

EXAMINING THE VALIDITY OF THE ALABAMA
PARENTING QUESTIONNAIRE SHORT-FORM FOR
LATINO IMMIGRANT PARENTS OF ADOLESCENTS
LIVING IN THE UNITED STATES

By

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Abstract: The present study examines the validity of the Alabama Parenting Questionnaire short-form (APQ-SF) for Latino immigrant parents of adolescents living in the United States. Data were collected on 83 Latino adolescents and their primary caregivers from the first wave of a larger intervention study. Secondary data analysis was conducted to determine the association of APQ-SF parent self-report measure and youth self-report indices of educational aspirations, delinquent behaviors, antisocial peers, and grades. The exploratory factor analysis of the APQ-SF indicated a two-factor solution of Positive Parenting and Poor Monitoring/Supervision. Results did not reveal significant differences on these factors related to adolescent or parent gender. Results demonstrated a lack of predictive validity for established adolescent outcomes related to positive parenting and parental monitoring. The findings of this study suggest that the APQ-SF has still not been adequately validated among this specific population. Future longitudinal research should be conducted with a larger sample of Latino immigrant families before determining the validity of the APQ-SF with this population.

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CHAPTER I

INTRODUCTION

The ability to accurately interpret results from any scientific study and generalize these findings depends on the validity of the measures we use in our research. In survey research, a respondent's culture may influence several aspects of a measure's reliability and validity. From regional deviations in language and dialect (Smith, Mohler, Harkness, & Onodera, 2005), to value differences that alter the significance of items (Benitez, He, Van de Vijver, & Padilla, 2016), to variations in response styles (Davis, Resnicow, & Couper, 2011; Hamamura, Heine, & Paulhus, 2008), culture can have a powerful effect on a respondent's perception of the questions which introduces systematic bias into the research findings (Choi & Pak, 2005). For example, extreme responding styles are more pronounced in collectivist societies compared to individualistic societies (Kimmelmeier, 2016). Because, an estimated 88% of the population growth in the United States over the next five decades will result from immigration or the offspring of immigrants (Pew Research Center, 2016). Therefore, it is imperative to have rigorously tested measures to

better understand and meet the needs of this burgeoning population. Self-report measures are commonly used in research on parenting because they are inexpensive and easy to administer (Pritchett et al., 2011). The development of successful programs for assisting Latino immigrant families living in the United States requires proper implementation of culturally appropriate and empirically validated measures so that programs can be evaluated. Unfortunately, the literature is lacking sufficient research that specifically addresses the validity of parenting measures among Latino immigrant families living in the United States (Chuang & Tamis-LeMonda, 2013).

Cultural Adaptation of Parenting Measures

The Alabama Parenting Questionnaire Short-Form (APQ-SF) (Elgar, Waschbusch, Dadds, & Sigvaldason, 2007) is a parenting measure often used by researchers and clinicians (Gross, Fleming, Mason, & Haggerty, 2015). Research utilizing the original version of the APQ (Frick, 1991) suggests that parenting practices vary across cultural contexts (Zlomke, Lamport, Bauman, & Talbot, 2014). Despite the fact that approximately 19.5 million people living in the United States self-identify as Latino immigrants (Migration Policy Institute, 2017), over one million of those Latino immigrants are adolescents (Pew Research Center, 2017), and the majority (52%) of Latino children in the U.S. have at least one foreign-born parent (Pew Research Center, 2009) the APQ-SF has not been adequately validated among this specific population. Instead, validation studies for this measure have been conducted within culturally adjacent communities such as other minority groups in the United States (Kung & Farrell, 2000) and foreign populations residing in Spain (Molinuevo, Pardo, & Torrubia, 2011) and Mexico (Robert, 2009). Only one study identified in this review of the literature

validated the APQ for Latino immigrant families, specifically parents of children ages four to nine (Donovick & Domenech-Rodriguez, 2008). There is a significant difference in cognitive development between school-age children and adolescents (Steinberg, 2001), therefore it should not be assumed that the measure is valid with immigrant parents of Latino adolescents. None of the other identified validation studies conducted on the APQ or APQ-SF reported any participants living in the United States that identified as Latino in their sample population or validated either version of the measure for Latino immigrant families (Clerkin et al., 2007; Dadds et al., 2003; Elgar et al., 2007; Frick, 1991; Molinuevo et al., 2011; Robert, 2009; Shelton et al., 1996). Latino immigrants living in the United States experience unique stressors related to acculturating to a new environment and the discrepancies in values between parents and children resulting from this acculturation process (Martinez, McClure, & Eddy, 2009). Therefore, the validity of parenting measures for this specific population may vary significantly between more acculturated groups and Latinos residing in their home countries.

Previous studies have indicated issues with validity when measures are applied to Latino immigrant populations living in the United States, including measures of social support (Rhodes, Daniel, Song, Alonzo, Downs, & Reboussin, 2013) and cultural identity (Dillon, Felix-Ortiz, Rice, De La Rosa, Rojas, & Duan, 2009). There are several factors related to significant differences in parenting practices between Latino immigrant families and non-immigrant populations including acculturation (Chao & Kanatsu, 2008; Driscoll, Russell, & Crockett, 2008; Orellana, Thorne, Chee, & Lam, 2001), income (Le & Lambert, 2008; Roche, Ensminger, & Cherlin, 2007), and the process of emigrating from another country (Orellana et al., 2001). Furthermore, traditional parenting categories

may not adequately represent Latino immigrant families revealing the need for more culturally appropriate measures of parenting (Domenech Rodriguez, Donovan, & Crowley, 2009).

Recent demographic data indicate that the lack of validated parenting measures for Latino immigrant families is a significant problem. In the United States, 10% of total births occur among foreign-born Latina women (Pew Research Center, 2009), 8.5% of the population consists of adult Latino immigrants (Pew Research Center, 2016), and 52% of Latino children have at least one foreign-born parent (Pew Research Center, 2017). There is a significant lack of evidence-based parenting interventions that have been culturally adapted for Latino immigrant families despite studies detailing the positive outcomes associated with these programs (Cardona et al., 2012; Kaminski, Valle, Filene, & Boyle, 2008).

Many studies have identified the lack of parenting programs specifically adapted for Latino immigrant families as a significant barrier to successful intervention efforts (Castro, Barrera, Pantin, Martinez, Felix-Ortiz & Rios, 2006; Cox, 2017; Martinez et al., 2009; Smith, Domenech-Rodriguez, & Bernal, 2011). Evidence-based interventions that are not culturally adapted for their target population are frequently unable to adequately recruit or retain participants (Castro et al., 2006) and are often less effective than their culturally adapted counterparts (Smith et al., 2011). According to research by Martinez and colleagues (2009), Latino immigrant families living in the United States require programs specifically designed to assist with the unique challenges associated with the acculturation process. Their study indicates that more research into acculturation process is needed in order to reduce the risk of negative outcomes among these families

(Martinez et al., 2009). Having validated measures is a fundamental component of conducting quality research on any evidence-based intervention (Kimberlin & Winterstein, 2008).

Overview of the Current Study

The sample for this validation study is drawn from the first wave of a larger intervention study targeting 7th and 8th grade Latino immigrant adolescents and their primary caregivers in the Tulsa Public Schools district. This was a longitudinal study designed to evaluate the long-term effects of the *¡Unidos Se Puede!* program (Cox, 2017) on increases in parental involvement in school, decrease rates of substance use, academic performance and educational aspirations of Latino immigrant adolescents, and program sustainability. Over the past 17 years, Tulsa, Oklahoma has experienced a steady growth of Latinos (121%) who now represent 12% of Tulsa county's population, and 34% of Tulsa Public Schools (Pew Research Center, 2017; Tulsa Public Schools). Recent estimates indicate that over 125,000 Latino immigrants currently live in the state of Oklahoma (Pew Research Center, 2017).

Culturally appropriate and empirically validated measures allow researchers to examine the underlying features of this unique population, identify the specific issues and concerns facing the community, and accurately measure the effectiveness of targeted interventions. In the present study, the validity of the Alabama Parenting Questionnaire Short Form (APQ-SF) will be examined for its applicability to a group of Latino parents who have immigrated to the United States. The study examines the association of parenting practices and adolescent behavior while carefully considering cultural influences on these parenting practices. In conclusion, despite the rapid growth of Latino

immigrants, the importance of culturally adapting interventions for this specific population, and the frequent use of the instrument in the measurement of parenting practices, the APQ-SF has not been validated for use with Latino immigrant parents of adolescents. In order to develop effective interventions targeting Latino immigrants we must better understand this population using validated measures. The primary aim of the current study is to determine the validity of the APQ-SF for use with Latino immigrant parents of adolescents living in the United States.

CHAPTER II

REVIEW OF LITERATURE

This study examines the use of the Alabama Parenting Questionnaire Short Form (APQ-SF) with Latino immigrant parents. The first section of this literature review covers previous research that specifically evaluates the validity of the APQ among various populations and reviews the effects of parenting behaviors on child outcomes. The second section of this literature review is focused on research that addresses the influence of cultural beliefs, values, and traditions on Latino immigrant parenting behaviors. It is well established in the literature that parenting practices vary across cultures, but there is very little research specifically examining parenting within Latino immigrant communities. Therefore, it is essential to begin by establishing a foundational understanding of Latino cultural influences on the parenting practices of families living in their country of origin and immigrant families living in the United States. This section of the literature review is organized around the three primary constructs of the APQ-SF, which have been identified as positive parenting, monitoring, and discipline (Elgar et al., 2007).

The Effects of Parenting Behaviors on Adolescent Outcomes

The importance of parenting practices and parent-adolescent relationships on behavioral and health adolescent outcomes has been well established (Hair et al., 2008; Steinberg, 2001). Evidence-based interventions that focus on the family are far more effective than those that center on the adolescent (Kumpfer, 2014). There are a few key positive parenting practices that are significantly related to adolescent outcomes including parental involvement (Catsambis, 2001), parental encouragement (Figueroa-Moseley, Ramey, Keltner, & Lanzi, 2006; Plunkett & Bamaca-Gomez, 2003), parental monitoring (Jacobson & Crockett, 2000; Mena, 2011), and consistent discipline (Rezai & Rahimi, 2013). Parental involvement and parental encouragement have been consistently linked to positive academic outcomes including increased academic achievement (Catsambis, 2001; Figueroa-Moseley et al., 2006; Jacobson & Crockett, 2000) and greater educational aspirations (Plunkett & Bamaca-Gomez, 2003). Additionally, parental monitoring and consistent discipline improve academic outcomes by reducing adolescent engagement with antisocial peers, delinquent activities, and substance use (Rezai & Rahimi, 2013). These findings support the overall structure of the APQ-SF which includes subscales focusing on the constructs of parental encouragement, monitoring, and discipline (Elgar et al., 2007).

Parenting practices are commonly classified into three dimensions: parental affection, behavioral control, and psychological control (Barber, Olsen, & Shagle, 1994; Baumrind, 1966). Parental affection includes supportiveness, responsiveness, and warmth as primary features of parent-child interactions (Wood, McLeod, Sigman, Hwang, & Chu, 2003). Each of these characteristics of parental affection represent different aspects

of parental reactions to the needs of their child. Responsiveness is how much a parent reacts the child's needs, supportiveness is how much a parent meets the child's needs, and warmth is how positively the parent reacts to the child's needs (Miller, Lambert, & Neumiester, 2012). Behavioral control comprises setting firm limits for behavior and the application of consistent discipline when behavior deviates from these limits (Galambos, Barker, & Almeida, 2003). Psychological control consists of manipulating behavior by inducing emotional states including fear of abandonment and feelings of guilt (Barber, 1996). Research has been conducted to evaluate the association between these parenting dimensions and adolescent outcomes. Parental affection is positively related to academic achievement (Galambos et al., 2003). Behavioral control is negatively related to externalizing behaviors such as deviant behavior and antisocial peer group affiliation (Pettit, Laird, Dodge, Bates, & Criss, 2001). Psychological control is positively related to internalizing behaviors such as depression, anxiety, and social withdrawal (Wolfradt, Hempel, & Miles, 2003).

