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EXAMINING THE EFFECTS OF FAMILISM ON THE ASSOCIATION BETWEEN
PARENT-ADOLESCENT CONFLICT, EMOTION REGULATION, AND
INTERNALIZING PROBLEMS AMONG LATINX ADOLESCENTS

by

Kenia Carrera

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

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2019

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ABSTRACT

Examining the Effects of Familism on the Association Between Parent-Adolescent Conflict, Emotion Regulation, and Internalizing Problems among Latinx Adolescents

by

Kenia Carrera, Master of Science

Utah State University, 2019

Major Professor: Rick A. Cruz, Ph.D.
Department: Psychology

The purpose of this study was to investigate multiple risk and protective factors of internalizing problems among Latinx adolescents to inform prevention and intervention efforts. Previous research conducted primarily with European American youth has identified parent-adolescent conflict and difficulties in emotion regulation as risk factors for internalizing symptoms. Among Latinx adolescents, the Latinx cultural value of familism has been identified as a protective factor against internalizing problems.

Three aims were proposed: (a) to test whether a mediation model of the association between parent-adolescent conflict and internalizing symptoms through difficulties in emotion regulation would be observed among Latinx adolescents, (b) to examine whether familism would moderate the relation between parent-adolescent conflict and difficulties in emotion regulation, and (c) to investigate whether familism

would moderate the initially tested mediation model. I predicted that these three aims would be supported, and that parent-adolescent conflict and difficulties in emotion regulation would be positively correlated and familism negatively correlated with internalizing symptoms.

I used secondary data from the Salud de los Adolescentes Latinos pilot study, which collected data from 92 Latinx adolescents from Northern Utah. Results partially supported the study's hypotheses. Parent-adolescent conflict ($r = .26, p = .01$) and difficulties in emotion regulation ($r = .20, p < .001$) were positively correlated with internalizing symptoms. Difficulties in emotion regulation also served as a mediator for the association between parent-adolescent conflict and internalizing symptoms among this population ($b = .22, SE = .07, 95\% CI [.08, .34]$). However, familism did not moderate the relation between parent-adolescent conflict and internalizing symptoms for either subscale of the familism measure ($b = .21, SE = .24, p = .39$; $b = -.01, SE = .23, p = .96$), and, contrary to my prediction, the future support familism subscale, was positively correlated with internalizing symptoms ($r = .20, p = .05$). Similarly, familism did not serve as a moderator in the mediation model for either subscale of familism ($b = .10, SE = .12, 95\% CI [-.10, .38]$; $b = -.01, SE = .11, 95\% CI [-.24, .21]$). Clinical implications, study limitations, and future directions were considered and discussed.

(105 pages)

PUBLIC ABSTRACT

Examining the Effects of Familism on the Association Between Parent-Adolescent
Conflict, Emotion Regulation, and Internalizing Problems among Latinx Adolescents

Kenia Carrera

Latinx adolescents report higher levels of anxiety and depression symptoms (i.e., internalizing symptoms) compared to other ethnic groups. Research studies primarily conducted with European American youth have concluded that difficulties in emotion regulation and parent-adolescent conflict are associated with an increased risk for youth internalizing symptoms. Additionally, an important Latinx cultural value, familism, has been identified as a protective factor for internalizing symptoms for Latinx adolescents. Therefore, the current study examined how familism, parent-adolescent conflict, and difficulties in emotion regulation interact to influence the development of internalizing symptoms among Latinx adolescents. It was hypothesized that (a) parent-adolescent conflict and difficulties in emotion regulation would be positively correlated with internalizing symptoms, (b) a mediation model of the association between parent-adolescent conflict and internalizing symptoms through difficulties in emotion regulation would be supported, (c) familism would be negatively correlated with internalizing symptoms, and (e) familism would moderate the relation between parent-adolescent conflict and difficulties in emotion regulation. Lastly, this project explored whether

familism would moderate the mediation model of the association between parent-adolescent conflict and internalizing symptoms through difficulties in emotion regulation.

To test this, data from the Salud de los Adolescentes Latinos study, which recruited Latinx adolescents ($N = 92$) from Northern Utah, was analyzed. Results from the study showed that higher levels of parent-adolescent conflict, difficulties in emotion regulation, and the future support subscale of familism were associated with an increased risk for internalizing symptoms among Latinx adolescents. Based on previous research, it was predicted that higher levels of familism would be associated with lower levels of internalizing symptoms, showing a protective effect. However, an association in the opposite direction was found, indicating that in this study familism served as a risk factor. In addition, familism did not moderate the association between parent-adolescent conflict and difficulties in emotion regulation nor the mediation model tested from the second study aim. Future studies should investigate the specific risk and protective properties of familism for Latinx adolescents. Findings also indicated that the association between parent-adolescent conflict and internalizing symptoms was partially explained through difficulties in emotion regulation. In other words, higher parent-adolescent conflict was associated with more adolescent difficulties in emotion regulation, which subsequently increased the risk for internalizing symptoms. These findings suggest that parent-adolescent conflict and difficulties in emotion regulation are risk factors for Latinx youth internalizing problems. Therefore, prevention and intervention efforts should target parent-adolescent conflict and difficulties in emotion regulation to reduce the risk for internalizing symptoms among Latinx adolescents.

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Kenia Carrera

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CHAPTER I

INTRODUCTION

Latinx adolescents report higher levels of anxiety and depression symptoms, including greater suicidal ideation and suicide attempts, compared to their European American peers (Center for Disease Control and Prevention, 2012; Kann et al., 2016; Martinez, Polo, & Carter, 2012). These internalizing symptoms are associated with an increased risk for later psychopathology (Wesselhoeft, Sorensen, Heirvang, & Bilenberg, 2013), impairments in functioning (Bertha & Balazs, 2013; González-Tejera et al., 2005), and suicidality (L. O'Donnell, C. O'Donnell, Wardlaw, & Stueve, 2004; Nepon, Belik, Bolton, & Sareen, 2010). In addition, Latinxs are the largest and fastest growing minority group in Utah, making up approximately 13% of Utah's population (Pew Research Center, 2016). Internalizing issues, in the form of depression and anxiety symptoms, among Latinx youth continue to be an under-researched topic (Hooper, Mier-Chairez, Mugoya, & Arellano, 2016; Martinez et al., 2012). Internalizing problems like these are an important public health concern for Latinx youth, and it is paramount to understand relevant risk and protective factors among this large and growing population.

Difficulties in emotion regulation are one important individual difference feature that contribute to disruptions in psychosocial functioning among children and adolescents (Gross & Muñoz, 1995; Kaufman et al., 2016; Zeman, Cassano, Perry-Parrish, & Stegall, 2006). Difficulties in emotion regulation, as defined here, are any issues that compromise an individual's ability to, "identify, understand, and accept emotional experiences, control impulsive behaviors when distressed, and flexibly modulate emotional responses as situationally appropriate" (Kaufman et al., 2016, p. 443). Previous research has shown

that family factors, such as parental emotion socialization and quality of family relationships, significantly influence the development of emotion regulation (Morris, Silk, Steinberg, Myers, & Robison, 2007; Repetti, Taylor, & Seeman, 2002; Sanders, Zeman, Poon, & Miller, 2015). The influences of parenting and family relationships may be accentuated in the context of Latinx cultural values. A notable Latinx cultural value is familism, which emphasizes family obligation, closeness, and respect (Cauce & Domenech-Rodriguez, 2002). Among Latinx youth, higher endorsement of familism has been associated with a decreased risk for internalizing and externalizing problems (Ewing et al., 2015; Gonzales, Deardorff, Formoso, Barr, & Barrera, 2006; Hernández & Bámaca-Colbert, 2016; Ober, Miles, Ewing, Tucker, & D'Amico, 2013). Studies on self-regulation have also demonstrated that culture shapes how people think about and practice emotion regulation strategies (Qu & Telzer, 2017). Nonetheless, the literature on how specific cultural values (i.e., familism) affect Latinx youth emotion regulation is scarce. To address this gap, research is needed to specify how certain familial and cultural factors intersect with emotion regulation and internalizing symptoms in Latinx adolescents.

In summary, previous research suggests that familism and emotion regulation independently contribute to the development of internalizing symptoms in Latinx youth. However, there is little research on the association between familism and difficulties in emotion regulation, and their possible interdependent effects on internalizing issues. This study aimed to better understand how individual, familial, and cultural factors interact to influence internalizing problems among Latinx adolescents. In particular, this study examined: (a) whether difficulties in emotion regulation helped to explain the relation

between parent-adolescent conflict and internalizing symptoms in a sample of Latinx adolescents; (b) whether the cultural value of familism moderated the association between parent-adolescent conflict and difficulties in emotion regulation, and (c) whether familism moderated the indirect association between parent-adolescent conflict and internalizing problems through difficulties in emotion regulation described in aim one (i.e., a moderated mediation model).

CHAPTER II

LITERATURE REVIEW

Theoretical Framework

To guide this study, I used Szapocznik and Coatsworth's (1999) Structural Ecosystems Theory (SET). SET provides an organizational framework for the multiple layers of risk and protective factors associated with youth outcomes. This framework integrates social ecological, developmental, and interactional theories to explain the processes involved in specific maladaptive outcomes (e.g., internalizing symptoms). SET highlights the importance of considering the reciprocal interactions that occur between and within the adolescent's proximal (i.e., family, school, peer, and neighborhood) and distal (i.e., cultural, political and social) systems across time when studying youth outcomes. Using this model, I examined multiple risk and protective factors across Latinx adolescents' social systems that may interact to predict internalizing symptoms.

Szapocznik and Coatsworth's (1999) SET is heavily influenced by Bronfenbrenner's (1979) social ecology theory. The social ecology theory posits that human development is shaped by four social systems or contexts—microsystems, mesosystems, ecosystems, and macrosystems (Bronfenbrenner, 1979). Bronfenbrenner (1979) described these contexts as a "set of nested structures, each inside the next, like a set of Russian dolls" (p. 22). At the center of the structure is the individual surrounded by the microsystems. The microsystems are the settings, people, and institutions with which the developing person directly interacts (e.g., family, peers, teachers, and neighborhood). The next level, mesosystems, consists of the relationships between the individual's microsystems. The individual does not directly interact with those relationships, but they

affect the individual's development. For example, a child's parents' involvement in neighborhood activities might affect how the individual perceives and interacts with the neighborhood. Ecosystems are the contexts that affect the child's meso- and microsystems, such as the strength of the parent's social support network. The outermost layer, macrosystems, contains the broader cultural, political, and social ideologies to which the individual is exposed. It is important to highlight that culture does not only exist within the macrosystem (Szapocznik & Kurtines, 1993). Culture also shapes an adolescent's microsystemic interactions (i.e., family relationships) and individual beliefs, values, and behaviors (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010; Theron & Lienberg, 2015).

The literature has identified several factors that contribute to internalizing symptoms in youth that can be categorized using Szapocznik and Coatsworth's (1999) SET model (Figure 1). At an intrapersonal level, difficulties in emotion regulation have been identified as a risk factor for developing internalizing problems (McLaughlin, Hatzenbuehler, Mennin, & Nolen-Hoeksema, 2011; Siener & Kerns, 2012; Suveg & Zeman, 2004). In addition, SET places the family at the center of a child's social ecology, assuming that family is the most important influencing system in a child's development. This is consistent with Latinx cultural beliefs. Therefore, at the most proximal level, this study examined the effects of the parent-adolescent relationship on internalizing symptoms. Further, the SET indicates that the cultural context influences the family and subsequently the individual. Given that cultural factors have been identified as crucial in Latinx youth development, I proposed to explore the role of an important Latinx cultural value (i.e., familism) on a previously conceptualized model of emotion regulation and

adjustment. Specifically, I analyzed whether the indirect effects of difficulties in emotion regulation on the association between parent-adolescent conflict and internalizing symptoms were influenced by familism. Guided by the SET model, this research project aimed to examine a mechanistic model of parent-adolescent relationships, adolescent emotion regulation skills, and internalizing problems in the context of Latinx adolescents' cultural values. Although this study used cross-sectional data, I situate emotion regulation, familism, and internalizing problems as developmental processes that unfold over time.

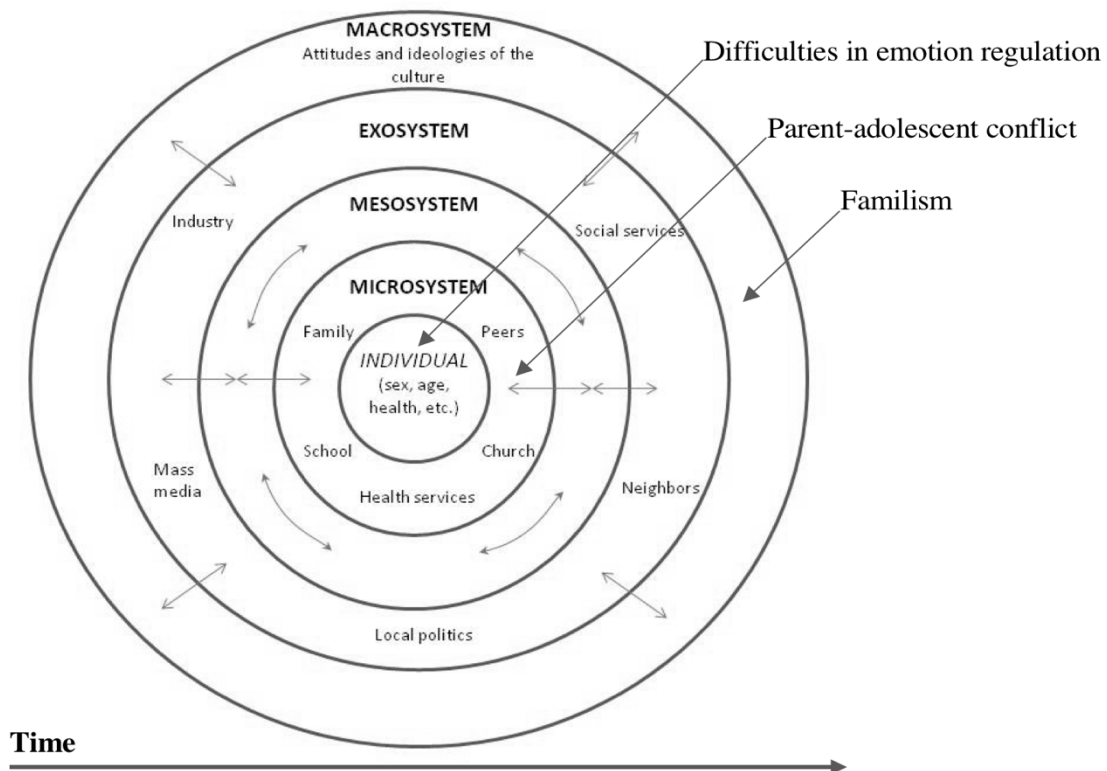


Figure 1. Structural Ecosystems Theory model with study variables.

