 2005; Levitt, Lane, & Levitt, 2005). In addition, the capacity of individuals to cope with these important transitional circumstances is facilitated by the presence of social support (Kahn & Antonucci, 1980; Levitt, 2005; Levitt, Lane, & Levitt, 2005). Immigration represents a unique transition where the stresses of immigration increase the need for social support while the immigration itself often disrupts the individual's support network. Children and adolescents may be especially vulnerable populations considering the developmental conflicts that they face as normative factors during this process.

Friends foster self-esteem, socialize and support each other in time of transitions and life stresses across the life span (Hartup & Stevens, 1999). However, most of the studies regarding children's friendship have included native born middle-class Euro-American children and young adolescents, and little is known about the friendships of immigrant children, who often vary culturally from Euro-Americans (Franco & Levitt, 1998; Rubin, Fredstrom, & Bowker , 2008). The limited research on the impact of friends

on immigrant youths, particularly Hispanic and Latino adolescents, will be reported in the next section.

*The Influence of Friends on Immigrant Child and Adolescent Adjustment*

Past research suggests that social support impacts the adjustment of immigrant youth (Cairns & Cairns, 1994). Similar to native born youth, friendships are thought to function to offer guidance, protection, and emotional support for the immigrant youth (Suarez-Orozco, Suarez- Orozco, & Todorova, 2008). Thus, friendship can be seen as an important factor for immigrant child and adolescent emotional and behavioral adjustment.

In fact, Harris (1999) states that peer acceptance can be more crucial for immigrant adolescents who are already different from the majority of the population with respect to their speech and appearance. Therefore, when immigrant youths spend greater time in their youth culture, neighborhoods, and U.S. institutions, they adjust their behaviors to the norms of these contexts. Some scholars suggest that greater acculturation and longer time after immigration and greater involvement with native born peers increase the possibility of risky behaviors among immigrant youths (Allen, Elliott, Fuligni, Morales, Hambarsoomian, & Schuster, 2008; Harris, 1999, Portes & Rumbaut, 2001). Allen et al. (2008) point out that greater acculturation leads to higher rates of substance abuse among Latino adolescents, related to social network change with acculturation. They conducted a study to investigate the relationships between network-level Spanish language use and substance use among Latino eighth-grade students. The results revealed that as Latino students have a higher percentage of high-school aged members in their social networks, they performed higher substance abuse behaviors,

whether or not network members spoke Spanish. Similarly, Gaba (2010) has reported that friends' substance use was significantly associated with ninth grade Latino immigrant youths' substance use and the intent to use, along with language acculturation and the sense of school belonging. Immigrant Latino adolescents were less likely to use or have intentions to use when they had fewer friends who use substances and had higher school belonging.

In conclusion, literature regarding the impact of peers on Latino/Hispanic immigrant youths reveals that support from friends and the behaviors of friends are related to immigrant youths' psychological and behavioral well-being. On the other hand, little research has been conducted with newly immigrant youth. Rumbaut (1985, 1989) claims that the psychological impact of immigration is more intense in the first three years of immigration and adjustment follows a U-shaped curve: elation, depression, and recovery. The first year is characterized by euphoria, the second year by strong disenchantment and demoralization, and, after the third year, individuals return to earlier levels of well being and satisfaction gradually. Thus, studying the initial years of immigration is essential to understand the processes involved in immigrant adaptation.

### *The Purpose of the Study*

Limited research suggests that social support, the behaviors of support providers, and disruption in social network relations influence immigrant children's adaptation (Fuligni, 1998, Suárez-Orozco, Suárez-Orozco, & Todorova, 2008). However there is a lack of empirical research addressed to these issues, especially in newly immigrant children at different age levels. Moreover, even though friendship is one of the subjects

widely studied among the majority population, research on friend relationships of immigrant children and adolescents is sparse.

The present study was based on data obtained as part of a larger study of social networks and adaptation in three cohorts of newly immigrant children and adolescents over their first three years following immigration. Peer social support and immigrant youth adjustment data were obtained from all three years of the project, but friend behavior data were obtained only in the third year of the project. Prior cohort-sequential analyses on these immigrant children's social networks showed changes in the number of friends and support from peers as they rebuild new friend groups in the years following migration (Levitt, Levitt, Lane, Cici-Gokaltun, & Franco, 2009). The aim of the current study was to investigate the impact of friend support and friend behaviors on the emotional and behavioral adjustment of the youths involved in the project and to determine whether these effects varied by the age of the youth. The following research questions and hypotheses, based on theory and existing literature, were tested with data obtained in the third post-migration year.

*Research question 1:* Is support from peers associated with the behavioral and emotional adjustment of immigrant children and adolescents post migration?

Hypothesis 1: Support from peers will be associated positively with the behavioral and emotional adjustment of immigrant children and adolescents. The more immigrant children and adolescents receive support from their peers, the more likely they will show emotional and behavioral adjustment.

*Research question 2:* Is friend problem behavior related to the emotional and behavioral adjustment of immigrant children and adolescents?

Hypothesis 2: Friend problem behavior will be related to the emotional and behavioral adjustment of immigrant children and adolescents. The more their friends engage in problem behaviors, the less the children and adolescents will show positive emotional and behavioral adjustment.

*Research question 3:* Do the impacts of peer support and friend problembehavior on immigrant child and adolescent adjustment vary as a function of the age of the immigrant?

Hypothesis 3: The impacts of peer support and friend problem behavior on immigrant child and adolescent adjustment vary as a function of the age of the immigrant. Particularly, as peer relations are generally more salient for adolescents, the linkage of social support and friend behavior to youth adjustment will be stronger for the adolescent groups compared to younger children. Because peer group conformity is more prevalent in early than in later adolescence, it was also possible that behavioral effects would be more pronounced for middle school age adolescents.

*Supplemental Longitudinal Analyses of Friend Support*

Data on friend problem behaviors were not obtained in the first and second years of the project. However, the availability of peer support data from all three years of project enabled analyses that examined the relation of peer support to youth adjustment as a function of time as a supplement to the examination of the differences between age cohorts in the third post-migration year.

# CHAPTER III

## Methodology

*Participants*

Archival data were used for analyses in the current study. Data were obtained as part of a larger project measuring social networks and school adaptation in immigrant children and adolescents (*N* = 622). The three waves of data were collected from elementary, middle, and high school students from the Miami Dade County Public Schools who were in grade 3-4, 6-7, and 9 at the time of the first assessment and who had been in the US for less than a year. A total of 503 immigrant children and adolescents for whom complete data were available in the third year of the project were included in the analyses. The participants were from five culturally distinct countries/regions, namely, Cuba (*n*= 128), Colombia *(n*= 96), Argentina (*n*= 99), Haiti (*n*= 114), and the English-speaking West Indies (*n*= 66). One hundred and fifty-eight participants (31%) were in elementary school, 189 (38%) were in middle school, and 156 (31%) were in high school. The children in the sample ranged in age from 7 to 18, with a mean age of 8.80 (*SD* = .83) in the elementary school group, 11.82 (*SD* = .86) in the middle school group, and 15.17 (*SD* = 1.15) in the high school group. Fifty percent (*n*= 252) of participants were male and 50% (*n*= 251) were female.

*Procedure*

Parents or guardians of immigrant students who met the criteria for participation were sent letters of explanation along with parent consent forms and child assent forms. Immigrant students who were born outside of the United States and who had resided in the U.S for a less than a year were eligible for the original study. If the students returned

a signed consent form at a previously set appointment time, they were able to participate in the study and they were interviewed at their schools. The initial interview took place in the spring of the students' first year and follow-up interviews were conducted one year and two years later. At each time of assessment, personal interviews were conducted in a quiet school location by interviewers fluent in the participants' languages. The mean interview time was 44 minutes for each session at Time 1 and Time 2, and 48 minutes at Time 3.

*Measures*

Peer support and friend problem behavior measures were incorporated into the interviews. Behavioral and emotional adjustment measures were also integrated into the interviews in order to collect information regarding youth functioning. Emotional functioning measures included in the interview were measures of self esteem, psychological symptoms, and depression. Teachers completed internalizing and externalizing behavior subscales of the *Child Behavior Checklist (CBCL-TRF;* Edelbrock & Achenbach, 1984) to report children's behavioral adjustment. Information on the age, gender, and ethnicities of participants was obtained from centralized school records.

*Peer Support.* In each year of the study, participants completed the *Children's Convoy Mapping Procedure* (Appendix A) (Levitt, Guacci-Franco, & Levitt, 1993) in order to determine the number of friends in their social networks and the amount of support provided by friends. The Convoy Mapping Procedure is a concentric circle diagram asking participants to place the closest and most important persons in inner, less close but still important persons in middle and outer circles. Participants are then asked to identify the network members who provide each of six support functions specified under

the categories of "affective function", "self-affirmation" and "instrumental assistance" in the convoy model (Appendix B). Support function questions included: "Are there people you talk to about things that are really important to you?" "Are there people who make you feel better when something bothers you or you are not sure about something" "Are there people who would take care of you if you were sick?" "Are there people who like to be with you and do fun things with you?" "Are there people who help you with homework or other work you do for school?" and "Are there people who make you feel special or good about yourself?". The internal consistency (alpha) reliability coefficients for the peer support measure were .81 for Time 1, .82 for Time 2, and .83 for Time 3. The sum of the support functions provided by peers was used in the analyses.

*Friend Problem Behavior* (Appendix C). In the third year, participants were asked about their friends' behaviors. The friend behavior measure included 4 items indexing how many friends (all, most, a few or none) engage in negative (e.g. fighting, drug use) behaviors. Specific items were: "How many of your friends ever get into physical fights?" "How many of your friends have had to repeat a grade at school?" "How many of your friends have used marijuana or other drugs?" "How many of your friends belong to a gang?" Internal consistency (alpha) reliability for the friend behavior index was .52

*Emotional Adjustment.* Self concept was measured in each year with an abbreviated 6-item version of the *Harter Self Perception Profile* (1985) (Appendix D) adapted to an interview format. The participants were instructed to choose statements that were true for them for 6 items assessing the academic, the social, and general self concept sub-categories addressed by Harter. The scale included the items such as "*1*, some (kids/people) feel that they are very *good* at their school work, but *2*, other kids

*worry* about whether they can do the school work assigned to them. Which is most like you, *1*, or *2*?" "*1*, some (kids/people) have as many friends as they want, but *2*, other (kids/people) would like to have a lot more friends. Which is most like you, *1*, or *2*?" "*1*, some (kids/people) *like* the kind of person they are, but *2*, other (kids/people) often *wish* they were someone else. Which is most like you, *1*, or *2*?" Internal consistency (alpha) reliability coefficients for the self-concept measure were .38 for Time 1, .37 for Time 2, and .38 for Time 3. (The relatively low reliability for this measure is attributable to the modification of the item scales from the standard 4 points to a dichotomous choice format, undertaken because many of the participants did not understand the 4-point format. The measure has been retained despite the modest reliability, however, because it is the predominant measure in use to assess self-concept in pre-adolescent children and thus was appropriate across the age range in the study. It has also been related in expectable ways to other project measure, thus appears to have validity for the population of interest).