Diana Baumrind (1966) developed three parenting style categories based on the intersection of two dimensions: parental affection and behavioral control. The degree to which each is practiced formed the basis for three parenting styles: authoritative, authoritarian, and permissive parenting. Parents practicing authoritative parenting are high on parental affection and moderate to high on behavioral control. An authoritative style of parenting is considered optimal for healthy child development in most cultures and has been correlated with positive outcomes including increased emotion regulation ability, pro-social skills, and self-esteem (Aunola & Nurmi, 2005; Larzelere, Morris, & Harrist, 2013). Authoritarian parenting, which includes a high degree of behavioral

control but a low degree of parental affection, is correlated with negative outcomes including increased rates of depression, poor social skills, and low self-esteem (Milevsky, Schlechter, Netter, & Keehan, 2007). Permissive parenting, indicated by low behavioral control and high parental affection, is correlated with negative outcomes including social withdrawal, substance use, and poor academic performance (Wolfradt et al., 2003). The associations between these parenting styles and child outcomes remain relatively stable across cultural contexts with very few exceptions (Pinquart & Kauser, 2018). The parenting practices involved in the authoritative parenting style, including parental warmth and consistent discipline, are universally associated with positive outcomes (Steinberg, 2001) and this parenting style is recommended across all cultural contexts (Pinquart & Kauser, 2018).

The Alabama Parenting Questionnaire

The APQ was originally developed as a 42-item measure of parenting practices (Frick, 1991) and validated for use with elementary school students (Shelton, Frick, & Wootton, 1996). It was specifically designed to measure positive and negative parenting practices that correlated with conduct problems in children (Dadds, Maujean, & Fraser, 2003). The original items are related to the parenting dimensions identified by Baumrind, but are grouped into five subscales: Parental Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment. An additional seven items related to non-physical discipline techniques were included in the Corporal Punishment subscale to distract participants from any potential negative connotations (Shelton et al., 1996). The Parental Involvement and Positive Parenting subscales represent the affection dimension. The Poor Monitoring/Supervision and Inconsistent

Discipline subscales represent the behavioral control dimension. Interestingly, the psychological control dimension is not represented in the APQ. Instead the APQ focuses on corporal punishment and physical discipline as the third dimension of parenting.

The APQ has undergone significant changes in response to several studies examining the validity of the measure in various contexts. Studies indicated that the Parental Involvement and Positive Parenting subscales are highly correlated while the Corporal Punishment subscale shows low internal reliability (Dadds et al., 2003). This led to an examination of the measure's original factor structure, which found that the Parental Involvement and Positive Parenting subscales should be merged into a single factor and that the Corporal Punishment subscale, along with the distracting items, should be completely removed from the measure (Clerkin, Marks, Policaro, & Halperin, 2007; Elgar et al., 2007). The APQ-SF is a shortened version of the measure which contains a three-factor structure consisting of nine items related to the Positive Parenting, Poor Supervision/Monitoring, and Inconsistent Discipline subscales (Elgar et al., 2007). Furthermore, the APQ-SF effectively abandons the physical discipline aspect of the original APQ due to low reliability of the Corporal punishment subscale.

Only three studies validating the APQ for Latino communities were located after an exhaustive search in multiple research databases including PsycInfo, Web of Science, and PubMed using the keywords Alabama Parenting Questionnaire and Latino/Hispanic. The first study (Robert, 2009) is an unpublished doctoral dissertation which examined parenting practices related to externalizing behaviors of sixth graders in a diverse Mexican sample. This study established external validity of the APQ Parent Report (Shelton et al., 1996) by correlating subscales with the externalizing behaviors in the

Child Behavior Checklist Parent Report (CBCL) (Achenbach, 1991). The Positive Parenting and Parental Involvement subscales were shown to be significantly negatively correlated with externalizing behaviors for males ($r = -.26$, $r = -.29$) and females ($r = -.15$, $r = -.17$). The Corporal Punishment, Poor Monitoring/Supervision, and Inconsistent Discipline subscales were shown to be significantly positively correlated with externalizing behaviors for males ($r = .38$, $r = .48$, $r = .45$) and females ($r = .27$, $r = .34$, $r = .48$). This study demonstrated good internal validity and external predictive validity for the APQ in a Mexican sample (Robert, 2009).

The second study (Donovick & Domenech-Rodriguez, 2008) examined the psychometric properties of the APQ in a Spanish-speaking Latino immigrant population. This study determined the basic reliability of the APQ by reporting alpha coefficient estimates for each of the five scales. Cronbach's alphas reported for the following subscales were adequate: Positive Parenting (.72), Parental Involvement (.77), and Poor Monitoring/Supervision (.73). However, the Inconsistent Discipline and Corporal Punishment subscales yielded low reliabilities of .58 and .41 respectively. Additionally, the study established predictive validity of the APQ Parent Report by regressing the externalizing and internalizing subscales of the CBCL on the APQ (Shelton et al., 1996). The Parental Involvement and Positive Parenting subscales were significantly negatively correlated with child externalizing behaviors for fathers but not for mothers ($r = -.43$, $r = -.40$). The Poor Monitoring/Supervision subscale was significantly positively correlated with child externalizing behaviors for mothers but not for fathers ($r = .37$). This study demonstrated acceptable reliability and predictive validity for the APQ in a Spanish-speaking Latino immigrant population. However, the sample in this study only consisted

of Latino immigrant parents of children ages four to nine. There is a significant difference in cognitive development between school-age children and adolescents (Steinberg, 2001), therefore it cannot be assumed that the validity of the measure applies to Latino immigrant parents of adolescents.

The third study (Holtrop, Smith, & Scott, 2015) examined five specific parenting practices, only parental involvement was derived from the APQ, and their association with child, ages 4 to 12, externalizing behaviors in a Spanish-speaking Latino immigrant population. This study only assessed the reliability of the Parental Involvement APQ subscale to examine the variable of positive involvement parenting practices. The Cronbach's alphas indicated strong reliability of the Parental Involvement subscale for mothers (.82) and fathers (.84). This study demonstrated strong internal reliability for the Parental Involvement APQ subscale in a Spanish-speaking Latino immigrant population but did not evaluate the entire APQ or the APQ-SF.

None of the identified studies containing a Latino or Hispanic sample validated the APQ-SF or used an English version of the measure (Donovick & Domenech-Rodriguez, 2008; Holtrop, Smith, & Scott, 2015; Robert, 2009). None of the other validation studies conducted on the APQ or APQ-SF identified in this literature review reported any participants that identified as Latino or Hispanic in their sample population (Clerkin et al., 2007; Dadds et al., 2003; Elgar et al., 2007; Shelton et al., 1996). See Appendix A for a summary of the sample characteristics and key findings of these studies.

The length of the 42-item APQ makes the instrument incompatible with intervention programs requiring short-term repeated assessments of parenting practices

within large assessment batteries (Elgar et al., 2007). Compared to the APQ, the 9-item APQ-SF is easier to administer, requires less time to complete, and reduces respondent burden. Therefore, the APQ-SF is a better candidate for parenting intervention programs targeting Latino immigrant families compared to the APQ. A comprehensive review of the literature did not reveal any studies which assessed the use of the APQ-SF for Latino immigrant parents of adolescents living in the United States.

Latino Culture: Parenting Practices and Adolescent Outcomes

Researchers studying Latino families, both those living in the United States and their native countries, have identified several common characteristics of Latino culture that influence parenting practices and adolescent outcomes. The most frequently mentioned features of Latino culture in the literature are positive parenting, traditional gender roles, community-based monitoring/supervision, and corporal punishment. The following paragraphs provide a brief description of these cultural characteristics.

Positive Parenting

Strong family cohesion, generally referred to as familism, is considered a traditional value within Latino culture (Fontes, 2002) and may impact how Latino immigrants respond to the APQ-SF. An emphasis on parenting is a foundational aspect within Latino communities (Parra-Cardona, Cordova, Holtrop, Villarruel, & Wieling, 2008) and the supportive nature of extended family networks is considered one of the defining traits of Latino culture (Chang & Liou, 2009; Sotomayor-Peterson, Figueredo, Christensen, & Taylor, 2012). Additionally, Latino culture promotes the expression of positive encouragement within interpersonal relationships including parental warmth (Gonzales et al., 2011; Panigua, 2005; Santiago-Rivera et al., 2002). Social support has

been identified as a strong predictor of parental warmth among Latino immigrant women (Izzo, Weiss, Shanaham, & Rodriguez-Brown, 2000). Likewise, maternal warmth has been negatively correlated with deviant behavior and substance use among Latino adolescents (Gonzales et al., 2011). Furthermore, studies on Latino educational attainment show that positive encouragement from parents motivates children to engage in adaptive schooling behaviors and improve their overall academic performance (Figueroa-Moseley, Ramey, Keltner, & Lanzi, 2006; Mena, 2011; Yowell, 1999). These findings indicate that Latino parents are likely to score higher on the APQ-SF Positive Parenting subscale compared to non-Latino parents. Furthermore, these findings suggest that higher scores on the subscale would be positively correlated with academic performance and educational aspirations while negatively correlated with adolescent problem behaviors (e.g., antisocial behaviors, substance use).

It is important to note that parental warmth and support are not the only aspects of familism. In fact, some researchers argue that the central feature of familism is the belief that family members have an obligation to put the needs of their family before their own (Lugo-Steidel & Contreras, 2003; Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987). These supportive familial networks, accompanied by a strong sense of familial obligation, act as a protective factor against negative outcomes such as deviant peer affiliations and adolescent deviant behavior (German, Gonzales, & Dumka, 2009). However, the protective role of familism is non-significant against the harmful effects of discrimination associated with internalizing and externalizing behaviors (Stein, Gonzalez, Cuptio, Kiang, & Supple, 2013). Combined these findings suggest that the APQ-SF Positive Parenting subscale represents only one aspect of familism while providing

simply a proxy measure of familial obligation. Parenting measures designed for Latino immigrant parents should explicitly address both facets of familism considering the importance of the cultural value for this population.

Monitoring/Supervision

Latino parenting is generally described as authoritarian and characterized by strict control of children through a high degree of supervision and firm expectations of behavior (Chang & Liou, 2009; Satiago-Rivera, Arredondo, & Gallardo-Cooper, 2002). This authoritarian parenting style is often attributed to a cultural expectation of children to respect authority figures within Latino communities (Santiago-Rivera et al., 2002). In fact, Latino children are expected to respectfully obey parental demands without hesitation in most circumstances (Bain, 2006; Vazquez, 2004). These findings indicate that Latino parents are likely to score higher on the APQ-SF Monitoring/Supervision subscale compared to non-Latino parents. The authority exerted by parents within Latino families is considered a cultural expression of parental love (Chang & Liou, 2009). Parental monitoring has been positively correlated with social competence (Leidy et al., 2010) and negatively correlated with deviant behaviors (Romero & Ruiz, 2007) and substance use (Marsiglia, Parsai, & Kulis, 2009) among Latino adolescents. These findings suggest that lower scores on the Monitoring/Supervision subscale would be positively correlated with adolescent externalizing behaviors among Latino adolescents.

The supportive family network, typically found in Latino communities, increases monitoring resources by extending the availability of suitable adult supervision (Romero & Ruiz, 2007; Santisteban, Coatsworth, Briones, Kurtines, & Szapocznik, 2012). It is generally considered acceptable for extended family members and friends to monitor and

discipline each other's children with Latino communities (Fontes, 2002; Quinones-Mayo & Dempsey, 2005). Conceivably, the widespread availability of adult supervision in Latino communities could result in counter intuitively lower scores on the APQ-SF Monitoring/Supervision subscale by essentially outsourcing of monitoring to other members of the community and reducing the need for parental monitoring. The subscale items assume that monitoring and supervision are explicitly functions of the adolescent's legal guardians. Broadening this perspective, particularly in the prompting of these items, would likely improve the validity of the APQ-SF among Latino populations.