Emotion Regulation

The literature shows that the ability to effectively regulate emotions is critical to the development of healthy psychosocial functioning (Cole, 1994). Emotion regulation,

as defined by Thompson (1994), is the combination of “extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (pp. 27-28). Effective emotion regulation requires self-awareness of emotions, goal-directed behavior regardless of intensity of emotion, and socially appropriate and flexible responses to emotional contexts (Cole, Teti, & Michel, 1994; Gratz & Roemer, 2004). When maladaptive patterns of emotion regulation emerge, the risk for psychopathology increases (Cole, 1994; Gratz & Roemer, 2004; Kaufman et al., 2016). The Difficulties in Emotion Regulation Scale (DERS) is a multidimensional, theoretically-driven measure of emotion dysregulation (Gratz & Roemer, 2004). The DERS assesses for the following six patterns of emotion dysregulation: (1) nonacceptance of emotional responses, (2) difficulty engaging in goal-directed behaviors while experiencing negative emotions, (3) difficulties with impulse control when upset, (4) lack of emotional awareness, (5) limited access to emotion regulation strategies, and (6) lack of emotional clarity. The development of emotion regulation strategies is dependent upon internal (i.e., neurophysiology, cognition, and subjective experiences), behavioral (i.e., facial expressions and behavioral actions), and external/social factors (i.e., cultural and social environments; Zeman et al., 2006).

Multiple studies have concluded that difficulties in emotion regulation predict the emergence of depression and anxiety symptoms among children and adolescents (McLaughlin et al., 2011; Siener & Kerns, 2012; Suveg & Zeman, 2004). For instance, children that report less awareness of emotions, biased interpretations of emotional situations, and lack of problem-solving coping show more depressive symptoms (Siener

& Kerns, 2012). Likewise, youth with anxiety disorders report higher levels of dysregulated emotion expression and maladaptive emotion coping strategies (Suveg & Zeman, 2004). Even though the majority of the literature on emotion regulation and internalizing symptoms has been cross-sectional in nature (Aldao, Nolen-Hoeksema, & Schweizer, 2010), longitudinal studies have demonstrated that deficits in emotion regulation predict increases in psychopathology, and not the other way around (McLaughlin et al., 2011). In a longitudinal study of 1065 middle school students, McLaughlin et al. (2011) investigated the effects of poor emotional understanding, dysregulated emotion expression, and rumination on depression, anxiety, aggression, and eating behaviors. Findings from this study suggest that the difficulties in emotion regulation feature is a transdiagnostic risk factor affecting multiple forms of psychopathology in adolescents (McLaughlin et al., 2011).

The literature highlights the importance of social contexts in the development of emotion regulation across the lifespan (Butler & Randall, 2013; English & Carstensen, 2014; Morris, Silk, Steinberg, Myers & Robison, 2007; Zeman et al., 2006). Morris et al.'s (2007) Tripartite Model of the Impact of the Family on Children's Emotion Regulation and Adjustment describes the role of the family in the development of emotion regulation (see Figure 2). Morris et al. (2007) suggest that this process depends on the three following factors: (a) observation and modeling, (b) parenting practices and style, and (c) the emotional climate of the family. First, children learn emotion regulation strategies through watching and interacting with their parent's own emotional profiles (Denham, Mitchell-Copeland, Strandberg, Auerbach & Blair, 1997). For instance, young children learn when and what is appropriate to feel and express given certain situations

by observing their parents' emotional reactions (Denham et al., 1997). Second, different parenting practices and styles have also been found to influence children's emotion regulation development (Darling & Steinberg, 1993).

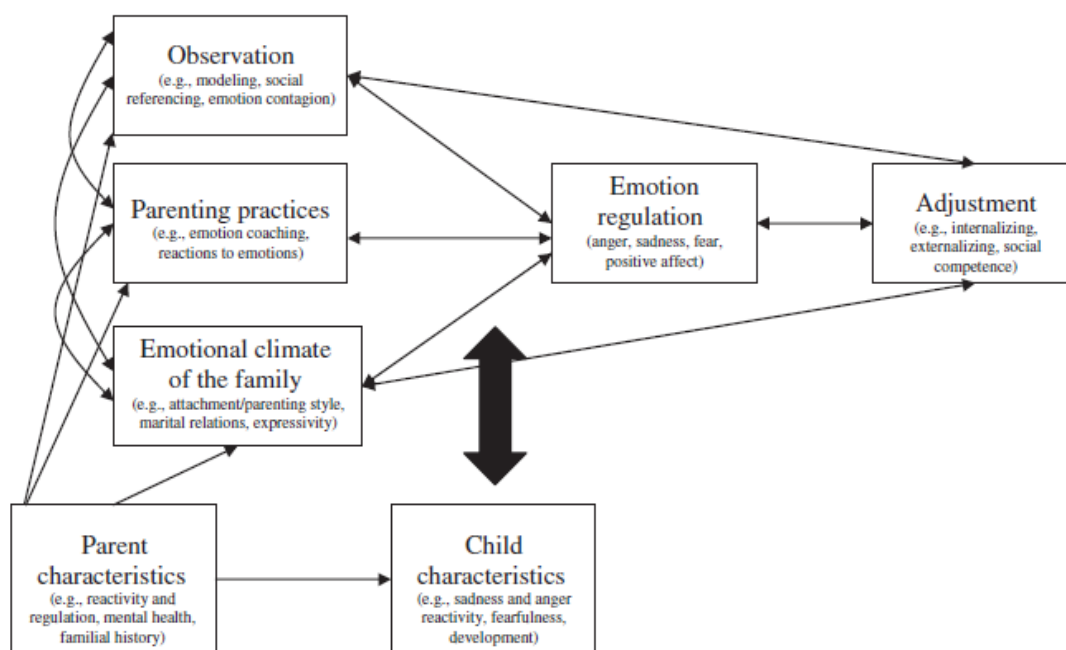


Figure 2. Tripartite Model of the Impact of the Family on Children's Emotion Regulation and Adjustment. Reprinted from "The Role of the Family Context in the Development of Emotion Regulation" by A. S. Morris, J. S. Silk, L. Steinberg, S. S. Meyers, & L. R. Robinson, 2007, *Social Development*, 16(2), p. 362. Copyright 2007 by the Blackwell Publishing Ltd.

For example, parents that exhibit warm and responsive styles tend to teach children more adaptive emotional coping strategies, such as effective problem-solving and correct labeling of emotions (Gottman, Katz, & Hooven, 1997). Alternatively, parents that exhibit emotion-dismissing styles tend to discourage displays of emotion (Gottman et al., 1997). Lastly, the model indicates that the emotional climate of the family through relationship qualities and emotional displays impacts emotional development (Darling & Steinberg, 1993). Family components such as parent-child attachment, parenting style, family expressivity, expressed emotion, and marital relations

are all considered elements of the family's emotional climate (Morris et al., 2007). Each of these developmental influences shape adaptive and maladaptive emotion regulation, and ultimately children's emotional, behavioral, and social adjustment.

Adolescence

As children transition into adolescence, their use of emotion regulation strategies and social contexts change (Shipman, Zeman, & Stegall, 2001; Zeman et al., 2006; Zimmermann & Iwanski, 2014). Zeman et al.'s (2006) review of the literature indicates that youth's repertoire of emotion regulation strategies increases from childhood to adolescence. Another study on the developmental changes of emotion regulation from early adolescence (age 11) to middle adulthood (age 50), however, revealed that during middle adolescence (ages 13-15) youth use less emotion regulation strategies and seek less social support than the other age groups (Zimmermann & Iwanski, 2014). During adolescence, youth's responsibilities and social contexts expand, leading to greater independence and autonomy from the family network (Allen, 2008). Oftentimes, parent-adolescent conflict also increases and perceived parental support decreases (Furman & Buhrmester, 1992; Laursen, Coy, & Collins, 1998). A study of emotion management with 140 5th-, 8th, and 11th-grade adolescents, found that 8th-graders expect the least social support from their mothers, corroborating research on the normative increased parent-adolescent conflict and social distancing during adolescence (Steinberg, 1990; Zeman & Shipman, 1997). Nonetheless, a review of the literature on parent-child relationships and emotion suggests that the family continues to directly and indirectly influence emotion regulation during adolescence (Parrigon, Kerns, Abtahi, & Koehn, 2015). Given these

findings, it is important to explore the influence of parent-adolescent relationships on emotion regulation and youth mental health outcomes.

The parent-child relationship has been observed to influence adolescent psychosocial outcomes. Even though parent-adolescent conflicts are normative (particularly over the adolescent's responsibilities and autonomy), conflicts that are emotionally intense and more chronic can lead to maladaptive functioning for youth (Moed et al., 2015). Kim, Thompson, Walsh, and Schepp's (2015) study of 110 adolescents at risk for high school dropout found that higher levels of parent-adolescent conflict were associated with adolescent depression and hopelessness. Similarly, Withers, McWey, and Lucier-Greer (2016) investigated how different aspects of the parent-adolescent relationship impact adolescent depression, withdrawal, delinquency, and aggression. The results from this study indicate that poorer parent-adolescent relationships (i.e., less closeness and communication and higher conflict) were correlated with adolescent depression, delinquency, and aggression. Conversely, supportive relationships with parents can be protective against maladaptive youth outcomes (Boutelle, Eisenberg, Gregory, & Neumark-Sztainer, 2009; Ge, Natsuaki, Neiderhiser, & Reiss, 2009). Therefore, the parent-adolescent relationship has consistently been shown to be a strong predictor of adolescent psychopathology.

The literature on the association between parent-adolescent relationships, emotion regulation, and youth outcomes is inconsistent. Previous studies have illustrated the important role that family relationships play on the development of emotion regulation (Morris et al., 2007). Regardless, the specific role of parent-adolescent conflict on emotion regulation and internalizing problems has been given less attention from

researchers in this area. Sim, Adrian, Zeman, Cassano, and Friedrich's (2009) proposed model showed that maladaptive emotion regulation skills partially mediated the association between family climate (i.e., emotional neglect and abuse from family members) and deliberate self-harm. A more recent study concluded that strong, positive youth-adult relationships moderate the association between difficulties in emotion regulation and suicide attempts (Pisani et al., 2013). Therefore, there is evidence for emotion regulation as a mediator and moderator of the links between the parent-adolescent relationship and youth outcomes. For this project, I used Morris et al.'s (2007) conceptualization of this pathway to examine emotion regulation as the mediator for the association between parent-adolescent conflict and internalizing problems.

The first aim of this study was to test one of the mediation models proposed by Morris et al. (2007) with a Latinx sample. The model proposed by Morris et al. (2007) positions emotion regulation as a mediator for the association between the emotional climate of the family and adjustment. In the present study, I evaluated a similar model that looked at emotion regulation as a mediator for the relation between parent-adolescent conflict and internalizing problems. The research presented by Morris et al. (2007) to support this model has been predominantly conducted with European American samples. Therefore, the first analytical step in this study was to test this mediational model with Latinx adolescents.

Familism

An important Latinx cultural value that has been studied in connection to Latinx youth outcomes is familism. The literature generally suggests that familism is a protective factor against adolescent internalizing symptoms (Ayon, Marsiglia, &

Bermudez-Parsai, 2010; Telzer, Yuen, Gonzales, & Fuligni, 2016). In particular, several studies have established the protective effects of familism against symptoms of depression and anxiety for Latinx youth. Ayon et al. (2010) examined the impact of familism and perceived discrimination on mental health issues among Latinx adolescents (ages 14-18) and their parents. This study found higher levels of familism were associated with decreased internalizing symptoms for Latinx families in their sample. Cupito, Stein, and Gonzalez's (2014) study on family cultural values, psychosocial issues, and school outcomes with 191 7th-10th graders supported those results. The authors found that family cultural values, including familism, were negatively related to symptoms of depression and positively associated with school belonging. In addition, the literature on the effects of cultural values on anxiety symptoms is more scarce, but the available research indicates that familism is protective against anxiety disorders (Martinez et al., 2012).

The association between cultural values and the parent-adolescent relationship is not yet completely understood. Simple correlational analyses suggest that higher levels of familism are associated with lower levels of parent-adolescent conflict (Kuhlberg, Peña, & Zayas, 2010). Other studies claim that the influence of familism on emotional adjustment may be due to variability in parent-adolescent conflict (Padilla, McHale, Rovine, Updegraff, & Umaña-Taylor, 2016; Smokowski & Bacallao, 2006). For instance, Smokowski and Bacallao's (2006) study with 323 Latinx adolescents found that familism's protective effects against internalizing symptoms were mediated by reduced parent-adolescent conflict. Another study that examined the moderator effects of familism on the relation between mother-adolescent conflict and youth outcomes found

that familism served a protective function in this association (Vargas, Roosa, Knights, & O'Donnell, 2013). However, support for these three claims has been inconsistent leaving gaps in research on the interaction between familism, parent-adolescent conflict, and internalizing problems (Telzer, 2010). Further research is needed to better understand how these protective (i.e., familism) and risk (i.e., parent-adolescent conflict) factors affect each other, and subsequently influence Latinx adolescent mental health. To my knowledge, the influence of familism on emotion regulation among Latinx adolescents has not yet been explored. Given the individual effects that parent-adolescent conflict, emotion regulation, and familism exhibit on internalizing symptoms, I predicted that familism would buffer the association between parent-adolescent conflict and emotion regulation, and their subsequent effects on internalizing problems.

To summarize, the literature suggests a complex interplay between these multilevel risk and protective factors as associated with internalizing symptoms among Latinx adolescents. At the individual level, difficulties in emotion regulation have been observed to promote internalizing problems and, at times, they show associations with parent-youth conflict. Heightened and especially chronic parent-adolescent conflict can also result in anxiety and depression symptoms for adolescents. In addition, research studies have demonstrated that the cultural value of familism is a protective factor for Latinx youth. This study proposed a unique pathway through which all of these factors interact. The proposed mechanism claimed that the indirect effects of emotion regulation on the relation between parent-adolescent conflict and internalizing problems could be influenced by changes in levels of adolescent reports of familism.