The *Rosenberg Self-Esteem Scale* (Appendix E) (Rosenberg, 1965) was administered in Year 3 as an additional measure of self-esteem. This scale was not used earlier because it would have been inappropriate for younger participants. It is a 10-item scale with four response choices from strongly agree to strongly disagree, which includes statements for individuals with low and high self esteem. The scale consists of items such as "I am able to do things as well as most other people (my age)" and "I feel I do not have much to be proud of". Internal consistency (alpha) reliability for the Rosenberg Self-Esteem Scale was .76. It was moderately correlated with the adapted Harter Self Perception Profile ($r$=.40).

Psychological symptoms were assessed with the *Psychological Symptoms Index* (Appendix F) (Suarez-Orozco, Suarez-Orozco, Todorova, 2008) which is an adapted 22-item checklist measuring symptoms primarily related to anxiety and depression. Participants were asked how they have been feeling lately. Example items are: "Lately, do you feel sad?" "Lately, do you feel lonely?" "Lately, do you have trouble concentrating?" "Lately, do you have trouble sleeping?". Internal consistency (alpha) reliabilities for psychological symptoms were .78 for Time 1, .76 for Time 2 and .80 for Time 3.

*The Children's Depression Inventory-Short Form* (CDI-S; Kovacs, 1985) was administered to assess depressive symptoms. The CDI-S is a 10-item scale and participants have three possible answers for each item that indicate "absence of symptoms", "mild symptoms" or "definite symptoms". Participants were instructed to pick one sentence for each item that describes them best for the past two weeks. Scores for each item range from 1 to 3 where higher scores indicate higher levels of depressive symptoms. The CDI-S includes the items consisting of three choices, for example, "I am sad once in a while" "I am sad many times" "I am sad all the time". Internal consistency (alpha) reliabilities for the CDI-S were .64 for Time 1, .65 for Time 2 and .74 for Time 3. (This measure is proprietary and thus not included in the appendices).

*Behavioral Adjustment.* Behavioral adjustment was assessed each year by teachers on the Teacher Report Form of the 112-item the *Child Behavior Checklist (CBCL-TRF;* Edelbrock & Achenbach, 1984). For the purpose of the analyses in the current study scores obtained from the 32-item externalizing behaviors subscale were used. Teachers were asked to describe the students depending on their ideas about how much the

statements in the scale were representative of the student on a 3-point Likert-type scale, where 1 means *not true* and 3 means *very true or often true*. The externalizing behavior subscale includes items such as "argues a lot" "breaks school rules" and "uses alcohol or drugs for nonmedical purposes". Internal consistency (alpha) coefficients for the externalizing behavior subscale were .95 for Time 1, .95 for Time 2 and .94 for Time 3. (This measure is proprietary and thus not included in the appendices).

# CHAPTER IV

## Results

The study involved analyses of the effect of friend support and friend behavior on emotional and behavioral functioning for three cohorts of newly immigrant children and adolescents in the third year following immigration, along with supplemental longitudinal analyses of friend support and adjustment over the three years of the project. Structural Equation Modeling (SEM) analyses were conducted with AMOS 19.0 in order to capture the association between friend support, friend behavior and outcome variables in the third year. The SEM models to be tested are shown in Figure 1 and Figure 2. In addition, longitudinal SEM analysis was applied to see changes in the impact of peer support on outcome variables over time.

### *Preliminary Analyses*

*Descriptive Statistics.* Prior to testing the proposed hypotheses, preliminary analysis was conducted to determine sample characteristics and to assess the reliability, distributional characteristics, and intercorrelations of measures. The sample demographic characteristics (e.g., age, gender, and ethnicity) were determined by computing frequencies and descriptive statistics. The sample's demographic characteristics were reported in Chapter 3 and Table 1. Initial analyses also included the calculation of basic descriptive statistics, including means, standard deviations, skewness and kurtosis, for all of the scales included in the study (Table 2).

*Missing Data*. The second step was addressing the issue of missing data in the database. Missing data were minimal (< 10%) for most variables. There were small amounts of missing data for no more than a few cases on certain variables in Year 3

(0.6% for self-concept, 0.2% for self-esteem, 4.4% for externalizing behavior). There was no coherent pattern to missing data. For the participants who had missing data, values were imputed to conform to covariance estimates consistent with the application of the Expectation-Maximization (EM) method (Schafer, 1997). Concerns regarding estimation with missing information are moot, due to the small number of instances of missing data. Missing data bias was assessed by Little's MCAR test. Because the significance value was higher than .05 ($X^2$ = 24.195, *df* = 21, *p*= .284), it was concluded that data were missing completely at random.

*Outliers.* Both model based and non-model based outlier analyses were conducted prior to all major analyses. Leverage indices for each individual were examined and an outlier was defined as a leverage score four times greater than the mean leverage in order to identify multivariate outliers. The mean leverage score was .026 and based on this criterion only four participants were determined as outliers. When outliers were found, they were checked for coding errors and the analyses were conducted both with and without the outliers. Because the results across the two forms of analyses were comparable, the outliers were not considered as consequential and they were not omitted from the analyses. Standardized *df*-betas were examined for each individual, each predictor, and each intercept to detect model-based outliers. An outlier was defined as anyone who had an absolute standardized *df*-beta score larger than 1.0 (Wilcox, 1997, 1999, 2003). Based on this rule, no outliers were evident.

*Non-normality.* Multivariate normality was evaluated by using Mardia's test for multivariate normality. The multivariate test was statistically significant ($p < 0.05$), which suggested the presence of non-normal data. Univariate indices of skewness and kurtosis

were examined as well in order to determine whether the absolute value of any of these indices was greater than 2.0. The absolute value of kurtosis was greater than 2.0 for the child depression score. Skewness and kurtosis scores for each study variable are presented in Table 2. As the non-normality appeared to be problematic in the current study, bootstrapping was pursued as a remedy. In order to estimate standard errors, *p* values, and confidence intervals, 2,000 bootstrap replications were performed. Statistical significance (i.e., *p*-values) and confidence intervals were estimated by using bias-corrected methods to interval estimation with the computer program AMOS. Instead of the traditional chi-square test, the Bollen-Stine bootstrap approach was performed to determine the p value for overall fit of the tested models (Bollen & Long, 1993). The Traditional Maximum Likelihood tests were also performed. The results from both estimation approaches were similar. All reported confidence intervals and significance tests in the study were from the bootstrap analyses.

*Statistical Power and Sample Size.* Structural equation modeling requires taking into account statistical power, issues of the stability of the covariance matrix, and the use of asymptotic theory in order to determine appropriate sample size. With regard to statistical power, however, it is difficult to evaluate the power associated with specific path coefficients in complex SEM models as a consequence of the large number of assumptions about population parameters that must be made. By using a limited information approach with variables of the path models implied by the current model, a rough approximation of power can be obtained, which permits the use of traditional power analysis software to gain a sense of sample size demands (Jaccard & Wan, 1996). For example, for a multiple regression analysis with 7 predictors where the squared

multiple correlation is .10, which was the lowest standardized residual value observed in the model, and where one wants to detect a predictor that accounts for at least 5% unique variance in the outcome, the required sample size to achieve power of 0.80 was approximately 173. The sample size of 503 in this study exceeded this standard to produce adequate statistical power. In addition, the sample size needed to achieve power of .80 for mean comparisons between two groups and an effect size corresponding to Cohen's definition of a medium effect (d = 0.50) is approximately 65 per group. The sample sizes of 158 for elementary, 189 for middle, and 156 for high school groups in the current study were above this criterion.

*Model Fit Criteria and Evaluation.* Following the recommendations of Bollen and Long (1993), a variety of global fit indices was used to assess the fit of the proposed model to the current sample, including indices of absolute fit, relative fit, and fit with a penalty function for lack of parsimony. In particular, statistically non-significant overall chi-square and *p*-value for the test of close fit, values of less than .08 for the root mean square error of approximation (RMSEA), greater than .95 for the Comparative Fit Index (CFI), greater than .90 for the traditional Goodness of Fit Index (GFI); and less than .05 for the standardized root mean square residual (SRMR) declared satisfactory model fit. In addition to the global fit indices, more focused tests of fit were evaluated. The standardized residual covariances between -2.00 and 2.00 and modification indices less than 4.00 indicated a good model fit. Any values greater than two were considered points of stress in the model and sources of ill fit. The parameter estimates also were examined for Heywood cases. Care was taken to ensure there was no specification error.

*Main Analyses: Model Tests*

The main hypotheses in the study suggested that both friend support and friend problem behaviors would be related to adjustment of immigrant youths. Particularly, it was hypnotized that support from peers would be associated positively with the behavioral and emotional adjustment of immigrant children and adolescents. On the other hand, it was hypothesized that friend problem behavior would be negatively related to the emotional and behavioral adjustment of immigrant children and adolescents. Finally, it was also expected that these impacts of peer support and friend problem behavior on immigrant youth adaptation would vary as a function of the age of the immigrant youth.

Hypotheses 1 and 2 were evaluated based on the model depicted in Figure 1. All variables in the model were observed variables. Child self-esteem, psychological symptoms, depression and externalizing behaviors were outcome variables. All other variables in Figure 1 served as exogenous variables that included predictor variables (friend support and friend behaviors) and control variables (gender, age, and ethnicity). Some residual variances (reflected by circles in Figure 1) and all exogenous variables were assumed to be correlated. The model was recursive and statistically overidentified. The Bollen-Stine bootstrapped chi square test yielded a $p$ value of .13. The Root Mean Square Error of Approximation was .04. The $p$ value for the test of close fit was .55. The Comparative Fit Index was 1.00. The Standardized Root Mean Square Residual was .01. All indices suggested the model fit the data well. No absolute standardized residuals greater than 1.96 and no theoretically meaningful modification indices of notable size were obtained in more focused analyses.

*Hypothesis 1: Support from peers will be associated positively with the behavioral and emotional adjustment of immigrant children and adolescents. The more immigrant children and adolescents receive support from their peers, the more likely they will show emotional and behavioral adjustment.* In order to test the relationship of friend support to immigrant youth emotional and behavioral adjustment, direct paths from the friend support variable to self-esteem, depression, psychological symptoms, and externalizing behavior variables were specified. As can be seen in Figure 2, paths from friend support to self-esteem and externalizing behaviors were statistically significant. For every one unit increase in the amount of friend support received by immigrant youth, the youth's self-esteem increased .18 units and youth externalizing behavior was increased .09 units.

*Hypothesis 2: Friend problem behavior will be related to the emotional and behavioral adjustment of immigrant children and adolescents. The more their friends engage in problem behaviors, the less the children and adolescents will show positive emotional and behavioral adjustment.* Direct paths from friend problem behavior to self-esteem, depression, psychological symptoms, and externalizing behaviors were specified to examine the influence of friend problem behavior on immigrant youth emotional and behavioral adjustment. All path coefficients from friend's problem behavior to outcome variables were statistically significant (Figure, 2). A one unit increase in friend problem behavior was associated with a decrease in immigrant youth's self esteem by 0.22, and was associated with increased depression by 0.22, psychological symptoms by 0.25, and externalizing behaviors by 0. 18.

