

2015

# Utilization of the Alabama Parenting Questionnaire across Family Structures: Do the Same Constructs Apply?

Leah Michelle Adams

*Louisiana State University and Agricultural and Mechanical College*

Follow this and additional works at: [https://digitalcommons.lsu.edu/gradschool\\_dissertations](https://digitalcommons.lsu.edu/gradschool_dissertations)



Part of the [Psychology Commons](#)

---

## Recommended Citation

Adams, Leah Michelle, "Utilization of the Alabama Parenting Questionnaire across Family Structures: Do the Same Constructs Apply?" (2015). *LSU Doctoral Dissertations*. 152.

[https://digitalcommons.lsu.edu/gradschool\\_dissertations/152](https://digitalcommons.lsu.edu/gradschool_dissertations/152)

This Dissertation is brought to you for free and open access by the Graduate School at LSU Digital Commons. It has been accepted for inclusion in LSU Doctoral Dissertations by an authorized graduate school editor of LSU Digital Commons. For more information, please contact [gradetd@lsu.edu](mailto:gradetd@lsu.edu).

UTILIZATION OF THE ALABAMA PARENTING QUESTIONNAIRE ACROSS FAMILY  
STRUCTURES: DO THE SAME CONSTRUCTS APPLY?

A Dissertation

Submitted to the Graduate School Faculty of the  
Louisiana State University and  
Agriculture and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The Department of Psychology

by

Leah Michelle Adams

B.S., B.A., University of Georgia, 2008

M.A., Louisiana State University and Agriculture and Mechanical College, 2010

May 2016

## Table of Contents

Abstract.....	iii
Introduction.....	1
Method.....	19
Results.....	23
Discussion.....	33
References.....	39
Appendix A: Scale Composition of the Alabama Parenting Questionnaire.....	45
Appendix B: Factor Structures in Single Parent and Two-Parent Samples.....	46
Appendix C: APQ Constructs as Predictors of Conduct Problems and Aggression.....	47
Appendix D: EFA Constructs as Predictors of Conduct Problems and Aggression.....	48
Appendix E: Interaction Terms: Conduct Problems and Aggression.....	49
Vita.....	50

## **Abstract**

America has experienced a marked increase in non-nuclear family structures over the last five decades. The evolution of more diverse family systems has led some researchers to eschew a “one size fits all” approach to parenting assessment, as these measures may neglect or misconstrue parent-child dynamics unique to non-nuclear families. The current study examined the underlying factor structure of the Alabama Parenting Questionnaire (APQ) in two distinct family structures to determine if parenting constructs were replicated across groups. Participants included 246 mothers from single parent and two-parent households in Louisiana. Statistical analyses included exploratory factor analysis, replication analysis, hierarchical regression analysis, and tests of interaction. Although one positive parenting construct was evident across family structures, the basic structural replication of the remaining constructs failed. Results also indicated that the original, theoretically-derived parenting constructs of the APQ demonstrated low reliability and internal consistency among the single parent sample. Finally, while increased levels of inconsistent discipline were predictive of increased conduct problems and child aggression in the two-parent sample, neither parenting constructs nor demographic variables were significant predictors of mother-reported behavior problems in children from single parent households. Overall, the current study failed to provide clear evidence to suggest that parenting constructs operate differently depending on family composition. Additional research will be beneficial in determining the degree to which family structure impacts parenting behavior.

## **Introduction**

Over the last fifty years, America has experienced significant changes in family structure that have extended across ethnic, age, and sociocultural groups (Anderson, 2003). Although the “traditional family” of the 1960’s and 1970’s was largely defined as a legally married man and woman with one or more children, shifting societal norms involving marriage, divorce, fertility, and job equality contributed to the evolution of increasingly diverse family systems (Carlson & Corcoran, 2001). In the decades that followed, the categorization of families as “traditional” or “nontraditional” fell out of favor among researchers because the terms failed to reflect the heterogeneous composition of American households (Beckert, Strom, Strom, Darre, & Weed, 2008). Family structure has since been conceptualized as a dynamic system that is capable of flexing to adapt to the changing conditions of a particular place or time (Horowitz, 1995). The increasing prevalence of single, cohabiting, and extended families provides compelling evidence to support such conceptualization.

To date, parenting literature has been dominated by studies of two-parent families. Because research investigating the functioning of non-nuclear family structures is still in its infancy (Dorsey, Forehand, & Brody, 2007), single, cohabiting, and extended families have often been viewed, by default, through the lens of the “nuclear family model” (DiFonzo & Stern, 2013). It has been successfully argued that such emphasis on the presence or absence of traditional parenting roles places non-nuclear families at an inherent disadvantage (Anderson, 2003). Indeed, a number of early studies were rooted in the misconception that non-nuclear families were somehow deficient, which in turn placed their children at increased risk for negative outcomes (Horowitz, 1995).

Previous studies have also been critiqued for attempting to assess non-nuclear parenting behaviors with measures developed in nuclear parent populations (Murry, Bynum, Brody,

Willert, & Stephens, 2001). Failure to obtain normative data from a variety of family structures is particularly problematic for parenting assessments, as the assumption of uniformity of groups can neglect and/or misconstrue parent-child dynamics that are unique to single, cohabiting, and extended families (Beckert, Strom, Strom, Darre, & Weed, 2008; McKee, Jones, Forehand, & Cueller, 2013). As such, a “one size fits all” approach to parenting assessment may incorrectly assume that parenting constructs operate similarly across all family structures, when that is not in fact the case.

The current study examined the underlying factor structure of a popular parenting measure (Alabama Parenting Questionnaire; Frick, 1991) in two distinct family structures to determine if parenting constructs were replicated across groups. The reliability of the measure’s theoretically-derived parenting constructs and those derived through factor analysis were then compared. Finally, the capacity of parenting constructs to predict child behavior problems frequently linked to non-nuclear families were examined. The role of poverty was also explored. To provide a basis for interpretation, the following sections present a brief summary of recent trends and research related to three non-nuclear family structures increasing in prominence in the United States. Assessment of parenting behavior and the development of the Alabama Parenting Questionnaire are then reviewed.

### **Single Parent Families**

Researchers theorize that the significant increase in single parenthood among American women can be linked, in part, to the women’s movement of the 1970’s (Horowitz, 1995). The educational and employment opportunities that resulted from the movement allowed women to achieve a degree of financial independence that was not afforded to previous generations (Schwartz, 2014). As such, women became less likely to enter into marriage to achieve financial stability, and were increasingly unwilling to remain in unhappy, dissatisfying, or abusive

marriages due to financial dependence on their husbands (Weinraub, Horvath, & Gringlas, 2002).

Longitudinal census data show a significant and steady increase in single parent households since 1960, when demographic information specific to single parent families was first solicited (U.S. Census Bureau, 2015). Approximately 1 in 4 American households with children is currently headed by a single parent (Anderson, 2003), giving this country the highest incidence of single parenthood among developed nations (Weinraub et al., 2002). From 2000 to 2010 alone, single parent households increased by 37.9% (U.S. Census Bureau, 2012). Although the number of single custodial fathers is slowly growing (2.4% increase over the last ten years), single parent families are primarily composed of mothers and their children (77.5%; U.S. Census Bureau, 2015).

Advances in fertility and family planning have also impacted women's motivations to marry (Thomas & Sawhill, 2005). Increased availability of affordable birth control over the last 3 decades has effectively decreased the proportion of marriages related to unplanned pregnancy, leading some researchers to theorize that "today's women are less likely than ever to marry to avoid an out-of-wedlock birth" (Weinraub et al., 2002). Overall, birthrates for unmarried mothers have declined 14% since 2008, with teenagers, black and Hispanic women, and women without a college degree experiencing the sharpest decline (Miller, 2015). However, this has not been the case for a subset of women aged 35-39, whose birthrate increased 48% from 2002 to 2012 (U.S. Census Bureau, 2015). Frequently referred to as "single mothers by choice," this group is characteristically comprised of college-educated, well-employed, and financially secure women who have purposely delayed childbearing for a variety of reasons (Weinraub et al., 2002). Hastened by fertility preservation methods (e.g., oocyte and embryo cryopreservation), in vitro

fertilization, surrogacy, and adoption, single women in their mid- to late-thirties are becoming new mothers at unprecedented rates (Miller, 2015).

### **Cohabiting Families**

Women's desire to secure employment and, thereby, ensure financial stability before entering into marriage has also brought about a significant increase in cohabitation among committed heterosexual and homosexual partners who wish to start a family. Stein and Copen (2013) found that almost half of the individuals surveyed by the National Center for Health Statistics in 2013 reported currently or previously living with someone as part of a cohabiting relationship, compared to 34% in 1995. Even more compelling, birth statistics from the same year found that 58% of out-of-wedlock births were to women cohabiting with a long-term partner, representing a marked increase from 41% in 2002 (Miller, 2015).

Through retrospective analyses of birthrate and domestic trends, researchers have surmised that approximately 40% of millennials born in the early 1990's spent some amount of time in a cohabiting household during childhood (Thomas & Sawhill, 2005). Overall, such data lend support to the theory that cohabitation has evolved into an increasingly prominent and accepted family structure, particularly among a generation of women for whom marriage rates are declining.

### **Extended Families**

Extended family households, or homes in which multiple generations reside to provide care and/or support to the broader family unit, are also on the rise. After falling to an all-time low in 1980, a record 49 million Americans, or 16.1% of the total U.S. population, were living in extended family households by 2008 (Roberts, 2010). This trend reversal was driven, in part, by the financial events leading up to the 2007 recession. However, economists and researchers agree that the increase was also reflective of "demographic changes that had been gathering steam for

decades” (Taylor et al., 2010), including a greater number of unmarried young adults aged 25 to 34, older median age at the time of marriage, and broader cultural and familial acceptance of single parenthood (Stein & Copen, 2013).

### **Research Involving Single, Cohabiting, and Extended Families**

The psychological literature has failed to keep pace with the evolving characteristics of American families (Dorsey, Forehand, & Brody, 2007). To some degree, this stems from the relative recency of issues impacting the prevalence of non-nuclear family structures, including decreased stigma surrounding cohabitation and childbearing outside of wedlock, and the expansion of state and federal legislation involving civil unions and gay marriage (Miller, 2015; Thomas & Sawhill, 2005). It is also reflective of the longstanding practice of grouping families by parental marital status for demographic purposes, which, by definition, has relegated studies to the comparison of only two groups: those who meet the legal definition of marriage, and those who do not (Dorsey et al., 2007). As a result, families from cohabiting and extended family households have often been categorized as “single parent families” even though they are frequently comprised of individuals in long-term, committed relationships with their child’s biological/adoptive parent, or reside with family members who play a significant role in the rearing of their child (Anderson, 2003). While this practice has not captured the heterogeneous composition of non-nuclear families, it has allowed researchers to identify several factors that appear to differentiate the parenting behaviors of single, cohabiting, and extended families from their two-parent counterparts.