Discipline/Punishment

According to Olayo-Mendez (2006), the cultural expectation of respectful children in Latino communities promotes strict disciplinary parenting practices. His research indicates that within Latino culture physical punishment, particularly corporal punishment, is viewed as an effective method for imparting cultural values and creating moral children (Olayo-Mendez, 2006). Corporal punishment in the United States is a controversial parenting practice (Gershoff, 2013) and actively discouraged by most national professional organizations (American Academy of Pediatrics, 1998). Latino families typically abandon the practice of physical punishment during the process of acculturation to life in the United States (Frias-Armenta & McCloskey, 1998). These cultural differences in the perception of physical punishment support the use of the APQ-SF over the APQ in Latino immigrant samples. The removal of the corporal punishment subscale in the APQ-SF improves the cultural applicability of the measure to this particular population. However, Latino immigrant parents may struggle to effectively discipline their children as a result of withdrawing traditional techniques in response to

cultural norms in the United States. Research on parenting interventions targeting Latino families indicate that educating parents on alternative forms of discipline reduces antisocial behavior in adolescents (Eamon & Mulder, 2005). These findings indicate that Latino immigrant parents are likely to score higher on the APQ-SF Inconsistent Discipline subscale compared to Latino parents living in their country of origin and non-Latino parents. Furthermore, these findings suggest that higher scores on the subscale would be positively correlated with adolescent externalizing behaviors among Latino adolescents.

Gender Roles

Latino culture generally values traditional gender roles in which femininity includes submission and dependence while masculinity involves domination and independence (Raffaelli & Ontai, 2004). These traditional gender roles are typically enforced through discrepancies in parenting practices among male and female children (Chang & Liou, 2009; Robert, 2009). These discrepancies include stricter parental monitoring of female children (Bulcroft et al., 1996; Deyoung & Zigler, 1994; Raffaelli & Ontai, 2004) and less consistency in the discipline of male children (Quinones-Mayo & Dempsey, 2005; Roche et al., 2007). This indicates that the items on the APQ-SF assessing parental monitoring and inconsistent discipline could vary by gender.

Latino families generally operate as patriarchies in which men have authority over women and children (Chang & Liou, 2009; Paniagua, 2005). However, Latino mothers traditionally manage the parenting duties and maintain cohesion within the family network (Chang & Liou, 2009; Hines, Garcia-Preto, McGoldrick, Almeida, & Weltman, 1999; Paniagua, 2005). Therefore, Latino mothers typically have a stronger emotional

connection with their children, compared to fathers, especially in terms of the mother-daughter relationship (Chang & Liou, 2009). Together these findings suggest an interaction effect between adolescent gender and parent gender on the APQ-SF subscales among Latino participants.

Unique Features of Latino Immigrant Parenting

Latino immigrant families living in the United States experience unique stressors, compared to non-immigrant Latino and non-Latino families, including generational gaps in acculturation (Leidy, Guerra, & Toro, 2010; Martinez, 2006) barriers to parental involvement in schooling (Leidy et al., 2010; Leyendecker & Lamb, 1999), and fear of deportation (Leidy et al., 2010). The importance of family in Latino culture indicates that positive parenting practices may have a particularly powerful effect on child outcomes within this population (Coatsworth et al., 2002; Deng et al., 2006; Miranda, Estrada, & Firpo-Jimenez, 2000). Research indicating that positive parenting constitutes a protective factor against environmental stressors for Latino immigrant children corroborates this common supposition (Leidy et al., 2010). Latino immigrant parents often exercise even greater control over their children compared to native Latino parents (Driscoll et al., 2008). Many aspects of familism in Latino immigrant families typically decrease throughout the process of acculturation (Chang & Liou, 2009). This is likely due to the process of emigrating from their home country which can radically disrupt extended family networks (Orellana, 2003). However, Latino immigrant families typically maintain a greater degree of familism compared to non-Hispanic White families in the United States (Hurtado, 1995). First-generation Latino immigrant parents use more authoritarian parenting practices, characterized by high levels of parental involvement,

monitoring, and inconsistent discipline (Ayon et al., 2015), compared to non-Latino parents or Latino parents living in their country of origin (Hill et al., 2003; Varela et al., 2004).

Acculturation

The process of acculturation is defined as adapting behaviors, beliefs, and values in response to the dominant culture after geographic relocation (Moyerman & Forman, 1992). The foundational model of acculturation developed by Berry (1980) argues against the assumption of cultural assimilation by immigrants and emphasizes the non-linear aspect of the process. This model examines the adoption of the receiving culture, the dominant culture of the new location, and the preservation of the heritage culture, the dominant culture of the immigrant's native country, as two separate dimensions.

According to Berry (1980), the intersection of these two dimensions generates four categories of acculturation: assimilation, integration, separation, and marginalization.

Assimilation involves adopting the receiving culture and abandoning the heritage culture.

Assimilation and integration are both related to higher rates of resilience among Latino immigrants (Marsiglia, Booth, Baldwin, & Ayers, 2013). Integration involves adopting the receiving culture and preserving the heritage culture. Integration is related to higher levels of life satisfaction compared to assimilation among Latino immigrants (Marsiglia et al., 2013). Furthermore, integration is consistently associated with more positive outcomes compared to the other acculturation categories (Berry, 2005; Coatsworth, Maldoanod-Molina, Pantin, & Szapocznik, 2005; David, Okazaki, & Saw, 2009).

Separation involves rejecting the receiving culture and preserving the heritage culture.

Separation is related to worse mental health outcomes compared to the assimilation and

integration categories (Berry, 2005). Marginalization involves rejecting the receiving culture and abandoning the heritage culture. Marginalization is associated with more negative outcomes compared to the other acculturation categories (Berry, 2005; Phinney, Horenczyk, Liebkind, & Vedder, 2001). However, there is a lack of support for this acculturation category due to poor reliability and validity of marginalization measures (Del-Pilar & Udasco, 2004; Schwartz & Zamboanga, 2008).

The acculturation process is particularly challenging for Latinos immigrating into the United States due to dominance of the English language, the emphasis of individualism, and the automatic designation of minority status within the receiving culture (Schwartz, Unger, Zamboanga, & Szapocznik, 2010). The degree of acculturation within Latino immigrant populations is usually measured by assessing English language proficiency and generational status (Dinh, Roosa, Tein, & Lopez, 2002). However, many Latino adolescents who do not speak Spanish still primarily preserve their heritage culture (Schwartz, Zamboanga, & Jarvis, 2007). Therefore, English language proficiency may not be a valid indicator of acculturation among Latino immigrants. Furthermore, these assessments of acculturation assume a linear transition into the receiving culture which directly contradicts Berry's seminal acculturation model.

Children in Latino immigrant families typically adapt to the new culture at a much faster rate than their parents (Leidy et al., 2010). This is likely a function of the United States education system which provides students with a basic understanding of local and federal laws while promoting the acquisition of the English language and the internalization of American values. In response to this generational struggle, many Latino immigrant parents attempt to preserve cultural values through traditional parenting

practices including increased monitoring of female children (Quinones-Mayo & Dempsey, 2005). In general, immigrant adults are less willingly to adopt the customs and values of the receiving culture than immigrant children (Schwartz, Pantin, Sullivan, Prado, & Szapocznik, 2006). This is likely due to the decades of meaningful experiences and developmental milestones that occurred in their native country which fostered a stronger sense of ethnic identity compared to the limited experiences of children. The acculturation gap between Latino immigrant parents and their children has been linked with increased family stress, ineffective parenting behaviors, and negative emotional and behavioral outcomes (Driscoll et al., 2008; Love & Buriel, 2007; Martinez, 2006). Some research indicates that acculturation is positively related to psychological distress (Ortega, Rosenheck, Alegria, & Desai, 2000) among Latino immigrants and this acculturative stress increases rates of depression (Hovey, 2000). However, other research purports that acculturation is positively related to parental warmth and consistent discipline among Latino parents (Dumka, Roosa, & Jackson, 1997). Together these findings indicate that acculturation could moderate the relationship between parenting practices and adolescent outcomes. Therefore, the validity of the APQ-SF among Latino immigrants may be improved by assessing the acculturation status of respondents and their children.

Barriers to Parental Involvement

The majority of public schools lack specialized resources to address the unique needs of Latino immigrant families (Leyendecker & Lamb, 1999). According to Leidy and colleagues (2010), the primary complaint of Latino immigrant parents is that relatively few teachers are bilingual and the dominant language of the school systems in

the United States is English. Research indicates that the majority of Latino immigrant parents have limited English proficiency (Ayon & Bou-Ghosn, 2013; Bacallao & Smokowski, 2013). Therefore, this language barrier can prevent parents from actively engaging with their child's homework, teachers, or school functions (Leidy et al., 2010). Many Latino immigrant parents place great a value on education and aspire to become involved with their child's schooling to help them succeed academically (Marsiglia, Nagoshi, Parsai, Booth, & Castro, 2014). Thus, the inability to properly engage with their child's schooling can decrease parental confidence and interferes with effective parenting practices (Bermudez, Zak-Hunter, Stinson, & Abrams, 2014; Ceballo, Kennedy, Bregman, & Epstein-Ngo, 2012). Lack of communication between parents and school officials may also exacerbate the cultural divide between home and school for Latino adolescents (Bernal, Saenz, & Knight, 1991) which could, in turn, influence their likelihood to engage in deviant behavior (Coatsworth et al., 2002) and associate with antisocial peers (Eamon & Mulder, 2005). These findings support the use of APQ-SF over the APQ in Latino immigrant samples. Latino immigrant parents may score artificially lower on the parental involvement subscale in the APQ due to the presence of items focusing specifically on schooling. Therefore, the removal of the APQ Parental Involvement subscale in the APQ-SF may improve the cultural applicability of the measure with this particular population.

Documentation and Discrimination

Legal concerns over documentation status create unique challenges and chronic stress for undocumented and recent Latino immigrants (Ayon & Bou-Ghosn, 2013; Bacallao & Smokowski, 2013; Finno, Haymes, & Mindell, 2006). The fear of deportation

often prevents unauthorized immigrant parents from engaging with any formal institution regulated by the federal government (Leidy et al., 2010). According to Ayon and Bou-Ghosn (2013), these fears have risen as immigration control continues to become politicized and Latino immigrant families have encountered acts of discrimination regardless of their documentation status. However, some argue that these fears actually promote increased parental monitoring as a means to protect children from potential discrimination (Ayon & Bou-Ghosn, 2013). As a result, undocumented Latino immigrant parents' scores on the APQ-SF Monitoring/Supervision subscale may vary by ecological factors associated with their documentation status.

Research on public opinion in the United States indicates that Latino immigrants are viewed more negatively than other migrant groups (Cornelius, 2002; Simon & Lynch, 1999). Furthermore, even children of Latino immigrants who are born in the United States often experience discrimination based on perceived immigrant status (Suarez-Orozco, Suarez-Orozco, & Todorova, 2008). The experience of discrimination often causes immigrants to remain in the separation category of acculturation by rejecting the receiving culture and preserving their heritage culture (Rumbaut, 2008). Latino immigrants are often negatively judged for their parenting practices as a result of cultural differences distinguishing them from the dominant parenting culture in the United States (Domenech-Rodriguez, Donovan, & Crowley, 2009). These judgments may reduce parental confidence and disrupt discipline practices due to concerns among Latino immigrant parents about how their parenting practices are perceived by society (Bermudez et al., 2014). These findings indicate that perceived discrimination may cause Latino immigrant parents to score higher on the APQ-SF Inconsistent Discipline

subscale. Therefore, the validity of the APQ-SF among Latino immigrants would be improved by assessing perceived discrimination among respondents.

