Relations between Family/Friendship Satisfaction and Anxiety

in a Sample of Children with Phobic and Anxiety Disorders:

Exploring Variability across Age and Ethnicity

by

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ABSTRACT

Although anxiety may be developmentally appropriate, it can become problematic in some youth. From an ecological perspective, social systems, like family and friendships, are theorized to influence developmental trajectories toward (mal)adjustment, but empirical evidence is scant with regard to the relative impact of subjective satisfaction with family and friendship on anxiety problem development. This thesis study used a subsample of approximately 50% Hispanic/Latino clinic-referred youth (n = 71, ages 6-16 years). Overall, results suggest that the effect of friendship satisfaction on anxiety varied as a function of age but not ethnicity, such that there was a significant negative relationship between child-reported friendship satisfaction and anxiety levels for older children (approx. 9 years and older) but not for younger children. The effect of family satisfaction on anxiety also varied as a function of age, such that older children showed a positive relation between child reported family satisfaction and parent reported anxiety. Furthermore, a positive relation between family satisfaction and anxiety was found only for the H/L children. Post hoc analyses regarding cultural underpinnings of this finding and implications for future research are discussed, as are the results regarding differences between parent and child reports of anxiety.

DEDICATION

To my husband, David Parker.

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TABLE OF CONTENTS

iv

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

Anxiety Disorders are one of the most common psychiatric conditions in children

and adolescents, with lifetime prevalence rate estimates as high as 31% (for any anxiety

disorder) and individual disorder diagnoses ranging from 2.2% to 19.3%, as indicated by

the National Comorbidity Survey-Adolescent Supplement (NCS-AS; Merikangas et al.,

2010). Anxiety can adversely impact adjustment, including social, academic, and family

functioning (Mychailyszyn, Mendez, & Kendall, 2010). Thus, anxiety can influence

normative development and may lead to maladaptive trajectories that pervade throughout

adolescence and adulthood. From an ecological perspective, there are a number of

domains that influence anxiety and that are, in turn, impacted by anxiety in children.

Social systems, like family and friendships, are one such domain that is likely to have a

bearing on these trajectories (Bronfenbrenner, 1986; Cicchetti & Toth, 2009).

The goal of this thesis is to examine the associations of both family and friendship

satisfaction to anxiety levels in clinic-referred children. Family and friendships are

imbedded within contexts specific to the individual child, like age and ethnicity; each of

which can impact the extent to which these relations have a bearing on development

(Bronfenbrenner, 1986). In keeping with the ecological systems approach, the thesis will

explore the ways in which the relative relations between family and friendship

satisfaction on anxiety varies as a function of key individual differences. This thesis

begins with a brief discussion of the life satisfaction construct and a broad overview of

the extant literature on family and friendship influences on, and concurrent relations

with/to anxiety levels, and will then move to a more specific treatment of how the nature

1

of these relations might vary across key individual child characteristics (i.e. age and ethnicity). It is conceivable that the relation between family/friendship satisfaction and anxiety also varies as a function of sex. Because there may be differences between boys and girls on factors related to friendships, such as intimacy and self-disclosure, it is reasonable to assume that there would be sex differences in the relation to anxiety levels (LaGreca & Lopez, 1998; Greco & Morris, 2005; Rose, 2002). Furthermore, research in community samples indicates that there are sex differences in endorsement of social anxiety symptoms, suggesting that manifestation of non-clinical anxiety differs as a function of sex (Greco & Morris, 2005). However, sex differences in anxiety symptoms are not as readily apparent at the clinical level. Clinically anxious boys and girls tend to rate similar levels anxiety (Treadwell, Flannery-Schroeder, & Kendall, 1995). Therefore, examining sex differences in the clinical sample for this thesis is not feasible, as there may not be enough meaningful variability between boys and girls on measures of anxiety levels.

Life Satisfaction: Family and Friendships

Trends in positive psychology point to the importance of examining satisfaction within specific life domains, in an effort to better understand how general contentment with life experiences can influence well-being (Berrera & Garrison-Jones, 1992). Research on children's peer relationships and friendships is mixed with regard to how best to conceptualize and parcel out the most important aspects of these influences (Bierman, 2004). Common constructs explicated in the literature include self-reported quality of friendships, number of reciprocated friendship nominations, and peer or self-reported victimization (physical and relational), and rejection. In terms of family

2

variables, common themes include cohesion, control, and positive parenting. Each of these constructs is distinct and important, but these varied paradigms also engender inconsistencies in the literature with regard to the best practices for conceptualizing the aggregated effect of friends and family on children's anxiety levels.

Vaux and Harrison (1985), for example, suggest that satisfaction with social support networks is related to both the size and closeness of support networks, and may therefore capture a more global subjective rating of the contentment with these relationships. In other words, measures of relationship quality or quantity may not actually tap into the extent to which a person feels these relationships are beneficial to them, as people may differ on what constitutes a "quality" relationship. Friendship satisfaction, however, may encapsulate the individual's needs or desires for closeness in a way that quality and quantity measures do not (Gini, 2008). In addition, life satisfaction and subjective quality of life appear to be distinct constructs from the negative cognitions commonly associated with anxiety and/or depression, and studies are beginning to suggest that satisfaction be viewed as an independent construct from internalizing symptoms, rather than a byproduct or inherent property of internalizing or even well-being (Gilman, Huebener, & Laughlin, 2000; Heady, Kelly, & Wearing, 1993). Measures of life satisfaction, therefore, tap a unique and distinguishable construct that is important to explore as a potential etiological factor of child psychopathology, especially internalizing disorders like anxiety.

Given the paucity of research on how the specific domains of family and friendship satisfaction predict anxiety in children, this thesis reviews literature that examines general family and friendship factors associated with anxiety (and other

3

internalizing disorders) and their development, with the overall goal of highlighting the need for consistency in the literature as well as providing a framework for the impetus driving this thesis. Based on the research literature, it seems that self-reported global satisfaction with social domains may be one of the most important factors in understanding anxiety development, although little is known in this regard. For instance, Berman, Kurtines, Silverman, and Serafini (1996) found that perceived availability of social support significantly predicted Post Traumatic Stress Disorder (PTSD) symptoms in a sample of youth exposed to violence, but that actual size and use of social support did not. Therefore, it may be that the individual's subjective perception of social support quality and availability is as important as the presence of support (Berman et al., 1996; Kaniasty & Norris, 1992) and can have a bearing on anxiety development specifically (Costa, Weems, & Pina, 2009; Muris et al., 2000). Thus, subjective family and friendship satisfaction seem to be appropriate constructs to explore in the context of social predictors of anxiety in children.

The Impact of Friendships and Family: An Overview

The realms from which children garner social support can vary and have important implications for adjustment. Research evidence suggests that youth who draw from multiple sources of support show better adjustment to stress than those who have single support sources. For example, children who reported relying on both close and extended family members, or both close family members and friends, reported less loneliness, higher self-concept, and had lower teacher-reported internalizing behavior during the transition from middle childhood to adolescence than those who listed only family or only friends as their primary means of support (Levitt, et al., 2005). Data also

show that anxious children tend to require grater reassurance and support from family and friends, which could burden already narrow social networks and have negative implications for building quality support systems (LaGreca & Lopez, 1998).

Relations between friendship satisfaction and anxiety. Friends provide archetypes from which children learn crucial social and emotion regulation skills. Satisfying friendships can provide opportunities for children to learn key elements of social interaction. Insufficient friendships may result in lost opportunities to engage in meaningful social learning, and these poor social skills, in turn, can exacerbate loneliness, sadness, or even anxiety (Banerjee, Watling, & Caputi, 2011). There is evidence that children who are rated as being anxious by teachers are generally not well-liked by peers, and are less likely to be rated as preferred playmates by non-anxious peers (Strauss, Frame, & Forehand, 1987). Hodges and Perry (1999), for instance, suggest that behaviors associated with anxiety and other internalizing disorders, like crying easily, sadness, and sensitivity may signal to more socially adept peers that anxious children are easy targets for victimization, making them vulnerable to social isolation and friendlessness. If children with anxiety are more vulnerable to peer victimization, then lack of satisfying friendships could possibly exacerbate the severity of their symptoms. While the non-longitudinal nature of the dataset for this thesis precludes exploration of directionality, this is an important research question. This thesis, however, will focus on the extent to which friendship satisfaction concurrently predicts anxiety levels in a sample of anxious children.

Children with anxiety typically struggle with social interactions. For example, in a sample of clinically-referred youth, the relation between anxiety and negative peer

interactions was mediated by poor social skills (Motoca, Williams, & Silverman, 2012). This finding suggests that anxiety can be associated with social skill deficits and negative peer interactions, which could inhibit children's ability to form and maintain positive friendships, possibly enhancing their internalizing tendencies. These findings are especially relevant for the conceptualization of this thesis, as it demonstrates the presence of social deficits in clinically anxious youth specifically. Building on past research and theory, this thesis aims to explore the extent to which (dis)satisfaction with social networks predicts anxiety levels. As such, it is expected that children who have dissatisfying friendships will have greater anxiety levels.

Strong friendships, rather than overall peer acceptance or rejection, have been found to protect against internalizing problems in children. For example, Festa and Ginsberg (2011) found that poor friendship quality significantly predicted anxiety symptom severity in a non-clinical sample of children in middle childhood. Even in the face of tumultuous peer experiences, like peer-rejection, victimization, and social isolation, quality friendships appeared to mitigate the risk for developing social anxiety levels and internalizing behavior problems (Hodges, Boivin, Vitaro, & Bukowski, 1999; Erath, Flanagan, Bierman, & Tu, 2010; Vernberg, 1990). For example, Laursen et al. (2007) found that social isolation prospectively predicted anxiety levels one year later in a community sample for children without reciprocated friendships, but not for children with friends. Given this apparently pivotal role of friendships in protecting children from increasing anxiety levels, it stands to reason that children with unsatisfying friendships could have greater anxiety levels. The reason for this relation is likely two-fold: first, these children could have fewer opportunities to engage in meaningful social interaction

and participate in key social learning experiences which can bolster self-esteem and decrease social distress, and second because they lack warm and affectionate sources of social support. Indeed, Schmidt and Bagwell (2007) found that aspects of positive friendship, like helping behaviors and security in friendships, moderated the association between peer victimization and anxiety/depression levels in 4th and 5th grade girls (Schmidt & Bagwell, 2007). In sum, it appears that lacking quality and satisfying friendships could intensify anxiety levels in youth. Many of these studies focus on community samples, rather than clinically anxious youth per se. It is important to note that these social factors could function differently in a clinical sample, such that friendships could have a more or less impact on anxiety development, but there is no research to support this possibility.

The relative contribution of friendship variables to levels of anxiety are widely studied but not generally well understood, as there is no consensus in the literature regarding the appropriate aspects of friendships or peer relationships that are most important (e.g., quality, quantity, and reciprocation). Subjective satisfaction with friendships may encompass the important facets of friendship that can predict internalizing distress (Gini, 2008). The literature reviewed thus far fails, however, to address how the impact of these subjective ratings vary as a function of age and ethnicity, given that the relative importance of these relationships typically differs across these individual characteristics.

Relations between family satisfaction and anxiety. Families often provide consistent and nuanced support structures for youth, as they are one of the primary arbitrators of children's environment and early social networks. In a sample of children

exposed to community violence, only those who reported low support from family reported increases in anxiety over the course of one academic school year, even after controlling for previous anxiety levels, while exposure to violence alone did not predict anxiety (White, Bruce, Farrell, & Kliewer, 1998). In this sense, weak family support networks may enhance vulnerability for anxiety, perhaps due to reduced feelings of control over anxiety-eliciting events.

The specific influence of family factors on the development and maintenance of children's anxiety levels is complex and little is known in this regard; however, common mechanisms studied include genetic transmission of parental anxiety, attachment styles, parental cohesion, conflict, and control to name a few (Rapee, 1997; Bogles & Brechman-Toussaint, 2006). One meta-analysis suggests that family variables should not be considered in isolation when studying child anxiety, given the relatively small effect sizes captured in the extant literature (MacLeod, Wood, & Weisz, 2007). Whereas family variables may not be a sufficient contributing factor alone, the relative impact of these facets and their interaction with child characteristics is important to explore, as understanding for whom these factors are influential should be of clinical interest. Again, it may be that child-reported satisfaction with family as a broader construct of family functioning encompasses the varied domains of influence, and can tap into inherent disturbances in communication and overall family functioning from the child's perspective.