A single parent’s ability to engage in positive parenting techniques can be negatively impacted by the competing need to shoulder the majority of household and family-related responsibilities (Dorsey, Forehand, and Brody, 2007). Task overload is one of the largest obstacles single parents face, and single mothers tend to report having more family- and work-

related difficulties than married mothers (Horowitz, 1995). Researchers have found that in the face of such challenges, single mothers are frequently more ineffective and inconsistent in their discipline practices, employ laissez-faire supervision, and engage in more negative interactions with their children (Bank et al., 1993; Jones, Forehand, Brody, & Armistead, 2003). Further, single mothers tend to use dominating (i.e., power assertive), hostile, and punitive parenting techniques with greater frequency than mothers in two parent families (Murry et al., 2001; McLoyd, 1990).

Unfortunately, such negativistic and inconsistent parenting behaviors have been associated with poorer outcomes for children (Kotchick, Dorsey, & Heller, 2005). Studies have found greater incidences of both internalizing and externalizing problems in children from single parent versus two-parent households (Murry et al., 2001). For example, Bank et al. (1993) found that children of divorced single mothers evidenced significantly higher rates of temper tantrums, fighting, bullying, lying, and stealing. In a review of outcome studies on the effects of growing up in a single parent home, Beckert et al. (2008) found that adolescents raised by single parents were at increased risk of school failure, truant behavior, low graduation rates, delinquency, teen pregnancy, and drug and alcohol abuse.

However, fellow researchers have been quick to contend that these studies have had a difficult time disentangling the detrimental effects of poverty on child outcomes in single, cohabiting, and extended families (Bulanda, 2007). It is well documented that non-nuclear families are disproportionately poor compared to married families, and often have fewer sources of economic support (Thomas & Sawhill, 2005; Weinraub et al., 2002). This is particularly salient among single parent families headed by women, who are 5 times more likely to be affected by poverty, and tend to remain impoverished longer than other demographic groups (Carlson & Corcoran, 2001; Weinraub et al., 2002).

Psychological distress associated with economic strain diminishes caregivers' capacities to engage in supportive, consistent, and effective parenting behaviors (Jackson, Gyamfi, Brooks-Gunn, & Blake, 1998; McLoyd, 1990). Poverty has been linked to increased use of coercive and overly punitive parenting techniques, inconsistent parental supervision and monitoring, and decreased communication between parents and their children (Bank, Forgatch, Patterson, & Fetrow, 1993; McLoyd, 1990). Because prior studies involving non-nuclear families have inconsistently accounted for the negative impact of economic strain on parent functioning, family structure has often been implicated as a significant contributor to negative parenting behaviors and poor child outcomes, when poverty may be more to blame (Hilton & Desrochers, 2000). Lending support to this theory, several studies have found that the effects of family structure on children's behavioral and cognitive outcomes are eliminated once economic status is controlled for by methodological or statistical means (Carlson & Corcoran, 2001).

The social sciences have only recently recognized cohabitation as a family structure that extends beyond relationships in which couples who live together happen to conceive a child. As such, the field currently lacks consensus on the ways in which parenting behaviors of cohabiting couples compare to those of single or two-parent families. Early studies suggested that cohabiting relationships were shorter and more unstable than marital relationships given their lack of "institutionalized commitment" (i.e., failure to exchange religious vows, absence of legal obligations toward spouse, etc.; Goldberg & Carlson, 2014). As a result, children from cohabiting families were thought to be at greater risk for experiencing family disruption and its emotional and behavioral sequelae than children from nuclear families (Stein & Copen, 2013). Researchers challenged this theory by demonstrating that it is the exposure to parental conflict preceding separation/divorce that impacts children's adjustment, rather than the separation/divorce itself (Aronson & Huston, 2004). Given that parental conflict is present across

family structures, it is now considered overly simplistic to assume that cohabiting unions inherently place children at increased risk (Stein & Copen, 2013).

Rates of individuals living in extended family households have increased significantly among Caucasians, Hispanics, and Asians since 1980 (Taylor et al., 2010). This trend has not been reflected among African Americans, whose rates have remained comparatively high and stable since household census data was first collected (U.S. Census Bureau, 2012). Researchers have linked the prevalence of African American extended family households to longstanding cultural traditions in which networks of relatives live within the same home and share the responsibilities of family life, including child rearing (Weinraub et al., 2002). It is not surprising, then, that studies examining the parenting behaviors characteristic of extended family households have primarily involved African American families.

The concept of “wider families” was developed to describe the kinship system that is frequently utilized by extended family households to ferry children from infancy to adulthood (Horowitz, 1995). Wider families are not limited to blood relatives, and often include family friends, social figures (e.g., athletic coaches) and individuals from community organizations (e.g., church leaders, school counselors) that provide aid and support to children and their caregivers (Anderson, 2003). For women raising children without a partner, the support provided by wider families has been shown to improve the quality and consistency of parenting practices, reduce child behavior problems, and improve academic performance (Kotchick, Dorsey, and Heller, 2005; Weinraub et al., 2002). As such, it has been theorized that extended families may serve a protective function against negative child outcomes by decreasing the parental distress that compromises effective parenting behaviors (Jackson, Choi, & Franke, 2009; Jackson, Preston, & Franke, 2010).

## **Assessment of Parenting**

Although a variety of parenting behavior instruments exist, their clinical utility is often limited by methodological flaws or financial impracticality. For example, *in vivo* observations of parent-child interactions are currently considered a gold standard in the assessment of parenting practices (Hawes & Dadds, 2006). However, it can be difficult to elicit problematic interactions that are truly analogous to those occurring at home, as children and parents are usually cognizant of the observation and may alter their behavior (Clerkin et al., 2007). Additionally, observational methods are not well-suited to all age ranges. Certain parenting constructs that are important in early and late adolescence, such as parental involvement in their child's academic or extracurricular activities, are impossible to observe directly in clinical or research settings (Frick et al., 1999).

Parent-report measures are frequently used to assess family functioning in multiple domains. However, these questionnaires largely evaluate global constructs such as parental stress or psychopathology, parenting style, or perceptions of parental competency and efficacy rather than specific parenting behaviors (Elgar et al., 2007). The few measures that do tap into positive and negative parenting practices tend to rely on a small number of items that are highly correlated, leading some researchers to question their validity within the context of treatment (Essau et al., 2006). It is also unclear as to whether these measures are capable of tracking changes in parenting behaviors over time, which would be beneficial for evaluating treatment gains or identifying areas for further intervention (Clerkin et al., 2007).

## **The Alabama Parenting Questionnaire**

In an effort to circumvent the methodological limitations of behavioral observation and the psychometric weaknesses of the parent-report measures available in the 1980's, Paul Frick developed the Alabama Parenting Questionnaire (APQ; 1991). The APQ is a multi-method,

multi-informant assessment system that evaluates parenting behaviors across five constructs: Parental Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment (Frick et al., 1999). The measure has four parallel forms that can be administered to both children and parents in a global report or phone interview format (Essau et al., 2006). Respondents are asked to rate different parenting behaviors using a 5-point frequency scale (1 = *never*, 5 = *always*) to indicate how often they occur in the home (Frick, 1991). With only 42 items, the global report format of the APQ can be administered in a matter of minutes and does not require the presence of a clinician for completion (Shelton et al., 1996). Furthermore, the measure's efficiency and ease of completion lends itself well to administration on an individual or group basis across clinical, community, school, and research settings (Essau et al., 2006).

The five constructs, or scales, that comprise the APQ were theoretically derived to reflect the parenting practices most commonly associated with externalizing behavior and conduct problems in children and adolescents (Frick et al., 1999; Loeber & Stouthamer-Loeber, 1986). For ease of interpretation, Appendix A presents APQ items organized by scale composition. Items assessing the Parental Involvement and Positive Parenting constructs are worded in a positive manner, while items assessing the Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment scales are worded more negatively (Essau et al., 2006). In an effort to mitigate any negative bias against the Corporal Punishment items, seven "distractor items" relating to other disciplinary practices were also included in the measure (Clerkin et al., 2007). Shelton et al. (1996) reported the distractor items to be an effective buffer for the Corporal Punishment scale after several analyses found the construct to be unrelated to socially desirable response sets.

In one of the earliest studies evaluating the validity and reliability of the APQ, Shelton et al. (1996) examined the psychometric properties of the measure in a sample of 160 clinic-referred and volunteer children (aged 6-13 years) and their primary custodial caretakers. After controlling for gender and socioeconomic status, APQ scores were found to discriminate between families of children diagnosed with disruptive behavior disorders and those of non-diagnosed controls. Frick et al. (1999) found similar results in a sample of 179 clinic-referred children and adolescents (aged 6-17 years) and their female caretakers. The Corporal Punishment construct of the APQ showed a significant peak in its association with conduct problems for children in the 9- to 12-year-old age range. Additionally, Inconsistent Discipline accounted for the largest amount of variance in conduct problems ( $R^2 = .38$ ) among adolescents, although the amount of variance attributed to Parental Involvement ( $R^2 = .31$ ) was substantial (Frick et al., 1999). In both studies, the parenting scales of the APQ demonstrated adequate to good internal consistency ( $\alpha = .67-.82$ ), with the exception of the Corporal Punishment construct ( $\alpha = .37-.46$ ). Researchers have attributed the scale's low reliability to the fact that it contains only three items (Essau et al., 2006). It has also been suggested that parents who engage in corporal punishment utilize a single, preferred method of discipline, which may lead to poor inter-item correlations within the construct (Frick, Christian, & Wootton, 1999).

To evaluate the measure within a community setting, Dadds, Maujean, and Fraser (2003) assessed the psychometric properties of the APQ in a large sample of school-aged children ( $n = 802$ ; aged 4-9 years) and their caregivers. They reported adequate to good internal consistency ( $\alpha = .55-.77$ ) across APQ constructs, and good test-retest reliability ( $r = .84-.90$ ). The two positive scales, Parental Involvement and Positive Parenting, were strongly related ( $r = .57$ ), and both demonstrated small, negative correlations with Poor Monitoring/Supervision ( $r = -.18$ ;  $r = -.13$ ), Inconsistent Discipline ( $r = -.21$ ;  $r = -.18$ ), and Corporal Punishment ( $r = -.19$ ;  $r = -.08$ ),

providing good evidence of validity between positive and negative parenting dimensions (Dadds et al., 2003). Correlations between the parenting constructs of the APQ and the Conduct Problems scale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) were also examined. The construct validity of the APQ was substantiated when analyses found the Parental Involvement ( $r = -.18$ ) and Positive Parenting ( $r = -.18$ ) scales of the APQ to be negatively correlated with the Conduct Problems scale of the SDQ. Conversely, the Inconsistent Discipline ( $r = .31$ ), Corporal Punishment ( $r = .24$ ), and Poor Monitoring/ Supervision ( $r = .19$ ) constructs were positively correlated with the Conduct Problems scale (all correlations significant at  $p < .05$ ; Dadds et al., 2003).

Although these studies indicated that the APQ was a valid and reliable measure of parenting behaviors across multiple settings and age ranges, additional analyses yielded mixed evidence for the psychometric integrity of some of the scales. For example, the Positive Parenting and Parental Involvement scales were often highly correlated, suggesting that they may measure a single dimension of parenting rather than two distinct constructs (Scott, Briskman, & Dadds, 2011; Shelton et al., 1996). Additionally, some researchers have questioned the inclusion of the Corporal Punishment scale within the APQ given its low internal consistency (Elgar et al., 2007). These research questions spawned a series of studies aimed at identifying the underlying factor structure of the APQ, eliminating redundant items, and adapting the measure for use with broader populations.