*Hypothesis 3: The impacts of peer support and friend behavior on immigrant child and adolescent adjustment vary as a function of the age of the immigrant. Particularly, as the impact of peers is generally more salient for adolescents, the relations of social support and friend behavior on youth adjustment will be stronger for the adolescent groups compared to younger children.*

The moderation effect of age/grade level on adjustment is depicted in Figure 3. Because peer behavioral conformity appears to be more important for early adolescents, it was anticipated that the relation of friend behavior to adjustment outcomes may also vary between the middle and high school adolescent groups. That is, the relation of age/grade level to behavioral adjustment may be nonlinear. Therefore, the moderation effect of child age on the relations between friend support, friend behavior and youth emotional and behavioral adjustment was evaluated by using multi group solutions with elementary, middle, and high school cohorts representing three different age groups. The first model tested had no equality constraints across groups. The purpose of this analysis was to establish a common model form in the three groups. The unconstrained model yielded a good fit to the data. The Bollen-Stine bootstrapped chi square test yielded a *p* value of .540. The Root Mean Square Error of Approximation (RMSEA) was <.001. The *p* value for the test of close fit was 0.99. The Comparative Fit Index was 1.00 and the traditional GFI was .99. The standardized root mean square residual (SRMR) was .03. Neither theoretically meaningful nor sizeable modification indices, nor any absolute standardized residuals larger than 1.96 were detected by more focused tests of model fit.

The second model was a fully constrained model, which also yielded a good fit to the data. The Bollen-Stine bootstrapped chi square test yielded a *p* value of .189. The

Root Mean Square Error of Approximation (RMSEA) was .024. The *p* value for the test of close fit was 1.00. The Comparative Fit Index was .98 and the traditional GFI was .97. The standardized root mean square residual (SRMR) was .06. More focused tests of fit did not reveal theoretically meaningful and sizeable modification indices, or any of the absolute standardized residuals larger than 1.96. Importantly, the nested chi square test comparing this model to the unconstrained model yielded a statistically significant chi square difference ($X^2$ diff (50) = 69.528, p = .04),a result that is consistent with the hypothesis that the model was different across groups.

Finally, the path equivalence model tests were conducted in which the path coefficients from each specific indicator variable to each specific outcome variable were constrained to be equal in the groups. The only path which caused inequvilance was from friend problem behavior to externalizing behavior. When the path from friend problem behavior to child externalizing behavior was forced to be equal across the groups, the model yielded a $X^2$ value ($X^2$ (20) = 23.365) which indicated that age moderated the path from friend problem behavior to externalizing behavior at the 90% confidence level (almost 95%). This result led to rejection of the null hypothesis of equal path coefficients for elementary, middle, and high school students for the path from friend problem behavior to externalizing behavior. In this analysis, the Bollen-Stine bootstrapped chi square test yielded a *p* value of .448. The Root Mean Square Error of Approximation (RMSEA) was .02. The *p* value for the test of close fit was .98. The Comparative Fit Index was 1.00 and the traditional GFI was .99. The standardized root mean square residual was .02.

Figure 4 presents relevant coefficients for all the three groups for the unconstrained model. It can be seen that the effect of friend problem behavior on externalizing behavior was significant only for the middle school cohort (path = .30, p = .001), compared to the elementary and high school cohorts.

*Supplemental Analyses*

In addition to examination of the impact of friend support and friend behavior on immigrant youth emotional and behavioral adjustment, the impact of peer support on youth adjustment as a function of time was examined as supplementary analyses. These analyses were based on the peer support scores from the three years of the project. The adapted Harter Self Perception Profile was analyzed, rather than the Rosenberg scale as the latter was only employed in the third year of the project.

*Missing Data*. Missing data were minimal (< 10%) for most variables. There were more than 10% missing data only for the externalizing behaviors for Year 1 (38.6%) and Year 2 (13.3%). Because the missing data for externalizing behaviors were not minimal at Time 1 and Time 2, participants with missing data for these variables were dropped from the analysis of externalizing behavior, resulting in an N of 269 for this analysis. The analysis for emotional adjustment included the 503 particpants with minimal missing data for the self-concept, symptoms, and depression measures.

Missing data for the 269 participants included in the analysis of externalizing behavior were minimal for the rest of the data set (2.6% for friend support at Time 2 and 4.1% for externalizing behavior at Time 3). Missing data for these variables were imputed with the Expectation-Maximization (EM) method. The data were missing completely at random ($X^2$ = 15.83, *df* = 10, *p*= .11).

For the emotional adjustment variables, missing data were minimal and imputed by the EM method using the computer program SPSS 19.0. Particularly, the amounts of the missing data were as follows; 2.2% for self concept, 1.2% for depression for Time 1, 6.8% for friend support, 7.0% for self concept, 7 % for symptoms, 7.2% for depression for Time 2, and 0.6% for self concept at Time 3. Result of Little's MCAR test, which was conducted in order to assess missing data bias, showed that data were missing completely at random ($X^2$ = 51.03, *df* = 54, *p*= .59).

*Non-Normality*. Mardia's test was conducted to evaluate multivariate normality. The multivariate test was statistically significant ($p < 0.05$) for emotional adjustment analyses, which suggested that the data were non-normally distributed. Univariate normality was also examined by indices of skewness and kurtosis. The absolute value of kurtosis was greater than 2.0 for youth depression score in all three years (5.27, 2.99, and 4.89, respectively). Because the non-normality appeared to be problematic, 2,000 bootstrap replications were performed as a remedy.

*Model Tests.* The separate longitudinal analysis of friend support and externalizing behavior yielded no significant relation of support to behavior. Longitudinal relations of friend support to immigrant youth emotional adjustment were evaluated based on the model shown in Figure 5. All variables in the model were observed variables. The model was recursive and statistically overidentified. The Bollen-Stine bootstrapped chi square *p* value for this model was statistically non-significant (p=.99). Also, the more traditional indices of global fit suggested a good model fit. The Root Mean Square Error of Approximation was < 0.001. The *p* value for the test of close fit was 1.00. The Comparative Fit Index was 1.00. The Standardized Root Mean Square

Residual was 0.01. No absolute standardized residuals greater than 2.00 were obtained. When theoretically meaningful modification indices of notable size (values of 4 or greater) were obtained in more focused analyses, they were evaluated in order to see if there were any theoretical rationales for modifying the model in the manner suggested, and paths among those variables were included in the model for the final analyses.

With regard to emotional adjustment, the paths from friend support Time 1 to friend support Time 2 (path = .40, p = .001) and Time 3 (path = .18, p = .001), and the direct path from friend support Time 2 to Time 3 (path = .39, p = .001) were statistically significant. In addition, the path coefficient from friend support Time 2 to psychological symptoms Time 3 was statistically significant. For every one unit increase in the amount of friend support received by immigrant youth at Time 2, the youth's psychological symptoms increased .11 units (path = .11, p = .007). Furthermore, as expected all other outcome variables were correlated across time.

However some interesting trends between self concept and friend support were observed. When the longitudinal analysis was conducted, large modification indices suggesting paths from self concept to friend support were obtained. Even though the main analyses of the Year 3 data suggested that friend support predicted self-esteem at Time 3, the direction of effects in the longitudinal model indicated that self concept at Time 1 predicted friend support at Time 2 (path = .12, p = .002) and self concept at Time 2 predicted support at Time 3 (path= .08, p=.054) when these paths were included in the model.

# CHAPTER V

## Discussion

The primary goal of this study was to investigate the relation of friends to the emotional and behavioral adjustment of newly immigrant children and adolescents. Particularly, the relations between friend support and friend problem behavior and immigrant youth emotional and behavioral adjustment were examined. The influence of friends on elementary, middle, and high school age immigrant youths was evaluated. The results of the current study extend the previous friendship research by examining friend support and friend behavior in a sample of immigrant youth and by examining the association of these friendship variables with immigrant youths 'adaptations within the initial years of their arrival to the U.S.

*Friend Support and Immigrant Youths' Emotional and Behavioral Adjustment*

The first aim of the current research was to examine the relations between peer support and immigrant youth adjustment. In the third post-migration year, friend support was found to be associated with only one aspect of emotional adjustment, which was self-esteem. Particularly, immigrant children and adolescents who reported that they were receiving more support from their friends had higher self-esteem scores, which is consistent with the literature that emphasizes the importance of friend support for the self esteem of children and adolescents (Franco & Levitt, 1998; Levitt, Guacci-Franco, Levitt, 1993; Rueger, Malecki, & Demaray, 2010; Way & Robinson, 2003). As suggested in previous research, close, positive and supportive relationships with friends may enhance children's self concept because they perceive themselves as competent and valued (Bowker & Rubin, 2009; Franco and Levitt, 1998). Therefore, the present result is

consistent with the idea that supportive relations with friends enhance youths' self concepts, and extends this idea to an immigrant population. Although friend support has also been found to be related to anxiety and depression in other studies (Rueger, Malecki, & Demaray, 2008; Rueger, Malecki, & Demaray, 2010; Venberg, 1990), friend support was not related to depression in this study, because immigrant children, moreso than U.S. born children, may rely on families more than friends as sources of social support.

Contrary to the expectation of the study, the results revealed that higher peer support was associated with higher externalizing behaviors reported by teachers. Because peer support enhances children's and adolescents' psychological functioning, children and adolescents with higher peer support are generally expected to show better behavioral adjustment as well. For example, Wasserstein and La Greca (1996) showed that higher friend support buffered the impact of higher parental conflict on youth problem behavior. Results of the current study seem to be inconsistent with this notion, and instead suggest that while higher peer support is generally regarded as a positive influence, this argument may not be valid in every circumstance. This finding is parallel to an assumption in literature on social development indicating that aggressive children and adolescents may also receive higher support from their peers (Rubin, Bukowski, & Parker, 2006). Furthermore, in a study conducted by Rueger, Malacki, and Demaray (2008), support from both classmates and close friends was found to be related to aggression and conduct problems among girls. Moreover, literature suggests that receiving high levels of support from peers sometimes compensates for the absence of support from parents, which causes youth to show lower adjustment (Fuligni & Eccles, 1993; Fuligni, Eccles, Barber, and Clements, 2001; Levitt et. al., 2002; Sabatelli & Anderson, 1991). Even though, parent

support was not included in the present study, absence of parental support might be an indicator for the youths who receive higher peer support but show higher externalizing behaviors. Most importantly, literature related to immigrant youth adaptation also shows that the length of stay in the U.S. and involvement with U.S. born peers were indicators for their behavioral adjustment. That is, the longer immigrant children and adolescents stay in the U.S. and the more they engage with U.S born peers, the more likely they are to show behavioral problems (Fuligni, 1998; Harris, 1999; Suarez-Orozco, 1987). The result regarding the impact of peer social support on immigrant youth behavioral adjustment was obtained from the data from participants' third year in the United States. Therefore, this finding, as well as the findings from the literature, suggest that peer support might not be necessarily related to positive behavioral outcomes for immigrant children and adolescents. This result once more highlights the importance of studying the characteristics of peers, when studying the impact of friends on youth functioning.