Youth-reported parenting and family relationships may significantly contribute to anxiety levels (Muris et al., 2000). For example, in a sample of youth with elevated anxiety levels, adolescents with higher levels of social anxiety were more likely to report

having family environments that were more isolating and less accepting than children with lower levels of social anxiety (Caster, Inderbitzen, & Hope, 1999). However, parent reports of family environments did not differ among reports form parents whose children had high and low social anxiety (Caster, et al., 1999). Interestingly, this lack of variation does not appear to be due to an inherent bias in reporting negative family environments for socially anxious youth. As reported by Siqueland, Kendall, and Steinberg (1996), independent observers rated parents of clinically anxious children as less granting of autonomy than parents of non-anxious children, but parents of anxious children did not rate themselves differently from parents of non-anxious children. In this sense, parents may not be as attuned to the negative family factors that contribute to children's anxiety. Youth report, on the other hand, may offer a more accurate account of dissatisfying family environments, especially those associated with anxiety. Again, the use of clinical samples in these studies points to the presence of family influence in clinically anxious youth, specifically.

Parental control behaviors and parent psychological disorders also are commonly studied area of influence on child anxiety (Chorpita & Barlow, 1998; Lieb et al., 2000). In their seminal conceptual paper, Chorpita and Barlow (1998) suggest that controlling parenting behaviors may diminish children's feelings of autonomy and self-efficacy for dealing with anxiety-evoking situations, thus leading to greater avoidance and consequently greater anxiety. In this sense, anxiety development is seemingly tied to both social learning through parent's avoidance of anxious situations and to cognitive factors associated with diminished control (Rapee, Schniering, & Hudson, 2009; Edwards, Rapee, & Kennedy, 2010; Choripita, Brown, & Barlow, 1998; Hudson & Rapee, 2001;

Dadds, et al., 1996; Lieb et al., 2000). Family stress as a whole also has been associated

with lower parental warmth and parenting problems, which in turn predicted anxiety and

depression in a community sample of two and four year old children (Bayer, Sanson, &

Hemphill, 2006). These early family factors could then contribute to decreased child

satisfaction with parents and family over time.

Children's anxious and inhibited proclivities also may evoke parenting styles that

require greater control and attention, which in turn, exacerbates and reinforces child

anxiety (Edwards et al., 2010; Hudson, Doyle, & Gar, 2009; Rubin, Nelson, Hastings, &

Asendorph, 1999). Despite the relatively solid body of literature examining parenting and

family variables in children's anxiety, the directionality and magnitude of these effects

are likely cyclical, and vary with individual child characteristics. Unfortunately, no

research to date has assessed the role of child-reported family satisfaction specifically

when it comes to the potential impact on anxiety levels in youth.

Comparing Across Age

Relations between friendship satisfaction and anxiety across age. The

presentation of anxiety typically differs across age (Weems & Costa, 2005). Separation

anxiety appears to be most common in children ages 6-9 years, fears of death and dying

most common in children ages 10-13 years, and social anxiety and performance-related

fears most prevalent in older adolescents ages 14-17 years (Weems & Costa, 2005). This

could suggest not only that there are age differences in anxiety manifestation, but also

that the contributing factors to anxiety levels may vary with age. That is, social factors

and friendship satisfaction may make more salient contributions to anxiety levels in older

children, beginning in later middle childhood and early adolescence (Weems & Costa,

2005). Therefore, the impact of friendship satisfaction to anxiety levels should be expected to be more prominent for older than younger children.

As children get older and become more autonomous, they begin to look to friends and other sources of support outside the family in an effort to establish personal agency and individual identity. For example, children in 4th grade rated their parents as most supportive, 7th grade children rated same sex friends and parents as equally important sources of support, and 10th grade children rated peers as slightly more supportive than parents (Furman & Buhrmester, 1992). It also has been suggested that youth experience increased conflict and tension with parents during early and middle adolescence than during other developmental periods, which may cause them to turn to friends who are more "in tune" with their specific and current needs (Furman & Buhrmester, 1992; Updegraff et al., 2002). Failure to create these connections could lead to personal disappointment and consistent feelings of inadequacy. Youth experience substantial changes in the patterns of social support networks from middle childhood to adolescence, which may make these transition periods particularly vulnerable to distress and disturbance (Levitt et al., 2005). For example, daily time sampling data indicate that positive affect when spending time with friends increases with age, suggesting that older children's friendships are more satisfying and fulfilling but could also be subject to greater vulnerability and impact on adjustment if friends do not meet their emotional needs (Larson & Richards, 1991). Furthermore, time spent alone appears to be associated with greater negative affect as children get older, suggesting that lack of contact with both family and friends is associated with maladjustment in older youth (Larson & Richards, 1991).

11

This increased reliance on friends, coupled with tension with parents, may make issues with friendship quality more salient predictors of anxiety levels during adolescence or later middle childhood. Indeed, friendship quality appears to negatively predict trait anxiety more profoundly for children over the age of 10 years than younger children, as found in a selected sample of shy children (Fordham & Stevenson-Hinde, 1999). These results have been corroborated longitudinally, where peer support negatively predicted depressive symptoms only for older adolescents but not for younger adolescents. Increases in depressive symptoms did not predict decreases in peer support, which indicates that peers could be powerful etiological variables, rather than consequences of internalizing problems for older children (Young, Berenson, Cohen, & Garcia, 2005). Although this study addresses depression symptoms and not anxiety per se, comorbidity between the two disorders could shed some light on processes involved with internalizing disorders as a whole.

Adolescence and later middle-childhood may, therefore, be a particularly salient period for the impact of friendships on anxiety, given the increased autonomy from parents and time spent with peers. In this sense, friendships may more readily impact anxiety levels for older children who may be more cognitively and emotionally attuned to friendship support. Indeed, adolescents with low parental acceptance and high peer competence were not as depressed as those who had high parental acceptance but low peer competence. In fact, those with high parental acceptance but low peer competence reported the highest depression levels in the community sample (Kan & McHale, 2007). Similarly, Laible, Carlow, and Raffaelli (2000) found that adolescents who reported high peer attachment but not parental attachment were less depressed, less aggressive, and

12

showed greater sympathy than those who had high parent but not peer attachment. These results are in keeping with the notion that friendships could bear a significant and independent influence on internalizing disorder levels, and therefore possibly anxiety levels, during early adolescence (Kan & McHale, 2007; Laible et al., 2000; Adams & Bukowski, 2006; Festa & Ginsberg, 2011). Decreased satisfaction with friendships during this time period could have a greater impact on anxiety than it would for younger children, for whom family may bear a greater significance. As such, it could be the case that as children get older, their anxiety levels begin to impact their social relationships in a more meaningful manner. This thesis will, therefore, compare the extent to which family satisfaction relates to anxiety in children of different ages, although it is important to note that these relationships are likely bidirectional and develop in dynamic ways, both concurrently and over time, especially for a clinically-referred sample that has likely been struggling with anxiety over extended periods of time.

Relation between family satisfaction and anxiety across age Younger children may be more readily influenced by family factors, which could lead to a more profound influence of family-related problems to anxiety levels for younger children. Children's reliance on parental support declines between the ages of 13 and 18 (Helsen, Vollebergh, & Meeus, 2000; De Goede, Branje, Delsing, & Meeus, 2009). However, a majority of adolescents still report parents and siblings as among their most important sources of social support (Blyth, Hill, & Thiel, 1982). Even though reliance on parents declines and emphasis on friends increases as adolescents get older, these influences become roughly equal by the end of adolescence. In other words, friends become increasingly important but do not necessarily surpass the impact of family (De Goede et al., 2009). Research on

the influence of family on anxiety and depression is, therefore, mixed. It may be that family variables do not influence anxiety as readily for older children as they do for younger children. Indeed, children ages 7-10 yrs old responded better to cognitive behavioral therapy for anxiety (CBT) with a family component than without a family component, whereas older children, ages 11-14, did not differ in their responses to CBT with and without family involvement (Barrett, Dadds, & Rapee, 1996). This means that family may be a more vulnerable influencing point for younger children, both in terms of being a more salient etiological factor and as a more powerful intervention tool.

Some research suggests, however, that adolescents who report low support from parents and high support from friends have more emotional difficulty, regardless of age, because friends are not capable of providing the sturdiness and consistency often characteristic of family support (Helsen et al., 2000). Furthermore, the negative and controlling parenting styles often associated with anxiety appears to be relevant across middle childhood and adolescence (Hudson & Rapee, 2000). It may be, on the other hand, that emotional autonomy from parents is essential for the transition to early adolescence, and that positive parenting becomes less influential with age (Gaertner, Fite, & Colder, 2010). For example, Gaertner et al (2010) found that positive parenting was not consistently associated with internalizing behavior problems as children entered into early adolescence, but friendship support was a constant longitudinal negative predictor of internalizing behavior problems. These results suggest that as children age, friendships exert a more powerful influence and parental support becomes less influential for some children. Therefore, family satisfaction is expected to be a more salient predictor of

anxiety levels in younger children, given their increased emphasis and reliance on family during earlier developmental periods.

Comparing across Hispanic/Latino and Caucasian Children

The relative impact of family and friendship satisfaction on anxiety may also vary across ethnicity. The research on whether the relation between family/friendship variables and anxiety is different for different ethnic groups is scarce and the results from this literature vary. Again, understanding for whom family and friendship variables are most likely to influence anxiety levels is an important facet of understanding anxiety development. The Hispanic/Latino (H/L) population is the largest ethnic minority in the United States, yet the research on etiology and development of mental health related issues in this population does not reflect this development (United States Census Bureau, 2006).

Anxiety is a particularly notable issue, as there is evidence that anxiety is prevalent in H/L children and may present differently than in Caucasian children. For example, a community sample of H/L youth reported more anxiety symptoms than other ethnic minorities, as well as greater levels of worry and social anxiety (McLaughlin, Hilt, & Nolen-Hoeksema, 2007). Similarly, a community sample of Mexican-American and Mexican children reported more physical symptoms and worry symptoms than their European American counterparts (Varela et al., 2007). H/L youth may therefore be at increased risk for these specific aspects of internalizing problems. However, the exact nature of these differences is not well understood. For instance, a community sample of H/L children reported greater anxiety sensitivity, but this increased sensitivity was not associated with increased anxiety severity or anxiety levels (Varela et al., 2007).

15

Similarly, H/L youth in a clinical sample reported more physiological symptoms of anxiety and tended to find these symptoms more distressing than European Americans (Pina & Silverman, 2004). This indicates that anxiety may present differently in H/L youth than in Caucasian youth, with greater emphasis on somatic and physiological symptoms, but that the exact differences in incidence of clinical anxiety and risks for internalizing distress are not known.

Relation between family satisfaction and anxiety in H/L and Caucasian children. While the understanding of actual differences in the presentation of anxiety in H/L youth is not clear, there are important etiological differences and influencing factors that are important to highlight. This could be especially relevant when examining family and friendship influences on anxiety, as there are key cultural differences regarding nuances of family and friend relationships for children. Some H/L children seem to express greater orientation toward family values and obligation and place a greater emphasis on family harmony and duty than their European American counterparts (Fuligni, Tseng, & Lam, 1999). The term *Familismo,* or familism refers to this general cultural orientation toward family harmony and duty, and away from personal gain or attention**.** Indeed, Latin American adolescents, including those who self-identified as Mexican and South or Central American, reported having stronger affiliations with family and had grater expectations for support and respect for family than did European American adolescents (Fuligni et al., 1999). These findings extended across generational status, including children who were first, second, and third generation Americans, which points to the consistency and importance of family orientation as a cultural value in H/L children (Fuligni et al., 1999). Although levels of acculturation vary within and between

H/L families living in the United States, familism appears to be a relatively stable cultural concept for many H/L families and children. Findings suggest that although some aspects of familism, like feelings of obligation to family, decreased as time spent in the US and acculturation increased, other aspects of familism, like presumed social support of family, do not typically decrease with time or acculturation (Sabogal et al., 1987). Furthermore, even though some family-related attitudes decrease, they were still greater and more pronounced than the family orientation values and beliefs of Caucasian participants. Updegraff et al. (2005) also found that Mexican-American adolescents spent a significant amount of time in shared activities with their siblings, and posit that this amount of time may be greater than many non-Mexican American adolescents, although researchers did not have a non-Mexican origin comparison group. This points to the importance of including indices of the satisfaction with the family as a whole in this study, rather than just parenting behaviors or practices alone, as satisfaction with the family unit as a whole may be particularly significant for the H/L sample included in this study.