As part of the National Institutes for Mental Health Collaborative Multisite Multimodal Treatment Study of Children with Attention-Deficit/Hyperactivity Disorder (MTA study), Wells et al. (2000) utilized the APQ to assess changes in parenting behavior as children received intensive behavioral therapy, medication management, or a combination of both treatments to address their symptoms of ADHD. Principal component analysis of the APQ within this

population revealed that a three-factor solution was the most interpretable and accounted for a significant amount of variance (32%). The constructs were labeled Positive Involvement ( $\alpha = .85$ ), Negative/Ineffective Discipline ( $\alpha = .70$ ), and Deficient Monitoring ( $\alpha = .72$ ). Utilizing this factor structure to interpret self-reported parenting behaviors over the span of the study, Wells et al. (2000) found that improvements in children's social skills at school were mediated by reductions in negative/ineffective discipline. Additionally, all modalities of treatment (behavioral therapy, medication management, or a combination of both treatments) produced greater reductions in the use of negative/ineffective discipline by parents than standard community care (Elgar et al., 2007).

To expand its use to families with young children, Clerkin et al. (2007) modified the APQ to exclude items considered irrelevant or unrelated to the parenting of preschool-aged children (e.g., "Your child fails to leave a note or let you know where he/she is going"). Once the inapplicable items were eliminated, principal component analysis with varimax rotation of the APQ-Preschool Revision (APQ-PR) yielded a three-factor solution accounting for 32.28% of variance. The Positive Parenting, Negative/Inconsistent Parenting, and Punitive Parenting factors demonstrated adequate internal consistency and temporal stability in a sample of 160 parents (130 mothers, 23 fathers, 7 mother-father pairs) of children ranging from 3 to 5 years old. Similar to the factor structure reported by Wells et al. (2000), the APQ-PR's Positive Parenting factor was ultimately composed of items that initially comprised the Parental Involvement or Positive Parenting constructs of the original APQ (Shelton et al., 1996). These results lent support to the hypothesis that the two constructs might, in fact, tap into the same underlying parenting dimension.

Elgar et al. (2007) generated an abbreviated version of the APQ in an effort to create a shorter assessment that would retain the reliability and validity of the full-length measure. The

factor structure of the original APQ was examined in a community sample of 1,402 parents (90% mothers). Although principal component analysis identified 5 factors, parallel analysis and Velicer's MAP test failed to support 2 of the constructs, which were subsequently eliminated. A 9-item short scale (APQ-9) was then generated by extracting the three highest loading items from the constructs labeled Positive Involvement, Ineffective Discipline, and Poor Supervision. Subsequent examination of the APQ-9 suggested adequate reliability and validity. However, some clinicians argued that the measure's restricted range of items and lack of content regarding parents' methods of punishment and involvement in the lives of their children significantly limited the practicality of data obtained from the abbreviated measure (Elgar et al., 2007).

Because the parenting constructs of the APQ were theoretically derived, researchers debate whether or not combining scales to create new constructs or removing items through variable reduction techniques affects the validity of the measure or its intended use. Hawes and Dadds (2006) examined the comparative validity of the three-factor APQ structure generated by Hinshaw et al. (2000) and the five original constructs of the APQ in a sample of parents (N=56) participating in parent training interventions for boys with disruptive behavior disorders. Results indicated that the original APQ was more sensitive to changes in parenting behaviors throughout treatment, and also demonstrated larger effect sizes. As such, the five scales evidenced greater clinical utility than the shorter, empirically-derived scales. Essau et al. (2006) reported additional evidence supporting the original structure of the measure after exploratory and confirmatory factor analyses yielded a five-factor solution similar to the *a priori* parenting constructs.

A limitation of research investigating the underlying parenting constructs of the APQ is the notable lack of diversity in participant family structure. Review of the 7<sup>1</sup> studies published to

---

<sup>1</sup> Maguin et al.'s 2015 study is not considered here, as it examined parenting constructs specific to adults impacted by alcohol abuse or dependence.

date reveals that an overwhelming majority of participants were from nuclear families, with married parents constituting anywhere from 79.5% (Zlomke, Lamport, Bauman, Garland, & Talbot, 2014) to 89.9% (Molinuevo, Pardo, & Torrubio, 2011) of each sample. Because the demographic composition of these studies failed to reflect the prevalence of non-nuclear families in the general population, it remains unclear if the parenting constructs revealed through factor analysis extend beyond two-parent households. This is unfortunate, as the APQ's ability to accurately identify both positive and problematic parenting behaviors makes it a potentially valuable tool for populations in which parent-child relationships are strained or maladaptive. Given existing research, it stands to reason that the APQ may potentially serve as an ideal method to identify problematic parenting behaviors that are often linked to non-nuclear families.

### **Study Rationale**

The United States has experienced a significant increase in the prevalence of single, cohabiting, and extended families over the last few decades. Despite such unprecedented growth, research examining non-nuclear family structures has been limited by a number of methodological weaknesses, and slow recognition and acknowledgement of the unique psychosocial challenges these families face (Beckert, Strom, Strom, Darre, & Weed, 2008). In failing to account for between-group differences, non-nuclear families have been placed at an inherent disadvantage when compared to their two-parent counterparts (Horowitz, 1995). This has been particularly problematic in studies investigating the parenting behaviors and child outcomes associated with non-nuclear families, which have served to perpetuate the misconception that non-nuclear family structures are, by nature, "broken" or inferior (Dorsey, Forehand, & Brody, 2007).

Parenting behavior has traditionally been operationalized and assessed based on constructs identified in nuclear white families, and the field remains divided as to whether these

constructs operate similarly across different demographic groups (Deater-Deckard & Dodge, 1997; Murry et al., 2001). Because non-nuclear families face adverse circumstances (e.g., poverty, limited child care resources) at a rate that is disproportionately higher than two-parent families (Thomas & Sawhill, 2005; Weinraub et al., 2002), and it has been well established that these circumstances negatively impact parents' ability to engage in positive and effective parenting practices (Bulanda, 2007; Hilton & Desrochers, 2000; McLoyd, V.C., 1990), researchers have argued that evaluating non-nuclear parenting behaviors based upon the constructs of two-parent families is functionally flawed. Doing so ultimately fosters a "deficit model" that may misconstrue differences as faults (Anderson, 2003). It also does little to illustrate the strengths of non-nuclear families, or uncover parent-child dynamics that are unique to these types of family structures. With this in mind, researchers are increasingly advocating for parenting measures that contain a variety of scales that can be tailored to an individual's specific family structure and other contextual factors (e.g., poverty, domestic violence) that impact his or her parenting behavior (Murry et al., 2001).

The Alabama Parenting Questionnaire (APQ) has been shown to be a valid and reliable measure of parenting behaviors across multiple settings and age ranges (Dadds et al., 2003; Shelton et al., 1996). Although the APQ contains 5 theoretically-based parenting scales, studies have uncovered a variety of factor structures suggesting that the measure captures 3 to 5 unique parenting constructs. Unfortunately, prior studies have primarily been comprised of participants from nuclear families, and have failed to sample non-nuclear participants at a level commensurate with the general population (29% of U.S. families with children under the age of 18; United States Census Bureau, 2015). It is therefore unclear whether the parenting constructs proposed by these studies would be replicated outside of two-parent family structures.

The APQ's adaptability, ease of administration, and demonstrated ability to identify the parenting practices most commonly associated with child externalizing behaviors and conduct problems make it a potentially ideal candidate for use with non-nuclear family structures. However, given the negative ramifications of utilizing the incorrect constructs to evaluate parenting behaviors in non-nuclear families, further analyses are needed. The current study examined the underlying factor structure of the Alabama Parenting Questionnaire in mothers from single parent and two-parent families to determine if parenting constructs were replicated across groups. The reliability of the measure's theoretically-derived parenting constructs and those derived through factor analysis were then compared. Lastly, the capacity of parenting constructs and yearly income to predict child behavior problems frequently linked to the utilization of maladaptive parenting behaviors in non-nuclear families was examined.

### **Hypotheses**

1. Researchers have discovered a number of distinctions in the parenting behaviors exhibited in single parent and two-parent households (Bank et al., 1993; Carlson & Corcoran, 2001; Hilton & Desrochers, 2000). This has caused many social scientists to disavow a "one size fits all" approach to parenting assessment, as it may neglect or misconstrue parent-child dynamics that are unique to non-nuclear families (Beckert et al., 2008). It is hypothesized that the factor structure of the APQ in the two-parent sample will not be replicated in the single parent sample, suggesting the presence of different underlying parenting constructs.
2. Prior studies have suggested adequate to good internal consistency across APQ parenting scales (Dadds, Maujean, and Fraser, 2003; Frick et al., 1999; Shelton et al., 1996). For the current study, it is hypothesized that the original parenting constructs of the APQ and

those derived through factor analysis will be reliable in the two-parent and single parent samples.

3. Non-nuclear families have been linked to increased rates of externalizing problems and aggression in children (Horowitz, 1995; Murry et al., 2001). However, it remains unclear if these negative outcomes stem from the parenting behaviors exhibited by single parents, or are more attributable to the adverse circumstances that disproportionately affect single parent families, namely poverty. For this study, it is hypothesized that the original parenting constructs of the APQ and those derived through factor analysis will be stronger predictors of conduct problems and aggression in children from the single parent sample than the two-parent sample.

- a. Numerous studies have documented the effects of poverty, race, age, and education level on parenting behavior (Brooks-Gunn & Markman, 2005; Jackson et al., 1998; Jackson et al., 2009; Lansford et al., 2007; Weinraub et al., 2002). The impact of these demographic variables will be explored in the current sample, and controlled for, statistically, to decrease the likelihood that they will confound results.

## Method

### Participants

Participants included 246 mothers from single parent and married households in New Orleans, Baton Rouge, or a surrounding parish in southern Louisiana. Both samples were taken from a larger study of families participating in the first wave of a longitudinal research project on child adjustment following a natural disaster (Hurricane Katrina). Participants' children ranged in age from 9 to 16 years ( $M = 11.5$ ,  $SD = 1.6$ ), and consisted of slightly more daughters (52%) than sons.

The two-parent sample included 139 mothers who reported their marital status as "married," and listed either a "husband" or "spouse" as living in the home. Most mothers ranged in age from the mid-thirties to early fifties ( $M = 39.4$ ,  $SD = 6.6$ ). The majority of participants were African American (43%) or Caucasian (40%), with Asian (10%) and Hispanic (4%) mothers comprising most of the remaining sample. The educational achievement of nuclear mothers was widely dispersed. Approximately one-third of participants had a high school diploma or less, 35% received partial post-secondary education, 25% graduated from a standard college or university, and 6% of mothers held a graduate or professional degree. At the time of the study, 24% of married mothers reported having a household income (i.e., combined income of all individuals living in the home as well as any government assistance) less than \$15,000 per year. Thirty percent of participants reported a yearly income ranging from \$15,000 to \$34,999, while 31% reported an income between \$35,000 and \$74,999. Thirteen percent of mothers reported a yearly family income of \$75,000 or more.