Gender

The literature shows gender differences between adolescent boys and girls across ethnicities with girls reporting higher levels of depression symptoms, anxiety, and comorbid internalizing disorders (Anderson & Mayes, 2010; Hooper, Mier-Chairez, Mugoya, & Arellano, 2016; McLaughlin, Hilt, & Nolen-Hoeksema, 2007). In particular, Latina adolescents exhibit three times more (17.4%) internalizing symptoms than their male counterparts (5.7%; Substance Abuse and Mental Health Services Administration, 2015). Previous studies have attributed this increased risk among Latina adolescents to a discrepancy between their Latinx and American cultural values (Cespedes & Stanley, 2008). Latinx traditional gender roles state that women should be dependent and passive, adhere to family obligations and put the family above themselves, which may conflict with the American values of autonomy and independence (Anderson & Mayes, 2010; Umaña-Taylor & Unger, 2007). Additionally, the tension between Latina adolescents' desire for autonomy and independence and their parents' endorsement of traditional gender roles has been found to create family conflict, which in turn may influence adolescent internalizing symptoms (Cespedes & Huey, 2008). To control for possible gender differences, sex was entered as a covariate in the present study.

Current Study

Guided by a social ecological perspective, this study aimed to further understand how complex interactions at different contextual levels (i.e. individual, familial, and cultural levels) affect the presence of internalizing symptoms among Latinx adolescents. Based on the literature, I proposed the following hypotheses: (a) higher self-reported levels of difficulties in emotion regulation and parent-adolescent conflict would predict an increased risk for internalizing symptoms; (b) stronger endorsement of familism

would be related to decreased internalizing symptoms; (c) difficulties in emotion regulation would have an indirect effect on the relation between parent-adolescent conflict and internalizing symptoms, and (d) familism would moderate the effects of parent-adolescent conflict on difficulties in emotion regulation. Lastly, I predicted that (e) familism would moderate the indirect effects of difficulties in emotion regulation on the association between parent-adolescent conflict and internalizing symptoms. Given the scope and sample size of this study, however, this last hypothesis was exploratory in nature.

Results from this study expand on the emotional adjustment literature by including Latinx adolescents and examining a culturally nuanced pathway of the effects of family relationships and emotion regulation on internalizing symptoms. In addition, if the predicted models were supported, then this project would show the strong protective effects of familism against well-established risk factors for internalizing symptoms (i.e., difficulties in emotion regulation and parent-adolescent conflict). The results would call for a heightened emphasis on cultural values in the youth development and outcomes literature. In particular, if the moderated mediation model was supported, then low levels of familism could be used as a risk marker for internalizing problems in prevention programs for Latinx youth. These findings could also inform intervention efforts. For instance, clinicians and researchers could work on weakening the effects of parent-adolescent conflict and difficulties in emotion regulation on internalizing problems by promoting the retention of familism among Latinx adolescents.

CHAPTER III

METHOD

Design

The current project analyzed a subset of data from the Salud de los Adolescentes Latinos (SAL) pilot study. The primary purpose of the SAL study was to investigate how cultural and familial factors influence Latinx youth's self-regulation and decision-making regarding risky behaviors (i.e. substance use and sexual behaviors). A secondary goal of SAL was to test the feasibility of recruiting Latinx youth along the Utah, Salt Lake, Davis, and Weber counties in Utah for future studies. Based on the large geographic area in which sampling occurred, the involvement of multiple remote research assistants from different universities, the challenges of sampling a marginalized population in Utah, and the limited funding and resources available to the research team to complete the study, the principal investigator decided that a sample size of 100 participants would be sufficient for the initial pilot study's purposes. Participants were recruited through advertisements on social media, table booths at community events, and flyers displayed in community organizations. Eligibility criteria for SAL included: (1) being between the ages of 13-18, (2) identifying as Latinx/Hispanic, and (3) being comfortable answering survey questions in English.

Procedures

To ensure that the families met eligibility criteria, graduate research assistants conducted eligibility screening interviews by phone. Undergraduate research assistants conducted interview sessions at the participants' homes or at a community location, based on the family's preference. Research assistants obtained consent from parents in Spanish

or English, depending on the parent's language of preference, and assent from adolescents before starting the interviews. The sessions consisted of a 90 min interview during which the adolescents responded to a questionnaire battery. The questionnaires were delivered via secured iPads using the Qualtrics software, a secure web-based survey platform. A few of the measures included sensitive questions regarding substance use and risky sexual behaviors. To maintain the participant's privacy, the research assistants handed the participants a keyboard connected to the iPad, and had the participants enter their responses to those sensitive items without seeing their answers. The participants also completed a computer task on the iPad to measure impulsivity. At the end of the session, the adolescents received \$20 gift cards for their participation.

Participants

From the 159 interested families, 58% ($N = 92$) successfully completed the screening and scheduling process and agreed to participate. Data from the other 67 interested families was not collected because they either did not meet inclusion criteria, indicated no longer being interested in participating, were unable to be reached, or could not be scheduled. In addition to the questionnaire battery and flanker task (Eriksen, 1995), the adolescents answered demographic questions. The average age of the participants was 15.09 ($SD = 1.71$), and 60.4% ($n = 55$) were girls. The majority of the adolescents in the sample were born in the United States (87%). Additionally, an indicator of socioeconomic status, household crowding, was created by dividing the number of household occupants by the number of household bedrooms. Previous studies have shown that overcrowding (i.e., when there is more than one person per room) is associated with fewer economic resources and negative outcomes (Galobardes, Shaw,

Lawlor, Lynch, & Smith, 2006; Marin, Chen, & Miller, 2008). Participants' demographic characteristics are presented in Table 1.

Table 1

Demographics

Category	Mean (SD)/ N (%)
Age	15.09 (1.71)
Household crowding	1.09 (0.28)
Sex	
Female	56 (60.4)
Male	36 (39.6)
Language spoken at home	
English	61 (67)
Spanish	31 (34)
Nativity	
Foreign-born	12 (13)
U.S. born	80 (87)

Measures

Difficulties in emotion regulation. The Difficulties in Emotion Regulation Scale-Short Form (DERS-SF) is a well-validated and widely used self-report measure for assessing emotion regulation problems (Kaufman et al., 2016). The scale consists of 18-items and six subscales, including strategies, non-acceptance, impulse, goals, awareness, and clarity. The items are answered on a 5-point frequency scale (1 = *Almost never*, 2 = *Sometimes*, 3 = *About half of the time*, 4 = *Most of the time*, and 5 = *Almost always*) with higher score indicating more difficulties in emotion regulation. Sample questions include, "When you're upset, you have difficulty focusing on other things", and "When you're upset, you become out of control." The DERS has been found to be moderately to highly correlated to measures that assess for clinical problems, such as the Child Behavior

Checklist, Beck Depression Inventory - II, and State-Trait Anxiety Inventory (Kaufman et al., 2016). Several studies have demonstrated the internal consistency and validity of the DERS with adolescent samples (Neumann et al., 2010; Weinberg & Klonsky, 2009), but it has not been tested with Latinx populations. The scale showed good internal consistency, Cronbach's $\alpha = .84$, with this study's sample.

Parent-adolescent conflict. The Parent-Adolescent Conflict Scale assesses two aspects of parent-adolescent conflict (Zeiders, Roosa, Knight, & Gonzales, 2013). First, the scale assesses for the presence of conflict (i.e., frequency) between parents and adolescents with consideration of minor disagreements as well as serious arguments. Second, the scale assesses conflict resolution strategies used by parents and adolescents. Only the frequency assessment was used in the current study. To assess the frequency of conflict between adolescents and their parents, the items ask how often general disagreements and conflicts happened in the past three months. A sample question is, "How often do you and your mom yelled or raised your voices at each other?" The frequency scale includes 10 items answered on a 4-point scale (1 = *Almost never or never*, 2 = *Sometimes*, 3 = *A lot of the time*, 4 = *Almost always or always*) with higher scores indicating more parent-adolescent conflict. The parent-adolescent conflict measure showed adequate internal consistency with this sample (Cronbach's $\alpha = .74$).

Familism. The familism scale (Fuligni, Tseng, & Lam, 1999) examines adolescents' attitudes towards familistic values. A total of 24 items and three subscales, current assistance, respect for family and future support, assess the adolescent's levels of familism. The current assistance subscale asks the participant to answer how often they are asked or required to do something on a 5-point frequency scale. The response options

for this subscale range from 1 to 4 (1 = *Almost never or never*, 2 = *Once in a while*, 3 = *Sometimes*, 4 = *A lot of the time (frequently)*, and 5 = *Almost always or always*). The respect for family and future support scales ask about family values and how important it is for the adolescent to do something. An example of a respect for family question is, "How important is it in your family for you to do well for the sake of your family?" The scale is scored as a mean of items and higher scores indicate higher levels of respect, family support, and family obligations. Cronbach's alphas for the three familism subscales ranged between poor and adequate (current assistance $\alpha = .74$, respect for family $\alpha = .67$, and future support $\alpha = .65$) for the present study.

Internalizing symptoms. The Strengths and Difficulties Questionnaire (SDQ) is a behavioral screening questionnaire typically used for 4-17-year-olds and in this study extended to 18-year-olds. The SDQ is comprised of 25 items, and it can be broken down into five subscales: conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior. The first four scales can be summed to obtain a total difficulties score. For the purposes of this study, I only used the emotional symptoms subscale, which consists of five items. The SDQ asks the adolescent to answer whether a statement is *Not true*, *Somewhat true*, or *Certainly true* based on the past 6 months. Sample questions of the emotional symptoms subscale include, "I worry a lot." and "I am often unhappy, depressed or tearful." The SDQ has been shown to discriminate between high and low risk populations, and has high inter-rater reliability with parent report (Goodman, Meltzer, & Bailey, 2003).

For this study, the SDQ's emotional symptoms subscale's internal consistency was borderline poor, .61, based on Cronbach's alpha. Several previous studies have

reported similar reliabilities for the emotional symptoms subscale using this reliability coefficient (Boxer et al., 2008; Goodman, 2001; Malti, T., Perren, S., & Buchmann, 2010). Given that the emotional symptoms subscale is ordinal and each of the five items measure different emotional syndromes (e.g., depression, anxiety, somatic symptoms), Cronbach's alpha is likely to miscalculate its reliability (McNeish, 2018). Therefore, an alternative measure to using Cronbach's alpha is ordinal omega. Unlike Cronbach's alpha, omega is less restrictive and allows item variances to vary, which matches this scale's structure (Dunn, Baguley, & Brunsden, 2014). Additionally, the ordinal omega more accurately represents the reliability of a measure with ordinal response items (Gadermann, Guhn, & Zumbo, 2012). Using ordinal omega, the SDQ's emotional symptoms subscale's internal consistency was adequate (.70; 95% CI [.61, .80]).

Covariates. Each model adjusted for sex (0 = *female*, 1 = *male*), age (13-18), household crowding (number of family members living at home divided by number of bedrooms in the home), and nativity (1 = *born outside of the U.S.*, 2 = *born in the U.S.*).

Analytic Strategy

Missing data. To account for missing data, I followed three steps using a combination of packages, including Multivariate Imputation by Chained Equations (MICE; Buuren & Groothuis-Oudshroon, 2011) and Visualization and Imputation of Missing values (VIM; Templ, Alfons, Kowarik, & Prantner, 2016), in R (R Core Team, 2016; Zhang, 2015). First, I checked all of the variables of interest, including covariates, for their proportions of missing data. Second, I analyzed the dataset for patterns of missingness, and produced a table for visualization. Lastly, I tested whether the data was missing completely at random (MCAR), missing at random (MAR), or not missing at random (NMAR) using

Little's (1988) MCAR test. The literature suggests that if the following conditions are met, then data can be considered as MCAR and listwise deletion as an acceptable method of addressing missingness: if less than 2% of the data is missing (Rubin, Witkiewitz, Andre, & Reilly, 2007), if the missingness is not dependent on other variables (Little & Rubin, 1989), or if the resulting p-value from Little's MCAR test is greater than .05 (Little, 1988).

Preliminary analyses. First, I obtained means and standard deviations for all the study variables, including the covariates. To examine the zero-order associations between DERS, parent-adolescent conflict, and familism and internalizing problems (Hypotheses a and b), I performed bivariate correlations. Based on the literature, I predicted that DERS and parent-adolescent conflict would be positively correlated and the three familism subscales negatively correlated to the outcome variable (Hypotheses a and b). In addition, I included the continuous covariates in the correlation matrix and ran independent group *t*-tests for the binary covariates to determine possible differences in the primary study variables based on the covariates.

Mediation analysis. To test for indirect effects (Hypothesis c), I conducted a bias-corrected bootstrap analysis using the PROCESS Macro software in SPSS Version 25 (Hayes, 2018). The bias-corrected bootstrap method has been shown to adjust for imbalanced confidence limits and nonnormally distributed indirect effects observed with other mediation analysis methods (MacKinnon, Lockwood, & Williams, 2004). I ran the mediation model (Figure 3) with difficulties in emotion regulation as the mediator of the association between parent-adolescent conflict and internalizing symptoms. I examined the 95% confidence interval of the indirect effect, and if the calculated interval did not contain zero, then the indirect effects test was considered statistically significant.

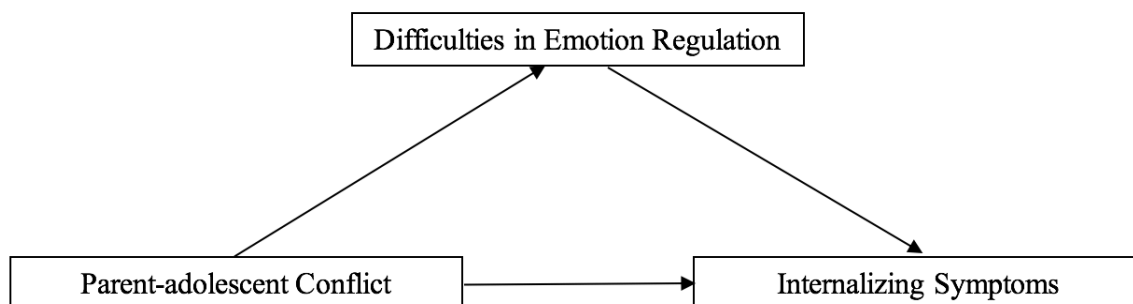


Figure 3. Hypothesized model: Difficulties in emotion regulation as mediator for relation between parent-adolescent conflict and internalizing symptoms.