This orientation toward family values and obligation may be protective for some H/L adolescents and children. German, Gonzales, and Dumka (2009) found that parent and child endorsement of familistic values protected against teacher rated externalizing problems in a sample of Mexican origin children ages 11-14 years. Although this study focused on externalizing problems and did not have Caucasian comparison group, these results could speak to the protective nature of strong family bonds in H/L children above and beyond that of Caucasian children. Given this increased emphasis on family ties, disruptions in these relationships could have a more detrimental effect on internalizing pathology for H/L children. Indeed, perceived family dysfunction significantly predicted

17

depressive symptoms in a community sample of first and second generation H/L youth (Hovey & King, 1996). Again, the lack of comparison group and focus on depression here does not speak to the relative extent to which family dysfunction is a more powerful predictor of anxiety in H/L youth, but it does set the stage to examine these hypotheses in future research.

Many H/L children are subject to a unique set of life challenges, such as acculturative stress, that could increase the risk for internalizing and externalizing behavior problems suggest that parental support may be a particularly salient protective factor between acculturative stress and internalizing for H/L children and adolescents. For example, parental support had a more consistent buffering effect between acculturative stress and depression than peer support in a non-clinical sample of H/L college students (Crockett et al., 2007). These results also speak to the pervasiveness of this protective factor across later development, when the emphasis on family tends to decrease and orientation toward friends and non-familial support structures begins.

Another more nascent body of research suggests that the constricted and intense family relationships experienced by some H/L children may mimic the controlling parenting styles that are common among anxious children. Luis, Varela, and Moore (2008) contend that controlling family environments and authoritarian parenting styles may be more apparent in Mexican-American and Mexican culture, which could lead to greater reported child anxiety. Contrary to their hypothesis, however, they found that controlling parenting did not predict anxiety for the Mexican-American children living in the United States, but it did for the Mexican children living in Mexico and the Caucasian children living in America. This suggests that familism, and other parenting behaviors

associated with it, is especially protective in the face of acculturative stress associated with immigration or minority status in the United States, but that it is not adaptive for children who do not face these situations (Luis et al., 2008). These findings engender questions regarding the extent to which family orientation is protective for all children, and for whom family obligations are important. It may be that this type of parenting style is more adaptive in some situations than in others, but it remains to be seen what these environments are and for whom these type so parenting styles are best. This question leads nicely into a discussion of the extent to which friendship satisfaction is related to anxiety. Regardless of these nuances, it is important to understand whether family holds different predictive functions of concurrent anxiety levels across ethnicity.

Relation between friendship satisfaction and anxiety in H/L and Caucasian children The relative influence of family and friendship variables on child anxiety levels can be difficult to disentangle and may be even more difficult in cultures that emphasize family. That is, it may be that family values influence the nature of friendships. For example, older and younger Mexican origin adolescents who endorsed strong familism values also tended to use solution oriented conflict resolution in their best friendships (Thayer, Updegraff, & Delgado, 2008).

These friendship-related values could serve to protect against catastrophic conflict and tension in these friendships, and also mitigate the possible negative associations between unsatisfying friendships and anxiety. Similarly, Bamaca and Umaña-Taylor (2006) found that H/L adolescents who had low emotional autonomy from parents were better able to resist peer pressure and had higher self-esteem than those who were more self-sufficient and detached from parents. Thus, the unified and solution-focused nature

of H/L family relations could permeate into friendships, making them stronger and more protective. Alternatively, it could be that close friendships outside of the family detract from the family-oriented focus and could create tensions in either family or friendships. Buchanan and Smokowski (2011) found that positive family relationships mediated the association between acculturative stress and mental health problems, but that negative associations with friends predicted decreased familistic values in a sample of H/L children. The directionality of this association is questionable, as it could be that gaps in family acculturative status could lead to more negative friend associations, but these results nevertheless highlight the notion that family relationships, especially for H/L children, is closely tied to friendships, and that family obligations may impede social functioning.

These studies may suggest that parenting variables and family values could permeate into friendships and make the relative influences of these factors difficult to distinguish in H/L youth. The time spent in family relations also could create tension with friendships. In this sense, it may be that tensions regarding time spent with family or friends makes fostering American-style friendships difficult for some H/L children, but the extent to which this leads to anxiety is questionable. Differing attitudes between parents who may be less assimilated to American culture, and children who may be more engrained into American friendship values could also be a source of tension, but the extent to which this leads to anxiety is open to future research.

In light of the possible contribution of friendship factors to anxiety in children and adolescents, it is important to also address the extent to which these patterns are present in H/L youth. A strong orientation toward family values protects some H/L youth from

the detrimental effects of poor friendships (Davidson, Updegraff, & McHale, 2011). In other words, family dysfunction seems to be a key contributing factor to anxiety levels in H/L youth. For instance, Mexican origin youth who reported low parental support but average peer support had lower GPAs, greater depression levels, and grater levels of risky behavior than those who had high support from parents and friends and those who had high support from parents but not friends (Davidson et al., 2011). That is, those who reported having support only from friends, but not family, had poorer adjustment outcomes than those who had support from family only. Additionally, those who had support from only family did not differ on adjustment outcomes from those who reported having support from both family and friends. This suggests that the protective nature of family relationships is strong for H/L youth living in the United States, and also that peer support in this context is relatively difficult to disentangle from family support.

Similarly, DeGarmo and Martinez (2006) found that those who endorsed having parent, peer, and school support had the best academic outcomes, but that parent support was the most significant and consistent predictor of academic success in their sample of H/L children in 6th through 12th grade. This study highlights the notion that multiple sources of support are important, as indicated in other Caucasian samples, but also that there may be an increased emphasis on family support in H/L children (Levitt et al., 2005). Although this does not pertain to the influence of friendships to anxiety, it does provide some insight into the emphasis placed on family in some H/L children.

Other research, however, suggests that peer friendships are cross-culturally influential. Both family and school support significantly mitigated the negative association between discrimination and anxiety levels in a community sample of H/L

children (Potochnick & Perreira, 2010). Similarly, Benner (2011) found that for those who reported having support from friends, there was not as profound of a relationship between loneliness and academic success. That is, those who had support from friends but were also lonely did not have as poor academic outcomes as those who were lonely and did not report having social support. Again, this does not pertain directly to anxiety, but it does provide some support for the notion that both family and friends are important protective factors cross-culturally. Nishina, Juvonen, and Witkow (2005) similarly found that their model of peer harassment as a predictor of anxiety and depression did not differ across ethnicity. In other words, the effects of poor peer relationships on anxiety and depression were not different for H/L youth. It may be that family variables have a more profound effect on anxiety/depression, but that friendships have equally detrimental and protective capabilities across ethnicity. It is likely the case that family serves as a protective factor against the detrimental influences of friendship (dis)satisfaction and that these constructs are interrelated in this context.

Given the mixed literature with regard to the extent to which friendship factors predict anxiety in H/L and Caucasian children, coupled with the difficulty of disentangling parenting and friendship factors in this context, this research question will be exploratory. No specific a priori hypothesis is made regarding the extent to which friendship satisfaction predicts anxiety levels differently for H/L and Caucasian youth. The results of this exploratory hypothesis will serve to engender future research questions and further analyses.

In sum, the literature on the relative influence of family and friendships on H/L children's anxiety is not cohesive and little is known in this regard. These effects most

likely differ based on relative acculturative status across children who identify themselves as H/L, as well as differences in acculturative status between parents and children and the stress associated with this gap. It is also important to note that these differences in ethnicity could vary across development, but this too is beyond the scope of this thesis. However, examining whether there are differences across ethnicity on the proposed family and friendship variables will provide an important supplement to the current literature. Although it is expected that there will be differences between H/L youth and Caucasian youth on the strength of the relationship between family satisfaction and anxiety/depression, these other contextual variables may notably mask the magnitude of the effect.

Much of the research does not provide nuanced distinctions between clinical and non-clinically anxious children. It is possible that there is less variability in the clinical sample with regard to predictors of severity, and that these variables (i.e age and ethnicity) are associated with more salient differences in a community sample, for whom anxiety is sub-threshold and therefore less severe or interfering. This is important to keep in mind while interpreting the results from this thesis.

Hypotheses

1. It is expected that friendship satisfaction will negatively predict concurrent anxiety levels.

2. It is expected that family satisfaction will negatively predict concurrent anxiety levels.

3. Friendship satisfaction will negatively predict concurrent anxiety levels for older but not younger children.

4. Family satisfaction will predict concurrent anxiety levels for younger but not older children.

5. Family satisfaction will be a stronger concurrent negative predictor of anxiety levels in H/L children than in Caucasian children.

6 (exploratory). This exploratory hypothesis will examine the concurrent relations between friendship satisfaction and anxiety levels in H/L and Caucasian children in this sample.

Chapter 2

METHOD

Participants

Data for this study were drawn from a subsample of 71 children (ages 6-16 years old, 47.9% girls, 52.1 % H/L, mostly of Mexican-origin). Participants were children from a larger sample of 80 children referred to a university-based anxiety treatment program through school personnel or school counselors (54.1%), newspaper advertisements (9.3%), internet resources (5.6%), community psychologists or mental health professionals (5.6%), pediatricians (9.0%), or other local means including, but not limited to, friends, radio advertisements, and community presentations (16.4% in all). Children who were not classified as H/L or Caucasian (9 children in all; 1 African American and 8 mixed ethnicity) were not included in this study, so as to facilitate a more refined comparison between Caucasian and H/L, specifically, rather than H/L and non-H/L children more generally. Of the participants who had complete clinician diagnostic profiles (94.4% of the current sample), one did not receive any diagnosis, 56 received anxiety disorder primary diagnoses (including, separation anxiety disorder (13), social anxiety (15), specific phobia (8) panic with and without agoraphobia (2), generalized anxiety disorder (13), OCD (4), and PTSD (1)), and 10 received primary diagnoses of other non-anxiety disorders (including, dysthymia (2), major depressive disorder (1), ADHD (2), oppositional defiant disorder (3), and Selective Mutism (2)).

Measures

Child Self-Report Measures. *The Multidimensional Anxiety Scale for Children* (*MASC*; March, Parker, Sullivan, Stallings, & Conners, 1997) is a 39 item child-completed measure that assesses anxiety along four related domains: Physical Symptoms, Social Anxiety, Separation Anxiety, and Harm Avoidance. Each subscale contains 9 items, except the physical symptoms scale which consists of 12 items. Sample items include: "I feel tense or uptight," "I check to make sure things are safe," and "I'm afraid that other kids will make fun of me." Children are asked to indicate whether each item is never (0), rarely (1), sometimes (2), or often (3) true about them. Scores, therefore, range from 0 to 117. The MASC has demonstrated acceptable psychometric properties in samples of mostly Caucasian children ranging from elementary to high school age (March et al., 1997). For example, a factor analysis revealed adequate factor structure across the four domains, and these factors were identical for boys and girls (March et al., 1997). In terms of convergent and discriminant validity, the MASC was found to correlate significantly with the RCMAS ($r = .633$, $p <.01$) but not with the CDI ($r = .189$, $p < .05$; March et al., 1997). The MASC also has demonstrated test-retest reliability at 3 weeks and 3 months, with mean ICCs of .785 and .933, respectively (March et al., 1997). The mean ICCs also were considered to be within the acceptable range (above .40) for all subscales at 3 weeks, except for the harm avoidance subscale, which yielded a mean ICC of .344 at 3 weeks (March et al., 1997). Mean ICCs were above the acceptable threshold for all subscales at 3 months (with the harm avoidance subscale showing an ICC of .719 at 3 months; March et al., 1997). The MASC was chosen as the primary measure of anxiety in this study, instead of the RCMAS because of concerns regarding the divergent

validity of the RCMAS and because of the utility of the multidimensional nature of the MASC. March et al. (1997) demonstrated considerable correlations between the CDI and the RCMAS ($r = .624$, $p < .01$), which suggests that the construct measured by the RCMAS may be closely tied to depression rather than anxiety strictly.