Examining the Validity of the APQ-SF for Latino Immigrant Parents

A review of the literature suggests that many aspects of Latino culture influence parenting practices and adolescent outcomes. Studies have assessed the validity of the full APQ for Latinos living in their country of origin. Despite being easier to administer, requiring less time to complete, and reducing respondent burden, no study has adequately assessed the validity of the APQ-SF with a Latino immigrant population in the U.S. Latino immigrant parents experience unique stressors that distinguish them from other populations including acculturation, barriers to parental involvement, fear of deportation, and discrimination based on immigrant status. Research indicates that these unique stressors influence parenting practices and would likely impact scores on parenting measures, making the assumption of validity based on Latinos living in their country of origin is inappropriate. Latino immigrant parents living in the United States need programs specifically designed to help them with these unique stressors and cultural barriers. Validated measures are a critical component of creating, improving, and evaluating any evidence-based parenting intervention targeting Latino immigrant families. Therefore, the primary aim of this study is to answer the research question: Is the APQ-SF a valid measure of parenting practices among Latino immigrant parents of adolescents living in the United States?

Goals of the Current Study

The majority of parenting measures have not been validated for Latino immigrant families living in the United States despite the steady increase in this population over

several decades. Research suggests that traditional parenting instruments may not accurately measure Latino immigrant parenting practices due to the unique cultural features of this population. Therefore, it is critical that parenting measures be validated for use with this specific population in order to better understand Latino immigrant parenting practices and improve the effectiveness of targeted interventions. The APQ-SF is the most recently developed version of a commonly utilized parenting measure. The primary aim of the current study is to examine the validity of the APQ-SF for use with Latino immigrant parents. The following section is an explanation of the various research questions, hypotheses, rationale, and analyses associated with the overall aim of this study.

Research Questions, Hypotheses, Rationale, and Analyses

Research Question

How will the factor structure of the APQ-SF when used with a Latino immigrant population compare to the three-factor solution identified in the original construction of the measure?

Background Literature. Previous research concluded that the original three-factor structure applied to a Spanish population (Molinuevo et al., 2011). Furthermore, these nine items are represented in three factors of the original five-factor structure in the APQ (Frick, 1991). However, the original construction of the measure was not validated for Latino immigrants and the factor structure may not necessarily replicate when used with this population.

Analysis. An exploratory factor analysis will be conducted on the APQ-SF to identify the appropriate factor solution when used with a Latino immigrant population.

Additionally, a reliability analysis will be conducted on each of the subscales identified in the measure to determine that homogenous constructs are being measured within each subscale.

Hypothesis 1

Hypothesis 1a. Mothers of female children will score higher on the Positive Parenting APQ-SF subscale compared to mothers of male children or fathers of female children.

Hypothesis 1b. Parents of female children will score lower on the Poor Monitoring/Supervision APQ-SF subscale compared to parents of male children.

Hypothesis 1c. Parents of male children will score higher on the Inconsistent Discipline APQ-SF subscale compared to parents of female children.

Rationale. Latino parenting culture generally promotes traditional gender roles through a stronger maternal emotional connection with female children (Chang & Liou, 2009), stricter parental monitoring of female children (Raffaelli & Ontai, 2004), and less consistency in the discipline of male children (Roche et al., 2007).

Analysis. An ANOVA will be used to calculate the group differences as a function of parent gender or adolescent gender in the APQ-SF subscales. Interaction effects between parent gender and adolescent gender will also be evaluated.

Hypothesis 2

Hypothesis 2a. The Positive Parenting subscale of the APQ-SF will be positively related to grade point average and youth educational aspirations while negatively related to delinquent behaviors and peer antisocial behaviors.

Hypothesis 2b. The Poor Monitoring/Supervision subscale of the APQ-SF will be positively related to delinquent behaviors and peer antisocial behaviors.

Hypothesis 2c. The Inconsistent Discipline subscale of the APQ-SF will be positively related to delinquent behaviors and peer antisocial behaviors.

Rationale. Studies on Latino educational attainment show that positive encouragement from parents motivates children to engage in adaptive schooling behaviors and improve their overall academic performance (Figueroa-Moseley, Ramey, Keltner, & Lanzi, 2006; Mena, 2011; Yowell, 1999). Parental monitoring has been positively correlated with social competence (Leidy et al., 2010) and negatively correlated with deviant behaviors (Romero & Ruiz, 2007) and substance use (Marsiglia, Parsai, & Kulis, 2009) among Latino adolescents. Inconsistent discipline has been consistently linked with adolescent deviant behavior and antisocial peer group affiliation (Arbona & Power, 2003; Eamon & Mulder, 2005; Morrison, Robertson, Laurie, & Kelly, 2002).

Analysis. The predictive validity of the APQ-SF will be examined by regressing academic and behavioral measures including GPA, educational aspirations, delinquent behaviors, and peer antisocial behaviors on the positive parenting, poor monitoring/supervision, and inconsistent discipline subscales.

CHAPTER III

METHODOLOGY

This chapter will consist of three main components: an overview of the larger intervention study from which this secondary data analysis was derived, a detailed description of the instruments, sample characteristics, and data collection procedures of this validation study, and an explanation of the hypotheses and analyses to be conducted within the dataset.

Overview of Intervention Study

Data for this validation study are from the first wave of an intervention study conducted in Tulsa, Oklahoma, entitled “Unidos se Puede” which translates to “United We Can”. The study is a large intervention study of 7th and 8th grade Latino adolescents and their primary immigrant caregivers in the Tulsa Public Schools district. The study was designed and implemented by Dr. Ronald Cox an associate professor at Oklahoma State University which is a public research university located in Stillwater, Oklahoma. The study was funded by the National Institute of Food and Agriculture (NIFA) through the Children, Youth and Families-at-Risk (CYFAR) grant program and conducted with the collaboration of many local community-based partners such as Tulsa Public Schools, the OSU Center for Family Resilience, Tulsa Community Service Council, and the Tulsa Hispanic Chamber of Commerce.

The larger intervention study was a longitudinal study designed to This was a longitudinal study designed to evaluate the long-term effects of the *¡Unidos Se Puede!* program on increases in parental involvement in school, decrease rates of substance use, academic performance and educational aspirations of Latino immigrant adolescents, and program sustainability. Data were collected from 7th and 8th grade students at two public schools between 2014 to 2016 along with their self-identified primary caregiver. A sample of 116 Latino adolescents and their 119 immigrant caregivers completed a battery of assessment instruments designed to measure constructs related to parenting, academic achievement, and risky behaviors. Broadly, these concepts included sociodemographic information, parental expectations, positive parenting, discipline practices, parental monitoring, parental involvement, self-efficacy, school climate, educational aspirations,

gang activity, substance use, workforce preparation, and antisocial peer affiliations.

Participants and Procedures

Sample Characteristics

The 7th and 8th graders in this sample were recruited from two middle schools in a large urban school district in Tulsa, Oklahoma. The district is racially diverse with 33% Hispanic or Latino, 25% African American, 2% Asian, 5% American Indian, and 9% identified as multiracial. The two schools were selected due to having higher concentrations of Latinos, ranging from 42% to 55% of total students, relative to other schools in the district. These schools ranged from having 89% to 91% of their students receiving free or reduced lunch.

Data were collected on 116 Latino adolescents and their primary immigrant caregivers of which 39% ($n = 44$) of the youth were female and 70% ($n = 83$) of the parents were female. Surveys were offered in English and Spanish. The vast majority of youth preferred to take the survey in English (91%; $n = 106$), while a very slight majority of parents preferred to take the survey in Spanish (50%; $n = 60$). The vast majority of parents reported living in the United States for more than six years (90%; $n = 107$). None of the parents reported living in the United States for the entire lives which confirms their self-reported immigrant status.

In order to better illustrate the financial circumstances of the sample, self-report data were collected from parent participants on monthly income and recent poverty experiences. The median household income of the sample was between \$1,501 to \$2,000 per month which translates into an average of approximately \$18,012 to \$24,000 per year. In 2016, the Oklahoma median household income was reported to be approximately

\$4,003 per month which translates into an average of \$48,038 per year (U.S. Census Bureau, 2016). The average household size of the sample was five primarily consisting of two adults and three children. According to federal poverty guidelines, any household of this size earning less than \$29,420 per year is considered impoverished (U.S. Department of Health & Human Services, 2018). Therefore, the majority of the households in this sample ($n = 92$; 77.3%) are considered impoverished under these guidelines. However, this was not reflected in the assessment of recent poverty experiences where the majority of parent participants reported being able to afford basic necessities of life such as food and housing. During the last year, 1.7% ($n = 2$) reported being homeless, 10.9% ($n = 13$) reported skipping a meal, 19.5% ($n = 23$) reported missing a monthly house payment, and 35.3% ($n = 42$) reported receiving assistance due to financial instability.

Procedure

Data for this study are from the first wave of a larger intervention study that used an interrupted time series design to test for intervention effects. Wave one is considered a baseline measure and was collected approximately four weeks before the beginning of the intervention. Participants were 7th and 8th grade students randomly selected from a pool of students provided by the local school district. Inclusion criteria included: 1) self-identification as Latino, Hispanic, or Chicano; 2) previous completion of an English proficiency test due to English not being either their first language or not being spoken at home; 3) having at least one parent born outside the U.S.; and 4) being an average student (defined as not failing or having all A's). Exclusion criteria included: 1) being excused from final exams due to cognitive disabilities and 2) having seven or more behavioral citations during the first six weeks of school. Data were collected from 7th and 8th graders

during the 2014-2015 and 2015-2016 school years. Data were also collected from the parent who self-identified as the primary caregiver. Neither the parents or adolescents were compensated for their participation in data collection. Data were collected from the adolescents electronically using tablets or computers. However, the survey items were read by a trained data collector. This approach was used to decrease issues related to literacy and to help maintain group cohesion during data collection (Cox, 2007). Specially trained data collectors recorded the response of parents on a tablet or computer. All protocols were approved by the Oklahoma State University IRB including protocols for parental consent and youth assent. Missing data were handled using FIML in Mplus version 6 (Muthen & Muthen, 2010).

Measures

The intervention study protocol included multiple assessment tools. For the current study, the Alabama Parenting Questionnaire Short Form (APQ-SF) parent self-report measure was utilized in the analyses along with youth self-report indices of educational aspirations, delinquent behaviors, antisocial peers, and grades specifically developed for the larger intervention study (Table 1). In the original study, the parent and adolescent variables were contained in separate cases and assigned participant identification codes based on self-reported demographic information. This demographic information was designed to be consistent between parents and adolescents which creating identical codes for these dyads. These data were merged, based on matching the parent and adolescent identification codes, in order to perform the various analyses for this study. Any cases containing non-matching identification codes were excluded from the analyses. Approximately thirty percent of these adolescent and parent cases were

unable to be definitively paired based on their identification codes which reduced the total available sample to 83 cases. Missing data from the adolescent self-report variables reduced this available sample to 42-55 cases depending on the variable being analyzed (Table 1).

