

SOCIOECONOMIC STATUS, PARENTING, AND EXTERNALIZING PROBLEMS IN  
AFRICAN AMERICAN SINGLE MOTHER HOMES: A PERSON-ORIENTED APPROACH

Margaret T. Anton

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Approved by:

Deborah J. Jones

Dianne S. Ward

Eric A. Youngstrom

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## ABSTRACT

Margaret T. Anton: Socioeconomic Status, Parenting, and Externalizing Problems in African American Single Mother Homes: A Person-Oriented Approach  
(Under the direction of Deborah J. Jones)

African American youth, particularly those from single mother homes, are overrepresented in statistics on externalizing problems. Parenting has been identified as a central context in which to understand youth externalizing problems; however, research on African American families has primarily relied on parenting constructs and norms developed with middle income, intact, European American families. The current study demonstrated that 1) a person-oriented approach elucidates variability in parenting practices *within* African American single mother families; 2) patterns in the data suggest that SES predicts variability in parenting style; and 3) parenting style and income were related to youth externalizing behavior, and that the relationship between Permissive and Disengaged parenting and youth externalizing problems depended on maternal income level. Findings have implications for understanding the specific maternal parenting and socioeconomic contexts in which externalizing problems are most likely to occur within this at-risk, yet relatively underserved group.

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## LIST OF ABBREVIATIONS

SES            Socioeconomic Status

## INTRODUCTION

Despite the recognition that parenting is associated with the development of youth externalizing problems, relatively little empirical research has been dedicated to understanding the antecedents and predictors of parenting, especially within the most at-risk and underserved groups (e.g., Kotchick & Forehand, 2002; Le et al., 2008; McLoyd, 1990). Although studies suggest that race and ethnicity may be predictors of parenting style (e.g., Baumrind, 1972; Hashima & Amato, 1994; Rafferty & Griffin, 2010), others highlight that more attention in the parenting literature needs to be given to the variability of other contextual variables *within* minority families, particularly those most vulnerable to negative youth outcomes, including single mother families (see Garcia-Coll et al., 1996; Hill, 2006; McLoyd, 1990; & Pinderhughes & Le, 2008 for reviews). Of note, the majority (67%) of African American youth will reside in a single parent, primarily mother-headed, household at some point during childhood and/or adolescence (Barrett & Turner, 2005; Mather, 2010; The Annie E. Casey Foundation, 2012). Likely due to a variety of legal, policy, and societal factors, African American youth, especially those from single mother households, are dramatically overrepresented in statistics on externalizing problems, including aggression and rule breaking, relative to European American youth and youth from two parent homes (e.g., Barrett & Turner, 2005; Huizinga, Thornberry, Knight, & Lovegrove, 2007; Lipman, Boyle, Dooley, & Offord, 2002). Although such trends have led some to blame single mother status for compromising youth outcomes, this risk or deficit-focused perspective fails to consider variability *within* the African American single mother family context and links between this variability and child outcomes, particularly

variability in maternal parenting behavior and socio-economic status (Barrett & Turner, 2005; also see Jones, Zalot, Chester, Foster, & Sterrett, 2007; Murry, Bynum, Brody, Willert, & Stephens, 2001 for reviews).

To some extent, this gap in the literature may be due to historical trends in the study of parenting and the measurement of parenting constructs. Early, seminal parenting research was conducted using a person-oriented approach in which parents were aggregated into parenting classes that included parents presenting similar patterns of behavior across multiple dimensions (see McGroder, 2000 for a review). Most notably, Baumrind's (1971) work placed parents into three parenting styles based on their patterns of responses on two constructs: demandingness and responsiveness: (1). Authoritarian or parents who scored high on demandingness and low on responsiveness; (2). Authoritative or parents who scored high on both demandingness and responsiveness; and (3). Permissive or parents who scored low on demandingness and high on responsiveness (also see McKee, Jones, Forehand, & Cuellar, 2013, for a review). In turn, findings by Baumrind and many others since that time highlight that Authoritative parenting style is the most optimal for child socio-emotional functioning (e.g., Deater-Deckard, Dodge, Bates, & Pettit, 1996; Dodge, Pettit, & Bates, 1994; McGroder, 2000).