The *Multidimensional Student Life Satisfaction Scale* (*MSLSS;* Huebner, 1994) is a 40-item child-completed measure designed to assess subjective satisfaction and well-being across the following five life domains: friendship, family, school, living environment, and self. The family and self scales contain seven items, the friends and living environment scales have nine items, and the school scale consists of eight items. Examples of items include, "I have enough friends," "I like where I live," and "I enjoy being at home with my family." Children rate the extent to which they agree with each item using a 6-point likert scale ranging from 1 ("strongly disagree") to 6 ("strongly agree"). Factor analyses have demonstrated adequate factor structure across the five domains with both middle childhood and adolescent samples (Huebner, 1994; Huebner, Laughlin, Ash, & Gilman, 1998; Gilman et al., 2000). In terms of reliability, Huebner, Laughlin, Ash, and Gilman (1998) found acceptable test-retest reliability across 4 weeks, with coefficients ranging from .70 to .80, as well as high internal consistency ranging between .91 and .93. The scale also has demonstrated adequate discriminate validity from the BASC clinical scales, which indicates that life satisfaction is not simply a byproduct of negative affect associated with clinical disorders (Gilman et al., 2000).

Mexican-American Cultural Values Scale, Familism Subscales (MACVS; Knight et al., 2010) were also used in a post-hoc analysis. This scale contains 50 items, and asks children to respond on an 8-point likert scale ranging from 0(none) to 8(very, very much).

27

This scale as a whole aims to tap into the extent to which children and adults adhere to Mexican-American values with the goal of understanding how they integrate and adapt different cultural values throughout the process of acculturation. It contains three Familism subscales: Family as Referent, Family Obligations, and Family Support. The Family as Referent subscale measures orientation toward using family and interpersonal success to define the self, and items include "children should always do things to make their parents happy," and "when it comes to important decisions, the family should ask for advice from close relatives". The Family Obligations subscale taps the extent to which they believe in the importance of caregiving roles of family, items include "children should be taught that it is their duty to care for their parents when their parents get old", and "Older kids should take care of and be role models for their younger brothers and sisters." The Family Support subscale measures the extent to which they value family support and includes items like "family provides a sense of security because they will always be there for you" and "It is always important to be untied as a family". Alpha levels for these subscales in adolescents range from .61-.67 (Knight et al., 2010). The alpha level from the current Hispanic/Latino sample (n=37) was α = .97.

Parent Report Measures. *Child Behavior Checklist Internalizing Problems Subscale* (CBCL*;* Achenbach, 1991) is a parent-completed measure comprised of 138 items. A total of 118 of those items assess internalizing and externalizing behavior problems, and the remaining 20 items assess social competencies. Each of the 118 internalizing and externalizing behavior problem items are rated on a 3-point scale of 0 (*not true*), 1 (*somewhat or sometimes true*), or 2 (*very true or often true*). Previous studies have reported that the measure has test-retest reliability in the .90s ($\kappa = .91$ for

Internalizing, $\kappa = .92$ for Externalizing, $\kappa = .94$ for Total Problems; Achenbach, 1991) and construct validity in the high .80s ($r = .89$ correlation with the BASC scale). Test-retest reliability estimates range from 0.87 to 0.89 using a 7-day interval (Achenbach, 1991). The Internalizing and Anxiety subscales were used for the present thesis.

Procedure

All parents and children signed informed consent and assent prior to participation in the study. Children and their mothers were administered an assessment battery that included these questionnaires about themselves or their children. A trained research assistant read each item aloud to younger children in order to insure completion and comprehension. Older children were assisted as necessary. After completing the measures, parents were offered a comprehensive learning program designed to provide children and parents with cognitive and behavioral tools to work through anxiety problems (Pina et al., 2012).

Data Analytic Plan

Parent and Child Reports of Anxiety. Parent and child reports were analyzed separately, rather than as a composite of anxious symptoms, because there appears to be considerable disagreement between parents and children that may make a composite score conceptually inappropriate. Parent-child agreement in clinic-referred samples appears to be lowest for symptoms related to anxiety (Edelbrock et al., 1986). Furthermore, clinical severity of anxiety does not appear to change the level of agreement between parents and children on diagnosis or symptoms (Edelbrock et al., 1986; Klien, 1991). One study found slightly lower correlations between parent-child reports of internalizing problems (with an average r = .24) than for externalizing problems (average

r = .31), which means that parents may be less attuned to their children's internal emotional states, or at the very least that they tap different aspects of internalizing distress (Rey, Schrader, & Morris-Yates, 1992). Furthermore, there was greater agreement on behaviors that were observable, whereas internal states yielded lower agreement between parents and children.

Engel, Rodrigue, and Geffken (1994) found overall considerably low agreement in a community sample (average *r* = .23) between parents and children in specific measures of anxiety, including the RCMAS and the STAIC, and conclude that anxiety is a difficult trait to tap using non self-report because internal anxious states are not readily observable. Engel, Rodrigue, and Geffken (1994) also attempted to isolate any effects that were due to general disagreement about pathology by asking parents to also fill out the anxiety measures as they *thought* their children would respond. They found that parents perceptions of their own child's reports of anxiety did not lead to greater agreement between parent and child reports, further highlighting the notion that parents may be unaware of their child's internal distress, especially regarding anxiety. De Los Reyes et al. (2012) found that self-reports of clinic-referred anxious children were significantly different from parent reports, but that both were considerably reliable and valid none the less. The researchers further concluded that parents and children both provide important, yet different, sources of information regarding child anxiety (De Los Reyes et al., 2012). Given the possibility that parents and children provide discrepant but qualitatively different information, a composite score may limit the variability in the anxiety measures and limit the applicability of a composite score in this context.

Chapter 3

RESULTS

Preliminary Analyses

  Outlier Analyses. DFFITS, a global measure of influence, was used to assess the extent to which each case impacted the standard error in the whole model. DFBETAS, a measure of how much each case influenced individual predictor coefficients, were also run for each case with family and friendship satisfaction predictors (Cohen, Cohen, West & Aiken, 2003). Cohen, Cohen, West, and Aiken (2003) suggest excluding cases of high influence, using a cutoff of values greater than the absolute value of 1 for DFFITS and greater than 1 for DFBETAS. None of the cases exceeded these cutoffs, so no cases were removed due to influence.

  Missingness. Missingness was assessed by dummy coding each case for missingness and correlating these dummy codes with sociodemographic variables (age, sex, and ethnicity). None of these variables correlated significantly with missingness, so variables were considered to be missing completely at random (Allison, 2002). Scale scores were, therefore, uniformly based on averaging across all available data.

  Descriptive Statistics. Descriptive statistics were run on all variables of interest including, MASC, CBCL, and MSLSS family and friendship satisfaction subscales, as well as sociodemographic variables (age, sex, and ethnicity; see Table 1). It should be noted that the parent reported CBCL anxiety scores are T-scores that typically have a mean of 50 and a SD of 10, which demonstrates that this sample had elevated anxiety scores nearly two standard deviations above the expected average in the population (see table 1). None of the variables exceeded conventional cutoffs of 2 for skewness and 7 for

kurtosis (West, Finch, & Curran, 1995). A prospective power analysis indicated that given a medium effect size and three predictors, a sample size of 77 is required to have conventional power of .80. Therefore, power may be an issue when interpreting these results, but the sample size of 71 in the current study may be sufficient to capture larger effect sizes. This slight limitation will be addressed in greater detail in the discussion.

Hypothesis Testing.

Preliminary Exploration. First, Pearson correlations (*r*) were run on variables of interest, including the MASC, CBCL internalizing problems and anxiety subscales, and MSLSS Family and Friendship Satisfaction subscales (See Table 2). Child-reported anxiety correlated significantly with all variables of interest, except for Family Satisfaction. Parent reported anxiety and internalizing were negatively, but not significantly, correlated with friendship satisfaction and positively, but not significantly, with family satisfaction. Parent and child repots of anxiety and internalizing distress were significant.

Then, a series of exploratory regression analyses were run, each with child and parent report measures of anxiety as the criterion (MASC for children, and the CBCL internalizing problems and anxiety problems subscales for parents) and family and friendship satisfaction MSLSS scores as predictors. These were run to get an idea of which outcome measures best taps the relations we aim to capture (see Table 3). Only the child report measure was significant in the regressions containing both family and friendship satisfaction variables as predictors, whereas the parent report measure of internalizing distress was not significant, although the CBCL anxiety problems subscale was marginally significant (*p* = .082). In an effort to capture the important information

provided by multiple raters, the marginally significant parent reported anxiety symptoms were included in subsequent analyses, but the non-significant internalizing distress subscale was not.

Hypotheses 1 and 2. The preliminary regressions discussed above, and outlined in Table 3, speak to the main effects of subjective friendship and family satisfaction on child reported anxiety. Family and friendship satisfaction together accounted for a significant proportion of the variance in child-reported anxiety. Furthermore, each predictor was independently significant. A hierarchical regression with friendship satisfaction entered in the first step and family satisfaction in the second step demonstrated that friendship satisfaction independently predicted anxiety, $R^2 = .099$, $F(1, 67) = 7.394$, $p = .008$, and that family satisfaction accounted for a significant proportion of the variance in anxiety after partialling out the effects of friendship satisfaction, $\Delta R^2 = .094$, $F(1, 66) = 7.394$, $p = .007$. This suggests that as a whole, both family and friendship satisfaction independently contribute to a significant proportion of the observed variation in child reported anxiety levels, but that family satisfaction is positively related to self-reported anxiety symptoms, whereas friendship satisfaction is negatively associated with self-reported anxiety.

Hypothesis 3. Continuous variable interactions within the multiple regression framework were used to assess hypothesis 3, by including an age by friendship satisfaction term and the MASC as the criterion. Age and Friendship Satisfaction were centered prior to creating the interaction term and being entered into the analysis (Cohen, Cohen, West & Aiken, 2003). The overall model predicting parent-reported CBCL

33

anxiety scores was not significant, $R^2 = .03$, $F(3, 61) = .65$, $p = .586$, nor was the individual interaction term, $b_3 = -.238$, $t = -.57$, $p = .571$.

The overall model predicting child reported MASC scores was significant, $R^2 = .17$, $F(3, 65) = 4.53$, $p = .006$, suggesting that the model containing age, friendship satisfaction and their interaction accounts for a significant proportion of the variance in child-reported anxiety. The specific interaction term was also significant $b_3 = -.07$, $t = -2.25$, $p = .028$. This significant interaction was probed by calculating simple regression equations, with age as the focal variable, i.e at older and younger children, above and below 1 SD from the mean age ($M = 9.85$, $SD = 2.57$, see figure 1). Results were consistent with the hypothesis, suggesting that friendship satisfaction significantly negatively predicted anxiety for children approximately 10 years old (at the mean age), $b = -.17$, $t = -3.10$, $p = .003$ and for children approximately 12 years old (1 SD above the mean age), $b = -.35$, $t = -3.46$ $p = .001$, but not for children approximately 7 years old (1 SD below the mean age), $b = .01$, $t = .06$, $p = .951$ (see figure 1).

Hypothesis 4. Continuous variable interactions within the multiple regression framework were used to assess hypothesis 4, by including an age by family satisfaction term and the MASC. Age and Family Satisfaction were centered prior to creating the interaction term and being entered into the analysis (Cohen, Cohen, West & Aiken, 2003). The model containing age and an age by family satisfaction interaction term predicting parent reported CBCL anxiety subscale scores was marginally significant, $R^2 = .10$, $F(3, 61) = 2.20$, $p = .097$, and the specific interaction term was significant, $b_3 = .69$, $t = 2.21$, $p = .031$. Simple slopes were calculated to further probe this interaction at different ages above and below 1SD from the mean age ($M = 9.85$, $SD = 2.57$). Results

indicated that family satisfaction significantly positively predicted anxiety for older children approximately 12 years of age (1 SD above the mean age), $b = 3.13$, $t = 2.41$, $p = .019$, but was not significant for younger children approximately 7 years of age (1 SD below the mean age), $b = -.45$, $t = -.44$, $p = .660$, or for children at the mean age of approximately 10 years, $b = 1.34$, $t = 1.58$, $p = .119$ (See figure 2).