*Friend Problem Behavior and Immigrant Youths' Emotional and Behavioral Adjustment*

Investigating the impact of friends' problem behavior on immigrant child and adolescent adjustment was the second research aim in the study. Higher problem behavior shown by peers was found to be related to lower self-esteem, and to more depression, psychological symptoms and externalizing behaviors among immigrant youths. As mentioned before, even though the association between friend problematic behavior and children's behavioral outcomes has been largely studied, there is a lack of literature addressing the impact of peer behaviors on youth emotional functioning. However, literature points out that friendship becomes more important in adolescence, and relationships with friends are related to youth's self definition and their perception of

themselves. In this study, it was expected that the peers with whom youths spend their time and especially the characteristics of these peers might impact the emotional functioning of the youths. The findings regarding the relationships between higher friend problem behavior and lower emotional adjustment among immigrant youths suggest that when immigrant youths have relationships with friends with problem behaviors, they may have more negative evaluation of themselves and more emotional distress.

The finding of this study regarding the influence of friend problem behavior on behavioral outcomes of immigrant youths is consistent with the literature which proposes that because children and adolescents have a tendency to develop friendships with others who are similar to themselves in many respects, such as behavioral, emotional, and racial similarities, the characteristics of friends are important to determine the developmental significance of having friends as risk or protective factors (Hartup & Stevens, 1999; Haselager et. al., 1998; Rubin, Bukowski, & Parker, 2006; Rubin, Fredstrom, & Bowker, 2008;). Literature suggests that antisocial peers have poor social skills, they are not positive role models and relationships with them are generally characterized by more conflict and deviant behaviors (Hartup & Stevens, 1999). Likewise, studies show that adolescents with aggressive or deviant friends perform increased aggressive or antisocial behaviors (Ciairano, Rabaglietti, & Beyers, 2007; Rubin, Bukowski, & Parker, 2006; Rubin, Fredstrom, & Bowker, 2008). Thus, the results of this study support the notion that in order to achieve optimal behavioral outcomes for children and adolescents, not only the qualities of their relationships with their friends, but also behavioral characteristics of their friends need to be taken into consideration. More specifically, this finding also provided the validity of this notion for immigrant youths.

*Friend Influence and Child Age*

The last research aim was to examine the relation of peer support and problem behavior to immigrant youths' emotional and behavioral adjustment as a function of immigrant youths' age, indexed in this study by grade level (elementary, middle, or high school). Results showed that while the impact of friend support did not vary depending on age level, the impact of friend problem behavior on externalizing behavior was more pronounced for the middle school cohort. This indicated that immigrant youths' age moderated the relationship between peer problem behavior and immigrant youth behavioral adjustment. Specifically, compared to the elementary and high school age groups, the middle school cohort was found to be engaging in more externalizing behaviors when they had friends performing problematic behaviors.

Hartup and Stevens (1999) argued that stable relationships with friends who show problem behaviors lead to an increase in youths' problem behaviors during the transition from childhood to adolescence. As is also indicated in the literature, peers become important in early adolescence. This is the period when young adolescents prefer to spend more time with their friends, perceive their friends as sources of support, and conform more to peer norms. Peer relationships, in turn, determine the early adolescents' identity, sense of belonging, interests, and behaviors (Hartups & Stevens, 1999; Fingerman, Brown, & Blieszner, 2011; Fuligni, Eccles, Barber, & Clements 2001; Furman & Buhrmester, 1985; Levitt, Guacci-Franco, & Levitt, 1993; Levitt et. al., 2005; Rueger, Malecki, & Demeray, 2008). Therefore, it is not surprising that middle school age adolescents who spend more time with friends who perform problem behaviors show higher externalizing behaviors.

*Longitudinal Patterns of the Relation of Peer Support to Immigrant Youth Adjustment*

Longitudinal relations of friend support to immigrant youth emotional and behavioral adjustment were also investigated in the current study. It was found only that friend support at Time 2 was related to psychological symptoms at Time 3. Inconsistent with expectations, the more support immigrant youths received from their friends at Time 2, the more they showed psychological symptoms at Time 3. However, friend support at Time 1 did not predict psychological symptoms at Time 2. This might have occured because immigrant youths were younger in Time 1 and this was the initial year of their immigration. On the other hand, friends may have become more influential in Time 2 for immigrant youths, because they increased in age, such that friends became more important developmentally. In addition, their friendship networks in the U.S. may have developed more at Time 2. Because of these factors they might have become more open to the influences of their friends at Time 2.

In addition, even though it was not the main interest in the analyses, self-concept was found to be a predictor of friend support longitudinally. According to the Convoy Model perspective, both personal characteristics of the individual and the characteristics of the situation (e.g. immigration) determine the amount of support an individual receives from others (Kahn & Antonucci, 1980). Consistent with this idea, immigrant youths who experience a disruption in their friendship networks but who have higher self concept might have a capacity to establish more supportive relationships with their friends over time and, in turn, they may receive more support from their peers.

*Limitations and Directions for Future Research*

There are certain limitations of the current research that should be noted. First of all, the correlational nature of the present findings should be taken into consideration when evaluating the results. In addition, the hypothesized relations between independent and outcome variables were tested depending on the SEM models in the current study. The proposed models might be incomplete, given the relatively small amounts of variance explained by the model paths. This suggests that some other processes might be influencing the relations between peer support and behavior and immigrant youth functioning, other than the factors included in the model. For example, Sabatelli and Anderson (1991) claim that coexistence of supportive and intimate peer and parent relationships are related to optimal peer adjustment. However, in the absence of adequate parent support youths rely more on peer support and may show extreme peer orientation and peer advise seeking, which in turn impact their adjustment negatively (Fuligni & Eccles, 1993; Fuligni, Eccles, Barber, and Clements, 2001; Levitt et. al., 2002; Sabatelli & Anderson, 1991). Therefore, including factors such as parental support and behavior, as well as peer support and behavior, may lead to more complete conclusions in future studies.

Moreover, some of the measures used in the study had low reliability scores (e.g., friend problem behavior and self concept), suggesting that these measures may be less appropriate for immigrant children than for U.S. born children. For example, as noted previously, immigrant children and adolescents in this study had difficulties in comprehending Harter's Self Perception Profile format: therefore a yes/no question format was used when applying this scale. Future research including more reliable

measures designed for use with relevant immigrant populations may obtain stronger relations among the study variables.

Furthermore, the emotional functioning information was gathered via self-report measures and behavioral functioning data were gathered through teacher report measures in the current research. Incorporating the measures from different sources (e.g. child, parent, and teacher) for each aspect of functioning in future studies may provide more unbiased information and may also provide different perspectives regarding peer influence on immigrant youth outcomes.

It is also important to note that the findings may be specific to the population involved in the study. The participants were immigrant children and adolescents who had migrated to South Florida from Argentina, Cuba, Haiti, Colombia, and the English Speaking West Indies in the current study. Generalizing these results to other immigrant groups may not be appropriate. Future research addressing the impact of friends on immigrant youth adaptation should include other ethnic and minority groups in order to increase the generalizability of the current findings to other immigrant populations. In addition, although the country of origin was included in the analyses as a covariate, it was not the focus of attention in the current study. Considering the obtained relationships between certain ethnicities and study variables (e.g., Argentineans and friend support), studying the main concepts of this study within larger sample of homogenous ethnic groups may provide more detailed information about the processes going on within certain immigrant populations.

*Conceptual and Clinical Implications*

Results of this study suggested that friends had an important influence in immigrant youths' lives. Particularly, this study provided support for the literature suggesting that both friend support and friend behaviors are associated with the functioning of children and adolescents and provided valuable information suggesting that this notion is valid for immigrant youths. These results may have important implications for both clinical and research purposes.

As indicated before, although there is a lack of literature addressing the impact of friends on the adjustment of newly immigrant youths at different age levels, there is an extant literature regarding the friendships of middle-class Euro-Americans and, to some extent, U. S. born minority groups. Research on first, second and third generation immigrants suggests that effects of engaging with U. S. born peers become more salient the longer youths with immigrant backgrounds reside in the United States. This study revealed friend effects for newly immigrant youths within their first few post-migration years. Also, by showing that factors found to be influential for U.S. groups can also be important for newly immigrant children even in their third year in the United States, this study adds some support for the validity of the measures and the constructs employed in this study with immigrant child and adolescent populations.

As the number of immigrant families in the United States has been increasing in recent years, this study contributes to future research designed to address the experiences that these youths have with their peers in the earlier stages of adaptation by assessing the role of friendship in the emotional and behavioral adjustment of first generation immigrant children and adolescents within the initial years of their arrival. Thus,

increased information about how immigrant youths at different age levels respond psychologically and behaviorally to their postmigration environment should help researchers and practitioners detect adjustment problems of immigrant youths earlier and suggest potential resources for them to develop theories and therapeutic interventions to improve their adaptation in subsequent years.

Future research may examine the application of influential friendship factors, observed as important in the current study, to interventions for immigrant families and youths, and teachers who work with these populations. Results of this study should help practitioners to comprehend the importance of targeting peers who are supportive or who show problematic behaviors in immigrant youths' networks as well as immigrant youths themselves. As a result, intervention techniques such as psychoeducational programs for parents, youths, and teachers can be developed to improve immigrant youth functioning. Practitioners can inform the parents, children, and teachers about the experiences that immigrant youths have with their peers and the importance and impacts of peers on immigrant youths in their initial years of adjustment to another country. Furthermore, practitioners can also guide them about the important aspects of friendship and about the importance of achieving optimal peer relationships by increasing the awareness of both families and children about friend selection. Particularly, they can design interventions, such as peer support groups, to facilitate positive youth adjustment. They can create an environment for immigrant youths to experience social interactions with their peers, to develop supportive relationships and to reinforce each other's positive behaviors within the secure atmosphere of support groups.

To conclude, by determining the friendship factors related to immigrant youth adjustment, this study may inform further research, along with interventions concerning the development of programs to facilitate immigrant youth functioning. This may help to develop techniques to determine immigrant youths with behavioral and emotional problems earlier and those problems can be targeted before they have fundamental and adverse effects in immigrant youths.