Table 1

Descriptive Statistics for the Adolescent Academic and Behavioral Measures

	<i>N</i>	Minimum	Maximum	Mean	SD
Educational Aspirations	53	7	24	17.4	4.44
Delinquent Behaviors	55	0	27	6.71	5.29
Antisocial Peer Behaviors	55	0	18	5.47	5.08
Grade Point Average	42	1.33	3.83	2.68	0.71

Alabama Parenting Questionnaire Short-Form (APQ-SF)

The APQ-SF (Elgar et al., 2007) is a nine-item parent self-report measure of parenting practices related to disruptive behaviors in adolescents. The measure was developed with a five-point response scale: never (1), almost never (2), sometimes (3), often (4), and always (5). The items were grouped into three constructs validated by a confirmatory factor analysis (Elgar et al., 2007): Positive Parenting (e.g., “You praise your child if he/she behaves well”), Poor Monitoring/Supervision (e.g., “Your child stays out in the evening after the time he/she is supposed to be home”), and Inconsistent Discipline (e.g., “Your child talks you out of being punished after he/she has done something wrong”). See Table 2 for the full list of items from the original APQ-SF measure. The exact scoring process will vary depending on the factors identified by the confirmatory factor analysis in this study. The items that sufficiently load onto each of the identified factors will be summed in order to calculate the participant’s total score for that subscale. Higher scores will indicate more of the specific parenting practice depending on the subscale.

Table 2

The Alabama Parenting Questionnaire Short-Form

Positive Parenting

1. You let your child know when he/she is doing a good job with something.
 6. You compliment your child after he/she has done something well.
 9. You praise your child if he/she behaves well.
-

Monitoring/Supervision

3. Your child fails to leave a note or to let you know where he/she is going.
 5. Your child stays out in the evening after the time he/she is supposed to be home.
 7. Your child is out with friends you don't know.
-

Inconsistent Discipline

2. You threaten to punish your child and then do not actually punish him/her.
 4. Your child talks you out of being punished after he/she has done something wrong.
 8. You let your child out of a punishment early (like lift restrictions earlier than you originally said).
-

Educational Aspirations

Educational aspirations were measured using a 4-item youth self-report index ($\alpha = .78$ in the current study) scored on a six-point response scale: less than graduated from high school (1), graduated from high school or equivalent (2), graduated from a community college or technical school (3), graduated from a university (4), graduated with a Master's degree (5), and graduated with a Doctorate (6). The items were designed to distinguish adolescent aspirations from realistic expectations in terms of anticipated academic achievement ("Recognizing that one thing is to want and another is reality, please answer the following questions"). Additionally, these items address the adolescent's perception of their parent's aspirations and expectations in terms of their academic achievement. Perceived parental expectations are associated with adolescent academic achievement goal orientations (Madjar, 2015). See Table 3 for the full list of items. The items are summed in order to calculate the participant's total score. The possible scores range from 4 to 24 with higher scores indicating greater educational aspirations. See Figure 1 for the frequency distribution of this measure.

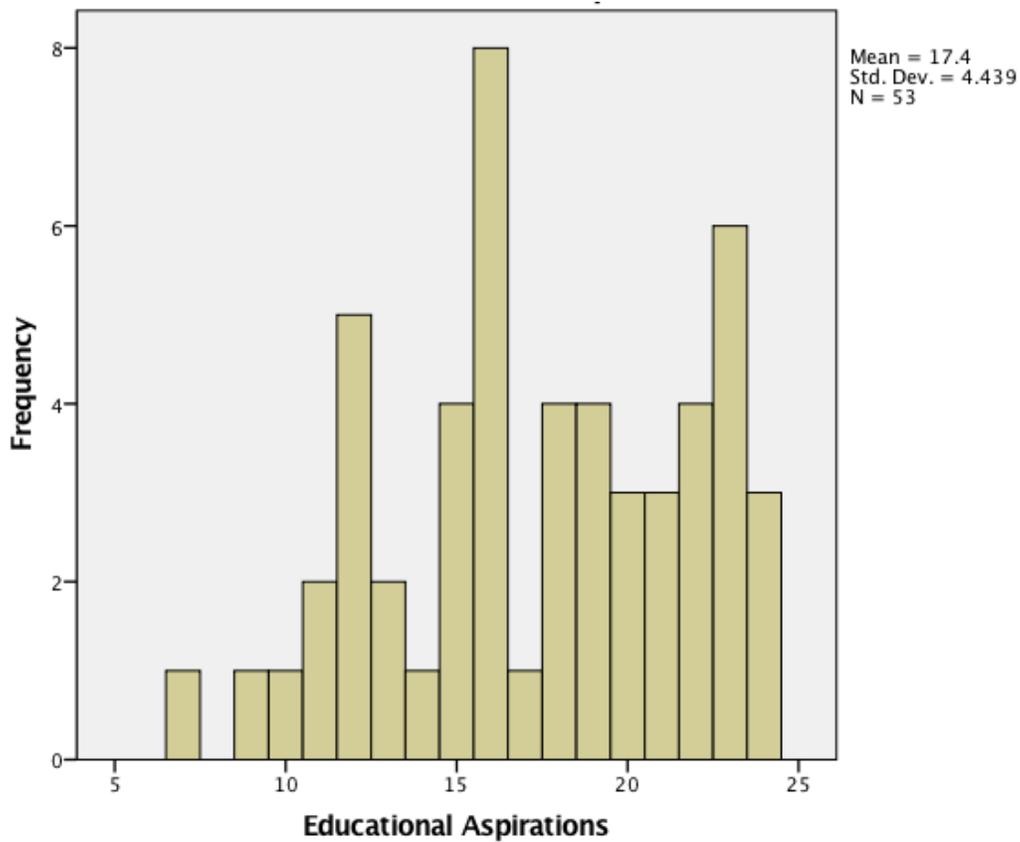
Table 3

Youth Educational Aspirations

1. If you could, how much education would you like to complete?
2. How much education do you really expect to complete?
3. If it were possible, how much education would your parents like you to complete?
4. How much education do your parents really expect you to complete?

Figure 1

Frequency Distribution of Educational Aspirations Adolescent Self-Report Measure (n = 53)



Delinquent Behaviors

Delinquent behaviors were measured using an 8-item youth self-report index scored on an eight-point response scale: never to eight times. The items were designed to catalog any engagement in deviant behavior within the last thirty days (“During the past 30 days, about how many times have you”). These items were grouped into two subscales based on face validity: Substance Use (e.g., “Taken illegal drugs”) and Negative Behaviors (e.g., “Gotten in trouble with the police”). See Table 4 for the full list of items. Four of the items are summed in order to calculate the participant’s total score on each subscale. The possible scores range from 0 to 32 with higher scores indicating more of the specific deviant behavior depending on the subscale. See Figure 2 for the frequency distribution of this measure.

Table 4

Delinquent Behaviors in the Last 30 Days

Substance Use

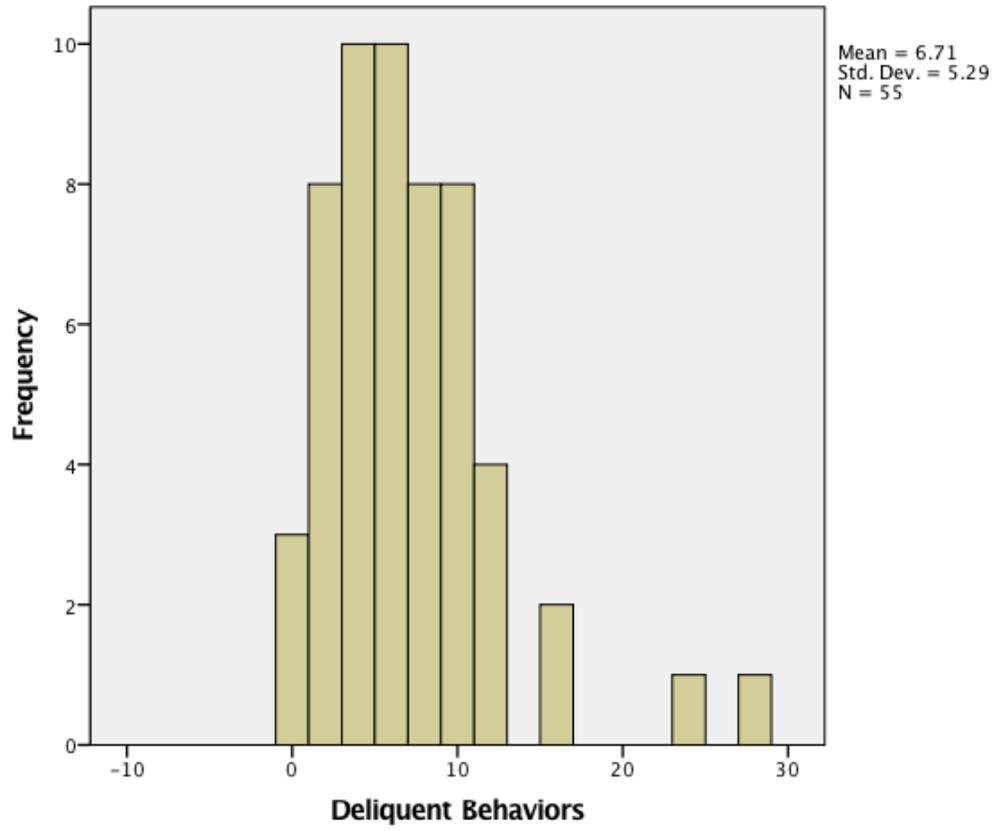
1. Taken illegal drugs (marijuana, sniffed glue, meth, pills not prescribed to you by a doctor, etc.)?
 2. Smoked cigarettes?
 3. Drank alcohol (more than a few sips)?
 4. Ridden in a car with a driver who had been drinking or taking drugs?
-

Negative Behaviors

1. Gotten in trouble with the police?
 2. Stolen something or damaged other people's property just for fun?
 3. Skipped classes at school?
 4. Gotten detention or were suspended from school?
-

Figure 2

Frequency Distribution of Deviant Behaviors Adolescent Self-Report Measure (n = 55)



Peer Antisocial Behaviors

Peer antisocial behaviors were measured using a 6-item youth self-report index ($\alpha = .87$ in the current study) scored on a five-point response scale: none (1), one (2), a few (3), most (4), all of them (5). The items were designed to catalog perceived antisocial behavior among the adolescent's peer group (e.g., "Give your best guess about how many of your close friends frequently skip school"). See Table 5 for the full list of items. The items are summed in order to calculate the participant's total score with two of the items being reverse coded. The possible scores range from 0 to 24 with higher scores indicating more perceived antisocial behavior of the adolescent's peer group. See Figure 3 for the frequency distribution of this measure.