Despite the early person-oriented foundation of the parenting literature, researchers have increasingly relied on a variable-oriented approach, in which parents are categorized primarily in Baumrind's pre-established parenting styles and/or along one or more of her parenting dimensions (see McGroder, 2000, for a review). Although a variable-oriented approach is not inherently problematic, the Authoritarian, Authoritative, and Permissive parenting typologies were normed in intact, middle income, European American families, but are currently being used to characterize more diverse family constellations including single mother, lower income, and

African American families. This practice continues despite lingering questions regarding the generalizability and validity of these parenting typologies for diverse families (e.g., Kilgore, Snyder, & Lentz, 2000; McLoyd, 1990; McWayne, Owsianik, Green, & Fantuzzo, 2008).

More specifically, three hypotheses and trends emerged from initial research on diverse families, which primarily included a comparison of low income, African American parenting practices to middle or high income, European American parenting practices (Hill, 2006). One hypothesis posits that African American parents are more likely to fall into harsh or unsupportive parenting styles (i.e., Authoritarian parenting) than European American parents (Baumrind, 1972; Baumrind, 1997; Hashima & Amato, 1994). This work suggests that African American parents may be less likely to engage in, or at least report, supportive behaviors as measured on traditional parenting scales, such as hugging and praising their children, and may be more likely to engage in or report punitive behaviors, such as yelling at or spanking their children than European American parents (e.g., Baumrind, 1972; Hashima & Amato, 1994; McGroder, 2000).

When researchers, however, began to probe this pattern and its effect on child outcomes, a second hypothesis emerged. Although harsh and unsupportive parenting is associated with child psychopathology, especially externalizing behaviors, in all children, the deleterious effects of these parenting styles may not be as robust for African American children (e.g., Baumrind, 1997; Brody & Flor, 1998; Costello, Keeler, & Angold, 2001; Deater-Deckard et al., 1996). That is, although African American parenting styles may be more authoritarian than European American parenting styles, specific aspects of this parenting style, such as controlling child behavior, may be more environmentally adaptive in African American families (Baumrind, 1997; Brody & Flor, 1998; McLoyd, 1990). For example, “No Nonsense” parenting, or high levels of control and moderate levels of warmth, has been associated with more youth

independence and assertiveness (Baumrind, 1972), as well as increased cognitive and social competence (Brody & Flor, 1998), in low-income African American youth. In addition, environmental stressors, such as dangerous neighborhoods in which African American families are more likely to live than their European American counterparts (Le et al., 2008), may make parenting practices, such as parental control, more advantageous within the African American community (Brody & Flor, 1998; Garcia-Coll, Meyer, & Brillion, 1995). Despite these findings and hypotheses, however, some research still posits that higher levels of harsh and inconsistent parenting leads to externalizing problems in African American children as it does in European American families (Dodge et al., 1994; Kilgore et al., 2000).

The inconsistent findings on African American parenting and its influence on child outcomes then led to a third idea that called into question the validity and generalizability of intact, middle income, European American normed parenting styles for African American families, particularly given the rise of single mother families within the African American community (e.g., Garcia-Coll et al., 1996; Kilgore et al., 2000; Le et al., 2008; McWayne et al., 2008). Therefore, leaders in the field, including Garcia-Coll and colleagues (1996), cautioned that additional research needs to examine African American maternal parenting in a *within* group model, in order to help disentangle the sociocultural context of parenting and its impact on child outcomes.

With the aim of reconciling these seemingly competing hypotheses, this study builds upon the recommendations by Garcia-Coll and other leaders in the field (e.g., Garcia-Coll et al., 1996; Kilgore et al., 2000; Le et al., 2008; McWayne et al., 2008) by asserting that a range of maternal parenting styles likely exist within African American single mother families. Therefore, this study will return to the foundation of the parenting style literature by using a person-oriented

approach to establish maternal parenting style clusters *within* a sample of African American single mother families. Building upon prior research on parenting in general and African American parenting in particular, it was predicted that mothers would fall into one of three maternal parenting clusters: positive or Authoritative parenting (high warmth and high control); No Nonsense parenting (moderate warmth and high control); and Harsh parenting (low warmth and high control).

In addition, it was expected that parenting styles within African American single mother families might vary as a function of a different sociocultural variables, primarily socioeconomic status (SES). Separate from race and single parent status, SES, or family income and maternal level of education, has been associated with maternal parenting practices in the literature more broadly. Research indicates that lower family income and less maternal education are often associated with aspects of parenting typically considered adverse, including high levels of control, lower levels of affection, and more inconsistent parenting practices overall (e.g., Hill, 2006; Hoff, Laursen, & Tardif, 2002; McLoyd, 1990; Rafferty & Griffin, 2010).