Table 1.
*Frequencies of Demographic Variables*

| | *n* | % |
|---|---|---|
| Country of Origin | | |
| Argentina | 99 | 19.7 |
| Columbia | 96 | 19.1 |
| Cuba | 128 | 25.4 |
| Haiti | 114 | 22.7 |
| English Speaking West Indies | 66 | 13.1 |
| Child Gender | | |
| Female | 251 | 50.1 |
| Male | 252 | 49.9 |
| Grade | | |
| Elementary | 158 | 31.4 |
| Middle | 189 | 37.6 |
| High | 156 | 31.0 |

Table 2.
*Descriptive Statistics of Observed Variables*

| Predictor Variable | *N* | *M* | *(SD)* | *Min* | *Max* | *Skewness* | *Kurtosis* |
|---|---|---|---|---|---|---|---|
| Friend Support | 503 | 1.58 | (1.55) | .00 | 6.24 | .48 | -.78 |
| Friend Problem Behavior | 503 | 1.37 | (.38) | 1.00 | 3.00 | 1.25 | 1.57 |
| Self Concept | 500 | 4.30 | (1.32) | .00 | 6.00 | -.57 | -.23 |
| Self-Esteem | 502 | 3.34 | (.49) | 1.40 | 4.00 | -.77 | .30 |
| Psychological Symptoms | 503 | 5.14 | (4.01) | .00 | 21.00 | .90 | .54 |
| Depression | 503 | 1.21 | (.24) | 1.00 | 2.40 | 1.97 | 4.96 |
| Externalizing Behavior | 503 | 1.51 | (1.64) | .00 | 6.93 | 1.03 | .43 |

Table 3.
*Pearson Correlations for All Model Variables*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Friend Support | --- | .04 | .13** | .24** | -.01 | -.06 | 01 |
| 2. Friend Problem Behavior | | --- | -.13** | -.21** | .23** | .20** | .21** |
| 3. Self Concept | | | --- | .40** | -.37** | -.41** | -.09* |
| 4. Self-Esteem | | | | --- | -.45** | -.54 ** | -.15** |
| 5. Psychological Symptoms | | | | | --- | .61** | .11* |
| 6. Depression | | | | | | --- | .07 |
| 7. Externalizing Behaviors | | | | | | | --- |

*Notes:* *$p < .05$. **$p < .01$

Figure 1. *Structural Equation Model of Friend Support and Friend Behavior as Predictors of Immigrant Youth Emotional and Behavioral Adjustment.*

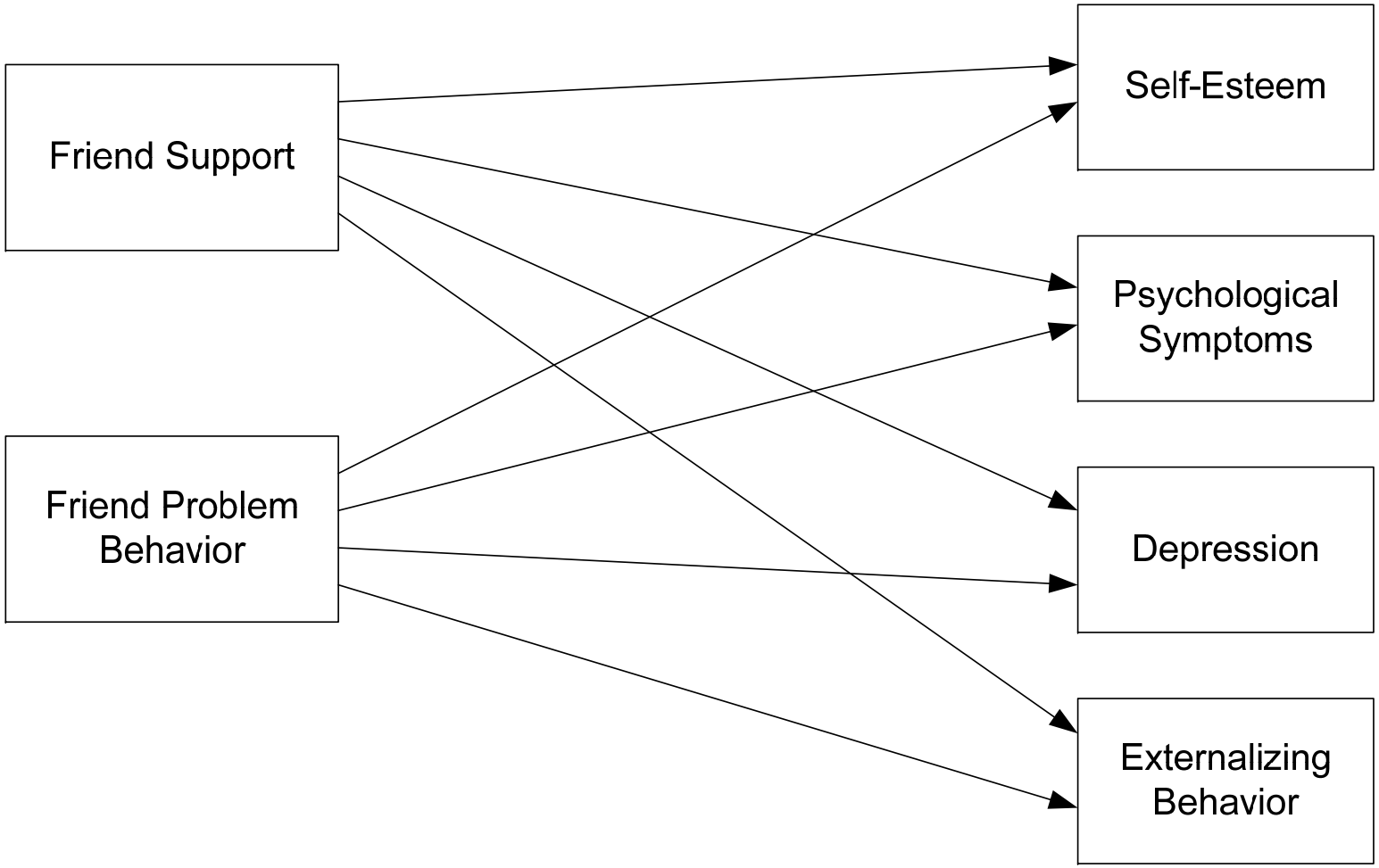
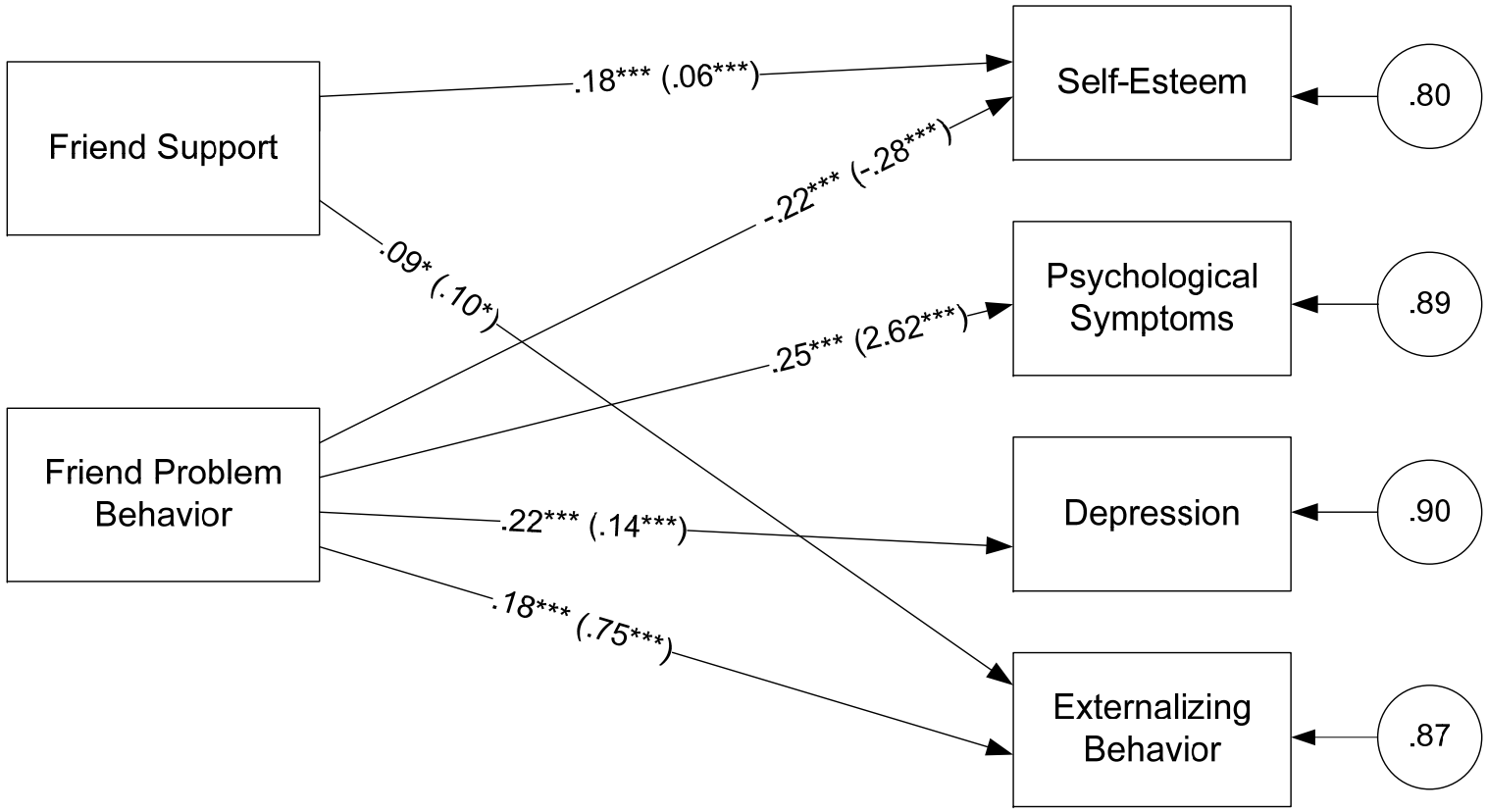


Figure 2. *Standardized Coefficients for Structural Equation Model of Friend Support and Friend Behavior as Predictors of Immigrant Youth Emotional and Behavioral Adjustment.*




*Notes:* The model highlights only significant paths from exogenous predictor variables to endogenous variables.
*** p < .001, ** p < .01*, p < .05.
Values presented in parentheses are unstandardized coefficients.
Exogenous variables are assumed to be correlated.