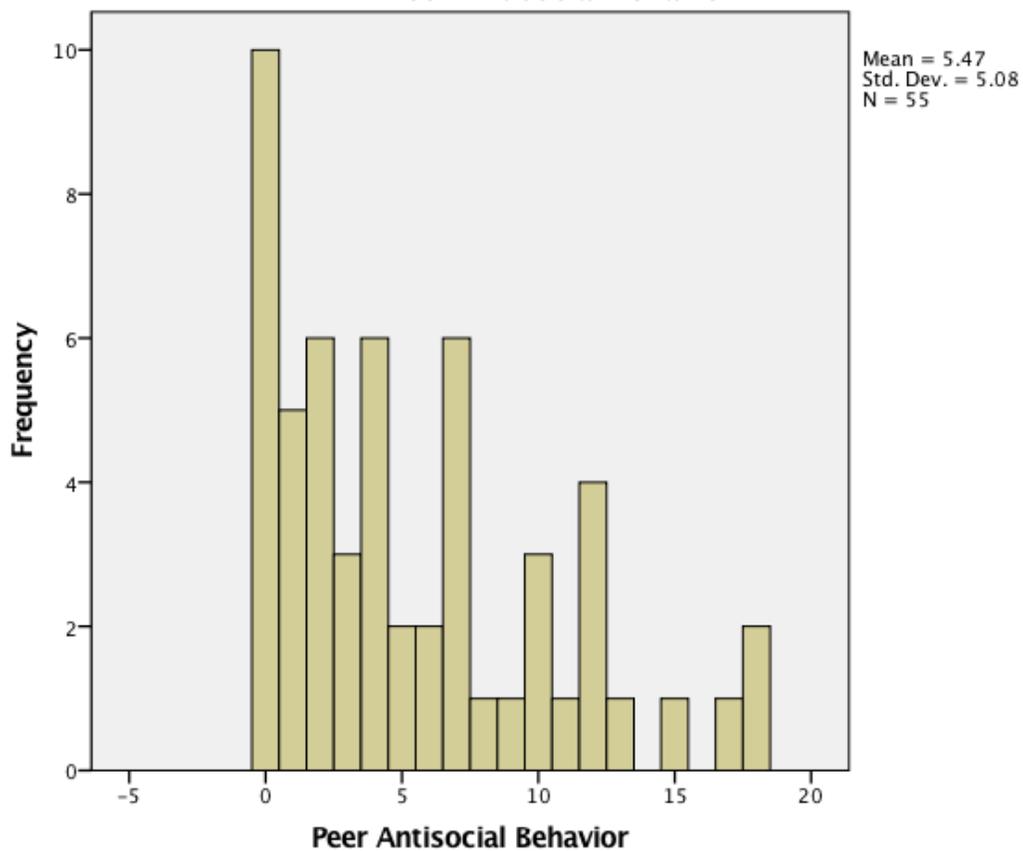
Table 5

Peer Antisocial

-
6. Frequently skip school?
 7. Have ever gotten in trouble with the police?
 8. Have ever stole something or intentionally damaged other people's property just for fun?
 9. Frequently drink alcohol (beer, wine, liquor)?
 10. Take illegal drugs (marijuana, sniffed glue, meth, pills not prescribed to them by a doctor, etc.)?
 11. Have been sent to detention or were suspended from school?
-

Figure 3

Frequency Distribution of the Peer Antisocial Behaviors Self-Report Measure (n = 55)



Grade Point Average (GPA)

Grades were measured using a 5-item youth self-report index in which participants disclosed the number of each final letter grade they received (“Last semester how many of the following did you get as the final grade for your classes”). See Table 6 for the full list of items. The letter grades are each assigned a value according to academic ranking (A = 4; B = 3; C = 2; D = 1; F = 0). The items are summed together and divided by the number of letter grade reported in order to calculate the participant’s GPA. The possible scores range from 0.0 to 4.0 with higher scores indicating greater academic performance. See Figure 4 for the frequency distribution of this measure.

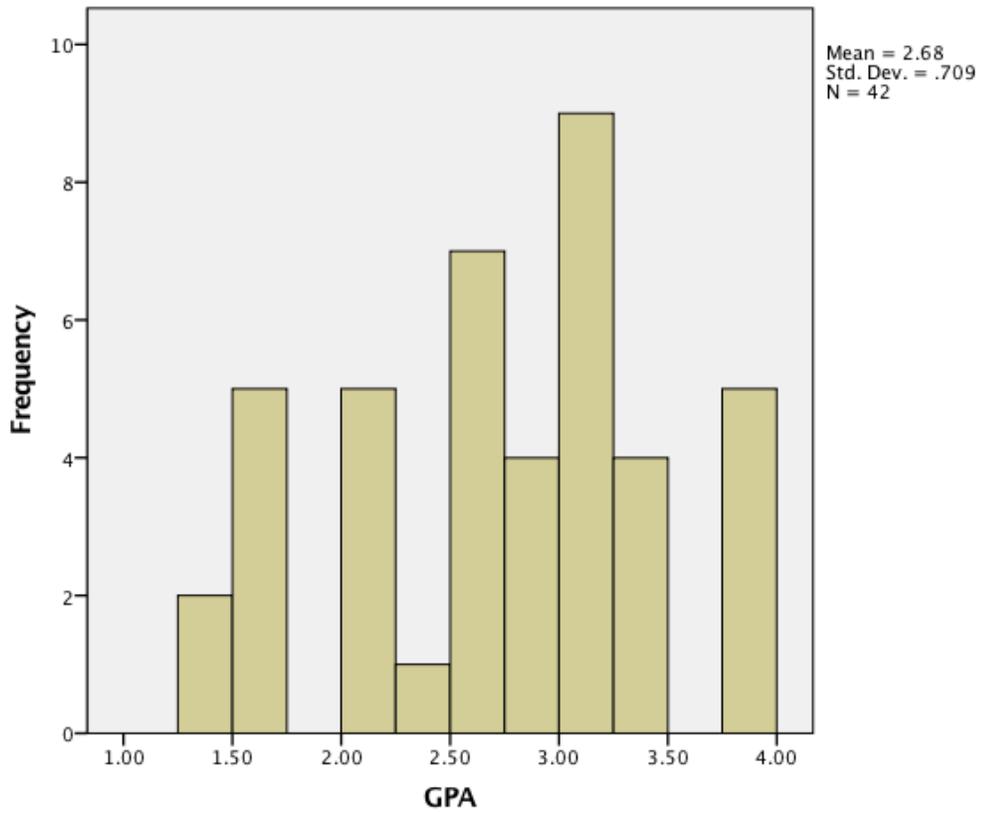
Table 6

Grade Point Average

1. A's
2. B's
3. C's
4. D's
5. E's or F's

Figure 4

Frequency Distribution of Adolescent Self-Report GPA (n = 42)



Overview of Data Analyses

All the statistical analyses and interpretation of the data were carried out using the Statistical Package for the Social Sciences (SPSS) 23.0 statistical program and Stata 15 statistical program. According to a thorough review of the literature, the APQ-SF has never been validated for a Latino immigrant population. Therefore, an exploratory factor analysis was performed in order to compare the identified factor solution with the three-factor structure in the original construction of the measure (Elgar et al., 2007). The factor analysis involved running a principal component extraction with varimax rotation with Kaiser Normalization. The principal component extraction analyzes the variance between variables, the varimax rotation increases the variance between the factors, and the Kaiser Normalization prevents over or under rotating. These are default mechanisms when conducting an exploratory factor analysis. Following the factor analysis, the internal reliability of the items of each identified factor were tested to determine if homogenous constructs are being measured within each subscale. An ANOVA was run to calculate the group differences as a function of parent gender and adolescent gender in each of the APQ-SF subscales with parent gender and adolescent gender as independent variables and the subscale scores as dependent variables. The interaction effects between parent gender and adolescent gender was unable to be evaluated due to sample limitations. Multiple regression analyses included the subscales of the APQ-SF as the independent variables and the academic and behavioral measures as the dependent variables. The purpose of this analysis was to determine the predictive validity of the APQ-SF.

CHAPTER IV

RESULTS

The primary purpose of this analysis of the APQ-SF was to examine the psychometric properties of the instrument when administered in a Latino immigrant sample. The following correlation matrix (Table 7) provides an overview of the associations between the APQ-SF parent self-report items, the identified APQ-SF factors, and the adolescent self-report indices. The subsequent exploratory factor analysis includes a discussion of each of the identified factors and how the current findings compare to the original factor structure of the APQ-SF (Elgar et al., 2007). Factor loadings for the current study can be viewed in Table 8. The scale composition of the instrument, as determined by the exploratory factor analysis conducted in the current study, is displayed in Appendix B.

Table 7

Correlation Matrix of APQ-SF Items (1-9), Identified APQ-SF Factors (10-11), and Adolescent Self-Report Measures (12-15)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Good job	--	-.04	-.02	.09	.02	.77**	.12	-.15	.72**	.90**	.04	.07	.09	-.02	-.11
2. Threaten		--	.27*	.25*	.21	-.07	.32**	.23*	-.10	-.08	.88**	-.04	-.19	.07	.05
3. Note			--	-.15	-.02	.06	.45**	-.03	-.01	.01	.25*	-.24	-.32*	.10	.22
4. Talks Out				--	.21	.19	-.06	.16	.13	.15	.49**	-.02	-.27	.09	.19
5. Out Late					--	-.04	.06	.23*	-.01	-.01	.51**	-.07	-.19	.15	.24
6. Compliment						--	.05	-.06	.86**	.94**	.01	.14	-.02	.13	-.01
7. Out with friends							--	.09	.05	.08	.47**	-.12	.03	-.05	.03
8. Lift Punishment								--	.06	-.06	.29**	.04	.10	-.13	.06
9. Praise									--	.93**	-.03	.12	.05	.13	-.08
10. PP Factor										--	.00	.11	.04	.08	-.07
11. PM Factor											--	-.07	-.26	.11	.15
12. Education Asp.												--	.06	.03	-.20
13. GPA													--	-.24	-.42**
14. Delinquent														--	.30*
15. Peer Antisocial															--

* $p < .05$ (2-tailed), ** $p < 0.01$ (2-tailed); $n = 83$; Note: PP = Positive Parenting, PM = Poor Monitoring

Factor Analysis

A discussion of each component and corresponding subscale (Elgar et al., 2007) is presented below, followed by a table summarizing the findings (Table 8) and scree plot demonstrating the eigenvalues of the identified factors (Figure 5). The scree plot shows only two factors with an eigenvalue of at least one which indicates a two-factor solution.

Factor 1: Positive Parenting

In the current study, items 1, 6, and 9 loaded onto the Positive Parenting factor with values of .6 or higher (Table 8). These variables are identical to those grouped into the Positive Parenting subscale of the original construction of the APQ-SF (Elgar et al., 2007). According to the exploratory factor analysis (EFA), Factor 1 explains 59.7% of the variance with an eigenvalue of 2.07 (Table 5).

Factor 2: Monitoring/Supervision

In this study, items 2, 4, 5, and 7 all loaded onto the Poor Monitoring/Supervision factor with values of .4 or higher (Table 8). This indicates an important deviation from how these items loaded on the original subscale. In the original construction of the APQ-SF, item 2 (“You threaten to punish your child and then do not actually punish him/her”) and item 4 (“Your child talks you out of being punished after he/she has done something wrong”) were grouped into the Inconsistent Discipline subscale not the Monitoring/Supervision subscale. Furthermore, item 3 (“Your child fails to leave a note or to let you know where he/she is going”) failed to load onto either factor with a value of .4 or higher in the current study but in the original construction it was grouped into the Monitoring/Supervision subscale of the APQ-SF (Elgar et al., 2007). According to the EFA, Factor 2 explains 43.3% of the variance with an eigenvalue of 1.50 (Table 5).