Moderation analysis. To test for interaction effects, I ran the moderation model through the PROCESS Macro software in SPSS (Hayes, 2018), which automatically conducts a series of regression analyses. First, I centered all predictor variables (i.e., parent-adolescent conflict, emotion regulation, and familism) at the mean to allow for more interpretable results. To test for familism as a moderator of parent-adolescent conflict and difficulties in emotion regulation (Hypothesis d), I separately entered the familism subscales as the moderators, parent-adolescent conflict as the independent variable, and difficulties in emotion regulation as the dependent variable. The PROCESS Macro software computed an interaction term for familism by parent-adolescent conflict, and calculated multiple linear regressions equations with the interaction term, parent-adolescent conflict, and difficulties in emotion regulation variables. If a statistically significant moderation effect was found, then the interaction would be probed to examine the association between parent-adolescent conflict and difficulties in emotion regulation at one standard deviation above and one standard deviation below the mean-centered familism moderator.

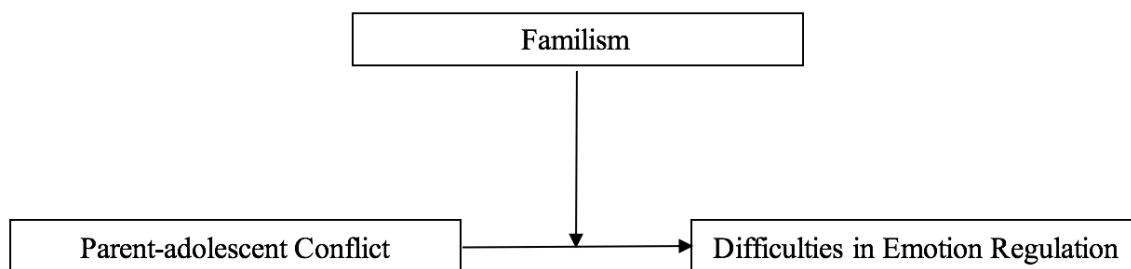


Figure 4. Hypothesized model: Familism as moderator for association between parent-adolescent conflict and difficulties in emotion regulation.

Moderated mediation analysis. To test the full moderated mediation pathway (Hypothesis e), I used the index method on PROCESS macro (Hayes, 2015). The index method is a combination between the moderation and mediation analyses previously described. As with the previous moderation test, an interaction term for parent-adolescent conflict by familism is first created. Then, this interaction term, parent-adolescent conflict, difficulties in emotion regulation, and familism are entered into a linear regression equation. Through this step, a bootstrap confidence interval at 95% for all of the regression coefficients is generated. If the confidence interval did not include zero for the interaction term, then the moderated mediation model (Figure 5) would show statistical significance.

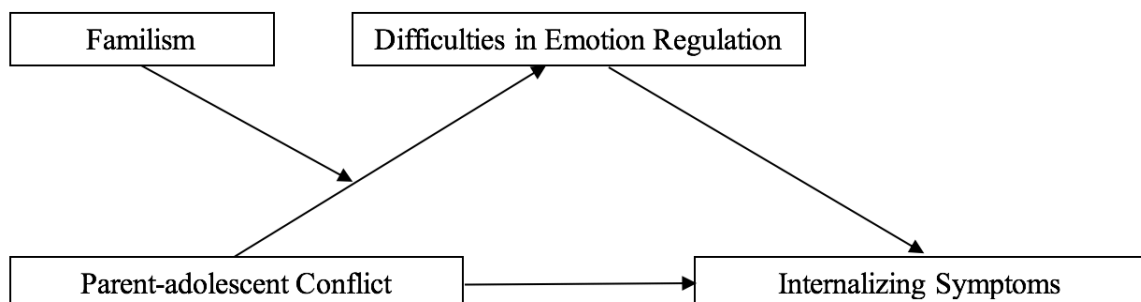


Figure 5. Hypothesized model: Moderated mediation with familism moderating the indirect effects of difficulties in emotion regulation on the association between parent-adolescent conflict and internalizing symptoms.

CHAPTER IV

RESULTS

Missing Data

The criteria to consider the missing data as MCAR and to support a listwise deletion was met. As observed from the proportion analysis, 1% of the data was missing from the study's main variables, and none was missing from the covariates. Additionally, there was no evidence of possible patterns that indicated that the missing data was dependent on the other observed variables. The pattern analysis showed that data from one case was missing for variables of interest, including difficulties in emotion regulation, parent adolescent conflict, familism, and internalizing symptoms. Similarly, Little's MCAR test calculated a p-value of .41, suggesting that the missing data was MCAR. It is important to note that MCAR is a strong assumption, and the literature advises researchers to be conservative with this assumption (Little, 1988; Little & Rubin, 1989). The analysis of the present data, however, points to MCAR, and given that listwise deletion is one of the simpler methods of addressing missing data, I conducted a listwise deletion of the one case with missing data.

Descriptives and Bivariate Correlations

The means, standard deviations, and bivariate correlations are presented in Table 2. Results from the independent samples *t*-tests showed group differences between boys and girls for the difficulties in emotion regulation and internalizing symptoms variables (Table 3). No other group differences based on the covariates were observed (Tables 2 and 4). The bivariate correlations indicated that difficulties in emotion regulation ($r = .66$, $p < .001$), parent-adolescent conflict ($r = .26$, $p = .01$), and familism support ($r = .20$, p

=.05) were positively correlated with internalizing problems. Seeing as the familism respect for family subscale had a nearly zero correlation coefficient with the rest of the variables (i.e., DERS, parent-adolescent conflict, and internalizing symptoms), this subscale was not used for the remaining statistical analyses (see Table 2).

Table 2

Correlations and Descriptive Statistics

Variables	1	2	3	4	5	6	7	8
1. Difficulties in emotion regulation	2.12 (.58)							
2. Parent-adolescent conflict	.30**	1.84 (.40)						
3. Familism (assist)	-.17	.00	3.59 (.56)					
4. Familism (support)	.18	.04	.17	3.46 (.65)				
5. Familism (respect)	-.02	.00	.25*	.42**	4.17 (.47)			
6. Internalizing symptoms	.66**	.26*	-.03	.20*	-.02	1.69 (.41)		
7. Age	-.05	.12	.11	-.09	-.05	.09	15.05 (1.70)	
8. Household crowding	.11	-.18	.01	.08	.00	.02	.03	1.10 (.28)

Note. The means and standard deviations are along the diagonal line, M(SD).

* $p < .05$.

** $p < .01$.

Table 3

Results of t tests and Descriptive Statistics DERS, Familism, Parent-adolescent conflict and Internalizing symptoms by Sex

Outcome	Group						95% CI for Mean Difference	<i>t</i>	df
	Girls			Boys					
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
DERS	2.23	.54	54	1.97	.61	37	.02, .50	2.14*	89
Familism (assistance)	3.57	.58	54	3.62	.53	37	-.29, .19	-.44	89
Familism (respect)	4.17	.41	54	4.17	.55	37	-.20, .20	.02	89
Familism (support)	3.51	.63	54	3.39	.69	37	-.15, .40	.89	89
Parent-adolescent conflict	1.86	.45	54	1.80	.33	37	-.11, .24	.75	89
Internalizing Symptoms	1.80	.43	54	1.53	.33	37	.09, .43	3.11**	89

* $p < .05$.

** $p < .01$.

Table 4

Results of t tests and Descriptive Statistics DERS, Familism, Parent-adolescent conflict and Internalizing symptoms by Nativity

Outcome	Group						95% CI for Mean Difference	t	df
	Born outside U.S.			Born in U.S.					
	M	SD	n	M	SD	n			
DERS	2.31	.48	12	2.10	.59	79	-.15, .57	1.18	89
Familism (assistance)	3.45	.56	12	3.61	.56	79	-.51, .18	-.93	89
Familism (respect)	4.31	.41	12	4.15	.47	79	-.13, .45	1.12	89
Familism (support)	3.31	.55	12	3.49	.67	79	-.58, .23	-.87	89
Parent-adolescent conflict	1.83	.52	12	1.84	.39	79	-.25, .25	-.03	89
Internalizing Symptoms	1.60	.30	12	1.70	.43	79	-.36, .15	-.81	89

Mediation

To investigate whether difficulties in emotion regulation mediated the association between parent-adolescent conflict and internalizing symptoms, I conducted a bias-corrected bootstrap with 2000 bootstrap samples. Results showed that the indirect effect of parent-adolescent conflict on internalizing symptoms through difficulties in emotion regulation was significant ($b = .22$, $SE = .07$, 95% CI [.08, .34]). The relation between parent-adolescent conflict and internalizing symptoms (c') was no longer significant after controlling for the mediator ($b = .03$, $SE = .09$, $p = .76$; Figure 6). Results also indicated significant direct effects, in that parent-adolescent conflict was a significant predictor of difficulties in emotion regulation ($b = .47$, $SE = .14$, $p = .002$), and difficulties in emotion regulation was a significant predictor of internalizing symptoms ($b = .46$, $SE = .06$, $p < .001$). Together, the two predictors, parent-adolescent conflict and difficulties in emotion regulation, explained 51% of the variance of internalizing symptoms ($R^2 = .51$, $F(6, 84) = 14.3$, $p < .001$).

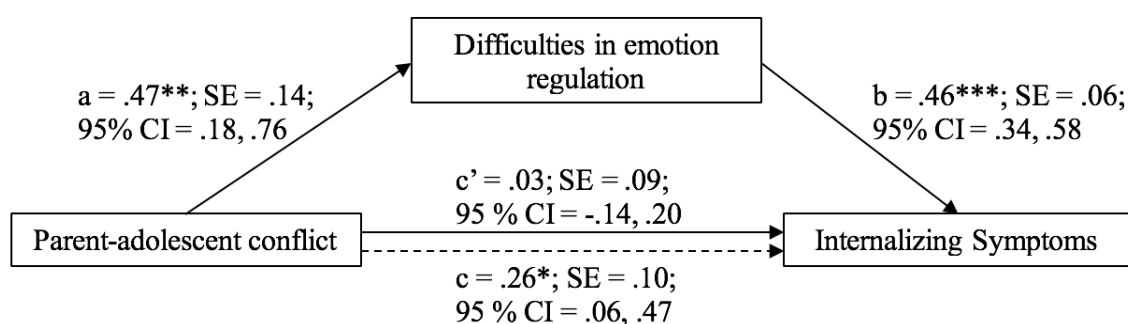


Figure 6. Difficulties in emotion regulation as mediator for relation between parent-adolescent conflict and internalizing symptoms.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Moderation

To test whether familism moderated the relation between parent-adolescent conflict and difficulties in emotion regulation, I ran a series of regressions between the three variables and a familism by parent-adolescent conflict interaction term. This model was tested with the familism assistance and familism support, subscales separately. Results from the familism assistance model indicated that parent-adolescent conflict was a significant predictor of difficulties in emotion regulation ($b = .47$, $SE = .14$, $p = .001$), but familism assistance was not ($b = -.13$, $SE = .11$, $p = .24$). Additionally, the interaction term did not significantly explain variation in the difficulties in emotion regulation variable ($b = .21$, $SE = .24$, $p = .39$), suggesting that familism assistance did not function as a moderator of the association between parent-adolescent conflict and difficulties in emotion regulation (Figure 7). This model accounted for 22% of the variation in difficulties in emotion regulation ($R^2 = .21$, $F(7, 83) = 3.28$, $p = .004$; Table 5). The familism support model demonstrated similar results with parent-adolescent conflict significantly predicting difficulties in emotion regulation ($b = .46$, $SE = .14$, $p = .002$), and not familism support ($b = .13$, $SE = .09$, $p = .16$). Likewise, the interaction term between familism support and parent-adolescent conflict was not significant ($b = -.01$, $SE = .23$, $p = .96$), indicating that familism did not moderate the relation between parent-adolescent conflict and difficulties in emotion regulation (Figure 8). Familism support and parent-adolescent conflict explained 21% of the variance of difficulties in emotion regulation in this model ($R^2 = .21$, $F(7, 83) = 3.14$, $p = .005$; Table 5).

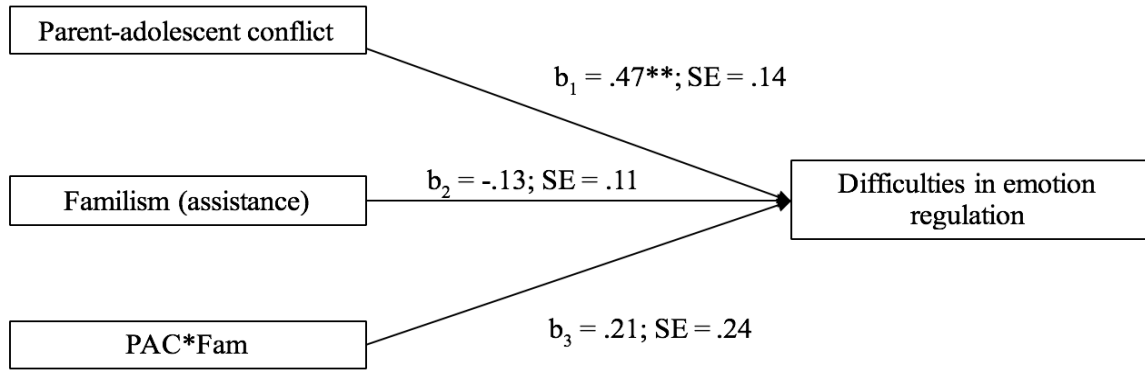


Figure 7. Familism (assistance) as moderator for association between parent-adolescent conflict and difficulties in emotion regulation.