The model containing age and an age by family satisfaction interaction term predicting child reported MASC scores was not significant, $R^2 = .04$, $F(3, 65) = .88$, $p = .457$, suggesting that the effect of family satisfaction on child reported anxiety did not vary as a function of age for child-reported anxiety levels.

Hypothesis 5. Continuous by dichotomous variable interactions within the multiple regression framework were used to assess hypothesis 5, by including an ethnicity by family satisfaction term in a multiple regression predicting MASC scores. Family satisfaction was centered and ethnicity was dummy coded. The overall model predicting parent reported CBCL anxiety scores was not significant, $R^2 = .037$, $F(3, 61) = .775$, $p = .513$, nor was the interaction term, $b_3 = .89$, $t = .52$, $p = .602$.

With regard to child reported MASC scores, the overall model was marginally significant, $R^2 = .08$, $F(3, 65) = 2.02$, $p = .120$, with a significant interaction term $b_3 = .28$, $t = 2.14$, $p = .036$. This interaction was probed by calculating simple regression equations for H/L children and Caucasian children in the sample. The regression for the Hispanic/Latino sample demonstrated a significant positive relation between family satisfaction and anxiety, $R^2 = .15$, $F(1,34) = 4.42$, $p = .043$, $b = .20$. The regression for the Caucasian children, however, was not significant, $R^2 = .03$, $F(1, 31) = .86$, $p = .361$, $b = -.08$, suggesting that family satisfaction does not account for a significant amount of

variation in anxiety levels for Caucasian children, but that it does for H/L Children. This finding is in line with the proposed hypothesis in that there are ethnicity differences; however, the valence of this effect is the opposite of what was expected, with greater family satisfaction predicting greater anxiety in the Hispanic/Latino sample only (see Figure 3).

To further probe this unexpected finding, and possible cultural underpinnings, a series of post-hoc analyses with the child-reported Mexican-American Vales Scale (MACVS) Familism subscales were run only with the H/L sample (n = 37; Total Familism Scale: $M = 101.72$, $SD = 34.60$, Familism Support Subscale: $M = 38.51$, $SD = 13.75$, Familism Obligations Subscale: $M = 31.64$, $SD = 11.17$, Familism Referent: $M = 31.56$, $SD = 11.00$). Preliminary correlations suggested that the Family as Referent and Family Obligation subscales correlated significantly positively with Family Satisfaction, whereas the Family Support subscale did not (see table 4). The Family Obligations subscale was the only subscale to also correlate marginally significantly with MASC scores, so this subscale was probed further. A regression with family obligations predicting MASC scores suggested that family obligations marginally positively predicted MASC scores for the H/L subsample, $R^2 = .09$, $F(1, 34) = 3.22$, $b = .08$, $p = .082$, suggesting that as feelings of family obligations increase, so does self-reported anxiety. A regression with family obligations predicting parent reported CBCL anxiety scores was also positive and marginally significant, $R^2 = .11$, $F(1, 30) = 3.77$, $b = 1.04$, $p = .062$.

Hypothesis 6 (exploratory). This exploratory hypothesis examined the concurrent relations between friendship satisfaction and anxiety levels in H/L and Caucasian children in this sample. Continuous by dichotomous variable interactions within the multiple regression framework were used to assess hypothesis 6, by including an ethnicity by friendship satisfaction term in a multiple regression predicting MASC scores and parent reported CBCL anxiety scores in separate regressions. Friendship satisfaction was centered and ethnicity was dummy coded. The overall model predicting parent reported CBCL anxiety scores was not significant, $R^2 = .03$, $F(3, 61) = .69$, $p = .559$, nor was the individual interaction term $b_3 = 1.13$, $t = .71$, $p = .480$.

Results indicated that the overall model containing friendship satisfaction, ethnicity, and their interaction predicting child reported MASC scores was significant, $R^2 = .12$, $F(3, 65) = 3.1$, $p = .033$. The specific interaction term was not significant, $b_3 = .13$, $t = 1.12$, $p = .268$, but the individual friendship satisfaction term was significant, $b_2 = .25$, $t = -2.59$, $p = .012$, suggesting a main effect of friendship satisfaction above and beyond that of ethnicity. These results suggest friendship satisfaction predicts child reported anxiety, above and beyond the influence of ethnicity.

Chapter 4

DISCUSSION

This thesis explored the relations between family and friendship satisfaction and anxiety levels in a sample of clinic-referred youth, as well as how these relations may vary as a function of age and ethnicity. Although anxiety is a relatively normal emotional experience, for some children anxiety interferes with daily functioning and adaptive development. Individual temperamental vulnerabilities, like behavioral inhibition, can place children at risk for pathological anxiety levels. From a learning theory perspective, anxiety can be negatively reinforced through avoidance of anxiety provoking situations. Anxious responses also can be learned by observing such behavior in others. Turning to cognitive theory, worry thoughts typical in anxious children are exacerbated over time and create negative schemas through which children filter information. These schemas, in turn, increase anxious interpretations that lower the threshold for anxious arousal. Whereas these variables and processes have been examined etiologically and also as maintaining variables, less is known about family and friendship satisfaction from an ecological systems and developmental psychopathological perspective. Thus, this thesis explored how macrosystem level influences of family and friendship satisfaction might be related to anxiety levels in a sample of children experiencing high anxiety levels.

Relations of Family and Friendship Satisfaction with Anxiety

In the present study, both family and friendship satisfaction contributed to a significant proportion of variance in child-reported anxiety levels. Specifically, children who endorsed greater friendship satisfaction were more likely to also report lower levels of anxiety. In the research literature, one study with a community sample of school age

38

children showed that poor friendship quality is associated with greater anxiety levels (Festa & Ginsberg, 2011). The reasons for the relations between friendship satisfaction and anxiety are likely multifaceted. Lacking satisfying friendships could decrease opportunities for children to learn crucial social skills that can enhance self-efficacy for handling social and other difficult situations. This could, in turn, decrease feelings of control and lead to greater avoidance of these important life experiences, thus creating avoidance and reactivity. In addition, there is some literature showing that friendships can help mitigate the risk for anxiety development in children who show other risk factors, like peer victimization (Hodges et al., 1999; Erath et al., 2010; Vernberg, 1990). Again, these conjectures are not entirely supported by the current findings, but they do provide insight into the relation between friendship satisfaction and anxiety levels in children overall.

With regard to main effects of family satisfaction, results showed that family satisfaction accounted for a significant proportion of the variance in child-reported anxiety. However, this relation was in the positive direction, such that family satisfaction was associated with greater anxiety levels in children (based on both child and parent reports of anxiety). In the research literature, controlling or restricting parenting behaviors have typically been linked to child anxiety (Chorpita & Barlow, 1998; Lieb et al., 2000; Muris & Merckelbach, 1998), but family satisfaction has not. It might be the case that other factors are moderating the relations between family satisfaction and anxiety in important ways. This possibility is discussed below in greater depth.

Relations between Friendship Satisfaction and Anxiety varied as a Function of Age.

Analyses revealed that lower friendship satisfaction was significantly associated with greater child-reported anxiety for children over the approximate age of 10. This is in line with literature that suggests friends may become more salient as children get older, and that poor quality friendships have a more profound influence on anxiety symptoms in older children (Furman & Buhrmester, 1992; Fordham & Stevenson-Hinde, 1999). This thesis provides further evidence that these patterns may also exist in a diverse sample of clinically anxious children. As friends shift into the primary means of social support, lacking these important environments for learning quality social interactions could have profound influences on anxiety. Not being exposed to the social skills engendered by quality friendships could foster avoidance and decrease self-efficacy for handling anxiety-provoking situations, and over time make anxiety worse.

These findings, coupled with research suggesting that social fears and anxiety are more common in older children, suggest that targeting social skills and facilitating friendships is an important objective for intervention and prevention efforts (Weems & Costa, 2005). For example, the Social Effectiveness Training program for Children (SET-C; Beidel, Turner, & Morris, 2000) targets social skills and effective communication strategies in socially anxious children, and has been shown to reduce overall anxious feelings and avoidance, as well as increase effective social interaction. Therefore, it could be important for interventions targeting generalized anxiety to also include a social training component that focuses on strategies for making and maintaining friendships.

Friendship satisfaction did not predict child-reported anxiety levels for the children approximately 7 years of age and younger. This is not surprising, as they may be

40

less sensitive to the effects of friendships at this age, given that their primary means of social support is thought to be family (Furman & Buhrmester, 1992). These findings could be confounded by age-related measurement invariance, in that younger children may have a more tenuous grasp on what constitutes satisfying friendships, and could therefore be less capable of adequately reporting their feelings about their own friendships. As such, this age-related null finding should be interpreted with caution.

The results predicting parent reported anxiety from friendship satisfaction and age were not significant. This discrepancy could be due to the differences in parent and child report discussed above, such that parents are not tapping into the more internal aspects of anxiety that could be particularly related to friendship satisfaction. It also could be that shared method variance between child reports of anxiety and friendship satisfaction are accounting for this relation. A multi-trait multi-method model would be required to test for method effects, which is beyond the scope of this thesis and is not warranted, given the sample size. However, life satisfaction in general is thought to be distinct from internalizing problems and/or the negative cognitive biases associated with anxiety (Gilman, Huebener, & Laughlin, 2000; Heady, Kelly, & Wearing, 1993). Future research should attempt to ascertain the possible measurement effects associated with self-reported anxiety and the various subjective life satisfaction domains. This is not to say that null findings from parents are not valid. They provide a more nuanced picture of these relations, and future research should include other raters of child anxiety, like clinician severity ratings, in an effort to reconcile these differences. Again, it could be that parents are not as aware of anxious symptoms that are associated most with friendship variables.

Relations between Family Satisfaction and Anxiety varied as a Function of Age

Analyses of family satisfaction and age predicting parent reported anxiety were marginally significant, and revealed that family satisfaction significantly positively predicted anxiety for older children, but not for children below the approximate age of 10. These results could partially account for the positive relation between family satisfaction and anxiety levels in the overall model (discussed above). That is, age could moderate the positive valance of effect in the overall model.

It could be that older children who are closer to their families are also subject to more constricting and controlling family environments, which are thought to greatly influence anxiety. Daily time sampling data suggests positive affect when spending time with friends increases with age and positive affect when spending time with family decreases with age (Helsen, Vollebergh, & Meeus, 2000; De Goede, Branje, Delsing, & Meeus, 2009). The current results could reflect that older children are in a transition period away from family and toward peers, and that having highly satisfying but constricting family environments could be related to more anxiety for older children. For example, although a family environment may be satisfying overall, it may also be associated with a more enmeshed dependency on parents and family members. This would be particularly problematic for older children and adolescents, for whom autonomy is often fostered through peer relationships apart from the family.

These results should be interpreted in light of the null findings predicting child-reported anxiety and the inherent differences in the nature of parent and child reports. It could be that children who are close with their parents express more anxiety to their parents than those who report dissatisfying family relations. This could be especially true

for older children, who may be more capable of articulately expressing their anxiety. This could then indicate that parents of children who are close with their family are more likely to report aspects of anxiety that are related with family satisfaction and also enmeshment. Furthermore, certain items on the CBCL anxiety problems subscale could reflect the aspects of anxiety that are reasonably associated with child reported family satisfaction. For example, item 11 reads, "clings to adults or too dependent". Endorsing this item for older children may reflect especially age-inappropriate enmeshment with parents and family, and could also reflect children's own report of greater family satisfaction. Given that the CBCL anxiety subscale contains only six items, highly endorsing this item could influence the aggregated score.