The single parent sample included 107 mothers who reported their marital status as "single," and listed only themselves and their child(ren) as living in the home. On average, the single mothers were slightly younger ( $M = 37.8$ ,  $SD = 6.9$ ) than mothers in the two-parent

sample, and were largely comprised of African American women (88%). Caucasian (10%) and Hispanic (1%) mothers made up the remainder of the sample. Approximately half of single parent participants had a high school diploma or less, and 33% reported receiving partial post-secondary education. When compared to mothers from two-parent households, the single mother sample was much less likely to have graduated from a standard college or university (13%), or have a graduate or professional degree (4%). As would be expected, there was a large differential in household income between samples. At the time of the study, 62% of mothers reported having a yearly income of less than \$15,000, placing them well below the poverty threshold for 2006 (United States Census Bureau, 2012). Of the remaining sample, 29% of participants reported a yearly income ranging from \$15,000 to \$34,999, 5% reported an income between \$35,000 and \$49,000, and 3% of mothers reported an income between \$50,000 and \$74,999.

## **Materials**

**Demographic Questionnaire.** Mothers completed a demographic questionnaire regarding participant and family characteristics. Specifically, the form asked for participant age, marital status, ethnicity, family income, educational history, and information regarding previous and current employment. Participants were also asked to provide the age, gender, and relationship (relative to the mother completing the questionnaire) of all individuals living in the household at the time the questionnaire was completed.

**Alabama Parenting Questionnaire (APQ; Frick, 1991).** The Alabama Parenting Questionnaire is a 42-item inventory of parenting practices. For this study, the parent global report format of the APQ was examined. Mothers were asked to rate how often various parenting behaviors typically occurred in their home using a five point frequency scale (1=never, 5=always). For the purposes of this study, the Parental Involvement (Single Parent:  $M = 40.2$ ,  $SD = 6.3$ ; Two-Parent:  $M = 40.7$ ,  $SD = 6.2$ ), Positive Parenting (Single Parent:  $M = 26.7$ ,  $SD = 3.4$ ;

Two-Parent:  $M = 26.5$ ,  $SD = 5.94$ ), Poor Monitoring/Supervision (Single Parent:  $M = 18.2$ ,  $SD = 6.0$ ; Two-Parent:  $M = 16.3$ ,  $SD = 7.4$ ), Inconsistent Discipline (Single Parent:  $M = 14.6$ ,  $SD = 4.6$ ; Two-Parent:  $M = 13.3$ ,  $SD = 4.4$ ), and Corporal Punishment (Single Parent:  $M = 6.9$ ,  $SD = 3.0$ ; Two-Parent:  $M = 5.2$ ,  $SD = 2.6$ ) scales were examined. As previously discussed, there is adequate to good psychometric support for the APQ. Reliability of the APQ in the two-parent and single parent samples is presented and discussed in the relevant section below.

**Behavior Assessment System for Children-Second Edition, Parent Rating Scale (BASC-2 PRS; Reynolds & Kamphaus, 2004).** The BASC-2 PRS is a parent-report measure of emotional and behavioral disorders in children and adolescents. Depending on the age of their child, mothers completed one of two versions of the BASC-2 (PRS-Child or PRS-Adolescent) by rating how often he or she exhibited a variety of behaviors (e.g., “Acts without thinking”) over the last few months (Never, Sometimes, Often, or Always). The BASC-2 PRS has demonstrated adequate to good internal consistency, divergent and convergent validity, and concurrent validity with the Achenbach System of Empirically Based Assessment (ASEBA; Stein, 2007).

For the purpose of this study, T-scores yielded from the Aggression (Single Parent:  $M = 50.9$ ,  $SD = 10.3$ ; Two-Parent:  $M = 48.2$ ,  $SD = 9.3$ ) and Conduct Problems (Single Parent:  $M = 52.7$ ,  $SD = 11.3$ ; Two-Parent:  $M = 48.8$ ,  $SD = 10.7$ ) subscales of the BASC-2 PRS were examined. Four percent of mothers from the two-parent sample rated their child as exhibiting clinically significant (i.e., T-scores  $\geq 70$ ) symptoms of aggression, compared to 5.7% of single mothers. Mother-reported child conduct problems were also higher in the single parent sample (8.9%) than the two-parent sample (4.8%).

## **Procedure**

As part of the longitudinal study previously described, mothers with children in 4<sup>th</sup>-8<sup>th</sup> grade were recruited 3 to 7 months after Hurricane Katrina via flyers and packets sent home with

their child. Of the fourteen schools selected to participate in the project, approximately 72% of the sample was displaced following the hurricane. Maternal participation rate was estimated to include 36% of all parents contacted by researchers. Study packets included information about the research project, parent consent forms, the demographic form and measures detailed above, and additional measures used to assess parent psychopathology, coping style, and social support. Once the measures were completed, parents returned the packets in a sealed envelope to their child's school where it was collected by the research staff. Mothers were entered into a drawing for a cash prize as incentive for participation.

## **Results**

### **Preliminary Demographic Analysis**

In order to explore the underlying factor structure of the APQ in separate family structures, demographic analysis of parent-reported marital status and household composition was completed. The demographic questionnaire of each participant was reviewed for clarity and consistency between family-related items, and then coded based on information provided about individuals living in the home at the time the questionnaire was completed. Of the 317 questionnaires reviewed, 34 participants were excluded due to missing data, conflicting report (e.g., participant indicated her marital status was single, but subsequently listed a “husband” as living in the home), or providing relationship information too vague to categorize (e.g., participant listed an individual’s name rather than “son,” “boyfriend,” etc.). Eight additional participants were excluded because they were not the biological parent, adoptive parent, or stepparent of a child participating in the study, and their caregiving responsibilities related to the child could not be determined. Although a small number ( $N=29$ ) of cohabiting and extended families participated in the study, their sample size was not amenable to factor analysis (Costello & Osborne, 2005), and they were therefore excluded from the present study.

### **Exploratory Factor Analyses**

To remain consistent with previously published studies (Clerkin et al., 2007; Elgar et al., 2007; Molinuevo, Pardo, & Torrubio, 2011; Wells et al., 2000), principal components analysis (PCA) was completed using SPSS version 23.0 to evaluate the underlying factor structures of the APQ in the two-parent and single parent samples. Varimax rotation was utilized given the need to compare factor structures during subsequent replication analyses (described below). Missing values were replaced with item means (Tabachnick & Fidell, 2013). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity were completed to ensure

that both datasets were suitable for factor analysis. As in Elgar et al. (2007), Molinuevo et al. (2011), and Wells et al. (2000), decisions regarding item selection and factor retention were based on the following criteria: eigenvalues  $\geq 1.0$ , factor loadings  $> .30$ , and interpretability of structure.

Following EFA replication analysis guidelines proposed by Osborne and Fitzpatrick (2012; and informed by Costa & McRae, 1997; and Barrett, 1985), identical PCA procedures were completed in the two-parent and single parent samples. Structural replicability was then evaluated by determining if the highest loading for each item occurred on the same factor in both samples. If items were not replicated in a similar manner, structural replicability was considered to have failed, and analysis ended. If items were replicated, the magnitudes of factor loadings were compared across samples. Appendix B presents a side-by-side comparison of the final factor structures in both samples. For clarity purposes, factors 1, 2, and 3 in the single parent sample are hereafter referred to as A, B, and C.

**Two-Parent Sample.** The two-parent sample yielded a good Kaiser-Meyer-Olkin statistic ( $KMO = .78$ ) and a highly significant Bartlett's test ( $p < .001$ ), indicating that factor analysis was an appropriate method for factor exploration. Kaiser criteria initially indicated the presence of 3 or 4 factors. Given the presence of a clean and interpretable 3 factor structure in the single parent sample, and the need to retain the same number of factors across samples for replication analyses, PCA was repeated in the two-parent sample with a forced 3 factor solution. This solution produced an interpretable structure that accounted for 44.37% of the variance. Of the original 35 items, 9 items were removed from analyses in both samples due to low factor loadings ( $< .30$ ) or similar loadings across two or more factors.

Following a thorough review of all factor items, the first factor was labeled Inconsistent Discipline ( $N = 12$ ), as it contained items related to parents' variable enforcement and follow-

through of discipline routines. Consistent with previous studies (Clerkin et al., 2007; Zlomke, et al., 2014), the adaptive parenting constructs from the original APQ (Parental Involvement and Positive Parenting) collapsed into a single factor during analysis. This second factor was labeled Responsive & Involved Parenting ( $N = 11$ ), as its items reflected parenting behavior that was nurturing, contingently reinforcing, and supportive. The third factor was labeled Indifferent/Detached Parenting ( $N = 3$ ), as it contained items suggestive of a minimal-to-limited degree of parent involvement in their child's day-to-day functioning.

**Single Parent Sample.** The Single Parent sample yielded a good Kaiser-Meyer-Olkin statistic ( $KMO = .73$ ; Hutcheson & Sofroniou, 1999) and a highly significant Bartlett's test ( $p < .001$ ), confirming the adequacy of the sample for PCA. Kaiser criteria suggested a 3 factor structure that was clean and interpretable, and accounted for 40.9% of the variance. To remain consistent with the two-parent sample, 9 of the original 35 items were removed from analysis due to similar loadings across multiple factors or low factor loadings ( $<.30$ ) in one or both samples.

Review of items suggested that the same Responsive and Involved Parenting ( $N = 11$ ) factor discovered in the two-parent sample was present in the single parent sample, but constituted a stronger factor among single mothers. Factor B contained parenting behaviors that were either indifferent (e.g., "Your child is not punished when he/she has done something wrong") or excessively punitive (e.g., "You slap your child when he/she does something wrong"). The factor was therefore labeled Unpredictable Parenting ( $N = 7$ ) to reflect the fact that parents' responses to instances of misbehavior vacillated from one extreme end of the discipline spectrum (i.e., non-involvement) to the other (i.e., coercive physical discipline). Factor C was labeled Overly Permissive Parenting ( $N = 8$ ), as its items were indicative of parenting behaviors that were excessively indulgent or exerted minimal effort to control/shape their child's behavior.

**Replication Analysis.** To determine if the factors generated through PCA met criteria for structural replication, the strongest factor loading for each item was highlighted and compared across samples (see Appendix B; Osborne & Fitzpatrick, 2012). Analysis indicated that two of the three factors (factors B and C, factors 1 and 3) failed to replicate. However, the Responsive and Involved Parenting construct (factor A and factor 2) replicated nicely in the single parent and two-parent samples. During the second stage of replication analysis, the squared difference of congruent items in each sample was calculated to assess for significant shifts in magnitude (see last column of Appendix B). Per Osborne & Fitzpatrick's (2012) recommendation, magnitudes were considered increasingly volatile the further they exceeded a threshold of .04. Analysis demonstrated that the squared differences of factor loadings for 10 of 11 items were in the acceptable range. The lone exception was item 18, whose magnitude of .0484 fell at or slightly above threshold. Overall, given the magnitudes of the remaining items, the Responsive and Involved Parenting factor was considered to have replicated well across samples (Osborne & Fitzpatrick, 2012).

### **Reliability and Validity**

To examine the reliability of the APQ's original constructs and those derived through factor analysis, internal consistency was explored using Cronbach's alpha. Internal validity was examined using the Pearson product-moment correlation coefficient (Pearson's  $r$ ).