** $p < .01$.

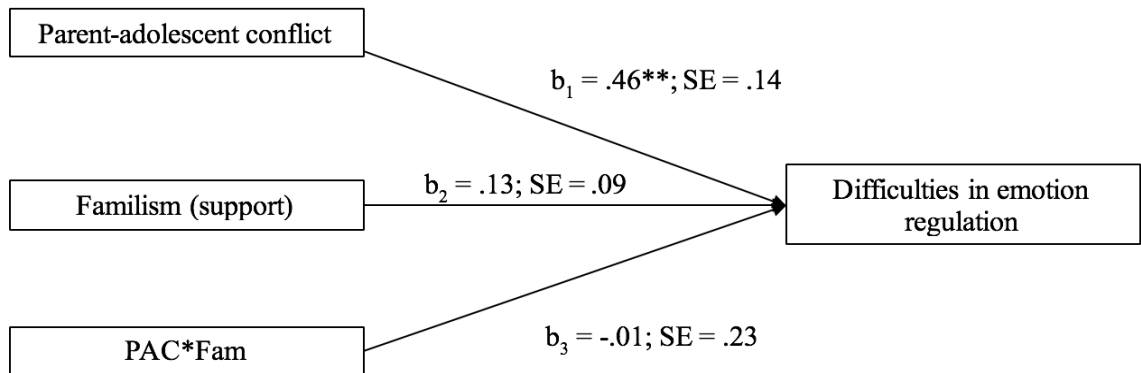


Figure 8. Familism (support) as moderator for association between parent-adolescent conflict and difficulties in emotion regulation.

** $p < .01$.

Table 5

Moderation Analysis Results

Model	β	SE	t	95% CI	R	R^2	F	p
Familism (assistance)	-.13	.11	-1.19	-.34, .08	.47	.22	3.28*	.004
Parent-adolescent conflict	.47	.14	3.39*	.19, .76				
Interaction term	.21	.24	.89	-.27, .69				
Familism (support)	.13	.08	1.44	-.05, .30	.46	.21	3.14*	.005
Parent-adolescent conflict	.46	.14	3.17*	.17, .75				
Interaction term	-.01	.23	-.05	-.47, .44				

* $p < .01$.

Moderated Mediation

To test whether familism moderated the previously assessed mediation pathway between parent-adolescent conflict, difficulties in emotion regulation, and internalizing symptoms, I used the Index method on the PROCESS macro software (Hayes, 2015). As with the previous analysis, two separate models for the different familism subscales were examined. Results from the familism assistance model, showed that the effect of parent-adolescent conflict on difficulties in emotion regulation by familism was nonsignificant ($b = .21, SE = .24, p = .39$). The findings further indicated that the indirect effect of parent-adolescent conflict on internalizing symptoms through difficulties in emotion regulation was not moderated by familism because the confidence interval for the index of moderated mediation included zero ($b = .10, SE = .12, 95\% \text{ CI } [-.10, .38]$). As Figure 10 illustrates, familism support showed similar nonsignificant effects for moderation between parent-adolescent conflict and difficulties in emotion regulation ($b = -.01, SE = .23, p = .96$), as well as no moderated mediation given the confidence interval of the index ($b = -.01, SE = .11, 95\% \text{ CI } [-.24, .21]$).

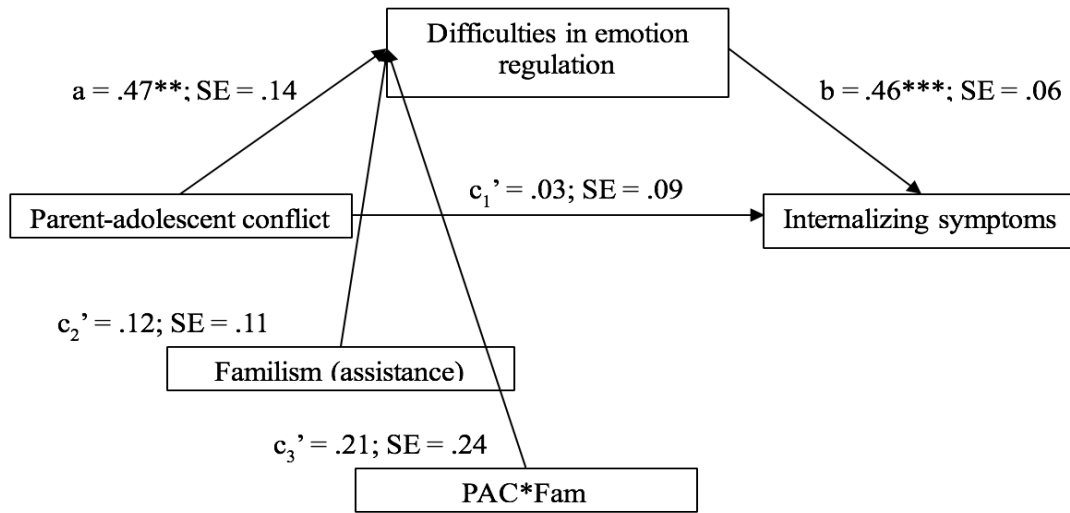


Figure 9. Moderated mediation with familism (assistance) moderating the indirect effects of difficulties in emotion regulation on the association between parent-adolescent conflict and internalizing symptoms.

** $p < .01$.

*** $p < .001$.

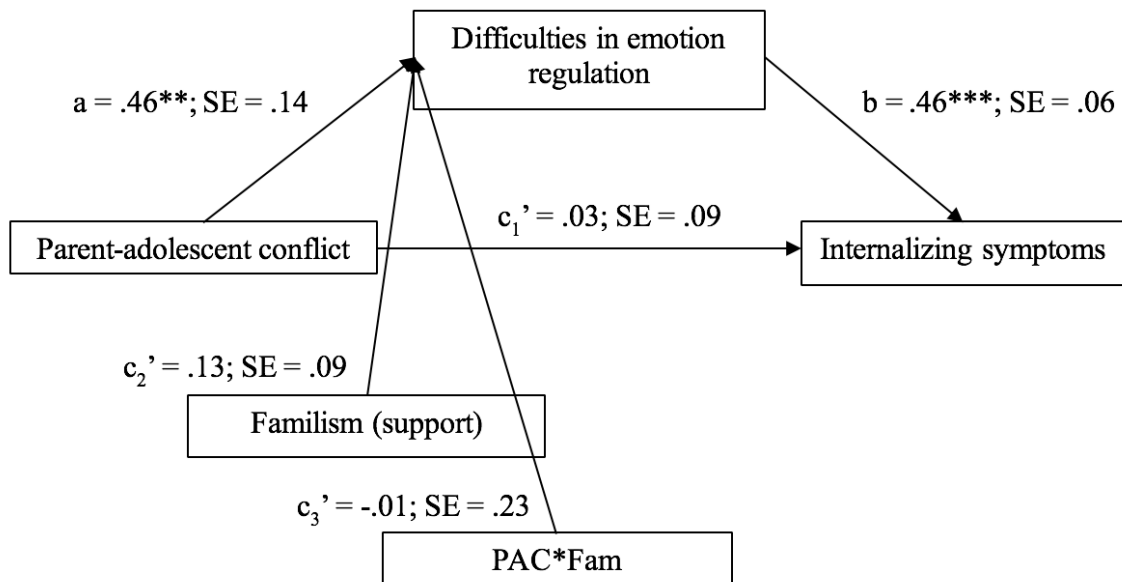


Figure 10. Moderated mediation with familism (support) moderating the indirect effects of difficulties in emotion regulation on the association between parent-adolescent conflict and internalizing symptoms.

** $p < .01$.

*** $p < .001$.

Table 6

Moderated Mediation Analysis Results

Models/Predictors	β	SE	t	95% CI	R	R ²	F	p
Moderator model: Familism (assistance)					.47	.22	3.28*	.004
Familism (assistance)	-.13	.11	-1.19	-.34, .08				
Parent-adolescent conflict	.47	.14	3.29*	.19, .76				
Interaction term	.21	.24	.87	-.27, .69				
Moderator model: Familism (support)					.46	.21	3.14*	.005
Familism (support)	.13	.09	1.44	-.05, .30				
Parent-adolescent conflict	.46	.14	3.17*	.17, .75				
Interaction term	-.01	.23	-.05	-.47, .45				
Mediation model: Internalizing symptoms					.71	.51	14.29**	< .001
Parent-adolescent conflict	.03	.09	.30	-.14, .20				
Difficulties in emotion regulation	.46	.06	7.58**	.34, .58				

* $p < .01$.** $p < .001$.

CHAPTER V

DISCUSSION

The aim of this study was to investigate how cultural, familial, and individual factors influence internalizing symptoms among a population of Latinx adolescents in northern Utah. I hypothesized that: (a) parent-adolescent conflict and difficulties in emotion regulation would be positively correlated to internalizing problems; (b) familism would be negatively correlated to internalizing problems; (c) difficulties in emotion regulation would mediate the association between parent-adolescent conflict and internalizing problems; (d) familism would moderate the association between parent-adolescent conflict and difficulties in emotion regulation; and (e) familism would moderate the indirect effects of parent-adolescent conflict on internalizing problems through difficulties in emotion regulation.

The hypotheses in this study were partially confirmed. Consistent with previous research, this study found that parent-adolescent conflict and difficulties in emotion regulation are positively associated with internalizing problems. Results further showed that the indirect effects of parent-adolescent conflict on internalizing problems are partially explained by difficulties in emotion regulation. These findings add to the empirical evidence that parent-adolescent conflict and difficulties in emotion regulation are risk factors that threaten Latinx adolescents' mental health, and should therefore be considered for prevention and intervention efforts. They additionally lend support to Morris et al.'s (2007) Tripartite Model of the Impact of the Family on Children's Emotion Regulation and Adjustment, which states that the family's influence on children's adjustment happens through the effects that the family has on the child's

emotion regulation processes. The literature that Morris et al. (2007) cite to rationalize their model is based on primarily European American samples, thus this study adds that Latinx adolescents' adjustment is affected by the same processes described in their model. These findings suggest that the parent-child relationship is important in developing healthy emotion regulation strategies and in preventing internalizing problems for Latinx youth.

Contrary to what was expected, familism showed no significant effects in the moderation and mediation models tested in this study. Specifically, it was expected that higher endorsement of familism would buffer the effects of parent-adolescent conflict on difficulties in emotion regulation, which would then result in a lower risk for internalizing symptoms. To the best of my knowledge, the intersecting influences of familism and parent-adolescent relationships in relation to emotion regulation and internalizing symptoms had not been explored. Therefore, this study was one of the first to test that pathway. Nonetheless, familism demonstrated no significant effects in these models. A potential explanation for these findings might be related to the type of familism measure used here. Fuligni et al.'s (1999) familism scale measures expectations and attitudes towards family obligations, and has been cited in the literature examining the association between cultural values and Latinx adolescent outcomes (e.g., Telzer et al., 2016). However, several of the studies evidencing the protective effects of familism on internalizing problems for Latinx adolescents have also used different measures of familism (Padilla et al., 2016; Smokowski & Bacallao, 2006; Vargas et al., 2013). Henceforth, future studies should explore and identify the specific protective properties of familism to create more consensus regarding how familism is measured and

conceptualized. Another explanation could be the small sample size of 91 in this study. The detection of significant effects becomes more difficult with smaller sample sizes since they lead to a decrease in power. For the purposes of the SAL pilot study, this sample size was adequate, but possibly not for these specific analyses. It is recommended that future studies use larger sample sizes. Additionally, the Latinx population is heterogenous and geographically diverse with each subgroup displaying different characteristics. Therefore, the influence of familism might not be as pronounced in this group of Latinx adolescents residing in Northern Utah. Given this, it is important to continue to investigate the influence of cultural values on Latinx adolescents' emotion regulation development and outcomes.

Although, no significant familism effects were found in the moderation and mediation models, the future support subscale was positively correlated with internalizing symptoms, which was in the opposite direction of what was predicted. This finding suggests that Latinx adolescents' belief that they should take care of their families in the future is connected to higher internalizing symptoms. Even though this was not the predicted association in this study, previous research studies have demonstrated similar findings (Kuhlberg et al., 2010). A possible explanation for this correlation might be that a strong endorsement of future support and family obligations might conflict with participants' mainstream cultural values of independence and autonomy (Fortuna, Perez, Canino, Sribney, & Alegria, 2007; Marsiglia, Kulis, Parsai, Villar, & Garcia, 2009). The current project's sample was composed of primarily second generation (86.7%) adolescents, and previous research indicates that Latinxs from the United States are high in individualism (i.e., emphasizing independence from others, personal goals, and

autonomy) while also maintaining high levels of collectivism (i.e., prioritizing group harmony, goals, and membership) possibly lending support to this hypothesis (Oyserman, Coon, & Kemmelmeier, 2002). Moreover, differences in cultural values between adolescents and their parents could result in family disagreements and conflict, which could in turn lead to adolescent distress (Gulbas & Zayas, 2015). Previous research has also evidenced that certain facets of familism can prompt adolescents to undermine their own wants and needs over the family's well-being (Nolle, Gulbas, Kuhlberg, & Zayas, 2012). Nonetheless, the mechanisms through which familism becomes a risk factor for Latinx adolescents are not yet well understood, and future studies should investigate specific mediators and moderators for the relation between familism and internalizing symptoms (e.g., acculturation, family functioning, and environmental context). Given that the significant effects of this familism subscale disappeared after accounting for the covariates, sex, household crowding, and nativity, these variables' influence on the association between familism and internalizing symptoms should be further explored.

Given the current findings, interventions that target parent-adolescent conflict and difficulties in emotion regulation to reduce internalizing problems among Latinx adolescents should be promoted. Two evidence-based interventions that engage the entire family to prevent and decrease negative Latinx adolescent outcomes are “Familias Unidas” and “Bridges” (Gonzales et al., 2012; Perrino, Pantin, Huang, Brinks, Brown, & Prado, 2016). The “Familias Unidas” preventive intervention consists of eight 2-hour multiparent group sessions and four 1-hour in-home visits with the parent(s) and adolescent across 12 weeks. The program aims to increase protective factors such as parent-child engagement and interaction, and to reduce risk factors such as poor

adolescent communication (Prado & Pantin, 2011). The “Familias Unidas” program has been shown to significantly reduce poor behavioral outcomes, including substance use, risky sexual behaviors, and internalizing symptoms (Perrino et al., 2016). Similarly, the “Bridges” intervention promotes family cohesion, effective parenting strategies, adolescent coping skills, and school engagement through two home visits and nine weekly 2-hour sessions with the adolescent and parent(s). Research shows that “Bridges” increases Mexican American youth school engagement, grades, and family support, and reduces substance use, parent-adolescent conflict, and internalizing problems (Gonzales et al., 2012). The target population of both programs are Latinx adolescents and families. Therefore, the interventionists are trained to work with this population, and are typically fluent in English and Spanish. Overall, these are family-centered programs shown to have significant positive outcomes on Latinx youth, and should be used as examples for developing future preventive interventions that target emotion regulation, parent-adolescent conflict, and internalizing problems among Latinx adolescents.