No research to date has examined positive relations between family satisfaction and anxiety in youth, so knowledge is limited in this regard. Future research could examine possible interactions between family and friendship variables in predicting anxiety across development, as it could be that greater family support coupled with lower friendship support networks at this age would be especially detrimental to anxiety development for older children, for whom friends are salient and important.

Relations between Family Satisfaction and Anxiety vary as a Function of Ethnicity

Findings revealed that the effects of family satisfaction on anxiety is different for H/L and Caucasian children, such that greater family satisfaction was related to higher levels of child reported anxiety only for the H/L sample. These results are contrary to the original hypothesis that family satisfaction would be a significant negative predictor of child's anxiety levels for the H/L sample. The influence of family on anxiety may be particularly salient for the H/L sample, as they may have different cultural values

regarding family. In an effort to better understand how these differences in family satisfaction might be related to different cultural orientations toward family, a series of post hoc analyses were run on the H/L sample. Familismo values are largely thought to be protective against pathology in general, but understanding for whom and in what contexts familismo values are protective has not been addressed in the literature until recently. Analyses revealed that the measure of family obligations, which taps the extent to which children feel obligations toward family duties and caring for family members, was marginally positively related to child and parent-reported anxiety levels. Thus, as reports of importance of family obligations increase, so does both self and parent-reported anxiety. It is important to note that the marginal significance could be due to small sample size and limited power. Future research should attempt to replicate these findings in a larger sample.

These findings could have important implications for understanding cultural differences in family processes and anxiety development in youth. It could be the case that the family satisfaction construct is actually tapping an aspect of familism regarding cohesion and closeness, but also possibly feelings of obligation and duty that accompany them. For Latino children, familismo obligations may be related to anxiety if children are pressured to "perform" in situations that are highly anxiety provoking. Luis, Varela, and Moore (2008) argue that the controlling family environments often associated with increased family orientation may be similar to the controlling parenting behaviors sometimes associated with anxiety in youth. It also could be that these familism values are less protective under instances of increased stress, including for children who are anxious. Umana-Taylor, Updegraff and Gonzales-Backen, (2011) found that familism

values mitigated the relation between perceived discrimination and risky behavior in a sample of Mexican-American teen mothers, but only when the levels of perceived discrimination were low. When teens reported greater discrimination levels, risky behavior was greater for those who endorsed more familistic values. This suggests that familism may be a "protective but reactive" factor that is protective under lower levels of stress, but less so in more stressful contexts (Luthar, Cicchetti & Becker, 2000).

In this sense, it could be that clinically anxious children, like those in this sample, are more easily influenced by feelings of family obligation. Kuhlberg, Pena, and Zayas (2010) found that familism was negatively related to parent-adolescent conflict, but positively related to internalizing symptoms in a sample of at-risk Latina adolescents. Sayegh and Knight (2010) also found that family obligations, but not expected family support, was related to feelings of negative well-being in parents and caregivers of elderly family members, especially for those who used avoidant coping styles. This, again, supports the idea that familsm obligations may exacerbate anxious symptoms when coupled with other risk factors in H/L youth.

Relations between Friendship Satisfaction and Anxiety did not vary as a Function of Ethnicity

This exploratory hypothesis examined concurrent relations between friendship satisfaction and anxiety levels across ethnicity. Results revealed that the effect of friendship satisfaction on anxiety was not different for H/L and Caucasian youth. Again, this could provide preliminary evidence that friendships are a salient predictor of anxiety regardless of ethnicity, which is in line with some of the research literature suggesting friendships are influential across ethnicity (Potochnick & Perreira, 2010; Benner, 2011;

Nishina, Juvonen & Witkow, 2005). Given the results regarding friendship satisfaction and age, it would be optimal to examine the interaction between age, ethnicity, and friendship satisfaction predicting anxiety levels, but the current sample size did not allow for such analyses. It could be that ethnicity differences in friendship effects emerge for older H/L children, but not for younger H/L children. It is important to note that no a priori hypothesis was made regarding these findings, as the literature is generally inconclusive, so concrete conclusions are not appropriate here. Future research should assess these questions in a way that is more scientifically sound.

Strengths, Limitations, and Considerations for Future Research

Although this study provides an interesting contribution to the literature, there are a number of limitations that should be addressed. First, as highlighted throughout, the sample was a clinic-referred, and therefore will likely have higher anxiety and depression levels than the normal population, thus limiting the generalizability of the findings. However, understanding more about the clinically anxious population is important. Also, these cases may have restricted range, and thus limited power to detect effects, which could account for some of the non-significant and marginally significant results. Similarly, the small sample size could preclude power to detect interaction effects, which tend to yield naturally smaller effect sizes, may be limited (Cohen, Cohen, West & Aiken, 2002). However, significant effects are likely robust since they were obtained in this small sample.

Clinic-referred children also could be systematically different from the non-anxious population, and therefore may not necessarily represent etiologies associated non-clinical levels of anxiety in the general population. For example, anxious children

46

could be more likely to report dissatisfaction with their parents and friends, but these relationships are not actually more dysfunctional or disruptive than the non-anxious children. As mentioned, negative affect associated with anxiety and general negative cognitive schemas could lead to greater probability of reporting dissatisfying social relationships. In this sense, heightened anxiety could be predicting dissatisfaction with social relationships, which is discussed below. However, research does suggest that subjective reports of expected social support may be as important as actual support received (Costa, Weems, & Pina, 2009). Despite this possibility, the unique nature of a clinically-referred sample in current thesis provides important information for understanding the clinical population and how these mechanisms operate in a population about which we know little.

Second, these data are not longitudinal, and therefore cannot speak to the directionality of effects. It could be that anxiety and anxious tendencies predict friendship and family satisfaction because anxious children elicit disrupted family and peer relationships. Furthermore, these relationships are probably cyclical and bidirectional over time, in that these anxious tendencies could mitigate healthy social and family/friendship functioning, which in turn exacerbates anxiety development. Longitudinal data would be required to make these inferences. The non-longitudinal nature of these data also precludes sound developmental conclusions to be drawn from age differences.

Finally, there are number of measurement issues that have been addressed throughout, but require greater treatment here. The findings from parent and child report measures of anxiety were different and not consistent across findings, which make the

aggregated results difficult to interpret. However, as mentioned, parents and children likely contribute different sources of information about children's anxiety, both of which should be taken into account; however, when only one source is available, children may provide the best singular measure of their own internal states (De Los Reyes et al, 2012). Unfortunately, the specific aspects of differences between parent and child report are not well known, so interpreting these discrepant findings is problematic. As mentioned, a composite score of parent and child report was not used in an effort to maintain the variance provided by both parents and children; however, this limits the already low collective power and running multiple analyses increases the possibility of type I error. Furthermore, given the discrepancies between parent and child reports of anxiety, future research should also include other important sources of information, like clinician severity ratings, in order to provide another index of anxiety severity. In addition, there could be measurement equivalence issues operating within the H/L and Caucasian samples. In other words, systematic differences in how anxiety is reported across ethnicity may be accounting for some of the observed effects. The same is true for age, such that younger children may have an inherently different internal working model of family and friendship variables that is accounting for the observed age differences. Furthermore, classroom observation, teacher reports, peer reports of friendship quality and sociometric standing, and specific measures of parent-child interactions would strengthen these findings.

Despite these limitations, this study elucidates aspects of social support mechanisms within the clinically anxious population, which is generally under-represented in the literature relative to community samples. Understanding how these

processes operate in this population as a function of age and ethnicity is important for developing well-targeted prevention and intervention efforts, as well as for gaining insight into how these problems may exacerbate over time in anxious children. In addition, the finding that family satisfaction and familism obligation positively predicted anxiety for the H/L children warrants the possibility that the protective nature familism should be examined more closely in future research. To date, this is the first study to find this trend in a sample of clinically anxious children, and future research should attempt to replicate these trends between familism and anxiety in clinically anxious youth in an effort to better understand risk and protective factors, as well as possible mechanisms for intervention.

REFERENCES

Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4-18.* Burlington: University of Vermont, Department of Psychiatry.

Adams, R. E., & Bukowski, W. M (2006). Relationships with mothers and peers moderate the association between childhood sexual abuse and anxiety disorders. *Child Abuse and Neglect, 31,* 645-656.

Allison, P. (2002). *Missing data.* Thousand Oaks, CA: Sage.

Bamaca, M. Y., & Umaña-Taylor, A. J. (2006). Testing a model of resistance to peer pressure among Mexican-origin adolescents. *Journal of Youth and Adolescence, 35,* 631-645.

Banerjee, R., Watling, D., & Caputi, M. (2011). Peer relations and the understanding of faux pas: Longitudinal evidence for bidirectional associations. *Child Development, 82*, 1887-1905.

Barrett, P. M., Dadds, M. R., & Rapee, R. M. (1996). Family treatment of childhood anxiety: A controlled trial. *Journal of Consulting and Clinical Psychology, 65,* 333-342.

Bayer, J. K., Sanson, A. V., & Hemphill, S. A. (2006). Parent influences on early childhood internalizing difficulties. *Journal of Applied Developmental Psychology, 27*, 542-559.

Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology, 68,* 1072-1080.

Benner, A. D. (2011). Latino adolescents' loneliness, academic performance, and the buffering nature of friendships. *Journal of Youth and Adolescence, 40,* 566-567.

Berman, S. L., Kurtines, W. M., Silverman, W. K., & Sarafini, L. T. (1996). The impact of exposure to crime and violence on urban youth. *American Journal of Orthopsychiatry, 66*, 329-336.

Berrera, M., & Garrison-Jones, C. (1992). Family and peer social support as specific correlates of adolescent depressive symptoms. *Journal of Abnormal Child Psychology, 20*, 1-16.

Buchanan, R. L., & Smokowski, P. R. (2011). Pathways from acculturation stress to negative friend association among Latino adolescents. *Child and Adolescent Social Work Journal, 28,* 375-391.

Bierman, K. L. (2004). *Peer Rejection: Developmental processes and intervention strategies.* New York, NY: Gulliford Press.

Blyth, D. A., Hill, J. P., & Thiel, K. S. (1982). Early adolescents' significant others: Grade and gender differences in perceived relationships with familial and nonfamilial adults and young people. *Journal of Youth and Adolescence, 11*, 425-460.

Bogles, S. M., & Brechman-Toussaint, M. L. (2006). Family issues in child anxiety: Attachment, family functioning, parent rearing and beliefs. *Clinical Psychology Review, 26*, 834-856.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723-742.

Caster, J. B., Inderbitzen, H. M., & Hope, D. (1999). Relationship between youth and parent perceptions of family environment and social anxiety. *Journal of Anxiety Disorders, 13*, 237-251.

Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: The role of control in the early environment. *Psychological Bulletin, 124*, 3-21.

Chorpita, B. F., Brown, T. A., & Barlow, D. H. (1998). Perceived control as a mediator of family environment in etiological models of childhood anxiety. *Behavior Therapy, 29,* 457-476.

Cicchetti, D., & Toth, S. (2009). The past achievements and future promises of developmental psychopathology: The coming of age of a discipline. *Journal of Child Psychology and Psychiatry, 50,* 16-25.

Cohen, J., Cohen, P., West, S., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.)*. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Costa, N. M., Weems, C. F., & Pina, A. A. (2009). Hurricane Katrina and youth Anxiety: The role of perceived attachment beliefs and parenting behaviors. *Journal of Anxiety Disorders, 33,* 935-941.

Crockett, L. J., Iturbite, M. I., Stone, R. A. T., McGinley, M., Raffaelli, M., & Carlo, G. (2007). Acculturative stress, social support and coping: Relations to psychological adjustment among Mexican American college students. *Cultural Diversity and Ethnic Minority Psychology, 13*, 347-355.

Dadds, M. R., Barrett, P. M., Rapee, R. M., & Ryan, S. (1996). Family process and child anxiety and aggression: An observational analysis. *Journal of Abnormal Child Psychology, 24*, 715-734.

Davidson, A. J., Updegraff, K. A., & McHale, S. M. (2011). Parent/peer relationship patterns among Mexican-origin adolescents. *International Journal of Behavioral Development, 35*, 260-270.

DeGarmo, D. S., & Martinez, C. R. (2006). A culturally informed model of academic well-being for Latino youth: The importance of discriminatory experiences and social support. *Family Relations, 55,* 267-278.