**Two-Parent Sample.** The original theoretically-derived constructs of the APQ demonstrated acceptable to good internal consistency on four out of five subscales, with coefficient alphas ranging from .74 to .85 (Table 1). Surprisingly, the Positive Parenting construct evidenced poor reliability ( $\alpha = .36$ ) in the two-parent sample. Consistent with previous studies, a strong correlation between the Parental Involvement and Positive Parenting scales ( $r = .51, p < .01$ ) was present, lending support to the theory that the scales may tap into the same

Table 1  
Two-Parent Sample: Internal Consistency and Validity

APQ Constructs	$\alpha$	Parental Involve.	Positive Parenting	Poor Mon./Supervis.	Incon. Discipline	Corporal Pun.
Parental Involvement	.82	–	.51**	-.23*	-.23**	-.17
Positive Parenting	.36		–	-.13	-.13	-.13
Poor Monitoring/Supervision	.85			–	.64**	.48**
Inconsistent Discipline	.74				–	.55**
Corporal Punishment	.81					–

  

EFA Constructs	$\alpha$	Incon. Discipline	Resp. & Inv. Parenting	Indiff./Detached Parenting
Inconsistent Discipline	.87	–	-.24*	.00
Responsive & Inv. Parenting	.84		–	.29**
Indiff./Detached Parenting	.67			–

\* $p < .05$ . \*\* $p < .01$ .

general parenting dimension (Scott, Briskman, & Dadds, 2011; Shelton et al., 1996). The maladaptive/punitive parenting constructs demonstrated strong positive correlations with each other. While Poor Monitoring and Inconsistent Discipline evidenced small negative correlations with Parental Involvement, they were unrelated to Positive Parenting. Surprisingly, Corporal Punishment also failed to significantly correlate with either adaptive parenting dimension.

Two of the parenting factors derived through analysis, Inconsistent Discipline ( $\alpha = .87$ ) and Responsive and Involved Parenting ( $\alpha = .84$ ), demonstrated good internal consistency. Although the third factor, Indifferent/Detached Parenting ( $\alpha = .67$ ), evidenced questionable reliability, this may be contributable to the factor's small number of items ( $N = 3$ ). Review of correlations suggested weak relationships between factors, providing support for the presence of three distinct parenting constructs.

**Single Parent Sample.** The original theoretically-derived subscales of the APQ demonstrated questionable internal consistency on the Poor Monitoring/Supervision ( $\alpha = .66$ ) and Inconsistent Discipline ( $\alpha = .63$ ) constructs within the single parent sample (Table 2). The

Table 2  
Single Parent Sample: Internal Consistency and Validity

APQ Constructs	$\alpha$	Parental Involve.	Positive Parenting	Poor Mon./Supervis.	Incon. Disc.	Corporal Pun.
Parental Involvement	.78	–	.76**	-.28**	-.23*	.06
Positive Parenting	.77		–	-.33**	-.24*	-.08
Poor Monitoring/Supervision	.66			–	.37**	.29**
Inconsistent Discipline	.63				–	.40*
Corporal Punishment	.72					–

  

EFA Constructs	$\alpha$	Resp. & Inv. Parenting	Unpred. Parenting	Overly Permiss. Parenting
Responsive & Inv. Parenting	.86	–	-.05	-.37**
Unpredictable Parenting	.76		–	.10
Overly Permissive Parenting	.70			–

\* $p < .05$ . \*\* $p < .01$ .

three remaining scales evidenced adequate reliability, with coefficient alphas ranging from .72 to .77. In accordance with the Two-Parent sample, the Positive Parenting scale was strongly positively correlated with the Parental Involvement scale ( $r = .76, p < .01$ ), calling the validity of the construct into question. The maladaptive/punitive parenting constructs demonstrated moderate to strong positive correlations with each other. As expected, Poor Monitoring and Inconsistent Discipline were negatively correlated with the adaptive parenting constructs. However, Corporal Punishment was once again found to be unrelated to Positive Parenting and Parental Involvement.

The parenting factors derived through analysis demonstrated acceptable to good internal consistency, with coefficient alphas ranging from .70 to .86. The Responsive and Involved Parenting factor evidenced a moderate negative correlation with Overly Permissive Parenting, but not Unpredictable Parenting. The two maladaptive parenting factors were found to be unrelated to each other.

## **Regression Analysis**

In order to examine and control for any demographic confounds that may have impacted the validity of results, a preliminary regression analysis was completed to identify participant variables that have previously been linked to parenting behaviors. Eight regression analyses were then completed to evaluate the capacity of parenting behaviors, as measured by the original parenting constructs of the APQ and those derived through factor analysis, and income to predict child conduct problems and aggression, as measured by the BASC-2 Parent Rating Scale. Demographic variables were entered into the first step of each analysis, followed by parenting constructs in the second step.

Finally, to determine if parenting constructs operated differently across samples (i.e., were stronger predictors of child behavior problems in the single parent sample than the two parent sample), 20 regression analyses were completed to test for interactions between family structure and the parenting constructs previously explored. Demographic variables were entered into the first step of each analysis. Following the completion of dummy coding procedures outlined by Aiken & West (1991), family structure (dummy coded; single parents as omitted group) and one of 10 parenting constructs (5 APQ constructs, 5 EFA factors) were entered in the second step. An interaction term consisting of the product of family structure and the parenting construct of interest was created and entered into the third step of each analysis. The regression was run, and the significance of each interaction term was reviewed.

**Preliminary Regression Analysis.** Yearly income, maternal race, maternal age, child age, and maternal education level were entered into separate preliminary regression analyses. Of the 5 variables examined, results indicated that yearly income,  $F(1,245) = 2.52, p < .05$ , and child age,  $F(1,245) = 4.69, p < .05$ , were significant predictors of mother-reported aggression in children. The remaining variables failed to account for a significant portion of variance in child

aggression or conduct problems. To control for the effects of yearly income and child age, the two variables were simultaneously entered into the first step of all subsequent analyses.

**APQ Constructs.** Appendix C summarizes the final regression models predicting child behavior problems from demographic variables and the original parenting constructs of the APQ.

**Two-Parent Sample.** The demographic variables of yearly income and child age accounted for a small but significant portion of variance (6.3%) in child conduct problems,  $F(2, 137) = 4.58, p < .05$  (Appendix C, Model 1). Although Parental Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment were not individually significant, the addition of the constructs improved model fit,  $R^2\Delta = .063, p = .012$  (Appendix C, Model 2). Overall, the model accounted for 12.6% of variance in mother-reported conduct problems in children.

Yearly income and child age accounted for a significant portion of variance in child aggression,  $F(2, 137) = 7.41, p < .01$  (Appendix C, Model A). Once again, the APQ scales were not individually significant but improved model fit in Step 2 of the analysis,  $R^2\Delta = .067, p = .001$  (Appendix C, Model B). Overall, the model accounted for 16.5% of variance in child aggression.

**Single Parent Sample.** Surprisingly, the demographic variables of yearly income and child age failed to account for a significant portion of variance in child conduct problems,  $F(2, 105) = .47, ns$  (Appendix C, Model 1). The addition of Parental Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment failed to improve model fit,  $R^2\Delta = .050, p = .395, ns$  (Appendix C, Model 2). Overall, the model accounted for only 5.9% of variance in mother-reported conduct problems in children.

Yearly income and child age also failed to account for a significant portion of variance in child aggression,  $F(2, 105) = .20, ns$  (Appendix C, Model A). Once again, the APQ scales did

not significantly improve model fit,  $R^2\Delta = .042$ ,  $p = .507$ , *ns* (Appendix C, Model B). Overall, the model accounted for only 4.6% of variance in child aggression.

**EFA Constructs.** Appendix D summarizes the final regression models predicting child behavior problems from demographic variables and the parenting constructs derived through factor analysis of the APQ.

**Two-Parent Sample.** The demographic variables of yearly income and child age accounted for a small but significant portion of variance (6.3%) in child conduct problems,  $F(2, 137) = 4.58$ ,  $p < .01$  (Appendix D, Model 1). The addition of the Inconsistent Discipline, Responsive and Involved Parenting, and Indifferent/Detached Parenting constructs further improved model fit,  $R^2\Delta = .037$ ,  $p = .014$  (Appendix D, Model 2). More specifically, analysis suggested that increased levels of inconsistent discipline were predictive of increased conduct problems in children. Overall, the model accounted for 10.0% of variance in mother-reported conduct problems.

Yearly income and child age accounted for a significant portion of variance in child aggression,  $F(2, 137) = 7.41$ ,  $p < .01$  (Appendix D, Model A). The addition of the EFA constructs in Step 2 improved model fit,  $R^2\Delta = .047$ ,  $p = .001$  (Appendix D, Model B). As was the case with conduct problems, results suggested that increased levels of inconsistent discipline were predictive of increased levels of aggression in children. Overall, the model accounted 14.6% of variance in mother-reported child aggression.

**Single Parent Sample.** The demographic variables of yearly income and child age failed to account for a significant portion of variance in child conduct problems,  $F(2, 105) = .47$ , *ns* (Appendix D, Model 1). The addition of Responsive and Involved Parenting, Unpredictable Parenting, and Overly Permissive Parenting failed to improve model fit,  $R^2\Delta =$

.031,  $p = .356$ , *ns* (Appendix D, Model 2). Overall, the model accounted for only 4.0% of variance in mother-reported conduct problems in children.

Yearly income and child age failed to account for a significant portion of variance in child aggression,  $F(2, 105) = .20$ , *ns* (Appendix D, Model A). Addition of the EFA constructs did not significantly improve model fit,  $R^2\Delta = .039$ ,  $p = .254$  (Appendix D, Model B). Overall, the model accounted for only 4.3% of variance in child aggression.

**Test of Interaction.** To determine if parenting constructs operated differently across samples, regression analyses were completed to test for interactions between family structure (dummy coded), the original constructs of the APQ, and those derived through factor analysis. Following the dummy coding and variable creation/entry procedures previously described, the interaction term for each regression was reviewed. All interaction terms were non-significant, suggesting that the slopes of the regression lines in each equation were not significantly different. As such, results provided no evidence that the parenting constructs operated differently in mothers from single parent and two-parent households. Appendix E presents the regression coefficient, unique variance, and significance level of each interaction term.

## Discussion

The first aim of this study was to compare the underlying factor structure of the Alabama Parenting Questionnaire across two distinct family structures. Review of the APQ literature published to date suggests that this is the first study to do so. Consistent with Clerkin et al. (2007), Elgar et al. (2007), and Wells et al. (2000), principal components analysis revealed the presence of three parenting factors in the two-parent and single parent samples, accounting for 44.37% and 40.90% of variance, respectively. One positive parenting construct, Responsive and Involved Parenting, was present in both samples and met criteria for acceptable replication across family structures. However, the basic structural replication of the remaining constructs failed, with 15 items loading onto non-congruent factors in each sample. These results suggested the presence of two distinct parenting constructs in each sample, lending partial support to hypothesis 1, and providing preliminary evidence against the assumption that parenting behaviors operate similarly across groups (Beckert et al., 2008).

Conceptually, these findings support Deater-Deckard and Dodge (1997) who assert that although there are species-specific goals of childrearing (e.g., health, safety, happiness), the ways in which parents achieve these goals varies significantly depending upon the context in which they are functioning. Therefore, assessing the parenting behaviors of single parent families with constructs identified in two-parent family structures may be flawed, as it fails to account for the unique challenges that impact individuals' abilities to effectively parent their children.