Limitations

This study presents a few limitations. First, although I situate emotion regulation, familism, and internalizing problems as developmental processes that unfold over time, cross-sectional data was used in this study. This limitation restricts my ability to conclude with certainty the temporal order of the variables of interest. Another limitation is that all of the data were gathered from adolescent self-report. Future studies should aim to gather data from the adolescent’s parents regarding the parent-adolescent relationship, levels of familism, and perceptions of the adolescent’s internalizing symptoms. Adolescents were also asked to self-report their gender based on a female/male binary scale, which might

force people to choose a gender with which they do not identify. Throughout this paper, the more gender inclusive term, Latinx, is used despite the limitations of the data. Given this limitation and the significant gender effects found in the study, future research should measure gender beyond this binary, and explore the influence of gender on the constructs examined in this study. In addition, this data was collected from a subset of Latinx adolescents in Northern Utah, and the results cannot necessarily be generalized to populations outside of that area. Lastly, even though one of our main measures (i.e., the DERS) has been validated across age groups and nationalities (Fossati et al., 2014; Neumann et al., 2010; Sarıtaş-Atalar, Gençöz, & Özen, 2015; Weinberg & Klonsky, 2009), previous studies have not validated the utility of the DERS with Latinx adolescents. Therefore, future research should also assess the validity and reliability of the DERS with Latinx youth.

Future Directions

Future research should examine the processes explored in this study longitudinally to test how familism, parent-adolescent conflict, and difficulties in emotion regulation influence internalizing problems over time. In addition, information about the adolescent should be collected from multi-informants, including parents, teachers, and peers, to minimize the potential bias that results from self-reports. The familism scale used in this study measured attitudinal familism that focused on family obligations, respect for family, and future support. It might be interesting and worthwhile to use a measure of behavioral familism, and examine which components of familism are protective. Furthermore, future studies should explore additional mediating and moderating variables that could help to fully understand the relation between parent-

adolescent conflict, difficulties in emotion regulation, and internalizing symptoms among Latinx youth.

Conclusion

The present study aimed to understand the individual and intersecting influences of familism, parent-adolescent conflict, and emotion regulation on Latinx adolescents' internalizing problems. Even though familism did not show significant effects in the predicted directions, these results suggest that we should continue to attempt to better understand the specific protective properties of this cultural value. This study adds to the literature on emotion regulation and parent-adolescent conflict by showing that these are also risk factors for Latinx youth. The findings highlight the importance of family relationships and healthy emotion regulation for this population, and they should be considered in the creation of prevention and intervention programs for internalizing symptoms. These programs would intervene at individual, familial, and cultural levels, which is a practice supported by the previously cited social ecological models (Szapocznik & Coatsworth, 1999).

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APPENDICES

Appendix A

Letters of Informed Consent and Assent



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 Amendment #3 Approved: 04/13/2017
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Informed Consent

Salud de los Adolescentes Latinos (SAL)

Purpose

You are invited to participate in a research project directed by Rick Cruz in the Department of Psychology at Utah State University. The purpose of our study is to learn about Hispanic/Latino adolescents' choices concerning their health. This form includes detailed information on the research to help you decide whether to participate in this study. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

If you agree to participate, we will ask you some questions about your life, family and peer relationships, things you do and don't like to do, and to play a computer game. The whole session will take about an hour and a half. We anticipate that 100-150 people will participate in this research study.

Risks

There are no physical risks involved in this research study, but we will ask you some questions that you may consider to be sensitive, including things like drug use and sexual history. We will also ask questions about your personal and family experiences as a Hispanic/Latino youth. We will not ask specific questions about documentation status of any family member.

We will give you plenty of opportunities for breaks and we will never pressure you to continue if you seem upset or uncomfortable with any part of the study.

Benefits

There is no direct benefit for participating in this research study. More broadly, this study will help the researchers learn more about why adolescents make certain decisions about their health, and may help other youth in the future.

Confidentiality

Please know that we will not share your answers with anyone outside of the research team, including your parents. Your identity will not be revealed in any publications, presentations, or reports resulting from this study.

We will collect your information through Qualtrics. This information will be securely stored under locked conditions. We will keep your consent form for three years following the conclusion of this study. Your signed consent form will be kept separate from the data, and nobody will be able to link your responses to them.

It is unlikely, but possible, that others may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so. The only exception we would make in keeping your information private is if you told us that you were being hurt, or if you planned to hurt someone else. In that case, we are required to contact the appropriate authorities to help protect you and others' safety.

The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to the survey responses because the survey takes place online. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet.



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Voluntary Participation and Withdrawal

Following your consent, your participation in this study remains completely voluntary. If you agree to participate now and changes you mind later, you may withdraw at any time by telling the researcher that you want to stop. If you choose to withdraw after we have already collected information about you, we will discard your data and it will not be used. Withdrawal will also not affect your compensation.

Compensation

For your participation in this research study, you will be paid \$20 in the form of a Visa gift card after the session for your time.

IRB Review

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at 435.277.0878 or rick.cruz@usu.edu. If you have questions about your rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

 Rick Cruz
 Principal Investigator
 (435) 277-0878; rick.cruz@usu.edu

Informed Consent

By printing your name in the box below, you agree to participate in this study. You indicate that you understand the risks and benefits of your participation, and that you know what you will be asked to do. You also agree that you have asked any questions you might have, and are clear that you can stop your participation in the study if you choose to do so. Please be sure to retain a copy of this form for your records.

 Printed name

 Date

Qualtrics Informed Consent

- ☐ I agree to participate in this study.
☐ I do not agree to participate in this study.

 Printed name

 Date



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Informed Consent

Salud de los Adolescentes Latinos (SAL)

Purpose

Your child is invited to participate in a research project directed by Rick Cruz in the Department of Psychology at Utah State University. The purpose of our study is to learn about Hispanic/Latino adolescents' choices concerning their health. This form includes detailed information on the research to help you decide whether to participate in this study. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

If you agree to allow your child to participate, and your child also agrees, we will ask him/her some questions about his/her life, family and peer relationships, things he/she does and doesn't like to do, and to play a computer game. We will also ask your child some questions about sensitive topics, like drug use and sexual history. The whole session will take about an hour and a half. We anticipate that 100-150 people will participate in this research study.

Risks

There are no physical risks involved in this research study, but we will ask your child some questions that he/she may consider to be sensitive, including things like drug use and sexual history. We will also ask questions about their personal and family experiences as a Hispanic/Latino youth. We will not ask specific questions about documentation status of any family member.

We will give your child plenty of opportunities for breaks and we will never pressure your child to continue if he/she seems upset or uncomfortable with any part of the study.

Benefits

There is no direct benefit to your child for participating in this research study. More broadly, this study will help the researchers learn more about why adolescents make certain decisions about their health, and may help other youth in the future.

Confidentiality

Please know that we will not share your child's answers with anyone outside of the research team, including you. His/her identity will not be revealed in any publications, presentations, or reports resulting from this study.

We will collect your child's information through Qualtrics. This information will be securely stored under locked conditions. We will keep your child's assent form until he or she turns 18 and then destroy it; your consent will be kept for three years following the conclusion of this study. Your signed consent form and your child's assent form will be kept separate from the data, and nobody will be able to link their responses to them.

It is unlikely, but possible, that others may require us to share the information your child gives us from the study to ensure that the research was conducted safely and appropriately. We will only share your child's information if law or policy requires us to do so. The only exception we would make in keeping their information private is if your child told us that they were being hurt, or if they planned to hurt someone else. In that case, we are required to contact the appropriate authorities to help protect your child and others safety.

The research team works to ensure confidentiality to the degree permitted by technology. It is possible, although unlikely, that unauthorized individuals could gain access to the survey responses because the survey takes place online. However, your child's participation in this project involves risks similar to one's everyday use of the Internet.



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Voluntary Participation and Withdrawal

Following your consent, your child's participation in this study remains completely voluntary. If your child agrees to participate now and changes his/her mind later, they may withdraw at any time by telling the researcher that they want to stop. If your child chooses to withdraw after we have already collected information about him/her, we will discard their data and it will not be used. Withdrawal will also not affect their compensation.

Compensation

For your participation in this research study, your child will be paid \$20 in the form of a Visa gift card after the session for his/her time.

IRB Review

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at 435.277.0878 or rick.cruz@usu.edu. If you have questions about your rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Rick Cruz
 Principal Investigator
 (435) 277-0878; rick.cruz@usu.edu

Informed Consent

By printing your name in the box below, you agree to allow your child to participate in this study. You indicate that you understand the risks and benefits of his/her participation, and that you know what he/she will be asked to do. You also agree that you have asked any questions you might have, and are clear that your child can stop his/her participation in the study if he/she chooses to do so. Please be sure to retain a copy of this form for your records.

Qualtrics Informed Consent

- ☐ I agree to allow my child to participate in this study.
- ☐ I do not agree to allow my child to participate in this study.

Parent's Printed Name	Date
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v.8.2

Youth Assent

We are doing a research study about how teenagers make decisions about their health. Research studies help us learn more about people. If you would like to be a part of this research study, you will be asked some questions about your life, things you do and don't like to do, your family relationships, and to play a computer game. We will also ask you some questions about drug use and sexual activity. Our time together will be about an hour and a half and you will be paid \$20 for your time.

Before you agree to do these things, we need to tell you a little more. First, the researcher will ask some personal questions and some of them ask about illegal things, like drug use. You can't get in trouble for any answer you provide, and we will not share your answers with your parents or anyone else. The only exception is if you told us that you were planning to hurt yourself or someone else, or if someone was hurting you. We would then have to report such a problem.

Not everyone who is a part of research studies receives something good from it. In this study, nothing directly good will happen to you, but you helping will help us learn more about people. Also, we will tell other people about what we learned from doing this study with you and the 100-150 other people who are in the study, but we won't tell anyone your name or that you were in the study.

If this sounds like something you would like to do, we will ask you to say that you understand what we talked about, and that you do want to participate. You do not have to be in this study if you do not want to be. If you decide to stop after we begin asking questions or playing the computer game that's okay, too. No one will be upset if you don't want to do this, or change your mind later. If you decide to stop participating, you will still be paid \$20 for your time. If you have any problems, you or your parent can contact the study director Dr. Rick Cruz (rick.cruz@usu.edu, 435.277.0878).

You can ask any questions you have, now or later. Your parents know about this research study, and they have said you can participate, if you want.

If you would like to be in this study, please sign your name and write the date.

 Name

 Date



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Consentimiento Informado

Salud de los Adolescentes Latinos (SAL)

Finalidad

Su hijo/a ha sido invitado/a a participar en un proyecto de investigación dirigido por Rick Cruz del departamento de psicología de la universidad Utah State. El propósito de este estudio es para aprender acerca de las decisiones que los adolescentes hispanos/latinos hacen respecto a su salud. Esta forma incluye información detallada acerca de la investigación para ayudarle a decidir su participación. Por favor, léala cuidadosamente y haga cualquier pregunta que tenga antes de aceptar participación.

Procedimiento

Si su hijo/a y usted aceptan participar, le haremos unas preguntas a su hijo/a acerca de su vida, relaciones familiares y compañeros, y cosas que le gusta y no le gusta hacer. Además se le pedirá que participe en un juego de computadora. La sesión completa tomará alrededor de una hora y media. Anticipamos que 100-150 personas van a participar en este estudio de investigación.

Riesgos

No hay riesgos físicos involucrados con este proyecto de investigación, pero puede que su hijo/a considere alguna de las preguntas muy personales, como preguntas acerca del uso de las drogas y historia sexual. También le haremos preguntas acerca de sus experiencias personales y con su familia como un joven hispano/latino. No preguntaremos acerca de la documentación de ningún miembro de familia.

Su hijo/a tendrá bastantes oportunidades de descanso y nunca lo vamos a presionar a continuar si él/ella parece molesto o incomodo con cualquier parte del estudio.

Beneficios

No hay beneficios directos hacia su hijo/a por participar en este estudio de investigación. En términos más generales, este estudio ayudará a los investigadores a aprender más acerca del por qué los adolescentes toman ciertas decisiones sobre su salud, y podría ayudar a otros jóvenes en el futuro.

Confidencialidad

Por favor, sepa que no compartiremos las respuestas de su hijo/a con nadie fuera del equipo de investigación, incluyendo a usted. La identidad de su hijo/a no va a ser revelada en ninguna publicación, presentación, o reporte que resulte de este estudio.

Recopilaremos la información de su hijo/a a través de Qualtrics. Mantendremos el formulario de asenso de su hijo/a hasta que él/ella cumpla 18 años y luego será destruido y mantendremos su forma de consentimiento por tres años después de la conclusión de este estudio. El formulario de asenso de su hijo/a y su consentimiento firmado se mantendrán separados de los datos, y nadie podrá vincular sus respuestas con ellos.

Es poco probable, pero posible, que otros requieran que compartamos la información de su hijo/a con ellos para asegurarse que la investigación se lleve a cabo cuidadosamente y apropiadamente. Solo compartiremos la información de su hijo/a si la ley o una póliza nos lo requiere. La única manera en la que no mantendremos la información de su hijo/a privada es si su hijo/a nos dice que está siendo herido, o si él/ella está planeado lastimar a alguien más. En ese caso, se nos requiere contactar a las autoridades apropiadas para proteger la seguridad de su hijo/a y la seguridad de los demás.

El equipo de investigación trabaja para asegurar la confidencialidad hasta el grado que la tecnología nos permite. Es posible, aunque poco probable, que individuos no autorizados obtengan acceso a la encuesta porque se lleva a cabo



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en línea. Sin embargo, su participación en esta encuesta en línea involucra los mismos riesgos que se corren cuando una persona usa el Internet.

Participación Voluntaria y Retiro

Después de su consentimiento, la participación de su hijo/a en este estudio es completamente voluntaria. Si su hijo/a acepta participar ahorita, y cambia de opinión después, se puede retirar en cualquier momento diciéndole al investigador que quiere detenerse. Si su hijo/a decide retirarse después de empezar la encuesta, descartaremos todos sus datos y no los usaremos. Su retiro tampoco va a afectar su compensación.

Compensación

Por su participación en este estudio, su hijo/a será pagado \$20 en una tarjeta de regalo Visa por su tiempo después de la sesión.