De Goede, I. H. A., Branje, S. J. T., Delsing, M. J. M. H., & Meeus, W. H. J. (2009). Linkages over time between adolescents' relationships with parents and friends. *Journal of Youth and Adolescence, 30*, 1304-1315.

De Los Reyes, A., Aldao, A., Thomas, S. A., Daruwala, S., Swan, A. J., Van Wie, M., & Lechner, W. V. (2012). Adolescent self-reports of social anxiety: Can they disagree with objective psychophysiological measures and still be valid?. *Journal of Psychopathological Behavior Assessment, 34*, 308-322.

Edelbrock, C. Costello, A. J., Dulcan, M. K., Conover, & Kala, R. (1986). Parent-child agreement on child psychiatric symptoms assed via structured interview. *Journal of child psychology and psychiatry, 27,* 181-191.

Edwards, S. L., Rapee, R. M., & Kennedy, S (2010). Prediction of anxiety symptoms in preschool aged children: Examination of maternal and paternal perspectives. *Journal of Child Psychology and Psychiatry, 51*, 313-321.

Engel, N. A., Rodrigue, J. R., Geffken , G. R. (1994). Parent-child agreement on ratings of anxiety in children. *Psychological Reports, 75,* 1251-1260.

Erath, S. A., Flanagan, K. S., Bierman, K. L., & Tu, K. M. (2010). Friendships moderate psychosocial maladjustment in socially anxious early adolescents. *Journal of Applied Developmental Psychology, 31I,* 15-28.

Festa, C. C., & Ginsberg, G. S. (2011). Parental and peer predictors of social anxiety in youth. *Child Psychiatry and Human Development, 42,* 291-306.

Fordham, K., & Stevenson-Hinde, J. (1999). Shyness, friendship quality, and adjustment during middle childhood. *Journal of Child Psychology and Psychiatry, 40,* 757-768.

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

Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63,* 103-115.

Gaertner, A. E. Fite, P. J., & Colder, C. (2010). Parenting and friendship quality as predictors of internalizing and externalizing symptoms in early adolescence. *Journal of Child and Family Studies, 19*, 101-108.

German, M., Gonzales, N. A., & Dumka, L. (2009). Familism values as a protective factor for Mexican-Origin adolescents exposed to deviant peers. *The Journal of Early Adolescence, 29,* 16-42.

Gilman, R., Huebner, E. S., & Laughlin, J. E. (2000). A first study of the multidimensional students' life satisfaction scale with adolescents. *Social Indicators Research, 52,* 135-160.

Gini, G. (2008). Associations among overt and relational victimization and adolescents' satisfaction with friends: The moderating role of the need for affective relationships with friends. *Journal of Youth and Adolescence, 37*, 812-820.

Greco, L. A., & Morris, T. L. (2005). Factors influencing the link between social anxiety and peer acceptance: Contributions of social skills and close friendships during middle childhood. *Behavior Therapy, 36,* 197-205.

Heady, B., Kelly, J., & Wearing, A. (1993). Dimensions of mental health: Life satisfaction, positive affect, anxiety and depression. *Social indicators Research, 29*, 63-82.

Helsen, M., Vollebergh, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence, 29*, 319-335.

Hodges, E ., Boivan, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 35*, 94-101.

Hodges, E., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology, 75*, 677-685.

Hovey, J. D., & King, C. A. (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1183-1192.

Hudson, J. L., Doyle, A. M., & Gar, N. (2009). Child and maternal influence on parenting behavior in clinically anxious children. *Journal of Clinical Child and Adolescent Psychology, 38*, 256-262.

Hudson, J. L., & Rapee, R. M. (2001). Parent-child interactions and anxiety disorders: An observational study. *Behaviour Research and Therapy, 39,* 1411-1427.

Huebner, E. S. (1994). Preliminary development and validation of a Multidimensional Life Satisfaction Scale for Children. *Journal of Psychological Assessment, 16,* 118-134.

Huebner, E. S., Laughlin, J. E., Ash, C., & Gilman, R. (1998). Further validation of the Multidimensional Students Life satisfaction Scale. *Journal of Psychological Assessment, 18,* 115-134.

Kan, M. L., & McHale, S. M. (2007). Clusters and correlates of experiences with parents and peers in early adolescence. *Journal of Research on Adolescence, 17*, 565-586.

Kaniasty, K., & Norris, F. H. (1992). Social support and victims of crime: Matching event, support and outcome. *American Journal of Community Psychology, 20*, 211-241.

Klien, R. G. (1991). Parent-child agreement in clinical assessment of anxiety and other psychopathology: A review. *Journal of Anxiety Disorders, 5,* 187-198.

Knight, G. P., Gonzales, N. A., Saenz, D. S., Bonds, D. D., German, M., Deardorff, J…. Updegraff, K. A. (2010). The Mexican American Cultural Values Scale for Adolescents and Adults. *Journal of Early Adolescence, 30*, 444-481.

Kuhlberg, J. A., Pena, J. B., & Zayas, L. H. (2010). Familism, parent-adolescent conflict, self-esteem, internalizing behaviors, and suicide attempts among adolescent Latinas. *Child Psychiatry and Human Development, 41*, 425-440.

LaGreca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology*, *26*, 83-94.

Larson, R., & Richards, M. H. (1991). Daily companionship in late childhood and early adolescence: Changing developmental contexts. *Child Development, 62*, 284-300.

Laursen, B., Bukowski, W. M., Aunola, K., & Nurmi, J. E. (2007). Friendship moderates prospective associations between social isolation and adjustment problems in young children. *Child Development, 78*, 1395-1404.

Laible, D. J., Carlow, G., & Raffaelli, M. (2000). The differential relations of parent and peer attachment to adolescent adjustment. *Journal of Youth and Adolescence, 29*, 45-59.

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

Lieb, R., Wittchen, H., Hofler, M., Fuetch, M., Stein, M. B., & Merikangas, K. (2000). Parental psychopathology, parenting styles, and the risk of social phobia in offspring: A prospective-longitudinal community study. *Archives of General Psychiatry, 57,* 859-866.

Luis, T. M. Varela, R., Enrique, M., & Moore, K. W. (2008). Parenting practices and childhood anxiety reporting in Mexican, Mexican American, and European American Families. *Journal of Anxiety Disorders, 22*, 1011-1020.

Luthar, S. S., Cicchetti, D., Becher, B. (2000). The construct of Resilience: A critical evaluation and guidelines for future work. *Child Development, 71,* 543-562.

MacLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review, 27,* 155-172.

March, J. S., Parker, J. D., Sullivan, K., Stallings, P., & Conners, K. (1997). Multidimensional anxiety scale for children (MASC): Factor structure, reliability and validity. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 554-565.

McLaughlin, K. A., Hilt, L. M., & Nolen-Hoeksema, S. (2007). Racial/Ethnic differences in internalizing and externalizing symptoms in adolescents. *Journal of Abnormal Child Psychology, 35,* 801-816.

Merikangas, K. R., He, J. Burstein, M., Swanson, S. A., Avenevoli, S., Ciu, L.,… Swendsen, J. (2010). Lifetime prevalence rates of mental disorders in U.S adolescents: Results from the National Comorbidity Survey Replication— Adolescent Supplement (NCS-A). *Journal of the American Academy of Child and Adolescent Psychiatry, 49*, 980-989.

Motoca, L. M., Williams, S., & Silverman, W. K. (2012). Social skills as a mediator between anxiety and peer interactions among children and adolescents. *Journal of Clinical and Adolescent Psychology, 41*, 329-336.

Muris, P., Meesters, C., Merckelbach, H., & Husenbeck, P. (2000). Worry in children is related to perceived parental rearing and attachment. *Behavior Research and therapy, 28,* 487-497.

Muris, P., & Merchelbach, H. (1998). Perceived parental rearing behavior and anxiety symptoms in normal children. *Personality and Individual Differences, 25*, 1199-1206.

Mychailyszyn, M. P., Mendez, J. L., & Kendall, P. C. (2010). Social functioning in youth with and without anxiety disorders: Comparisons by diagnosis and comorbidity. *School Psychology Review*, *39,* 106-121.

Nishina, A., Juvonen, J., & Witkow, M. R. (2005). Sticks and stones may break my bones, but names will make me feel sick: The psychosocial, somatic, and scholastic consequences of peer harassment. *Journal of Clinical Child and Adolescent Psychology, 34*, 37-48.

Pina, A., & Silverman, W. (2004). Clinical phenomenology, somatic symptoms, and distress in Hispanic/Latino and European American youths with anxiety disorders. *Journal of Clinical Child and Adolescent Psychology, 33*, 227-236.

Pina, A. A., Zerr, A. A., Villalta, I. K., & Gonzales, N. A. (2012). Indicated prevention and early intervention for childhood anxiety: A randomized trial with Caucasian and Hispanic/Latino Youth. *Journal of Consulting and clinical Psychology, 8*, 940-946.

Potochnick, S. R., & Perreira, K. M. (2010). Depression and anxiety among first generation immigrant Latino youth: Key correlates and implication for future research. *The Journal of Nervous and Mental Disease, 198*, 470-477.

Rapee, D. M. (1997). Potential role of childrearing practices in the development of anxiety and depression. *Clinical Psychology Review, 17*, 47-67.

Rapee, D. M., Schniering, C. A., & Hudson, J. L. (2009). Anxiety disorders during childhood and adolescence: Origins and treatment. *Annual Review of Clinical Psychology, 5,* 377-341.

Rey, J. M., Schrader, E., & Morris-Yates, A. (1992). Parent-child agreement on children's behaviors reported by the child behavior checklist (CBCL). *Journal of Adolescence, 15*, 219-230.

Rose, A. J. (2002). Co-Rumination in the friendships of girls and boys. *Child Development, 73,* 1830-1843.

Rubin, K. H., Nelson, L. J., Hastings, P., & Asendorph, J. (1999). The transaction between parents perceptions of their children's shyness and their parenting styles. *International Journal of Behavioral Development, 23*, 937-957.

Sabogal, F., Martin, G., Otero-Sabogal, R., Vanoos Martin, B., & Perez-Stable, E. J. (1987). Hispanic Familism and Acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences, 9,* 397-412.

Sayegh, P., & Knight, B. G. (2010). The effects of famlism and cultural justification on the mental and physical health of family caregivers. *Journal of Gerontology Psychological Sciences, 66B*(1), 3-14.

Schmidt, M. E., & Bagwell, C. L. (2007). The protective role of friendships in overtly and relationally victimized boys and girls. *Merrell-Palmer Quarterly, 53*, 439-460.

Siqueland, L., Kendall, P. C., & Steinberg, L. (1996). Anxiety in children: Perceived family environments and observed family interaction. *Journal of Clinical Child Psychology, 25*, 225-237.

Strauss, C. C., Frame, C. L., & Forehand, R. (1987). Psychosocial impairment associated with anxiety in children. *Journal of Clinical and Child Psychology, 16*, 235-239.

Thayer, S. M., Updegraff, K. I. A., & Delgado, M. Y. (2008). Conflict resolution in Mexican American adolescents' friendships: Links with culture, gender, and friendship quality. *Journal of Youth and Adolescence, 37,* 783-797.

Treadwell, K. R. H., Flannery-Schroeder, E. C., & Kendall, P. C. (1995). Ethnicity and gender in relation to adaptive functioning, diagnostic status, and treatment outcome in children form an anxiety clinic. *Journal of Anxiety Disorders, 9,* 373-384.

United States Census Bureau. (2006). Nation's population one-third minority. Retrieved June 1st 2012 from http://www.census.gov/population/www/socdemo/hispanic/hispanic_pop_presentation.html.

Umana-Taylor, A. J., Updegraff, K. A., & Gonzales-Backen, M. A. (2011). Mexican-origin adolescent mothers stressors and psychological functioning: Examining ethnic identity affirmation and familism as moderators. *Journal of Youth and Adolescence, 40,* 140-157.

Updegraff, K. A., Madden-Derdich, D. A., Estrada, A. U., Sales, L. J., & Leonard, S. A. (2002). Young adolescents' experiences with parents and friends: Exploring the connections. *Family Relations, 51,* 72-80.