The second aim of this study was to evaluate the reliability of the APQ's original theoretically-derived parenting constructs and those derived through factor analysis. It was hypothesized that both sets of constructs would be reliable in the two-parent and single parent samples given previous studies suggesting adequate to good internal consistency across APQ parenting scales (Dadds, Maujean, and Fraser, 2003; Frick et al., 1999; Shelton et al., 1996). This

hypothesis was only partially supported. Reliability analysis of the original APQ scales in the two-parent sample demonstrated acceptable to good internal consistency on all constructs except Positive Parenting.

Multiple studies have suggested that the Positive Parenting and Parental Involvement scales may tap into the same underlying parenting dimension (Clerkin et al., 2007; Essau et al., 2006). This was supported in the present study by very strong correlations between the Positive Parenting and Parental Involvement scales in the two parent ( $r = .51, p < .01$ ) and single parent samples ( $r = .76, p < .01$ ), and their collapse into one general adaptive parenting construct (Responsive and Involved Parenting) during both PCA procedures. This was ultimately the only construct that replicated across samples. The parenting constructs derived through factor analysis in the two-parent sample evidenced good internal consistency on the Inconsistent Discipline and Responsive and Involved Parenting constructs. While the third construct, Indifferent/Detached Parenting, demonstrated less robust internal consistency, this may be the result of the factor's small number of items ( $N=3$ ).

The theoretically-derived scales of the APQ were much less reliable in the single parent sample, suggesting that the measure, in its original form, may not have been a great fit for this particular parent population. This is not surprising given that parenting assessments are typically conceptualized based on parenting constructs identified in predominantly white, married couples, which does not reflect the demographic composition of this study's single parent sample (i.e., 88% African American women, 62% impacted by poverty, etc.). The parenting constructs derived through factor analysis evidenced greater internal consistency among single mothers.

Factor correlations were largely as expected for the theoretically-derived scales of the APQ. That is to say that the two positive parenting constructs were strongly, positively correlated with each other, as were the negative parenting constructs of Poor Monitoring/Supervision and

Inconsistent Discipline. The lone exception was the original APQ's Corporal Punishment scale, which positively correlated with the other maladaptive parenting constructs (Inconsistent Discipline, Poor Monitoring and Supervision), but failed to negatively correlate with any of the positive parenting constructs. This was surprising, as research has consistently shown that mothers who engage in physical discipline tend to use other power-assertive discipline techniques with greater frequency than positive and/or adaptive parenting behaviors, particularly in stressful environments (Hilton & Desrochers, 2000; McLoyd, 1990). The corporal punishment literature suggests that the present findings may be related to this study's sample characteristics.

While it is well-documented that excessive physical discipline can be associated with negative child outcomes, parenting behaviors have been shown to relate differently to child adjustment depending on different contextual and cultural factors (Jackson et al., 2009; Lansford et al., 2004). Previous studies have suggested that corporal punishment is more normative for African American families, who may implement such parenting practices in an effort to decrease the likelihood their children will engage in high risk activities (Murry et al., 2001). For the same reason, physical discipline is utilized with greater frequency among families affected by poverty, regardless of race (McLoyd, 1990). Given that participants of the current study were predominantly African American, and a significant number of participants were impacted by poverty (regardless of ethnicity or family structure), it stands to reason that the use of corporal punishment and positive parenting behaviors may not be mutually exclusive. Therefore, an appreciable negative correlation between subscales might not exist.

The third and final aim of this study was to determine the capacity of parenting constructs to predict child behavior problems that have frequently been linked to non-nuclear family structures. Consistent with previous studies, preliminary analysis of demographic variables indicated that yearly income and child age were significant predictors of child behavior

problems. As such, their effects were controlled for during subsequent analyses in an effort to minimize the potential for demographic confounds. Based on extensive literature indicating that poverty and the utilization of maladaptive parenting behaviors are major determinants in externalizing behavior among children from non-nuclear families (Bank et al., 1993; Jackson et al., 2010; Kotchick et al., 2005; Loeber & Stouthamer-Loeber, 1986; McLoyd, 1990), it was hypothesized that yearly income, the original parenting constructs of the APQ and those derived through factor analysis would not only predict child conduct problems and aggression, but would do so more strongly in the single parent sample than the two-parent sample.

This hypothesis was not supported. While increased levels of inconsistent discipline (as measured by the parenting construct derived through EFA) were predictive of increased conduct problems and child aggression in the two-parent sample, neither parenting constructs nor demographic variables were significant predictors of mother-reported behavior problems in children from single parent households. Given the high rate of poverty within the single parent sample and the well-established relationship between socioeconomic status, maladaptive parenting behaviors, and externalizing behaviors in children (Bulanda, 2007; Weinraub et al., 2002), it is difficult to explain why yearly income was not significantly predictive of child behavior problems. Restriction of range may serve one explanation, given that the majority single parent participants were African American, and impoverished or poor.

Although several factors may explain the failure of parenting constructs to predict conduct problems and aggression, the most obvious may be psychometric in nature. As previously discussed, the original scales of the APQ were not very reliable within the single parent sample, which may have impacted the results of regression analyses. This does not explain why the parenting constructs also failed to significantly predict child behavior problems in the two-parent sample, for which the internal consistency of constructs ranged from adequate

to good. An alternate explanation involves the interrelatedness of predictor variables, particularly the parenting constructs of the original APQ (see Tables 2 and 3). High correlations between predictors may explain why the individual parenting constructs were not significantly predictive of the outcome variables, but improved the overall fit of the predictive model.

Regression results suggest that other variables not included in the model, and perhaps not yet fleshed out in the non-nuclear parenting literature, may be influencing child outcomes. Along with the inconsistent psychometric integrity of the parenting scales previously discussed, this may explain why different parenting constructs were discovered in single and two-parent families during factor analysis, but these differences were not reflected during subsequent tests of interaction. More broadly, it is important to highlight the demographic differences between this study's combined sample and those used to create and validate the APQ, particularly with regard to household income (see Frick et al., 1999; Shelton et al., 1996). Given the high rate of poverty among participants in the current study, one must question whether results speak more to the effects of financial hardship on parenting behavior than family structure.

### **Limitations and Future Directions**

This study has several limiting factors. Assessment measures were confined to self-report, as observational and interview data were not collected. As with any study using such measures, it was assumed that participant responses were a reliable and honest estimation of mothers' actual behavior. However, this cannot be confirmed. A second limitation of the study lies in its cross-sectional rather than longitudinal design. Future studies should attempt to obtain data using multi-method assessments across multiple time points. Lastly, because this study involves exploratory factor analyses, it cannot currently be confirmed that these results will extend beyond this sample. Additional research involving theoretical or factorial model analysis (e.g., SEM, confirmatory factor analysis) with larger samples and a greater diversity of non-

nuclear family structures (e.g., cohabiting and extended families, families headed by single fathers, etc.) will be necessary to determine if the underlying factor structure of the APQ varies across family structures. The poor fit of the APQ to this study's single parent sample suggests that further development is needed. More specifically, a greater variety of parenting items would be beneficial for identifying the parenting behaviors specific to different family structures.

Overall, the current study does not provide clear evidence to suggest that parenting constructs operate differently depending on familial composition. Given the increasing prevalence of non-nuclear families in the United States, this study highlights the need for additional research to determine if parenting behaviors vary due to differences in family structure or the context and environment in which parents raise their children.

## References

- Amato, P.R., & Gilbreth, J.G. (1999). Nonresident fathers and children's well-being: A meta-analysis. *Journal of Marriage and the Family*, *61*, 557-573.
- Anderson, C. (2003). The diversity, strengths, and challenges of single parent households. In F. Walsh (Ed.), *Normal Family Processes: Growing Diversity & Complexity* (3<sup>rd</sup> ed.). New York, NY; The Guilford Press.
- Aronson, S.R., & Huston, A.C. (2004). The mother-infant relationship in single, cohabiting, and married families: A case for marriage? *Journal of Family Psychology*, *18*(1), 5-18.
- Bank, L., Forgatch, M.S., Patterson, G.R., & Fetrow, R.A. (1993). Parenting practices of single mothers: Mediators of negative contextual factors. *Journal of Marriage and the Family*, *55*, 371-384.
- Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth & Society* *9*(3), 239-276.
- Beckert, T.E., Strom, P.S., Strom, R.D., Darre, K., & Weed, A. (2008). Single mothers of early adolescents: Perceptions of competence. *Adolescence*, *43* (170), 275-290.
- Belsky, J. (1984). The Determinants of Parenting: a process model. *Child Development*, *55*, 83-96.
- Brooks-Gunn, J., & Markman, L. (2005). The contribution of parenting to ethnic and racial gaps in school readiness. *The Future of Children*, *15*(1), 139-168.
- Bulanda, R. (2007). Beyond provisions: The relationship between poverty status and parenting among single mothers. *Marriage & Family Review*, *42*, 63-86.
- Carlson, M.J., & Corcoran, M.E. (2001). Family structure and children's behavioral and cognitive outcomes. *Journal of Marriage and Family*, *63*, 779-792.
- Clerkin, S.M., Marks, D J., Policaro, K.L., & Halperin, J.M. (2007). Psychometric properties of the Alabama Parenting Questionnaire-Preschool revision. *Journal of Clinical Child and Adolescent Psychology*, *36* (1), 19-28.
- Costello, A.B., & Osborne, J.W. (2005). Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most from Your Analysis. *Practical Assessment, Research, & Evaluation*, *10* (7), 1-9.
- Dadds, M.R., Maujean, A., & Fraser, J.A. (2003). Parenting and conduct problems in children: Australian data and the psychometric properties of the Alabama Parenting Questionnaire. *Australian Psychologist*, *38*(3), 238-241.