Importantly, African Americans and single mother headed families are disproportionately represented in poverty rates in the United States (e.g., Costello et al., 2001; McLoyd, 1990; Rafferty & Griffin, 2010). Yet, the bulk of the work on SES and parenting has compared European American and African American families (Costello et al., 2001; Hill, 2006; Hoff et al., 2002) and often confounds race, family structure, and low-income status, with mixed results (Barrett & Turner, 2005; Hill, 2006; Le et al., 2008). For example, some research suggests that the influence of SES might not be as impairing for African Americans as it is for European Americans (Costello et al., 2001; Hill, 2006). Other research, however, suggests the opposite, particularly in African American single mother homes characterized by increased stressors, such

as discrimination and lower rates of employment opportunities than European American parents and two parent headed homes (McLoyd, 1990; Rafferty & Griffin, 2010). To this point, some research on racial minority parenting practices indicates that the differences between European American and African American parenting practices disappear when income and education are controlled for (Hashima & Amato, 1994) or only low-income families are examined (Cook, Roggman, & D'zatko, 2012). Such work, however, does not thoughtfully capture the added sociocultural context of single motherhood (Barrett & Turner, 2005; Burchinal, Follmer, & Bryant, 1996). Accordingly, the second aim of the current study was to begin to elucidate the influence of socioeconomic status on maternal parenting within African American single mother families in particular. Specifically, given research suggesting that families with higher SES are less susceptible to stressors that compromise parenting practices (Conger & Donnellan, 2007), it was hypothesized that families with higher levels of maternal education and income (i.e., two variables often used to characterize SES) would engage in more positive parenting practices than mothers with lower levels of education and income. In addition, building upon research that suggests that family stress and contextual factors, such as dangerous neighborhoods, associated with poverty may lead to deficits in parenting (Dodge et al., 1994; Hoff et al., 2002), it was expected that lower SES families would be more likely to fall into the harsh parenting or no nonsense parenting clusters and less likely to fall into the positive parenting cluster.

Finally, research suggests that both parenting style and family SES are associated with child externalizing problems (e.g., Dodge et al., 1994; Elder, Nguyen, & Caspi, 1985; Rothbaum & Weisz, 1994). Specifically, the Family Stress Theory posits that financial strain indirectly influences child well being through parental stress and associated compromises in parenting practices (see Conger & Donnellan, 2007, for a review). In line with the Family Stress Theory,

research suggests that parenting deficits, such as harsh discipline and lack of warmth, associated with the development of child externalizing behaviors, result from family economic hardship (e.g., Bates, Pettit, Dodge, & Ridge, 1998; Dodge et al., 1994; Hoff et al., 2002). Yet, investigating the separate and joint influence of SES and parenting on children has been challenging, because other variables, such as race and single parent status, influence both parenting and SES (Hoff et al., 2002). In addition, previous research suggests that SES and parenting may interact differently for African Americans than European Americans (Hill, 2006).

Accordingly, the third aim of the current study was to investigate the moderating effect of family SES on the relationship between maternal parenting style, specifically no nonsense parenting, and youth externalizing problems within an African American single mother sample. It was predicted that when family SES is lower, the relationship between no nonsense parenting and youth externalizing behavior would not be as strong as when family SES is higher. Previous research suggests that no nonsense parenting serves a protective role for children living in more impoverished circumstances, because higher levels of control may be necessary to protect children (Brody & Flor, 1998). This type of parenting style, however, may be detrimental for higher income children, because increased maternal control in the absence of high maternal warmth is not necessary for these children.

## METHOD

### **Overview**

The current analyses were conducted using data from the African American Families and Children Together (AAFAC) Project, which aimed to examine the role of extended family members in the health and well being of African American youth from single mother homes. African American single mother-headed families with an 11- to 16-year-old adolescent were

recruited from counties across central North Carolina. Recruitment was conducted through community agencies (e.g., health departments, YMCAs, churches), public events (e.g., health fairs), local advertisements (e.g., university-wide informational emails, bus displays, brochures), and word-of-mouth (e.g., participants telling other families about the project). Two hundred and forty-one African American single mother families met eligibility criteria. Of these 241 families, approximately 80 percent ( $n = 194$ ) completed all study procedures.

### **Participants**

Participants for the current analyses were 194 African American single mother-child dyads (see Table 1). On average the adolescents were 13 years old ( $SD=1.59$ , range=11-16 years), and gender was about evenly split (54.6% boys). Mothers were on average 38 years old ( $SD= 6.67$ , Range= 26-64 years). Consistent with national trends for African American single mother families, half the mothers reported that they were “never married” (51%) (The Annie E. Casey Foundation, 2012). Half of the mothers completed some college or vocational school (51%), and the majority (82%) were employed. The average household income was \$29,734 ( $SD = \$17,456$ ). Of note, in contrast to many African American samples, this sample is relatively diverse in terms of education and income of mothers.