Updegraff, K. A., McHale, S. M., Whiteman, S. D., Thayre, S. M., & Delgado, M. Y. (2005). Adolescent sibling relationships in Mexican American families: Exploring the role of familism. *Journal of Family Psychology, 19*, 512-522.

Vaux, A., & Harrison, D. (1985). Support network characteristics associated with support satisfaction and perceived support. *American Journal of Community Psychology, 13,* 245-268.

Varela, R. E., Weems, C. F., Berman, S. L., Hebsley, L., & Rodreguez de Bernal, M. C. (2007). Internalizing symptoms in Latinos: The role of anxiety sensitivity. *Journal of Youth and Adolescence, 36,* 429-440.

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

Weems, C. F., & Costa, N. M. (2005). Developmental differences in the expression of anxiety symptoms and fears. *Journal of the Academy of child and Adolescent Psychiatry, 44,* 656-663.

West, S., Finch, J., & Curran, P. (1995). Structural equation models with nonnormal variables: problems and remedies. In R. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 56-75). Thousand Oaks, CA, US: Sage Publications, Inc.

White, K. S., Bruce, S. E., Farrell, A. D., & Kliewer, W. (1998). Impact of exposure to community violence on anxiety: A longitudinal study of family social support as a protective factor for urban children. *Journal of Child and Family Studies, 7*, 187-203.

Young, J. F., Berenson, K., Cohen, P., & Garcia, J. (2005). The role of parent and peer support in predicting adolescent depression: A longitudinal community study. *Journal of Research on Adolescence, 15*, 407-423.

Table 1

Descriptive Statistics

	%	*M*	*SD*	*Skewness*	*Kurtosis*	Observed Range (possible range)
Sex (Girls)	47.9% (n = 34)	--	--	--	--	---
Ethnicity (Hispanic)	52.1% (n = 37)	--	--	--	--	---
Age (in years)	--	9.85	2.57	.840	.011	6 to 16 years (actual)
Child Report						
MASC	--	49.45	20.43	.05	-.67	6 to 94 (0 to 117)
MSLSS (Friendship Satisfaction)	--	44.33	10.10	-1.51	2.27	9 to 54 (9 to 54)
MSLSS (Family Satisfaction)	--	53.67	7.00	-1.36	2.09	9 to 42 (7 to 42)
Parent Report						
CBCL: Internalizing Problems T-Scores	--	70.04	8.86	.29	.04	50 to 92 (1 to 100)
CBCL: Anxiety Problems T-Scores	---	70.79	6.54	-1.00	.99	50 to 80 (1 to 100)

Note: MASC = Multidimensional Anxiety Scale for Children (March, Parker, Sullivan, Stallings & Connors, 1997), MSLSS = Multidimensional Student Life Satisfaction Scale (Huebner, 1994), CBCL = Child Behavior Checklist (Achenbach, 1991), *M* = mean, *SD* = standard deviation

59

Table 2

Correlations for All Variables of Interest

	1	2	3	4	5	6	7
1. MASC	---						
2. MSLSS (Friendship Satisfaction)	-.31*	---					
3. MSLSS (Family Satisfaction)	.14	.43**	---				
4. CBCL Internalizing	.40**	-.14	.10	---			
5. CBCL Anxiety	.31*	-.15	.14	.58**	---		
6. Age	.05	.17	-.09	-.05	-.09	---	
7. Ethnicity	-.03	-.23	-.10	.27*	.09	-.14	---

Note. *p < .05, ** p < .01, MASC = Multidimensional Anxiety Scale for Children (March, Parker, Sullivan, Stallings & Connors, 1997), MSLSS = Multidimensional Student Life Satisfaction Scale (Huebner, 1994), CBCL = Child Behavior Checklist (Achenbach, 1991)

Table 3

Preliminary Regressions: Family and Friendship Satisfaction Predicting Anxiety Outcome Measures

	t	p	β	R^2	$F(df)$	p
			Child Report			
MASC: overall model				.19	7.92(2,66)	.001
Friendship Satisfaction	-3.77	<.001	-.22			
Family Satisfaction	2.78	.007	.18			
			Parent Report			
CBCL Internalizing: overall model				.05	1.74(2,66)	.182
CBCL Anxiety: overall model				.08	2.61(2,62)	.082
Friendship Satisfaction	-1.95	.056	-1.57			
Family Satisfaction	1.94	.056	1.77			

Note. MASC = Multidimensional Anxiety Scale for Children (March et al., 1997), CBCL = Child Behavior Checklist (Achenbach, 1991)

61

Table 4

Partial Correlations for the Hispanic/Latino Sample Only

	1	2	3	4	5
1. Family Obligations	---				
2. Family as Referent	.90**	---			
3. Family Support	.85**	.92**	---		
4. MASC	*.29*	*.24*	*.20*	---	
5. Family Satisfaction	.37*	.38*	*.21*	.35**	---

Note. *p < .05, ** p < .01, *Italics indicate marginal significance between .05 and .10.*
1, 2, and 3, from the MACVS, child report (Mexican American Cultural Values Scale; Knight et al., 2010), MASC = Multidimensional Anxiety Scale for Children (March et al., 1994)
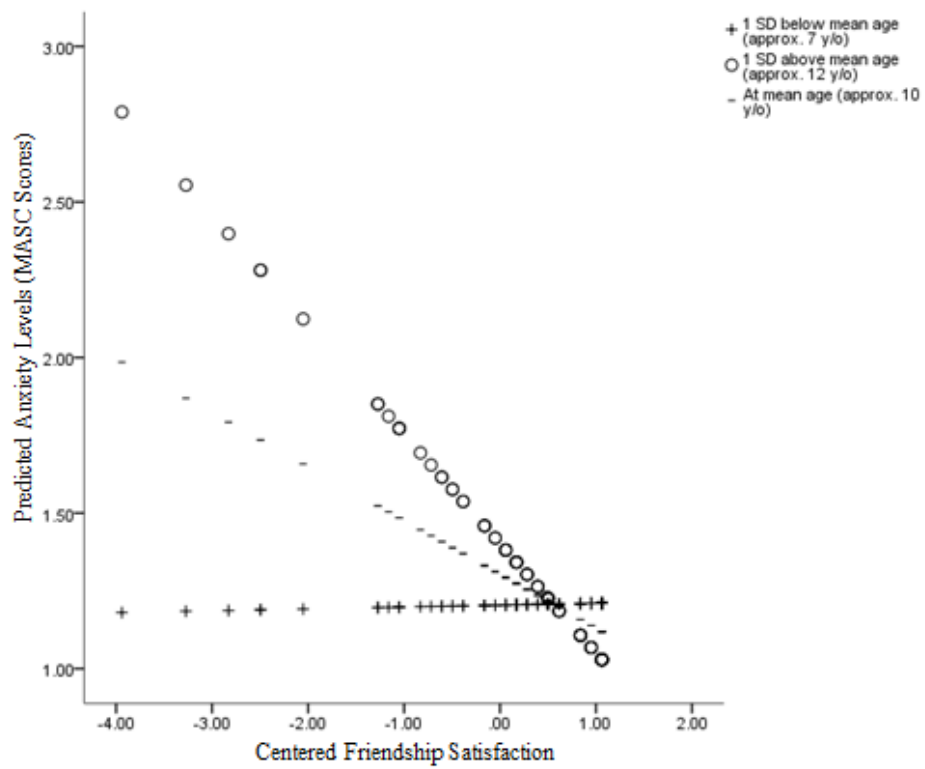
Figure 1. Friendship Satisfaction Predicting Child-Reported Anxiety Levels (MASC Scores) by Age (M age = 9.85, SD = 2.57).
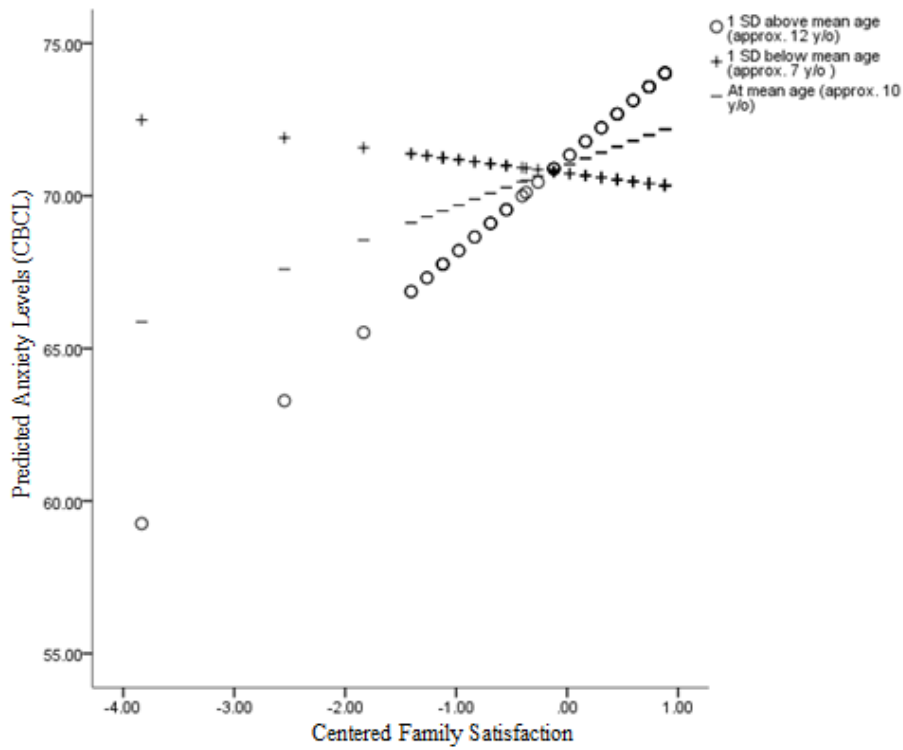
Figure 2: Family Satisfaction Predicting Parent-Reported Anxiety Levels (CBCL) by Age (M age = 9.85, SD = 2.57).
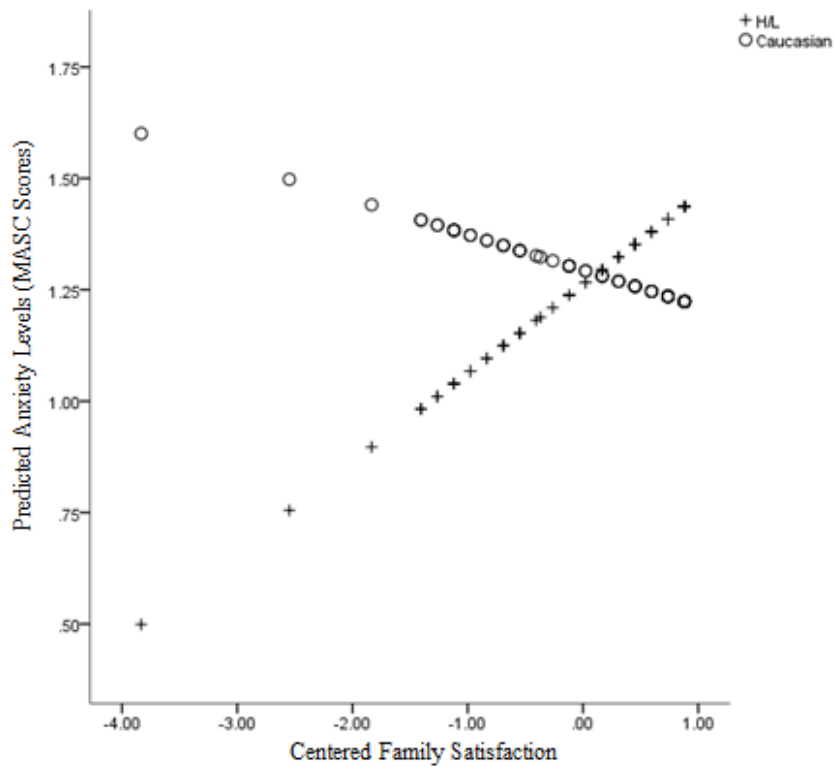
Figure 3. Family Satisfaction Predicting Anxiety Levels among H/L and Caucasian Children