- Deater-Deckard, K., Dodge, K.A. (1997). Externalizing behavior problems and discipline revisited: Nonlinear effects and variation by culture, context, and gender. *Psychological Inquiry*, 8(3), 161-175.
- DiFonzo, J.H., & Stern, R.C. (2013). Breaking the mold and picking up the pieces: Rights of parenthood and parentage in non-traditional families. *Family Court Review*, 51(1), 104-118.
- Dorsey, S., Forehand, R., & Brody, G. (2007). Coparenting conflict and parenting behavior in economically disadvantaged single parent African American Families: The role of maternal psychological distress. *Journal of Family Violence*, 22, 621-630.
- Dufur, M.J., Howell, N.C., Downey, D.B., Ainsworth, J.W., & Lapray, A.J. (2010). Sex differences in parenting behaviors in single-mother and single-father households. *Journal of Marriage and Family*, 72, 1092-1106.
- Elgar, F.J., Waschbusch, D.A., Dadds, M.R., & Sigvaldason, N. (2007). Development and validation of a short form of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies*, 16, 243-259.
- Essau, C.A., Sasagawa, S., & Frick, P.J. (2006). Psychometric Properties of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies*, 15(5), 597-616.
- Field, A. (Ed.). (2005). Exploratory Factor Analysis. *Discovering Statistics Using SPSS* (2<sup>nd</sup> ed., pp.619-680). Thousand Oaks, CA: Sage Publications Inc.
- Frick, P.J. (1991). *The Alabama Parenting Questionnaire*. Unpublished rating scale, University of Alabama.
- Frick, P.J., Christian, R.E., & Wootton, J.M. (1999). Age trends in the association between parenting practices and conduct problems. *Behavior Modification*, 23(1), 106-128.
- Goldberg, J.S., & Carlson, M.J. (2014). Parents' relationship quality and children's behavior in stable married and cohabiting families. *Journal of Marriage and Family*, 76(4), 762-777.
- Hawes, D.J., & Dadds, M.R. (2006). Assessing parenting practices through parent-report and direct observation during parent-training. *Journal of Child and Family Studies*, 15(5), 555-568.
- Hilton, J.M., & Desrochers, S. (2000). The influence of economic strain, coping, with roles, and parental control on the parenting of custodial single mothers and custodial single fathers. *Journal of Divorce and Remarriage*, 33, 55-76.
- Hinshaw, S.P., Owens, E.B., Wells, K.C., Kraemer, H.C., Abikoff, H.B., Arnold, L.E.,...Wigal, T. (2000). Family Processes and Treatment Outcome in the MTA:

- Negative/Ineffective Parenting Practices in Relation to Multimodal Treatment. *Journal of Abnormal Child Psychology*, 28 (6), 555–568.
- Horowitz, J.A. (1995). A conceptualization of Parenting: Examining the Single Parent Family. *Marriage and Family Review*, 20 (1-2), 43-70.
- Hutcheson, G.D., & Sofroniou, N. (1999). *The Multivariate Social Scientist: Introductory Statistics Using Generalized Linear Models*. Thousand Oaks, CA: Sage Publications.
- Jackson, A.P., Choi, J.K., & Franke, T.M. (2009). Poor single mothers with young children: Mastery, relations with nonresident fathers, and child outcomes. *Social Work Research*, 33, 95-106.
- Jackson, A.P., Gyamfi, P., Brooks-Gunn, J., & Blake, M. (1998). Employment status, psychological well-being, social support, and physical discipline practices of single black mothers. *Journal of Marriage and the Family*, 60, 894-902.
- Jackson, A.P., Preston, K.S.J., & Franke, T.M. (2010). Single parenting and child behavior problems in Kindergarten. *Race and Social Problems*, 2, 50-58.
- Jones, D.J., Forehand, R., Brody, G., & Armistead, L. (2003). Parental monitoring in African American, single mother-headed families: An ecological approach to the identification of predictors. *Behavior Modification*, 27, 435-457.
- Kotchick, B.A., Dorsey, S., & Heller, L. (2005). Predictors of parenting among African American single mothers: Personal and contextual factors. *Journal of Marriage and Family*, 67, 448-460.
- Lansford, J.E., Chang, L., Dodge, K.A., Malone, P.S., Obaru, P., Palmerus, K.,...Quinn, N. (2004). Physical discipline and children's adjustment: Cultural normativeness as a moderator. *Child Development*, 76 (6), 1234-1246.
- Loeber, R., & Stouthamer-Loeber, M. (1986). Family factors as correlates and predictors of juvenile conduct problems and delinquency. In M. Tonry & N. Morris (Eds.), *Crime and Justice* (Vol. 7, pp. 29-149). Chicago: University of Chicago Press.
- Maguin, E., Nochajski, T.H., De Wit, D.J., & Safyer, A. (2012). Examining the Validity of the Adapted Alabama Parenting Questionnaire-Parent Global Report Version. *Psychological Assessment*, 1-13.
- Martin, J.A., Hamilton, B.E., Osterman, M.J.K., Curtin, S.C., & Mathews, T.J. (2012). *Births: Final Data for 2012* (National Vital Statistics Reports, Vol. 62, No. 9). Hyattsville, MD:National Center for Health Statistics.
- McKee, L.G., Jones, D.J., Forehand, R., & Cueller, J. (2013). Assessment of parenting behaviors and style, parenting relationships, and other parent variables in child assessment. In D.H. Saklofske, C.R. Reynolds, & V.L. Schwann (Eds.), *The*

- Oxford Handbook of Child Psychological Assessment (pp. 788-821). New York, NY: Oxford University Press.
- McLoyd, V.C. (1990). The impact of economic hardship on black families and children: psychological distress, parenting, and socioemotional development. *Child Development, 61*, 311-346.
- Miller, C. C. (2015, May 9). Single motherhood, in decline overall, rises for women 35 and older. *The New York Times*, pp. A12.
- Molinuevo, B., Pardo, Y., & Torrubio, R. (2011). Psychometric Analysis of the Catalan Version of the Alabama Parenting Questionnaire (APQ) in a Community Sample. *The Spanish Journal of Psychology, 14*(2), 944-955.
- Murry, V.M., Bynum, M.S., Brody, G.H., Willert, A., & Stephens, D. (2001). African American single mothers and children in context: A review of studies on risk and resilience. *Clinical Child and Family Psychology Review, 4*(2), 133-155.
- Osborne, J.W., & Fitzpatrick, D.C. (2012). Replication analysis in exploratory factor analysis: What it is and why it makes your analysis better. *Practical Assessment, Research & Evaluation, 17*(15), 1-8.
- Peterson, J., & Hawley, D. (1998). Effects of stressors on parenting attitudes and family functioning in a primary prevention program. *Family Relations, 47*, 221-227.
- Randolph, K.A., & Radey, M. (2011). Measuring Parenting Practices among Parents of Elementary School–Age Youth. *Research on Social Work Practice, 21*(1) 88-97.
- Reynolds, C. R., & Kamphaus, R. (2004). Behavior Assessment System for Children [Second Edition].
- Roberts, S. (2010, March 18). Extended family households on the rise. *The New York Times*, pp. A12.
- Schwartz, P. (2014, October 14). Why more women choose not to marry. CNN Opinion & Social Commentary. Retrieved from [http://www.cnn.com/2014/10/15/opinion/schwartz-single-women/index.html?hpt=hp\\_t3](http://www.cnn.com/2014/10/15/opinion/schwartz-single-women/index.html?hpt=hp_t3).
- Scott, S., Briskman, J., & Dadds, M.R. (2011). Measuring parenting in community and public health research using brief child and parent reports. *Journal of Child and Family Studies, 20*, 343-352.
- Shelton, K.K., Frick, P.J., & Wootton, J. (1996). Assessment of parenting practices in families of elementary school-age children. *Journal of Clinical Child Psychology, 25* (3), 317-329.

- Stein, R., & Copen, C. (2013). Study: Record Number of People are Cohabiting. *NPR News*. Radio broadcast available at <http://www.npr.org/2013/04/04/176203263/study-record-number-of-people-are-cohabiting>.
- Stein, S. (2007). Review of the Behavior Assessment System for Children [Second Edition]. In K. F. Geisinger, R. A. Spies, J. F. Carlson, & B. S. Plake (Eds.), *The Seventeenth Mental Measurements Yearbook*. Retrieved from <http://www.ebscohost.com/biomedical-libraries/mental-measurements-yearbook>.
- Stevens, J.P. (2009). *Applied multivariate statistics for the social sciences* (5<sup>th</sup> edition). New York, NY: Routledge.
- Sytsma, S.E., Kelley, M.L., & Wymer, J.H. (2001). Development and Initial Validation of the Child Routines Questionnaire. *Journal of Psychopathology and Behavioral Assessment*, 23(4), 241-251.
- Tabachnick, B. G., and Fidell, L. S. (2012). *Using Multivariate Statistics* (6<sup>th</sup> ed.) Boston, MA: Allyn and Bacon.
- Taylor, P., Passel, J., Fry, R., Morin, R., Wang, W., Velasco, G., and Dockterman, D. (2010). The return of the multi-generational family household. Retrieved from the Pew Research Center website: <http://www.pewsocialtrends.org/2010/03/18/the-return-of-the-multi-generational-family-household/>.
- Thomas, A., & Sawhill, I. (2005). For love *and* money? The impact of family structure on family income. *The Future of Children*, 15(2), 57-74.
- United States Census Bureau, Current Population Survey, Annual Social and Economic Supplements. (2015, January). *Children Under 18 Years Living With Mother Only, by Marital Status of Mother: 1960 to Present*. Retrieved from United States Census Bureau website: <http://www.census.gov/hhes/families/data/children.html>.
- United States Census Bureau, Current Population Survey, Annual Social and Economic Supplements. (2015, January). *Living Arrangements of Children under 18 Years Old: 1960 to Present*. Retrieved from United States Census Bureau website: <http://www.census.gov/hhes/families/data/children.html>.
- United States Census Bureau, United States Department of Commerce, Economics and Statistics Administration. (2012, April). *Households and Families: 2010* (2010 Census Brief No. C2010BR-14). Retrieved from United States Census Bureau website: <https://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf>.
- United States Census Bureau, United States Department of Commerce, Economics and Statistics Administration. (2012). *Poverty Thresholds for 2005 by Size of Family and Number of Related Children Under 18 Years*. Retrieved from United States Census Bureau website: <http://www.census.gov/hhes/www/poverty/data/threshld/thresh05.html>.

- Weinraub, M., Horvath, D.L., & Gringlas, M.B. (2002). Single Parenthood. In M. Bornstein (Ed.), *Handbook of Parenting* (2nd ed., Vol. 3, pp. 109-140). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Wells, K.C., Epstein, J.N., Hinshaw, S.P., Conners, C.K., Klaric, J., Abikoff, H.B., . . . Wigal, T. (2000). Parenting and family stress treatment outcomes in Attention Deficit Hyperactivity Disorder (ADHD): An empirical analysis in the MTA study. *Journal of Abnormal Child Psychology*, 28(6), 543-553.
- Zlomke, K.R., Lamport, D., Bauman, S., Garland, B., & Talbot, B. (2014). Parenting Adolescents: Examining the Factor Structure of the Alabama Parenting Questionnaire for Adolescents. *Journal of Child and Family Studies*, 23(8), 1484-1490.