Table 8

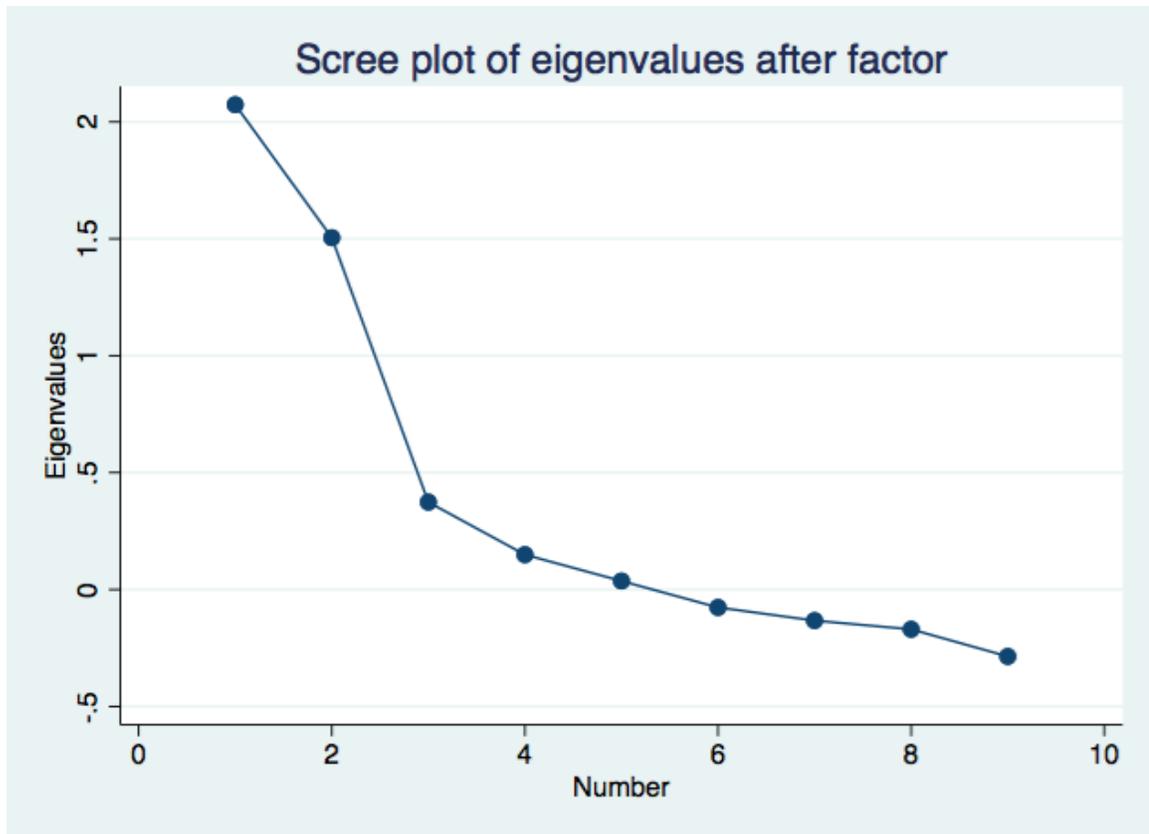
Comparison of Factor Analysis of the APQ-SF for Current Study to Elgar et al. (2007)

APQ-SF Items	Elgar et al. (2007) Factors			Current Study Factors		
	PP	PMS	ID	PP	PMS	ID
1. You let your child know when he/she is doing a good job with something.	.77			.65		
2. You threaten to punish your child and then do not actually punish him/her.			.74		.57	
3. Your child fails to leave a note or to let you know where he/she is going.		.62			.23	
4. Your child talks you out of being punished after he/she has done something wrong.			.63		.49	
5. Your child stays out in the evening after the time he/she is supposed to be home.		.75			.47	
6. You compliment your child after he/she has done something well.	.76			.90		
7. Your child is out with friends you don't know.		.65			.72	
8. You let your child out of a punishment early (like lift restrictions earlier than you originally said).			.74		.27	
9. You praise your child if he/she behaves well.	.79			.90		

Note: PP = Positive Parenting; PMS = Poor Monitoring/Supervision; ID = Inconsistent Discipline

Figure 5

Scree Plot of Eigenvalues for the Identified APQ-SF Factors



Reliability of APQ-SF Factors

Reliability estimates were used to assess the homogeneity of constructs measured by each of the identified factors. The internal consistency (i.e., Cronbach's alpha) of the items making up each of the factors is summarized in Table 9. Factor 1, Positive Parenting, demonstrated strong internal consistency ($\alpha = .86$). Factor 2, Poor Monitoring/Supervision, showed only adequate internal consistency ($\alpha = .65$). The interpretation of Cronbach's alpha in the development of research instruments typically uses somewhat arbitrary, albeit fairly standard, guidelines (Taber, 2017): .9 or > excellent, .8 or > strong, .7 or > good, .6 or > acceptable, .5 or > poor, and < .5 unacceptable. According to these guidelines, Factor 1 (Positive Parenting) would be considered strong and Factor 2 (Monitoring/Supervision) would be considered acceptable.

Table 9

Internal Consistency of Items on the APQ-SF Factors using Cronbach's Alpha

Factor	APQ-SF Scale	Cronbach's Alpha	Number of Items
1	Positive Parenting	.86	3
2	Monitoring/Supervision	.65	4

The Effects of Parent/Adolescent Gender on APQ-SF Scores

In order to calculate the group differences as a function of parent gender and adolescent gender on each of the identified APQ-SF factors, two-way ANOVAs were run with the parent gender and adolescent gender as independent variables and the factor scores as dependent variables. The basic assumptions of ANOVA include level of measurement, random sampling, independence of observations, normal distribution, and homogeneity of variance (Pallant, 2013). These assumptions were met in these analyses because the dependent variables are continuous, the scores were obtained using random sampling, the measurements were not collected in a group setting, the dependent variables are relatively normally distributed, and the Levene's tests for equality of variance were non-significant. The Delinquent Behaviors measure is slightly skewed, but the analysis of variance is robust enough to tolerate this degree of violation (Pallant, 2013). The interaction effects between parent gender and adolescent gender were not analyzed because the eligible sample did not contain male parents with female children.

The first two-way ANOVA was run on a sample of 82 participants to calculate the group differences as a function of parent gender or adolescent gender in the identified Positive Parenting APQ-SF factor. Simple main effects analysis showed that there were no significant differences in reported positive parenting behaviors as a function of parent gender ($F = .135, p = .06$) or adolescent gender ($F = 0.14, p = .71$) (Table 10).

Table 10

ANOVA Results and Descriptive Statistics for Positive Parenting Factor by Gender

Variable	Mean	SD	<i>n</i>
Parent Male			
Adolescent Male	10.03	2.94	32
Adolescent Female	.	.	.
Parent Female			
Adolescent Male	10.38	3.19	21
Adolescent Female	8.52	3.95	29

Source	SS	df	MS	<i>F</i>	<i>p</i>
Parent Gender	42.31	1	42.31	.135	.06
Adolescent Gender	1.55	1	1.55	0.14	.71

Note: $R^2 = .05$, adj. $R^2 = .03$

The second two-way ANOVA was run on a sample of 82 participants to calculate the group differences as a function of parent gender and adolescent gender in the identified Monitoring/Supervision APQ-SF factor. Simple main effects analysis showed that there were no significant differences between parent gender ($F = 0.08, p = .79$) or adolescent gender ($F = 1.39, p = .24$) on reported parental monitoring behaviors (Table 11).

Table 11

ANOVA Results and Descriptive Statistics for Monitoring/Supervision Factor by Gender

Variable	Mean	SD	<i>n</i>
Parent Male			
Adolescent Male	5.06	1.44	32
Adolescent Female	.	.	.
Parent Female			
Adolescent Male	5.62	1.75	21
Adolescent Female	5.48	1.88	29

Source	SS	df	MS	<i>F</i>	<i>p</i>
Parent Gender	0.23	1	0.23	0.08	.79
Adolescent Gender	3.93	1	3.93	1.39	.24

Note: $R^2 = .02$, adj. $R^2 = -.004$

Predictive Validity of the APQ-SF

The predictive validity of the APQ-SF was examined by regressing academic and behavioral measures including GPA, educational aspirations, delinquent behaviors, and peer antisocial behaviors on the positive parenting and monitoring/supervision factors. The basic assumptions of multiple regression include level of measurement, related pairs, independence of observations, normality, linearity, and homoscedasticity (Pallant, 2013). These assumptions were met in these analyses because the dependent variables are continuous, the scores of these variables were obtained from the same subjects, the measurements were not collected in a group setting, the dependent variables are relatively normally distributed, the relationship between the variables is linear, and the variability in the independent scores is similar across all values of the dependent variables.

The first multiple regression analysis was used to test if either of the identified factors, positive parenting or monitoring/supervision, significantly predicted adolescent grade point averages (Table 12). Positive parenting did not significantly predict adolescent GPA ($\beta = .05, p = .76$) and monitoring/supervision also did not significantly predict adolescent GPA ($\beta = -.26, p = .10$). The results of the regression indicated the two predictors explained only 7% of the variance ($R^2 = .07, F_{2,39} = 1.48, p = .24$).

The second multiple regression analysis was used to test if either of the identified factors, positive parenting or monitoring/supervision, significantly predicted adolescent educational aspirations (Table 13). Positive parenting did not significantly predict adolescent educational aspirations ($\beta = .11, p = .41$) and monitoring/supervision also did not significantly predict adolescent educational aspirations ($\beta = -.07, p = .59$). The results of the regression indicated the two predictors explained 1.8% of the variance ($R^2 = .02,$

$F_{2,50} = 0.45, p = .63$).

The third multiple regression analysis was used to test if either of the identified factors, positive parenting or monitoring/supervision, significantly predicted adolescent peer antisocial behaviors (Table 14). Positive parenting did not significantly predict adolescent peer antisocial behaviors ($\beta = -.07, p = .58$) and monitoring/supervision also did not significantly predict adolescent peer antisocial behaviors ($\beta = .15, p = .26$). The results of the regression indicated the two predictors explained 2.9% of the variance ($R^2 = .03, F_{2,52} = 0.77, p = .46$).

The fourth multiple regression analysis was used to test if either of the identified factors, positive parenting or monitoring/supervision, significantly predicted adolescent deviant behaviors (Table 15). Positive parenting did not significantly predict adolescent deviant behaviors ($\beta = .08, p = .55$) and monitoring/supervision also did not significantly predict adolescent deviant behaviors ($\beta = .10, p = .45$). The results of the regression indicated the two predictors explained 1.8% of the variance ($R^2 = .02, F_{2,52} = 0.47, p = .62$).

Table 12

Summary of Multiple Regression Analyses for Factors Predicting Adolescent Self-Report

GPA (n = 42)

Factor	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Positive Parenting	0.01	0.03	0.05	.76
Monitoring/Supervision	-0.11	0.07	-0.26	.10

Note: R² = .07, adj. R² = .02, F = 1.48

Table 13

Summary of Multiple Regression Analyses for Factors Predicting Adolescent Self-Report

Educational Aspirations (n = 53)

Factor	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Positive Parenting	0.15	0.18	0.11	.41
Monitoring/Supervision	-0.19	0.37	-0.07	.59

Note: R² = .02, adj. R² = -.02, F = 4.54

Table 14

Summary of Multiple Regression Analyses for Factors Predicting Adolescent Self-Report

Peer Antisocial Behaviors (n = 55)

Factor	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Positive Parenting	-0.11	0.20	-0.07	.58
Monitoring/Supervision	0.47	0.41	0.15	.26

Note: R² = .03, adj. R² = -.01, F = 0.77

Table 15

Summary of Multiple Regression Analyses for Factors Predicting Adolescent Self-Report

Deviant Behaviors (n = 55)

Factor	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Positive Parenting	0.13	0.21	0.08	.55
Monitoring/Supervision	0.33	0.43	0.10	.45

Note: R² = .02, adj. R² = -.02, F = 0.47

CHAPTER V

DISCUSSION

This study examined the validity of the APQ-SF as a measure of parenting practices among Latino immigrant parents of adolescents living in the United States. An exploratory factor analysis identified a two-factor solution differing from the three-factor solution in the original construction of the measure. The ANOVAs conducted did not reveal significant differences in these APQ-SF factor scores as a function of adolescent or parent gender. The multiple regressions performed on the APQ-SF factor scores and adolescent behavioral/academic measures did not indicate predictive validity. This chapter will discuss the possible explanations for these findings, the limitations of this study, and the research implications of these conclusions.

The APQ-SF Factor Structure

The first step in examining the psychometric properties of the APQ-SF was to compare the factor structure for a Latino immigrant population with the original construction of the measure (Elgar et al., 2007). The results of this factor analysis indicate a two-factor solution for the APQ-SF when used in Latino immigrant populations. This two-factor solution for the APQ-SF includes the Positive Parenting subscale identified in the original construction and a variation of the Poor Monitoring/Supervision subscale but excludes the Inconsistent Discipline subscale identified in the original construction.