Figure 3. *Structural Equation Model of Friend Support and Friend Behavior as Predictors of Immigrant Youth Emotional and Behavioral Adjustment and Grade Level as a moderator for these relationships.*

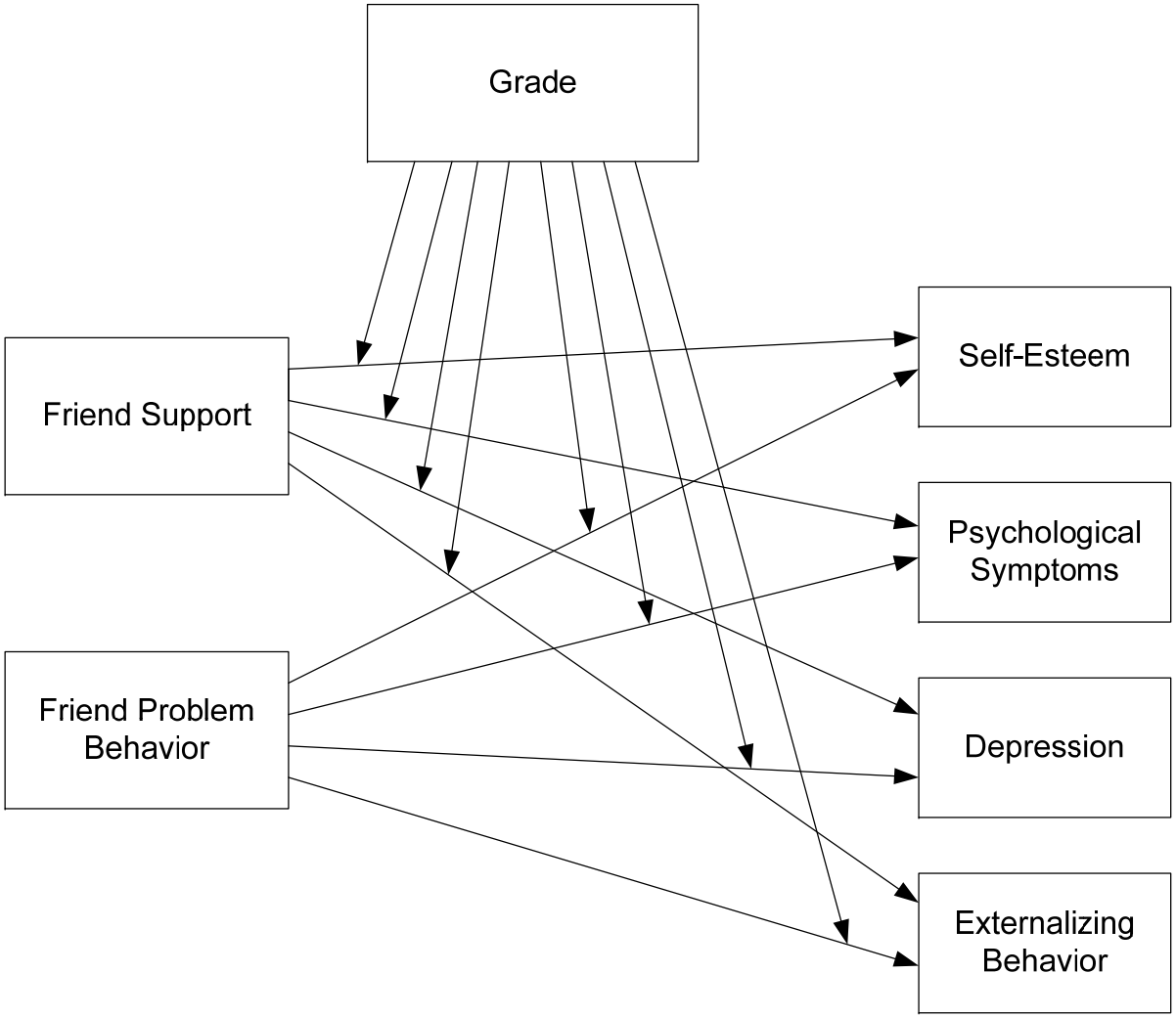
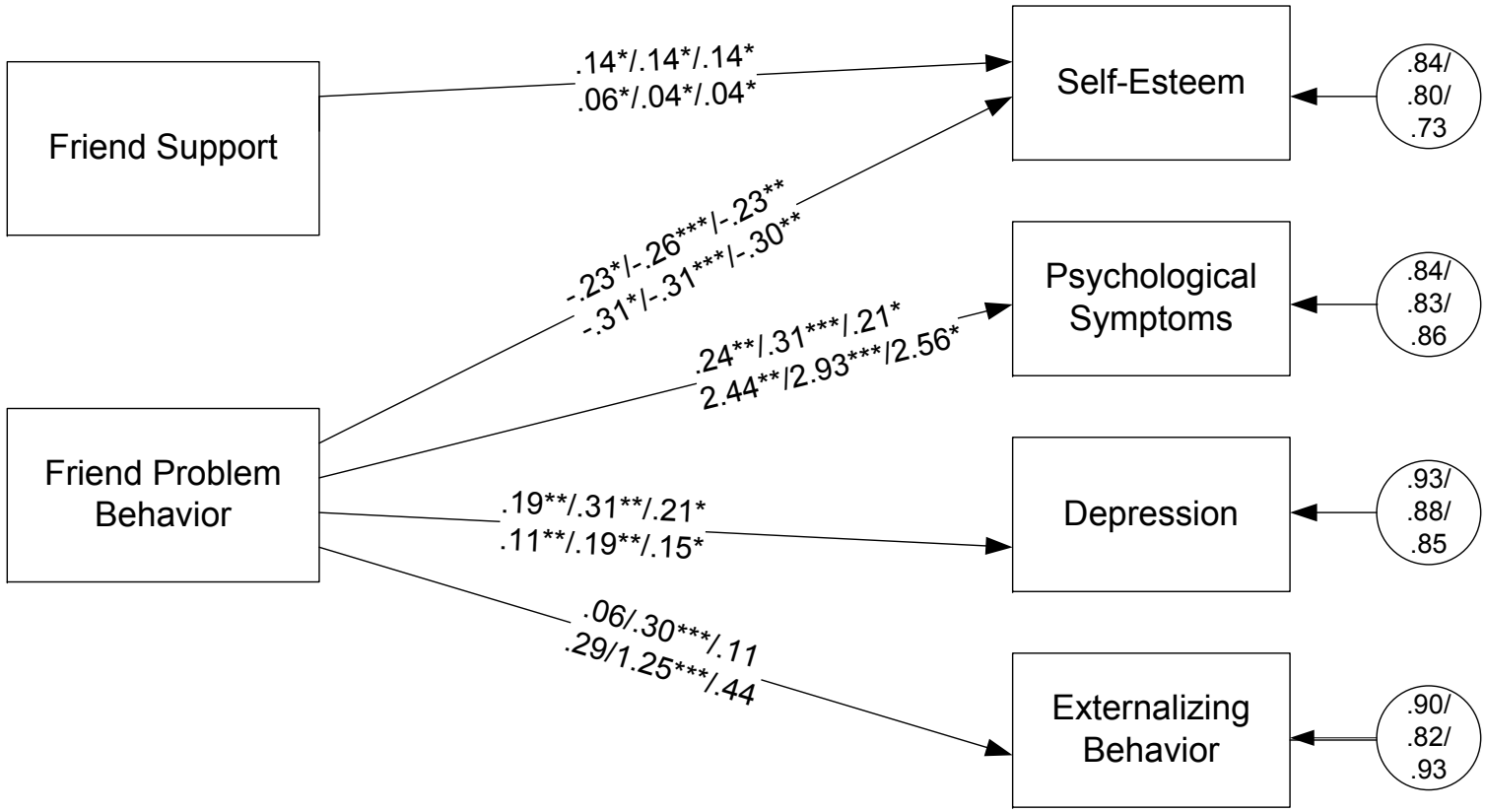
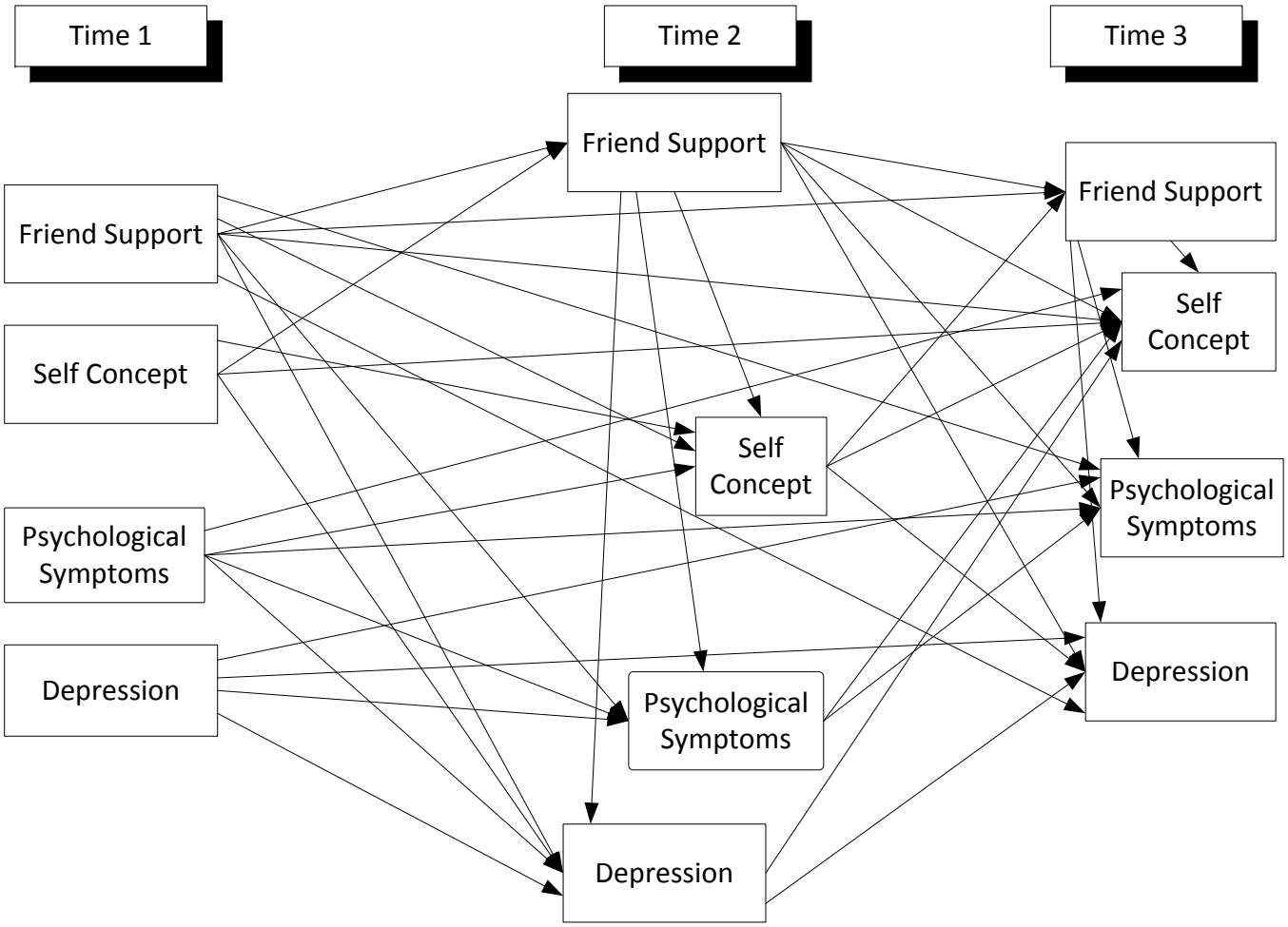


Figure 4. *Standardized Coefficients for Structural Equation Model of Friend Support and Friend Behavior as a Predictor of Immigrant Youth Emotional and Behavioral Adjustment and Grade Level as a moderator for these relationships.*




*Notes:* The model highlights only significant paths from exogenous predictor variables to endogenous variables.
Elementary school cohort coefficients are listed first, then middle school, and high school cohort coefficients are listed
*** p < .001, ** p < .01*, p < .05.
Values presented under the arrows are unstandardized coefficients.
Exogenous variables are assumed to be correlated.