## Appendix A

### Scale Composition of the Alabama Parenting Questionnaire

---

#### Parental Involvement

1. You have a friendly talk with your child.
  4. You volunteer to help with special activities that your child is involved in (such as sports, Boy/Girl Scouts)
  7. You play games or do other fun things with your child.
  9. You ask your child about his/her day in school.
  11. You help your child with his/her homework.
  14. You ask your child what his/her plans are for the coming day.
  15. You drive your child to a special activity.
  20. You talk to your child about his/her friends.
  23. Your child helps plan family activities.
  26. You attend PTA meetings, parent-teacher conferences, or other meetings at your child's school.
- 

#### Positive Parenting

2. You let your child know when he/she is doing a good job with something.
  5. You reward or give something extra to your child for obeying you or behaving well.
  13. You compliment your child when he/she does something well.
  16. You praise your child if he/she behaves well.
  18. You hug or kiss your child when he/she has done something well.
  27. You tell your child that you like it when he/she helps out around the house.
- 

#### Poor Monitoring/Supervision

6. Your child fails to leave a note or let you know where he/she is going.
  10. Your child stays out in the evening past the time he/she is supposed to be home.
  17. Your child is out with friends you don't know.
  19. Your child goes out without a set time to be home.
  21. Your child is out after dark without an adult with him/her.
  24. You get so busy that you forget where your child is and what he/she is doing.
  28. You don't check that your child comes home from school when he/she is supposed to.
  29. You don't tell your child where you are going.
  30. Your child comes home from school more than an hour past the time you expect him/her.
  32. Your child is at home without adult supervision.
- 

#### Inconsistent Discipline

3. You threaten to punish your child and then do not actually punish him/her.
  8. Your child talks you out of being punished after he/she has done something wrong.
  12. You feel that getting your child to obey you is more trouble than it's worth.
  22. You let your child out of a punishment early (e.g., lift restrictions earlier than you originally said).
  25. Your child is not punished when he/she has done something wrong.
  31. The punishment you give your child depends on your mood.
- 

#### Corporal Punishment

33. You spank your child with your hand when he/she has done something wrong.
  35. You slap your child when he/she does something wrong.
  38. You hit your child with a belt, switch, or other object when he/she has done something wrong.
- 

#### Other Discipline Practices

34. You ignore your child when he/she is misbehaving.
  36. You take away privileges or money from your child as a punishment.
  37. You send your child to his/her room as a punishment.
  39. You yell or scream at your child when he/she has done something wrong.
  40. You calmly explain to your child why his/her behavior was wrong when he/she misbehaves/
  41. You use time out (make him/her sit or stand in a corner) as a punishment.
  42. You give your child extra chores as a punishment.
-

**Appendix B**  
**Factor Structures in Single Parent and Two-Parent Samples**

Items	Single Parent Factor Structure			Two-Parent Factor Structure			Squared Diff.
	A	B	C	1	2	3	
2. You let your child know when he/she is doing a good job with something	<b>.60</b>	-.06	-.21	-.15	<b>.66</b>	-.09	<b>.0036</b>
3. You threaten to punish your child and then do not actually punish him/her	.18	-.06	<b>.50</b>	<b>.60</b>	.16	-.22	<i>failed</i>
4. You volunteer to help with special activities that your child is involved in	<b>.63</b>	.07	.13	-.17	<b>.55</b>	.19	<b>.0064</b>
7. You play games or do other fun things with your child	<b>.63</b>	.08	-.05	-.17	<b>.59</b>	.24	<b>.0016</b>
8. Your child talks you out of being punished after he/she has done something wrong	.09	.03	<b>.62</b>	<b>.63</b>	.00	-.03	<i>failed</i>
10. Your child stays out in the evening past the time he/she is supposed to be home	-.28	.17	<b>.58</b>	<b>.60</b>	-.18	.42	<i>failed</i>
11. You help your child with his/her homework	<b>.65</b>	.16	-.24	-.13	<b>.50</b>	.30	<b>.0225</b>
12. You feel that getting your child to obey you is more trouble than it's worth	-.30	.10	<b>.58</b>	<b>.75</b>	-.18	.06	<i>failed</i>
13. You compliment your child when he/she does something well	<b>.62</b>	-.15	-.31	-.09	<b>.61</b>	-.12	<b>.0001</b>
15. You drive your child to a special activity	<b>.55</b>	-.10	.10	-.04	<b>.68</b>	-.13	<b>.0169</b>
16. You praise your child if he/she behaves well	<b>.58</b>	-.19	.04	.06	<b>.75</b>	-.17	<b>.0289</b>
18. You hug or kiss your child when he/she has done something well.	<b>.54</b>	.03	-.40	-.04	<b>.76</b>	-.00	<b>failed</b>
19. Your child goes out without a set time to be home	-.19	.15	<b>.48</b>	<b>.57</b>	-.23	.15	<i>failed</i>
22. You let your child out of a punishment early	.03	-.02	<b>.64</b>	<b>.70</b>	-.08	-.12	<i>failed</i>
23. Your child helps plan family activities	<b>.65</b>	.01	.05	-.07	<b>.61</b>	.05	<b>.0016</b>
25. Your child is not punished when he/she has done something wrong	.07	<b>.60</b>	.15	.28	.02	<b>.51</b>	<i>failed</i>
26. You attend meetings, parent-teacher conferences, or other functions at your child's school	<b>.58</b>	.08	-.08	-.13	<b>.42</b>	.07	<b>.0256</b>
27. You tell your child that you like it when he/she helps out around the house	<b>.71</b>	.00	-.11	-.01	<b>.58</b>	.02	<b>.0169</b>
28. You don't check that your child comes home from school when he/she is supposed to	.12	<b>.69</b>	.07	.08	.12	<b>.66</b>	<i>failed</i>
29. You don't tell your child where you are going	.00	<b>.69</b>	.07	.10	.05	<b>.82</b>	<i>failed</i>
30. Your child comes home from school more than an hour past the time you expect him/her	-.29	<b>.41</b>	.11	<b>.57</b>	-.21	.46	<i>failed</i>
31. The punishment you give your child depends on your mood	.01	.36	<b>.52</b>	<b>.56</b>	-.19	.18	<i>failed</i>
32. Your child is at home without adult supervision	-.34	-.12	<b>.46</b>	<b>.45</b>	-.12	.14	<i>failed</i>
33. You spank your child with your hand when he/she has done something wrong	.11	<b>.62</b>	-.09	<b>.58</b>	.01	.10	<i>failed</i>
35. You slap your child when he/she does something wrong	-.10	<b>.68</b>	.12	<b>.73</b>	-.10	.10	<i>failed</i>
38. You hit your child with a belt, switch, or other object when he/she misbehaves	-.07	<b>.68</b>	-.07	<b>.66</b>	-.12	.17	<i>failed</i>
Eigenvalue	4.62	3.11	2.90	4.87	4.48	2.19	
% Variance	17.77	11.96	11.16	18.72	17.23	8.43	
Total % Variance	40.90			44.37			

Single Parent Sample:  $KMO = .73$ ; Bartlett's Test,  $p < .001$ .

Two-Parent Sample:  $KMO = .78$ ; Bartlett's Test,  $p < .001$ .

**Appendix C**  
**APQ Constructs as Predictors of Conduct Problems and Aggression**

Predictor	Conduct Problems								Aggression							
	Model 1				Model 2				Model A				Model B			
	$\beta$	$t$	$R^2$	$F$	$\beta$	$t$	$R^2$	$R^2\Delta$	$\beta$	$t$	$R^2$	$F$	$\beta$	$t$	$R^2$	$R^2\Delta$
<b>Two Parent Sample</b>																
Yearly Income	-.12	-1.48	.063	4.58*	-.06	-.65			-.19	-2.34*	.098	7.41**	-.12	-1.36		
Child Age	.21	2.51*			.22	2.62**			.23	2.85**			.23	2.83**		
APQ Parental Involve.					-.06	-.63	.126	.063*					-.12	-1.21	.165	.067**
APQ Positive Parenting					-.02	-.21							-.04	-.44		
APQ Poor Mon./Sup.					-.04	-.35							-.04	-.37		
APQ Incon. Discipline					.10	.87							.10	.92		
APQ Corp. Punishment					.19	1.90							.15	1.60		
<b>Single Parent Sample</b>																
Yearly Income	.06	.57	.009	.47	.06	.57			.06	.61	.004	.20	.11	1.04		
Child Age	.08	.77			.01	.08			.02	.18			-.01	-.13		
APQ Parental Involve.					-.10	-.71	.059	.050					-.04	-.29	.046	.042
APQ Positive Parenting					-.08	-.57							-.05	-.38		
APQ Poor Mon./Sup.					.07	.62							.03	.22		
APQ Incon. Discipline					.08	.77							.12	1.09		
APQ Corp. Punishment					-.09	-.87							.10	.91		

\* $p < .05$ . \*\* $p \leq .01$ .

**Appendix D**  
**EFA Constructs as Predictors of Conduct Problems and Aggression**

Predictor	Conduct Problems								Aggression							
	Model 1				Model 2				Model A				Model B			
	$\beta$	$t$	$R^2$	$F$	$\beta$	$t$	$R^2$	$R^2\Delta$	$\beta$	$t$	$R^2$	$F$	$\beta$	$t$	$R^2$	$R^2\Delta$
<b>Two Parent Sample</b>																
Yearly Income	-.12	-1.48	.063	4.58*	-.07	-.80			-.19	-2.34*	.098	7.41**	-.14	-1.57		
Child Age	.21	2.51*			.20	2.35*			.23	2.85**			.21	2.55*		
EFA Incon. Discipline					.19	2.14*	.100	.037*					.18	2.11**	.146	.047**
Resp. & Inv. Parenting					-.05	-.53							-.11	-1.29		
Indiff./Detach. Parenting					-.02	-.25							-.07	-.78		
<b>Single Parent Sample</b>																
Yearly Income	.06	.57	.009	.47	.04	.37			.06	.61	.004	.20	.07	.69		
Child Age	.08	.77			.03	.32			.02	.18			-.03	-.34		
Resp. & Inv. Parenting					-.12	-1.11	.040	.031					-.07	-.64	.043	.039
Unpredictable Parenting					-.08	-.83							.00	-.04		
Overly Perm. Parenting					.09	.88							.18	1.67		

\* $p < .05$ . \*\* $p \leq .01$ .

**Appendix E**  
**Interaction Terms: Conduct Problems and Aggression**

Interaction Terms	Conduct Problems					Aggression				
	$\beta$	$t$	$R^2$	$R^2\Delta$	$p$	$\beta$	$t$	$R^2$	$R^2\Delta$	$p$
<b>APQ Constructs</b>										
Parental Involvement x FS <sup>a</sup>	-.10	-.38	.072	.001	.703	-.41	-1.49	.073	.009	.139
Positive Parenting x FS	.19	.61	.064	.001	.550	.02	.05	.060	.000	.957
Poor Monitoring/Supervision x FS	.03	.19	.064	.000	.850	.15	.94	.062	.003	.349
Inconsistent Discipline x FS	.07	.38	.073	.001	.706	.05	.27	.071	.000	.790
Corporal Punishment x FS	.23	1.69	.072	.001	.092	.11	.79	.074	.002	.429
<b>EFA Constructs</b>										
Responsive & Involved Parenting x FS	.01	.04	.063	.000	.967	-.25	-.92	.067	.003	.361
Unpredictable Parenting x FS	.14	.99	.057	.004	.323	.16	1.11	.052	.005	.269
Overly Permissive Parenting x FS	.06	.34	.081	.000	.730	.04	.25	.087	.000	.810
Inconsistent Discipline x FS	.05	.28	.068	.000	.783	-.01	-.03	.073	.000	.978
Indifferent/Detached Parenting x FS	.07	.50	.054	.001	.618	.07	.51	.049	.001	.613

\* $p < .05$ . \*\* $p \leq .01$ .

<sup>a</sup>FS = *Family Structure*.

## **Vita**

Leah Adams graduated *Magna Cum Laude* from the University of Georgia in 2008 with a Bachelor of Science degree in psychology, and a Bachelor of Arts degree in sociology. She completed her graduate training in clinical child psychology at Louisiana State University, receiving her Master of Arts degree in December of 2010. She is a candidate to receive her Doctor of Philosophy degree in May of 2016. Leah completed her predoctoral internship training in clinical and pediatric psychology at the University of Tennessee Professional Psychology Internship Consortium. Following internship, she joined the Psychology Service of the Aflac Cancer and Blood Disorders Center at Children's Healthcare of Atlanta. Her interests include the provision of consultation and liaison services within medical settings, working with children with acute and chronic illnesses, and evaluating the effects of hematological and oncological disorders (and their treatment) on emotional, behavioral, and academic functioning.