The finding that the Positive Parenting factor loadings, identified in the exploratory factor analysis, contained the identical items of the original structure supports the use of the APQ-SF for Latino immigrant populations. However, findings suggest that the two negative subscales, Monitoring/Supervision and Inconsistent Discipline, have inadequate discriminative ability in regard to these two constructs. The loadings of item 2 “You threaten to punish your child and then do not actually punish him/her” and item 4 “Your child talks you out of being punished after he/she has done something wrong” onto the Poor Monitoring/Supervision factor rather than the Inconsistent Discipline factor is not a surprising finding and is probably not connected to Latino cultural differences. Monitoring and consistent discipline are both parenting practices that represent aspects of behavioral control (Baumrind, 1966). Therefore, the more likely explanation is that parents who do not diligently monitor their children are also not practicing consistent discipline because their parenting style consists of low behavioral control. Furthermore, the mean scores on the Poor Monitoring/Supervision factor were low in this study which

contradicts the authoritarian nature of Latino parenting identified in previous literature (Chang & Liou, 2009; Satiago-Rivera et al., 2002) Instead this finding is consistent with Baumrind's (1966) classification of permissive parenting. Previous research only indicated low positive correlations between the Poor Monitoring/Supervision and Inconsistent Discipline subscales (Elgar et al., 2007). Therefore, this factor may need to be reclassified as Permissive Parenting in Latino immigrant populations. The limited sample size, 82 cases, in this study is potentially compromising the effectiveness of the exploratory factor analysis. However, previous research states that a similar sample size of 50 is a reasonable absolute minimum for conducting an accurate factor analysis (Winter, Dodou, & Wieringa, 2009). Overall, the two-factor solution estimated by the exploratory factor analysis indicates that the APQ-SF does not maintain the original factor structure when used in a Latino immigrant population.

Gender Differences in APQ-SF Factor Scores

In order to estimate the group differences as a function of parent gender and adolescent gender on each of the identified APQ-SF factors, two-way ANOVAs were run with the parent gender and adolescent gender as independent variables and the factor scores as dependent variables. Neither of these ANOVAs indicated significant main effects, reveal interaction effects, or support the related hypotheses. It was expected that a) mothers of female children would score higher on the Positive Parenting subscale, b) parents of female children would score lower on the Poor Monitoring/Supervision subscale, and c) parents of male children would score higher on the Inconsistent Discipline subscale. These expectations were based on the literature review of Latino parenting culture which indicated that Latino parents typically promote traditional gender

roles through a stronger maternal emotional connection with female children (Chang & Liou, 2009), stricter parental monitoring of female children (Raffaelli & Ontai, 2004), and less consistency in the discipline of male children (Roche et al., 2007). Instead, the simple main effects analyses showed that there were no significant differences between parent gender or adolescent gender on reported positive parenting behaviors. This finding contradicts the expectation that Latino immigrant parents typically enforce traditional gender roles in their children similarly to Latino families living in their country of origin. However, the p-value estimated by the ANOVA indicated that the difference in Positive Parenting factor scores as a function of parent gender was marginally significant. Therefore, it is reasonable to hypothesize that a statistically significant effect of parent gender would have been identified with a larger sample size (Pritschet, Powell, & Horne, 2016). Future research should be conducted to evaluate the potential effects of parent gender on APQ-SF scores in Latino immigrant populations.

According to a recent meta-analysis of 126 studies on gender-differentiated parenting practices there are actually minimal differences in the parenting of boys versus girls in many different cultures (Endendijk, Groenveld, Bakermans-Kranenburg, & Mesman, 2016). Therefore, this finding for Latino immigrant parents may be better represented in the current research than previously identified in the literature review. Furthermore, this meta-analysis revealed more gender-based parenting practices in Latin-American cultures compare to United States (Endendijk et al., 2016). This could indicate that the lack of gender differences in parenting practices identified in this study represents a cultural difference between Latino immigrant and non-immigrant parenting practices potentially linked to acculturation in the United States. The majority of the

parents participating in this study reported living in the United States for at least six years which was the upper limit of the acculturation demographic question. Future research on the APQ-SF should examine the potential moderating effects of acculturation on gender-differentiated parenting practices among Latino immigrants.

These findings should be interpreted cautiously given the limited sample size, 29 to 32 participants depending on the group, there may simply not be enough statistical power to detect the effect of gender differences on the subscale scores. For example, in this sample the mothers of female children scored lower on the Positive Parenting subscale compared to mothers of male children and fathers of male children but this difference was not statistically significant. Furthermore, proper assessment of parent/adolescent gender interaction effects on subscale scores was impossible because the sample did not contain any self-reports by fathers of female children.

Predictive Validity of the APQ-SF Factors

The predictive validity of the APQ-SF was examined by regressing academic and behavioral measures including GPA, educational aspirations, delinquent behaviors, and peer antisocial behaviors on the positive parenting and monitoring/supervision factors. The results of these regressions did not indicate predictive validity of the APQ-SF or support the related hypotheses. It was expected that a) the Positive Parenting factor would be positively associated with adolescent GPA and educational aspirations, b) the Positive Parenting factor would be negatively associated with adolescent delinquent behaviors and peer antisocial behaviors, and c) the Poor Monitoring/Supervision and Inconsistent Discipline factors would be positively associated with adolescent delinquent behaviors and peer antisocial behaviors. These expectations were based on previous research with

Latino adolescents indicating that positive parental encouragement motivates children to engage in adaptive schooling behaviors and improve their academic performance (Figueroa-Moseley, Ramey, Keltner, & Lanzi, 2006; Mena, 2011; Yowell, 1999), parental monitoring is positively correlated with social competence (Leidy et al., 2010) while negatively correlated with delinquent behaviors (Romero & Ruiz, 2007) and substance use (Marsiglia, Parsai, & Kulis, 2009), and inconsistent discipline is linked with adolescent delinquent behavior and antisocial peer group affiliation (Arbona & Power, 2003; Eamon & Mulder, 2005; Morrison, Robertson, Laurie, & Kelly, 2002). However, none of these associations were replicated in this study (Table 1). Although the association between adolescent GPA and Poor Monitoring factor scores was marginally significant. Interestingly, this association was not identified in the literature review. Therefore, this identified factor may be assessing something other than parental monitoring when used in a Latino immigrant population.

Instead, the regression analyses did not indicate any predictive validity for the Positive Parenting or Poor Monitoring/Supervision factors of the APQ-SF. The identified factors were not significantly associated with any of the adolescent behaviors or academic outcomes examined in this study. These results challenge several studies which show strong associations between the factors and youth outcomes including conduct problems (Dadds et al., 2003) and externalizing behaviors (Donovick & Domenech-Rodriguez, 2008; Robert, 2009). Additionally, these results contradict a large body of well-established literature that has consistently linked positive parenting and parental monitoring with adolescent behavioral and academic outcomes (Figueroa-Moseley et al., 2006; Jacobson & Crockett, 2000; Mena, 2011; Plunkett & Bamaca-Gomez, 2003). The

association of these parenting practices and adolescent outcomes has been well documented in Latino populations (Leidy et al., 2010; Marsiglia et al., 2009; Romero & Ruiz, 2007; Yowell, 1999). Therefore, the most reasonable conclusion is that results of the regressions in this study indicate that the APQ-SF is not a valid measure of parenting practices in Latino immigrant populations. For example, the increased risk of discrimination due to immigrant status (Ayon & Bou-Ghosn, 2013) could reduce or even counteract the beneficial outcomes expected from higher scores on the APQ-SF Positive Parenting subscale. Therefore, the predictive validity of the parenting measure may be compromised in Latino immigrant populations.

Given the limited sample size there may simply not be enough statistical power to detect a significant predictive relationship between the identified APQ-SF factors and the adolescent academic/behavioral measures. However, dismissing these results outright because they do not support previous findings would be antithetical to the research process, particularly considering the insufficient research in the literature examining the validity of parenting measures for Latino immigrant populations. Based on these findings, there is no evidence to support the predictive validity of the identified APQ-SF factors in a Latino immigrant population. Furthermore, without establishing predictive validity of the measure for the population this study cannot endorse use of the APQ-SF with Latino immigrants living in the United States. Future research must overcome the limitations of this study and establish predictive validity with adolescent outcomes in order to reconsider the validity of the APQ-SF for Latino immigrant populations.

Limitations of the Study

The small sample size, only 42 to 83 cases depending on the analysis, was the most noteworthy limitation in this study. The sample eligible for this study, selected from an existing dataset, originally included 116 pairs of adolescents and parents. However, only approximately seventy percent of these adolescent and parent cases were definitively paired which significantly reduced the number of available data for analyses. The limited sample size likely reduced the statistical power of the analyses below the threshold necessary to detect any significant effects. Furthermore, the available participant pairs did not include any father-daughter dyads which eliminated the possibility of assessing parent/adolescent gender interaction effects on the identified APQ-SF factors.

Future research should include a larger sample, including fathers with daughters, in order to be more representative of the Latino immigrant population, allow for the assessment of parent/adolescent gender effects, and improve the generalizability of the findings. In addition to the issue with sample size, the existing dataset limited the evaluation of longitudinal effects by the very nature of the original intervention study. Only the first wave of participants in the existing dataset were deemed eligible for these analyses because these responses were the baseline data in a targeted parenting intervention. Future research seeking to validate or modify the APQ-SF for Latino immigrant populations should enroll participants who are not scheduled to participate in confounding procedures such as a parenting intervention study which prevent the collection of data over an extended period of time.

Conclusion

Validated parenting measures provide researchers, clinicians, and policy makers with standardized information on the social environment of a family members. This information is the foundation of any quality research on evidence-based parenting interventions. Unaddressed cultural differences can influence the reliability and validity of parenting measures, limit the generalizability of research findings, and reduce the effectiveness of resulting treatments. Therefore, it is the responsibility of researchers to validate parenting measures within the cultural context of the intended patient population. This study sought to examine the validity of a prominent parenting measure, the APQ-SF, among the burgeoning population of Latino immigrants living in the United States. The literature review identified a significant absence of research that specifically examines the validity of parenting measures among Latino immigrant families living in the United States. The implementation of effective parenting interventions for Latino immigrant families requires the development of culturally appropriate and empirically validated measures. Overall, the hypotheses, based on the literature review, were not supported by the results of this study. The expectations of a three-factor solution, significant gender differences in factor scoring, and strong predictive validity were not met by the related analyses. Unfortunately, the results of this study conclude that the APQ-SF has still not been adequately validated among this specific population. Future longitudinal research should be conducted with a larger sample of Latino immigrant families before ultimately determining the validity of the APQ-SF with this population.

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APPENDICES

Appendix A

Studies Reporting Internal Reliability and Factor Structure for the APQ

Study	Location	Child	Cronbach's alpha					Factors
		age	PI	PP	PM	ID	CP	
Clerkin et al., 2007	US	3 - 5	--	.82	--	.74	.63	3
Dadds et al., 2003	Australia	4 - 9	.75	.77	.59	.73	.55	5
Donovick & Domenech- Rodriguez, 2008	US	4 - 9	.77	.72	.73	.58	.41	5
Elgar et al., 2007	Australia	4 - 9	--	.57	.61	.62	--	3
Holtrop et al., 2015	US	5 - 12	.83	--	--	--	--	--
Robert, 2009	Mexico	11 - 12	.85	.55	.62	.58	.41	5
Shelton et al., 1996	US	6 - 13	.80	.80	.67	.67	.46	5
Zlomke et al., 2014	US	11 - 18	--	.86	.83	.78	.66	4

Note: PI = Parental Involvement; PP = Positive Parenting; PM = Parental Monitoring
ID = Inconsistent Discipline; CP = Corporal Punishment

Appendix B

The Alabama Parenting Questionnaire Short-Form: Scale Composition, Current Study

I. Positive Parenting

1. You let your child know when he/she is doing a good job with something.
 6. You compliment your child after he/she has done something well.
 9. You praise your child if he/she behaves well.
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II. Monitoring/Supervision

2. You threaten to punish your child and then do not actually punish him/her.
 4. Your child talks you out of being punished after he/she has done something wrong.
 5. Your child stays out in the evening after the time he/she is supposed to be home.
 7. Your child is out with friends you don't know.
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