Figure 5. *Longitudinal Structural Equation Model of Friend Support as Predictors of Immigrant Youth Emotional Adjustment*



References

Allen, M. L., Elliott, M. N., Fuligni, A. J., Morales, L. S., Hambarsoomian, K., & Schuster, M. A. (2008). The relationship between spanish language use and substance use behaviors among Latino youth: A social network approach. *Journal of Adolescent Health, 43*(4), 372-379.

Bollen, K. & Long, S. (1993). Testing structural equation models. Newbury Park: Sage.

Bowker, J. C., & Rubin, K. H. (2009). Self-consciousness, friendship quality, and adolescent internalizing problems. *British Journal of Developmental Psychology, 27*(2), 249-267.

Cairns, R. B. & Cairns, B. D. (1994). *Lifelines and risks: pathways of youth in our time.* Cambridge: Cambridge University Press.

Ciairano, S., Rabaglietti, E., Roggero, A., Bonino, S., & Beyers, W. (2007). Patterns of adolescent friendships, psychological adjustment and antisocial behavior: The moderating role of family stress and friendship reciprocity. *International Journal of Behavioral Development, 31*(6), 539-548.

Edelbrock, C. & Achenbach, T. M. (1984). The teacher version of the child behavior profile: I. Boys aged 6-11. *Journal of Consulting and Clinical Psychology, 52,* 207-217.

Elder, G. H., Jr. (1998). The life course as developmental theory. *Child Development, 69,* 1-12.

Fingerman, K. L., Brown, B. B., & Blieszner, R. (2011). In formal ties across the lifespan: Peers, consequential strangers, and people we encounter in daily life. In K. L. Fingerman, C. Berg, J. Smith, & T. C. Antonucci, (Eds.), *Handbook of lifespan development* (pp. 487-511). New York: Springer Publishers.

Franco, N., & Levitt, M. J. (1997). The social ecology of early childhood: Preschool social support networks and social acceptance. *Social Development, 6*(3), 292-306.

Franco, N., & Levitt, M. J. (1998). The social ecology of middle childhood: Family support, friendship quality, and self-esteem. *Family Relations: An Interdisciplinary Journal of Applied Family Studies, 47*(4), 315-321.

Fuligni, A. J. (1997). The academic achievement of adolescents from immigrant families: The roles of family background, attitudes, and behavior. *Child Development, 68,* 261-273.

Fuligni, A. J. (1998). The adjustment of children from immigrant families. *Current Directions in Psychological Science, 7*(4), 99-103.

Fuligni, A. J., & Eccles, J. S. (1993). Perceived parent-child relationships and early adolescents' orientation toward peers. *Developmental Psychology, 29* (4), 622-632.

Fuligni, A. J., Eccles, J. S., Barber, B. L., & Clements, P. (2001). Early adolescent peer orientation and adjustment during high school. *Developmental Psychology, 37*(1), 28-36.

Fuligni, A. J., Tseng, V., & Lam, M. (1999). Attitudes towards family obligations among American adolescents with Asian, Latin American, and European backgrounds. *Child Development, 70*(4), 1030-1044.

Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology, 21*(6), 1016-1024.

Gaba, A. L. (2010). Correlates of substance use among urban Latino immigrant high school freshmen: Linguistic acculturation, friends' use, and sense of school belonging. US: ProQuest Information & Learning). *Dissertation Abstracts International: Section B: The Sciences and Engineering, 71* (5-), 3355.

Gil, A. G., & Vega, W. A. (1996). Two different worlds: Acculturation stress and adaptation among Cuban and Nicaraguan families. *Journal of Social and Personal Relationships, 13*(3), 435-456.

Gold, S. J., & Amthor, R.F. (2011). Life-span development and international migration. In K. L. Fingerman, C. Berg, J. Smith, & T. C. Antonucci, (Eds.), *Handbook of lifespan development* (pp. 777-804). New York: Springer Publishers.

Harris, K. M. (1999). The health status and risk behaviors of adolescents in immigrant families. In D. J. Hernandez (Ed.) *Children of immigrants: Health, adjustment, and public assistance.* Washington, D.C.: National Academy Press.

Harter, S. (1985). *Manual for the self-perception profile for children.* Denver: University of Denver.

Hartup, W. W. (1999). Constraints on peer socialization: Let me count the ways. *Merrill-Palmer Quarterly, 45*(1), 172-183.

Hartup, W. W. (2005). Peer interaction: What causes what? *Journal of Abnormal Child Psychology, 33*(3), 387-394.

Hartup, W. W., & Stevens, N. (1999). Friendships and adaptation across the life span. *Current Directions in Psychological Science, 8*(3), 76-79.

Haselager, G. J. T., Hartup, W. W., van Lieshout, Cornelis F. M., & Riksen-Walraven, J. (1998). Similarities between friends and nonfriends in middle childhood. *Child Development, 69*(4), 1198-1208.

Jaccard, J. & Wan, C. (1996). *LISREL analyses of interaction effects in multiple regression.* Newbury Park: Sage.

Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachment, roles, and social support. In P. B. Baltes, & O. G. Brim (Eds.), *Life Span Development and Behavior* (Vol. 3, pp. 253-286). San Diego, CA: Academic Press.

Kao, G. (2000). Psychological well-being and educational achievement among immigrant youth. In D. J. Hernandez, (Ed.), *Children of immigrants: Health, adjustment, and public assistance.* Washington, D.C.: National Academy Press.

Kerr, D. C. R., Preuss, L. J., & King, C.A. (2006). Suicidal adolecents'social support from family and peers: Gender-specific associations with psychopathology. *Journal of Abnormal Child Psychology, 34,* 103-113.

Kiang, L. & Fuligni, A. J. (2009). Ethnic identity and family processes among adolescents from Latin American, Asian, and European backgrounds. *Journal of Youth and Adolescence, 38,* 228-241.

Kovacs, M (1985). The Children's Depression Inventory (CDI). *Psychopharmacological Bulletin, 21,* 995-998.

Levitt, M. J. (2005). Social relations in childhood and adolescence: The convoy model perspective. *Human Development, 48*(1-2), 28-47.

Levitt, M. J., Guacci-Franco, N., & Levitt, J. L. (1993). Convoys of social support in childhood and early adolescence: Structure and function. *Developmental Psychology, 29*(5), 811-818.

Levitt, M. J., Lane, J. D., & Levitt, J. (2005) Immigration stress, social support, and adjustment in the first postmigration year: An intergenerational analysis. *Research in Human Development, 2*(4), 159-177.

Levitt, M. J., Levitt, J., Bustos, G. L., Crooks, N. A., Santos, J. D., Telan, P., et al. (2005). Patterns of social support in the middle childhood to early adolescent transition: Implications for adjustment. *Social Development, 14*(3), 398-420.

Levitt, M. J., Bustos, G.L., Crooks, N. A., Hodgetts, J., Milevsky, A., & Levitt, J. L. (2002). *Multiple attachments and well-being in middle childhood and adolescence.* Presented at the meeting of the American Psychological Association, Chicago.

Levitt, M. J., Levitt, J., Lane, J., Cici-Gokaltun, A., & Franco, N. (April, 2009). *Social network changes in newly immigrant children and adolescents: A cohort sequential analysis.* Presented at the meeting of the Society for Research in Child Development, Denver.

Levitt, M. J., Weber, R. A., & Guacci, N. (1993). Convoys of social support: An intergenerational analysis. *Psychology and Aging, 8*(3), 323-326.

Licitra-Kleckler, D. M., & Waas, G. A. (1993). Perceived social support among high-stress adolescents; The role of peers and family. *Journal of Adolescent Research, 8,* 381-401

Martínez, R. S., Aricak, O. T., Graves, M. N., Peters-Myszak, J., & Nellis, L. (2011). Changes in perceived social support and socioemotional adjustment across the elementary to junior high school transition. *Journal of Youth and Adolescence, 40*(5), 519-530.

Portes, A., & Rumbaut, R. G. (2001). *The story of the immigrant second generation: Legacies.* New York: Russell Sage Foundation.

Portes, A., & Rumbaut, R. G. (2005). Introduction: The second generation and the children of immigrants longitudinal study. *Ethnic and Racial Studies, 28*(6), 983-999.

Reid, M., Landesman, S., Treder, R., & Jaccard, J. (1989). "My family and friends": Six- to twelve-year-old children's perceptions of social support. *Child Development, 60*(4), 896-910.

Rodriguez, N., Mira, C. B., Myers, H. F., Morris, J. K., & Cardoza, D. (2003). Family or friends: Who plays a greater supportive role for Latino college students? *Cultural Diversity and Ethnic Minority Psychology, 9*(3), 236-250.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. *Handbook of child psychology: Vol. 3, social, emotional, and personality development (6th ed.).* (pp. 571-645) Hoboken, NJ, US: John Wiley & Sons Inc.

Rubin, K., Fredstrom, B., & Bowker, J. (2008). Future directions in friendship in childhood and early adolescence. *Social Development, 17*(4), 1085-1096.

Rueger, S. Y., Malecki, C. K., & Demaray, M. K. (2008). Gender differences in the relationship between perceived social support and student adjustment during early adolescence. *School Psychology Quarterly, 23*(4), 496-514.

Rueger, S. Y., Malecki, C. K., & Demaray, M. K. (2010). Relationship between multiple sources of perceived social support and psychological and academic adjustment in early adolescence: Comparisons across gender. *Journal of Youth and Adolescence, 39*(1), 47-61.

Rumbaut, R. G. (1985). Mental health and the refugee experience: A comparative study of southeast Asian refugees. In *Southeast Asian mental health: treatment, prevention, services, training, and research,* ed. T.C. Owasn, pp. 433-486. Rockville, MD: National Institute of Mental Health.

Rumbaut, R. G. (1989). Portraits, patterns, and predictors of the refugee adaptation process. In *Refugees as Immigrants: Combodians, Latinos, and Vietnamese in America,* ed. D.W. Haines. Pp. 138-182. Totowa, NJ: Rowman & Littlefield.

Rumbaut, R. G. (2005). Immigration, incorporation, and generational cohorts in historical contexts. *Historical influences on lives & aging.* (pp. 43-88) New York, NY, US: Springer Publishing Co.

Rumbaut (2008). Reaping what you sow; immigration, youth, and reactive ethnicity. *Applied Developmental Science, 12* (2), 108-111.

Sabatelli, R. M., & Anderson, S. A. (1991). Family system dynamics, peer relationships, and adolescents' psychological adjustment. *Family Relations: An Interdisciplinary Journal of Applied Family Studies, 40*(4), 363-369.

Schafer, J. L. (1997). *Analysis of incomplete multivariate data*. Chapman & Hall, London. Book No. 72, Chapman & Hall series Monographs on Statistics and Applied Probability.

Suarez-Orozco, M. (1987). "Becoming somebody": Central American immigrants in U.S. inner-city schools. *Anthropology & Education Quarterly, 18*(4), 287-299.

Suarez-Orozco, C. & Suarez-Orozco, M. (2002). *Children of immigration.* Harvard University Press.

Suárez-Orozco, C., Suárez-Orozco, M. M., & Todorova, I. (2008). *Learning a new land: Immigrant students in American society* Cambridge, MA, US: Belknap Press/Harvard University Press.