Revisión de IRB

El Comité Institucional para la Protección de Participantes Humanos en Estudios Científicos (IRB por sus siglas en inglés) para la protección de las personas participantes de la investigación en Utah State University ha revisado y aprobado este estudio de investigación. Si tiene alguna pregunta acerca del estudio, por favor contacte al investigador principal al 435.277.0878 o rick.cruz@usu.edu. Si tiene alguna pregunta acerca de sus derechos o si simplemente le gustaría hablar con alguien fuera del equipo de investigación, por favor contacte a la directora de IRB al 435.797.3059 o irb@usu.edu.

 Rick Cruz
 Investigador Principal
 (435) 277-0878; rick.cruz@usu.edu

Consentimiento Informado

Al imprimir su nombre en el cuadro de abajo, usted acepta que su hijo/a participe en este estudio. Usted indica que entiende los riesgos y beneficios de su participación, y que sabe lo que se le pedirá que haga. También acepta que ha hecho cualquier pregunta que pueda tener, y entiende que su hijo/a puede detener su participación en este estudio si así lo decide. Por favor, asegúrese de conservar una copia de este formulario para sus registros.

 Nombre Imprimido del Padre/Guardián Fecha

Consentimiento Informado de Qualtrics

- ☐ Acepto dejar a mi hijo/a participar en este estudio.
☐ No acepto dejar a mi hijo/a participar en este estudio.

Nombre impreso del padre	Fecha
--------------------------	-------



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Asenso Juvenil

Estamos llevando a cabo un proyecto de investigación sobre como los adolescentes toman decisiones sobre su salud. Los estudios de investigación nos ayudan a aprender más sobre la gente. Si te gustaría ser parte de este estudio, te vamos a hacer unas preguntas acerca de tu vida, las cosas que te gustan y no te gustan hacer, y tus relaciones familiares. También se te pedirá que participes en un juego de computadora. Nuestro tiempo juntos será alrededor de una hora y media y habrá un incentivo de \$20 por tu tiempo.

Antes de que aceptes estas cosas, te tenemos que decir un poco más. Primero, el investigador te hará unas preguntas personales y algunas sobre actividades ilegales, come el uso de las drogas. No te puedes meter en problemas por cualquier respuesta que nos des, y no compartiremos tus respuestas con tus padres o con nadie más. Sin embargo, si planeas lastimarte o lastimar a otra persona, o si alguien te está lastimando, tendríamos que reportar tu situación.

No todas las personas que son parte de un estudio de investigación reciben un beneficio. En este estudio, no vas a recibir un beneficio directo, pero nos vas a ayudar a aprender más sobre la gente. También, le diremos a otra gente acerca de lo que aprendimos de este estudio contigo y los otros 100-150 participantes, pero no les diremos tu nombre o que fuiste parte del estudio.

Si esto te parece como algo que te gustaría hacer, te pediremos que digas que entiendes de lo que hablamos, y que quieres participar. No tienes que ser parte del estudio si no quieres. Si decides retirarte después de empezar el cuestionario o el juego de computadora, eso también está bien. Nadie se va a molestar si no quieres participar, o si cambias de opinión más tarde. Si decides ya no participar, aun vas a recibir los \$20 por tu tiempo. Si tienes algún problema, tu o tus padres pueden contactar al director del estudio, Dr. Rick Cruz, al 435.277.0878 o rick.cruz@usu.edu.

Puedes hacer cualquier pregunta que tengas ahora o después. Tus padres saben sobre este estudio, y te dieron permiso para participar, si quieres.

Si te gustaría ser parte de este estudio, por favor firma tu nombre and escribe la fecha.

Nombre _____

Fecha _____

Appendix B

Codebook

Demographics

Instructions: Thanks for your willingness to participate in this study. I will start off by asking you a few questions about you and your family.

Gender	Please tell me your gender (1=Female; 2=Male; 3=Other)
Grade	In what grade are you currently enrolled? (5=5 th ; 6=6 th ; 7=7 th ; 8=8 th ; 9=9 th 10=10 th ; 11=11 th ; 12=12 th ; 13=college; 14=not enrolled)
DOB	Please tell me your date of birth. [That would make you XX years old, right?]
Lang	Thank you. Now please tell me which language you speak at home most often with your other family members (1=English; 2=Spanish; 3=Other)
Nat1	Next, I'd like to know, what country were you born in? (1=United States; 2=Another country; -8=Don't know; -9=Refusal/skip)
Nat1_oth	[if Nat1=2] OK, can you please tell me which country you were born in?
Nat2	And what country was your biological mother born in? (1=United States; 2=Another country; -8=Don't know; -9=Refusal/skip)
Nat2_oth	[if Nat2=2] OK, can you please tell me which country she was born in? (String variable)
Nat3	What country was your biological father born in? (1=United States; 2=Another country; -8=Don't know; -9=Refusal/skip)
Nat3_oth	[If Nat3=2] What country was he born in? (String variable)
HomSiz	How many bedrooms do you have in your home?
FamSiz1	How many adults currently live in your home? This is anyone who is 18 years or older.
FamSiz2	Counting yourself, how many kids live in your home? This is anyone who is younger than 18 years old.

Difficulty in emotion regulation Scale-Short Form (DERS-SF)

Instructions: Next, I will ask a series of statements that people might use to describe themselves. Please respond with the most appropriate option.

Item name	Reverse -code	Subscale	Item text
DERS01	R	Awareness	You care about what you are feeling
DERS02		Clarity	You have no idea how you are feeling
DERS03		Clarity	You have difficulty making sense out of your feelings
DERS04	R	Awareness	You pay attention to how you feel
DERS05		Clarity	You are confused about how you feel
DERS06	R	Awareness	When you're upset, you acknowledge your emotions
DERS07		Non-acceptance	When you're upset, you become embarrassed for feeling that way
DERS08		Goals	When you're upset, you have difficulty getting work done
DERS09		Impulse	When you're upset, you become out of control
DERS10		Strategies	When you're upset, it takes you a long time to feel better
DERS11		Goals	When you're upset, you have difficulty focusing on other things
DERS12		Non-acceptance	When you're upset, you feel guilty for feeling that way
DERS13		Goals	When you're upset, you have difficulty concentrating
DERS14		Impulse	When you're upset, you have difficulty controlling your behavior
DERS15		Strategies	When you're upset, you believe there is nothing you can do to make yourself feel better
DERS16		Non-acceptance	When you're upset, you become irritated at yourself for feeling that way
DERS17		Impulse	When you're upset, you lose control over your behavior.
DERS18		Strategies	When you're upset, you believe that you will end up feeling very depressed

Text of answer choice	Numeric value
Almost never	1
Sometimes	2
About half the time	3
Most of the time	4
Almost always	5
Refusal	-8
Don't know	-9

Strengths and Difficulties Questionnaire – emotional symptoms subscale

Instructions: For each item, please answer with Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the last six months

Item name	Subscale	Item text
SDQ03	emotional symptoms	I get a lot of headaches, stomach-aches or sickness
SDQ08	emotional symptoms	I worry a lot
SDQ13	emotional symptoms	I am often unhappy, depressed or tearful
SDQ16	emotional symptoms	I am nervous in new situations. I easily lose confidence
SDQ24	emotional symptoms	I have many fears, I am easily scared

Text of answer choice	Numeric value
Not true	1
Somewhat true	2
Certainly true	3
Refusal	-8
Don't know	-9

Family Obligations—current assistance subscale

Instructions: Thanks for your answers. We will now talk about your family in general for the next few questions. I will read statements about how often you are asked or required to do certain things with your family. Please tell me how often you are asked or required to...

Item name	Item text
AFO1	Spend time with your grandparents, cousins, aunts, and uncles
AFO2	Spend time at home with your family
AFO3	Run errands that the family needs done
AFO4	Help your brothers or sisters with their homework
AFO5	Spend holidays with your family
AFO6	Help out around the house
AFO7	Spend time with your family on weekends
AFO8	Help take care of your brothers and sisters
AFO9	Eat meals with your family
AFO10	Help take care of your grandparents
AFO11	Do things together with your brothers and sisters

Text of answer choice	Numeric value
Almost never or never	1
Once in a while	2
Sometimes	3
A lot of the time (frequently)	4
Almost always or always	5
Don't know	-8
Refusal/skip	-9

Family Obligations—respect for family and future support subscales

Instructions: Thanks for your answers. I will now ask you a few questions about your family. First, I will read some statements asking you how important or not important different values are in your family. How important is it in your family for you to...

Item name	Subscale	Item text
AF12	Respect for family	Treat your parents with great respect?
AF13	Respect for family	Follow your parents' advice about choosing friends?
AF14	Respect for family	Do well for the sake of your family?
AF15	Respect for family	Follow your parents' advice about choosing a job or major in college?
AF16	Respect for family	Treat your grandparents with great respect?
AF17	Respect for family	Respect your older brothers and sisters?
AF18	Respect for family	Make sacrifices for your family?
AF19	Future support	Help your parents financially in the future?
AF20	Future support	Live at home with your parents until you are married?
AF21	Future support	Help take care of your brothers and sisters in the future?
AF22	Future support	Spend time with your parents even after you no longer live with them?
AF23	Future support	Live or go to college near your parents?
AF24	Future support	Have your parents live with you when you get older?

Text of answer choice	Numeric value
Not important at all	1
A little important	2
Moderately important	3
Important	4
Very important	5
Don't know	-8
Refusal/Skip	-9

Parent-Child Conflict

Instructions: Thinking about the past 3 months, how often did the following happen?

Item Name	Item Text
MCC01	Over the past 3 months, how often have you and your mom disagreed with each other?
MCC02	How often have you let your mom know that you were angry?
MCC03	How often has your mom let you know that she was angry?
MCC04	You and your mom became very frustrated with each other.
MCC05	Over the past 3 months, how often have you and your mom given each other the silent treatment?
MCC06	You and your mom had a small argument or misunderstanding.
MCC07	You and your mom gave each other dirty looks or rolled your eyes.
MCC08	You and your mom ignored each other.
MCC09	How often have you and your mom had a serious argument or fight?
MCC10	You and your mom yelled or raised your voices at each other.

Text of answer choice	Numeric value
Almost never or never	1
Sometimes	2
A lot of the time	3
Almost always or always	4
Refusal	-8
Don't know	-9

Appendix C
Qualtrics Questionnaires

Start of Block: Difficulty in emotion regulation scale- Short Form (DERS-SF)

DERS-SF Next, I will ask a series of statements that people might use to describe themselves. Please respond with the most appropriate option. ***Interviewer, turn response booklet to page 6***

DERS01 You care about what you are feeling.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS02 You have no idea how you are feeling.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS03 You have difficulty making sense out of your feelings.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS04 You pay attention to how you feel.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS05 You are confused about how you feel.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS06 When you're upset, you acknowledge your emotions.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS07 When you're upset, you become embarrassed for feeling that way.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS08 When you're upset, you have difficulty getting work done.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (5)
- ☐ Almost always (6)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS09 When you are upset, you become out of control.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS10 When you're upset, it takes you a long time to feel better.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS11 When you're upset, you have difficulty focusing on other things.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS12 When you're upset, you feel guilty for feeling that way.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS13 When you're upset, you have difficulty concentrating.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS14 When you are upset, you have difficulty controlling your behavior.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS15 When you're upset, you believe there is nothing you can do to make yourself feel better.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS16 When you're upset, you become irritated at yourself for feeling that way.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS17 When you're upset, you lose control over your behavior.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

DERS18 When you're upset, you believe that you will end up feeling very depressed.

- ☐ Almost never (1)
- ☐ Sometimes (2)
- ☐ About half the time (3)
- ☐ Most of the time (4)
- ☐ Almost always (5)
- ☐ Refusal (8)
- ☐ Don't know (9)

End of Block: Difficulty in emotion regulation scale- Short Form (DERS-SF)

Start of Block: Parent Child Conflict (PCC)

MCC The next set of questions are about your relationship with your mom. Think about the past 3 months, how often did the following happen? **Interviewer, turn response booklet to page 17.**

MCC01

Over the past 3 months, how often have you and your mom disagreed with each other?

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC02 How often have you let your mom know that you were angry?

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC03 How often has your mom let you know that she was angry?

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC04 You and your mom became very frustrated with each other.

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC05 Over the past 3 months, how often have you and your mom given each other the silent treatment?

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC06 You and your mom had a small argument or misunderstanding.

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC07 You and your mom gave each other dirty looks or rolled your eyes.

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC08 You and your mom ignored each other.

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC09 How often have you and your mom had a serious argument or fight?

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

MCC10 You and your mom yelled or raised your voices at each other.

- ☐ Almost never or never (1)
- ☐ Sometimes (2)
- ☐ A lot of the time (3)
- ☐ Almost always or always (4)
- ☐ Refuse (8)
- ☐ Don't know (9)

Start of Block: Strengths and Difficulties Questionnaire

SDQ For each item, please answer with Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the last six months. **Interviewer, turn response booklet to page 16.**

SDQ03 I get a lot of headaches, stomach-aches or sickness.

- ☐ Not true (1)
- ☐ Somewhat true (2)
- ☐ Certainly true (3)
- ☐ Refusal (8)
- ☐ Don't know (9)

SDQ08 I worry a lot.

- ☐ Not true (1)
- ☐ Somewhat true (2)
- ☐ Certainly true (3)
- ☐ Refusal (8)
- ☐ Don't know (9)

SDQ13 I am often unhappy, depressed or tearful.

- ☐ Not true (1)
- ☐ Somewhat true (2)
- ☐ Certainly true (3)
- ☐ Refusal (8)
- ☐ Don't know (9)

SDQ16 I am nervous in new situations. I easily lose confidence.

- ☐ Not true (1)
- ☐ Somewhat true (2)
- ☐ Certainly true (3)
- ☐ Refusal (8)
- ☐ Don't know (9)

SDQ24 I have many fears, I am easily scar

- ☐ Not true (1)
- ☐ Somewhat true (2)
- ☐ Certainly true (3)
- ☐ Refusal (8)
- ☐ Don't know (9)

End of Block: Strengths and Difficulties Questionnaire

Start of Block: Family Obligations

AF Thanks for your answers. We will now talk about your family in general for the next few questions. I will read statements about how often you are asked or required to do certain things with your family. Please tell me how often you are asked or required to.... **Interviewer: turn response booklet to page 2.**

AFO1 Spend time with your grandparents, cousins, aunts, and uncles

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO2 Spend time at home with your family

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO3 Run errands that the family needs done

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO4 Help your brothers or sisters with their homework

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO5 Spend holidays with your family

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO6 Help out around the house

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO7 Spend time with your family on weekends

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO8 Help take care of your brothers and sisters

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO9 Eat meals with your family

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO10 Help take care of your grandparents

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

AFO11 Do things together with your brothers and sisters

- ☐ Almost never or never (1)
- ☐ Once in a while (2)
- ☐ Sometimes (3)
- ☐ A lot of the time (frequently) (4)
- ☐ Almost always or always (5)
- ☐ Don't know (-8)
- ☐ Refusal/skip (-9)

Q545 Thanks for your answers. I will now ask you a few questions about your family. First, I will read some statements asking you how important or not important different values are in your family. How important is it in your family for you to.... **Interviewer: turn response booklet to page 8**

AF12 Treat your parents with great respect?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF13 Follow your parents' advice about choosing friends?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF14 Do well for the sake of your family?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF15 Follow your parents' advice about choosing a job or major in college?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF16 Treat your grandparents with great respect?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF17 Respect your older brothers and sisters?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF18 Make sacrifices for your family?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF19 Help your parents financially in the future?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF20 Live at home with your parents until you are married?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF21 Help take care of your brothers and sisters in the future?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF22 Spend time with your parents even after you no longer live with them?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF23 Live or go to college near your parents?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

AF24 Have your parents live with you when you get older?

- ☐ Not important at all (1)
- ☐ A little important (2)
- ☐ Moderately important (3)
- ☐ Important (4)
- ☐ Very important (5)
- ☐ Don't know (-8)
- ☐ Refusal/Skip (-9)

End of Block: Family Obligations

Appendix D

SPSS Syntax

****Descriptives for covariates****

DESCRIPTIVES VARIABLES=age
/STATISTICS=MEAN STDDEV RANGE MIN MAX.

FREQUENCIES VARIABLES=Gender
/ORDER=ANALYSIS.

FREQUENCIES VARIABLES=Household_crowding
/ORDER=ANALYSIS.

FREQUENCIES VARIABLES=Nativity
/ORDER=ANALYSIS.

****DERS – Difficulties in emotion regulation scale****

COMPUTE DERS01rc=6-DERS01.
EXECUTE.
COMPUTE DERS04rc=6-DERS04.
EXECUTE.
COMPUTE DERS06rc=6-DERS06.
EXECUTE.

MISSING VALUES DERS01rc, DERS04rc, DERS06rc (-8, -9).

MISSING VALUES DERS02 DERS03 DERS05 DERS07 DERS08 DERS09 DERS10
DERS11 DERS12 DERS13 DERS14 DERS15 DERS16 DERS17 DERS18 (-8, -9).

COMPUTE DERS = MEAN(DERS01rc, DERS02, DERS03, DERS04rc, DERS05,
DERS06rc, DERS07, DERS08, DERS09, DERS10, DERS11, DERS12, DERS13,
DERS14, DERS15, DERS16, DERS17, DERS18).
Execute.
Variable labels Difficulties in Emotion Regulation Scale.
Execute.

RELIABILITY
/VARIABLES=DERS01rc DERS02 DERS03 DERS04rc DERS05 DERS06rc DERS07
DERS08 DERS09 DERS10 DERS11 DERS12 DERS13 DERS14 DERS15 DERS16
DERS17 DERS18
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

****SDQ – Strengths and difficulties questionnaire****

MISSING VALUES SDQ03 SDQ08 SDQ13 SDQ16 SDQ24 (-8,-9).

EXECUTE.

COMPUTE SDQemo = MEAN(SDQ03, SDQ08, SDQ13, SDQ16, SDQ24).

Variable labels Emotional Symptoms.

Execute.

RELIABILITY

/VARIABLES=SDQ03, SDQ08, SDQ13, SDQ16, SDQ24

/SCALE('ALL VARIABLES') ALL

/MODEL=ALPHA.

****MCC - Parent Child Conflict****

MISSING VALUES MCC01 TO MCC10 (-8, -9).

VALUE LABELS MCC01 MCC02 MCC03 MCC04 MCC05 MCC06 MCC07 MCC08
MCC09 MCC10

1 'Almost never'

2 'Sometimes'

3 'About half the time'

4 'Most of the time'

5 'Almost always'

-8 'Refusal'

-9 'Dont know'.

COMPUTE MCC = MEAN(MCC01, MCC02, MCC03, MCC04, MCC05, MCC06,
MCC07, MCC08, MCC09, MCC10).

Variable labels Parent Adolescent Conflict.

Execute.

RELIABILITY

/VARIABLES=MCC01 MCC02 MCC03 MCC04 MCC05 MCC06 MCC07 MCC08
MCC09 MCC10

/SCALE('ALL VARIABLES') ALL

/MODEL=ALPHA.

****Famob - Family Obligations****

Missing values AFO1 to AFO11 (-8,-9).

COMPUTE famobass = MEAN(AFO1, AFO2, AFO3, AFO4, AFO5, AFO6, AFO7,
AFO8, AFO9, AFO10, AFO11).

Execute.

Variable labels Current assistance.

Execute.

RELIABILITY

```

/VARIABLES= AFO1 AFO2 AFO3 AFO4 AFO5 AFO6 AFO7 AFO8 AFO9 AFO10
AFO11
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

```

****AFRespect and AFsupport****

Missing values AF12 to AF24 (-8,-9).

Value labels AF12 to AF24

1 'not important at all'

2 'a little important'

3 'moderately important'

4 'important'

5 'very important'

-8 'don't know'

-9 'refusalskip'.

Execute.

```

COMPUTE famobres=MEAN(AF12, AF13, AF14, AF15, AF16, AF17,AF18).

```

EXECUTE.

Variable labels Respect for family.

Execute.

```

COMPUTE famobsup =MEAN(AF19, AF20, AF21, AF22, AF23, AF24).

```

EXECUTE.

Variable labels Future support.

Execute.

RELIABILITY

```

/VARIABLES=AF12, AF13, AF14, AF15, AF16, AF17, AF18

```

```

/SCALE('ALL VARIABLES') ALL

```

```

/MODEL=ALPHA.

```

RELIABILITY

```

/VARIABLES=AF19, AF20, AF21, AF22, AF23, AF24

```

```

/SCALE('ALL VARIABLES') ALL

```

```

/MODEL=ALPHA.

```

****group comparisons**

```

T-TEST GROUPS=Household_crowding(0 1)

```

```

/MISSING=ANALYSIS

```

```

/VARIABLES=DERS famobass famobres famobsup MCC SDQemo

```

```

/CRITERIA=CI(.95).

```

```

T-TEST GROUPS=Gender(1 2)

```

```

/MISSING=ANALYSIS
/VARIABLES=DERS famobass famobres famobsup MCC SDQemo
/CRITERIA=CI(.95).

```

```

T-TEST GROUPS=Nativity(1 2)
/MISSING=ANALYSIS
/VARIABLES=DERS famobass famobres famobsup MCC SDQemo
/CRITERIA=CI(.95).

```

```

ONEWAY DERS SDQemo MCC famobass famobres famobsup BY age
/STATISTICS HOMOGENEITY
/MISSING ANALYSIS
/POSTHOC=TUKEY ALPHA(0.05).

```

****Descriptives for each variable****

```

DESCRIPTIVES VARIABLES=famobass famobres famobsup MCC DERS SDQemo
Gender age Household_crowding Nativity
/STATISTICS=MEAN STDDEV.

```

****Correlations****

```

CORRELATIONS
/VARIABLES=famobass famobres famobsup MCC DERS SDQemo Gender age
Household_crowding Nativity
/PRINT=TWOTAIL NOSIG.

```

****Center all predictor variables (DERS, PCC, and FamOb)****

```

COMPUTE Cen_DERS=DERS - 2.1215.
EXECUTE.

```

```

COMPUTE Cen_MCC=MCC - 1.8369.
EXECUTE.

```

```

COMPUTE Cen_famobass=famobass - 3.5921.
EXECUTE.

```

```

COMPUTE Cen_famobres=famobres - 4.2675.
EXECUTE.

```

```

COMPUTE Cen_famobsup=famobsup - 3.4619.
EXECUTE.

```

****Mediation, moderation, and moderated mediation models on PROCESS MACRO****

process x=Cen_MCC/w=Cen_famobass/y=Cen_DERS/cov=Gender, age,
Household_crowding, Nativity/model=1/boot=2000/percent=1/center=1.

process x=Cen_MCC/w=Cen_famobsup/y=Cen_DERS/cov=Gender, age,
Household_crowding/model=1/boot=2000/percent=1/center=1.

process y=SDQemo/x=Cen_MCC/m=Cen_DERS/cov=Gender, age,
Household_crowding/model=4/boot=2000/percent=1/center=1.

process y=SDQemo/x=Cen_MCC/m=Cen_DERS/w=Cen_famobass/cov=Gender, age,
Household_crowding/model=7/boot=2000/percent=1/center=1.

process y=SDQemo/x=Cen_MCC/m=Cen_DERS/w=Cen_famobres/cov=Gender, age,
Household_crowding/model=7/boot=2000/percent=1/center=1.

process y=SDQemo/x=Cen_MCC/m=Cen_DERS/w=Cen_famobsup/cov=Gender, age,
Household_crowding/model=7/boot=2000/percent=1/center=1.

****On PROCESS, model 1 is moderation, model 4 is mediation, and model 7 is
moderated mediation****

Appendix E

Missing Data Analysis Syntax in R

```

library(tidyverse)
library(furniture)
library(haven)
library(psych)
library(data.table)
library(car)
library(pander)
library(lubridate)
library(sjlabelled)
library(labelled)
library(corr)
library(ggcorrplot)
library(mice)
library(naniar)
library(GGally)
library(sjPlot)
library(VIM)
library(lavaan)
library(BaylorEdPsych)
library(mvnmle)
library(dplyr)

```

```

data <- read.table("~/Documents/SAL Data Analysis/Missing data
variables.txt", header = TRUE)

```

```

names(data)

```

```

#First: Check your missings:
# Proportion of Missingness
propmiss <- function(data) {
  m <- sapply(data, function(x) {
    data.frame(
      nmiss=sum(is.na(x)),
      n=length(x),
      propmiss=sum(is.na(x))/length(x)
    )
  })
  d <- data.frame(t(m))
  d <- sapply(d, unlist)
  d <- as.data.frame(d)
  d$variable <- row.names(d)
  row.names(d) <- NULL
  d <- cbind(d[ncol(d)],d[-ncol(d)])
  return(d[order(d$propmiss), ])
}

```

```

}

miss_vars<-propmiss(data)
miss_vars_mean<-mean(miss_vars$propmiss)
miss_vars_ges<- miss_vars %>% arrange(desc(propmiss))

plot1<-
  ggplot(miss_vars_ges,aes(x=reorder(variable,propmiss),y=propmiss
    *100)) +
    geom_point(size=3) +
    coord_flip() +
    theme_bw() + xlab("") +ylab("Missingness per variable") +
    theme(panel.grid.major.x=element_blank(),
          panel.grid.minor.x=element_blank(),

    panel.grid.major.y=element_line(colour="grey60",linetype="dashed
    ")) +
    ggtitle("Percentage of missingness")
plot1

#Second search for patterns and visualize missingness
md.pattern(data, plot = TRUE, rotate.names = FALSE)

aggr(data)

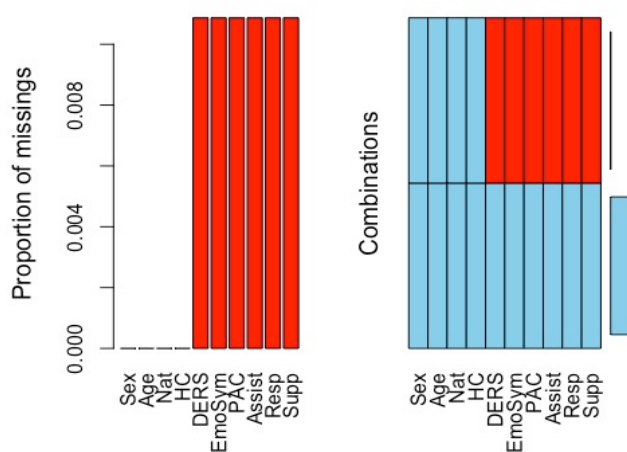
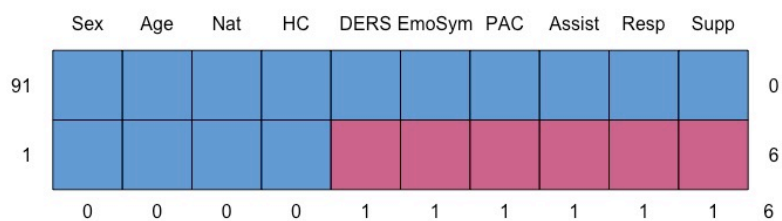
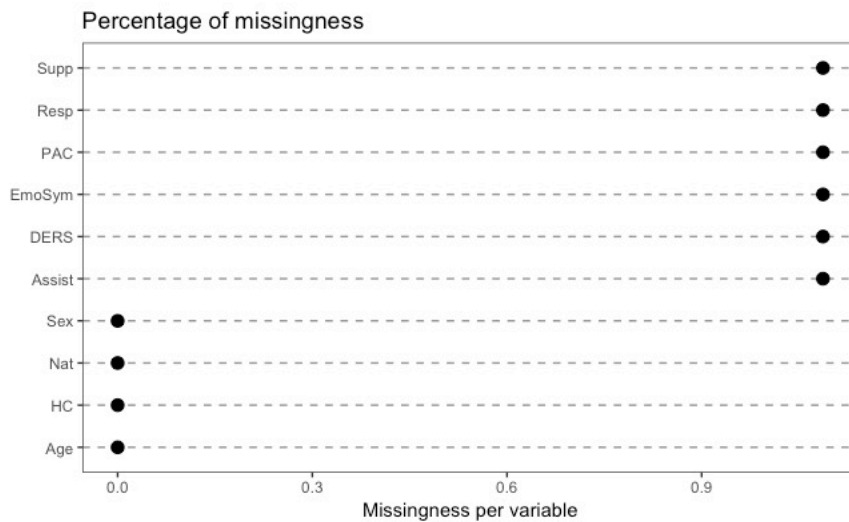
#Third check for type of missingness, mcar, mar, or nmar
test_mcar <- LittleMCAR(data)
print(test_mcar$p.value)

#Given that the results show evidence for mcar, I can do listwise
deletion

```

Appendix F

Results from Missing Data Analysis in R



```
> test_mcar <- LittleMCAR(data)
this could take a while> print(test_mcar$p.value)
[1] 0.410001
```