U.S. Census Bureau (2010). *Place of birth of the foreign-born population:2009.* Retrieved 6/13/2011 from U.S. Census Bureau Web site http://www.census.gov/prod/2010pubs/acsbr09-15.pdf

Vega, W. A., & Rumbaut, R. G. (1991). Ethnic minorities and mental health. *Annual Review of Sociology, 17*, 351-383.

Vernberg, E. M. (1990). Psychological adjustment and experiences with peers during early adolescence: Reciprocal, incidental, or unidirectional relationships? *Journal of Abnormal Child Psychology, 18*(2), 187-198.

Wasserstein, S. B. & La Greca, A. M. (1996). Can peer support buffer against behavioral consequences of parental discord? *Journal of Clinical Child Psychology, 25*(2), 177-182.

Way, N., & Robinson, M. G. (2003). A longitudinal study of the effects of family, friends, and school experiences on the psychological adjustment of ethnic minority, low-SES adolescents. *Journal of Adolescent Research, 18*(4), 324-346.

Wilcox, R. (1997). *Introduction to robust estimation and hypothesis testing*. San Diego: Academic Press.

Wilcox, R. (1999). *Fundamentals of modern statistical methods*. New York: Springer.

Wilcox, R. (2003). *Applying contemporary statistical techniques*. San Diego: Academic Press.

Appendices

Appendix A: Convoy Mapping Procedure

Appendix B: Support Functions

Appendix C: Friend Problem Behavior

Appendix D: Self Concept

Appendix E: The Rosenberg Self-Esteem Scale

Appendix F: Psychological Symptoms

Appendix A

## Convoy Mapping Procedure

A. (SHOW CIRCLE TO RESPONDENT) Like we did before, we want to put in this circle picture *all of the people who are close and important in your life*-- the people you *really love or like* and who *really love or like* you.

(WRITE R's FIRST NAME IN CENTER).

(POINT) Remember, this *first* circle is for the people who are the *most close and important to you*-- People *you love the most* and who *love you the most*.

(POINT) This *middle* circle is for people who are *not quite as close*, but who are *still important*-- people you *really love or like*, but not *quite as much* as the people in the first circle.

(POINT) This *last* circle is for people who are *not as close as the others*, but who are *still important*-- people you *still really love or like,* but not *quite as much* as the people in the middle circle.

Circles can be *empty, full, or in between.* You don't need to put everyone you know in the circles-- *just* the people you love or like *very much*, and people who love or like *you* very much.

A1. OK, let's do the *first* circle. Tell me who is the *most* close and important to you--who *you* love the most and who loves *you* the most. (INTERVIEWER--GET NAMES OF ALL EXCEPT MOTHER OR FATHER. NUMBER EACH NAME AS IT IS PUT IN, AND PUT IN CLOCKWISE BEGINNING AT TOP OF DIAGRAM. GET INDIVIDUAL NAMES, NOT GROUPS).

Anyone else?

YES .....Anyone else? NO → GO TO A2

A2. OK, now for the *middle* circle. Tell me the names of people who are not *quite* as close but who are *still important* to you.

Anyone else?

YES .....Anyone else? NO → GO TO A3

A3. OK, now for the *last* circle. Tell me the names of the people who are *not as close* as the others, but who are *still important* to you.

Anyone else?

YES .....Anyone else? NO → GO TO B

Appendix B

## Support Functions

**B. Now, I'd like to ask some questions about the people in your circles.**

B1. Are there people you talk to about things that are really important to you? Tell me the number in the circle picture of *each* person you talk to about things that are really important to you.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Other_____

B2. Are there people who make you feel better when something bothers you or you are not sure about something? Tell me the number of *each* person who makes you feel better when something bothers you or you are not sure about something.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Other_____

B3. Are there people who would take care of you if you were sick?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Other_____

B4. Are there people who like to be with you and do fun things with you?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Other_____

B5. Are there people who help you with homework or other work you do for school?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Other_____

B6. Are there people who make you feel special or good about yourself?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Other_____

Appendix C

Friend Problem Behavior

| **E10. [RESPONDENT BOOK]** | | | | |
|---|---|---|---|---|
| E10d. How many of your friends ever get into physical fights? | 1.All | 2.Most | 3.A few | 4.None |
| E10f. How many of your friends have had to repeat a grade at school? | 1.All | 2.Most | 3.A few | 4.None |
| E10g. How many of your friends have used marijuana or other drugs? | 1.All | 2.Most | 3.A few | 4.None |
| E10h. How many of your friends belong to a gang? | 1.All | 2.Most | 3.A few | 4.None |

Appendix D

Self Concept

**F1. Now I'm going to read some things that (kids/people) sometimes think about themselves.**

| The first question says... [POINT TO CHOICES] | | | |
|---|---|---|---|
| F1a. | ***1***, some (kids/people) feel that they are very *good* at their school work, but ***2***, other kids *worry* about whether they can do the school work assigned to them. Which is most like you, ***1***, or ***2***? | 1 | 2 |
| F1b. | ***1***, some (kids/people) find it *hard* to make friends, but ***2***, other (kids/people) find it's pretty *easy* to make friends. | 1 | 2 |
| F1c. | ***1***, some (kids/people) *like* the kind of person they are, but ***2***, other (kids/people) often *wish* they were someone else. | 1 | 2 |
| F1d | ***1***, some (kids/people) have as many friends as they want, but ***2***, other (kids/people) would like to have a lot more friends. | 1 | 2 |
| F1e. | ***1***, some (kids/people) are *not* happy with the way they do a lot of things, but ***2***, other (kids/people) think the way they do things is *fine*. | 1 | 2 |
| F1f. | ***1***, some (kids/people) have *trouble* figuring out the answers in school, but ***2***, other (kids/people) almost *always* can figure out the answers. | 1 | 2 |

Appendix E

## The Rosenberg Self-Esteem Scale

**Please put an X in the box that shows how strongly you agree or disagree with these sentences about you.**

**1 = Strongly Agree 2 = Somewhat Agree 3 = Somewhat Disagree 4 = Strongly Disagree**

| | **Yes, I Agree** | | **No, I Disagree** | |
|---|---|---|---|---|
| 1. I feel that I'm a person of worth, at least on an equal basis with others (at least as worthy as others). | 1 | 2 | 3 | 4 |
| 2. I feel that I have a number of good qualities. | 1 | 2 | 3 | 4 |
| 3. All in all, I feel that I am a failure. | 1 | 2 | 3 | 4 |
| 4. I am able to do things as well as most other people (my age). | 1 | 2 | 3 | 4 |
| 5. I feel I do not have much to be proud of. | 1 | 2 | 3 | 4 |
| 6. I take a positive (good) attitude toward myself. (I believe in myself.) | 1 | 2 | 3 | 4 |
| 7. On the whole, I am satisfied with myself | 1 | 2 | 3 | 4 |
| 8. I wish I could have more respect for myself. | 1 | 2 | 3 | 4 |
| 9. I certainly (really) feel useless at times | 1 | 2 | 3 | 4 |
| 10. At times, I think I am no good at all | 1 | 2 | 3 | 4 |

Appendix F

Psychological Symptoms

**H. Now we would like to know *how you've been feeling lately*. For each feeling that I read, please tell me whether you've been feeling this way.**

| Lately, do you.... | **1.Yes** | **2.No** |
|---|---|---|
| H1. Feel nervous? | 1.Yes | 2.No |
| H2. Have trouble remembering things? | 1.Yes | 2.No |
| H3. Feel annoyed too easily? | 1.Yes | 2.No |
| H4. Have stomach aches? | 1.Yes | 2.No |
| H5. Feel like you have lots of energy? | 1.Yes | 2.No |
| H6. Feel like you have a good appetite? | 1.Yes | 2.No |
| H7. Cry easily? | 1.Yes | 2.No |
| H8. Feel like something terrible is going to happen? | 1.Yes | 2.No |
| H9. Feel shy? | 1.Yes | 2.No |
| H10. Lose your temper too easily? | 1.Yes | 2.No |
| H11. Eat too much? | 1.Yes | 2.No |
| H12. Feel sad? | 1.Yes | 2.No |
| H13. Feel bored? | 1.Yes | 2.No |
| H14. Worry too much? | 1.Yes | 2.No |
| H15. Have trouble making decisions? | 1.Yes | 2.No |
| H16. Have trouble concentrating? | 1.Yes | 2.No |
| H17. Feel upset? | 1.Yes | 2.No |
| H18. Feel happy? | 1.Yes | 2.No |
| H19. Get into arguments too easily? | 1.Yes | 2.No |
| H20. Have trouble sleeping? | 1.Yes | 2.No |
| H21. Keep remembering something frightening? | 1.Yes | 2.No |
| H22. Feel lonely? | 1.Yes | 2.No |

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| | |
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PUBLICATIONS AND PRESENTATIONS

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Cici-Gokaltun, A., Levitt, M. J., and Levitt, J. (February 2012). *Parent, Friend, and Self Values of Immigrant Children and Adolescents*. Poster presented at the Society for Research in Child Development Themed Meeting: Positive Development of Minority Children, Tampa, FL.

Cici-Gokaltun, A., Levitt, M. J. and Levitt, J. (May 2011). *The Influence of Best Friendships on Immigrant Children's Emotional and Behavioral Wellbeing*. Poster presented at the Association for Psychological Sciences 23rd Annual Convention, Washington, DC.

Cici-Gokaltun, A., Levitt, M. J. and Levitt, J. (April 2011). *The Influence of Friends on Immigrant Children's Emotional and Behavioral Adjustment*. Poster presented at the Society for Research in Child Development Biennial Meeting, Montreal, Quebec, Canada.

Cici-Gokaltun, A., Montgomery, M. J., Whiddon, M. and Levitt, M. J. (April 2009). *The Impact of Parental Differentiation of Self on Positive Family Functioning*. Poster presented at the Society for Research in Child Development Biennial Meeting, Denver, CO.

Levitt, M. J., Levitt, J., & Cici-Gokaltun, A. (May, 2012). *Differences in Immigrant Child Adaptation are Mediated by Acculturation, Hardship, and Discrimination.* Poster presented at the Association for Psychological Sciences 24rd Annual Convention, Chicago, IL.

Levitt, M. J. and Cici-Gokaltun, A. (2011). *Close Relationships Across the Life Span. Handbook of Life-Span Development* (Eds. K. L. Fingerman, C. A. Berg, J. Smith and T. C. Antonucci), Springer, NY, pp. 457 - 479.

Levitt, M., Levitt, J., Cici-Gokaltun, A. and Wright, C. L. (April, 2011). *Immigration Stress, Acculturation Conflict, and Parent-Child Relationship Change*. Poster presented at the Society for Research in Children Development Biennial Meeting, Montreal, Quebec, Canada.

Levitt, M., Levitt, J., Lane, J., Cici-Gokaltun, A. and Franco, N. (April 2009). *Social Network Changes in Newly Immigrant Children and Adolescents: A Cohort Sequential Analysis.* Poster presented at the Society for Research in Child Development Biennial Meeting, Denver, CO.