### **Procedure**

All procedures were reviewed and approved by the Behavioral Institutional Review Board. Informed consent and assent were obtained from mothers and youths, respectively. Participants decided whether assessments were conducted at a community site or in their home. Interviews were completed on separate laptop computers using Audio Computer-Assisted Self-Interviewing (ACASI) software to decrease the potential for biased responses and to maximize confidentiality. Respondents listened through earphones to pre-recorded questions and personally

recorded their answers via the computer mouse and keyboard. Interviews assessed a variety of psychosocial variables and took approximately 60 to 90 minutes to complete. Families were compensated \$25 for their participation.

In addition to the standard AAFACT protocol, data were collected specifically for the current analyses in order to identify items from three measures to use in the cluster analyses of parenting behavior (see Plan of Analyses for more detail). A panel of five experts in child clinical psychology who study parenting and/or African American families were asked to complete blind ratings of items from measures of maternal warmth (IBQ; Prinz, Foster, Kent, & O'Leary, 1979), maternal monitoring (Stattin & Kerr, 2000), and maternal knowledge (PKS; Stattin & Kerr, 2000) (Jensen et al., 2007; Lengua, Sadowski, Friedrich, & Fisher, 2001). First, experts were provided with a brief overview of the parenting literature, including definitions of Baumrind's (1971) constructs (i.e., responsiveness and demandingness) and maternal warmth and control. Experts were then asked to decide how well items from these three measures of parenting behavior assessed two constructs: maternal warmth/responsiveness and maternal control/demandingness. Experts were provided with the following answer options modeled after the methods in Jensen et al. (2007): *0- Definitely not; 1-Probably not; 2- Kind of; more than not; and 3- Excellent match* (see Appendix F). Consistent with Jensen et al. (2007) who used a similar methodology, these answer options were selected to intentionally exclude a middle category to make items easier to rate and improve rater agreement.

## **Measures**

**Demographics.** Mothers completed a demographics measure, which included information about themselves (e.g., education and age), their child (e.g., adolescent's age), and their family (e.g., household income).

**SES.** Maternal education and household income were reported by mothers and were used to form a measure of socioeconomic status for each parent-youth dyad by entering both income and education level into a multinomial regression model (see Plan of Analyses).

**Parenting Style.** Parenting style clusters were empirically derived using cluster analysis (see Plan of Analyses for more detail). Accordingly, coefficient alphas are reported for the relevant scales, however, analyses were conducted using an item-level approach:

*Maternal Warmth.* Mothers completed the short form of the Interaction Behavior Questionnaire (IBQ; Prinz et al., 1979). This measure assessed warmth and support in the mother-child relationship. The short form contains 20 items with the highest phi coefficients and the highest item-to-total correlations with the 75 items in the long form IBQ. The short form correlates .96 with the longer version. Sample items, which may be endorsed as *True* or *False*, include, “For the most part, he or she likes to talk to you,” and “This child usually listens to what you have to tell him or her.” Scores ranged from 0 to 20, with higher scores indicating greater warmth and support in the mother-child relationship. In addition to being discussed as a measure of warmth in the child-parent relationship or of relationship quality, the IBQ has also been discussed in previous research as measuring parent-child interaction and communication-conflict behavior/ positive communication (Wade, Wolfe, Brown, & Pestian, 2005; Steele, Nesbitt-Daly, Daniel, & Forehand, 2005; Klein & Forehand, 1997). Prinz et al. (1979) and Robin and Weiss (1980) have reported adequate internal consistency and discriminant validity. The alpha coefficient for the current sample was .87.

*Maternal Monitoring.* Maternal monitoring was assessed by reports from the mother using Stattin and Kerr’s (2000) measure. Nine items assessed mother’s knowledge of her child’s whereabouts, activities, and relationships (Dishion & McMahon, 1998). The items are rated on a

5-point scale: 0 (Not at All), 1 (Rarely), 2 (Some of the time), 3 (Most of the time), and 4 (Always). Sample items ask mothers how much they know about “What this child does during his or her free time” and “When this child has an exam or assignment due at school.” Higher scores indicated more maternal monitoring. For the current sample, the coefficient alpha was .79.

*Maternal Knowledge.* The Parental Knowledge Scale (PKS; Stattin & Kerr, 2000) assessed mothers’ knowledge about adolescents’ daily activities. Fifteen items are rated on a 5-point scale: 0 (Not at All), 1 (Rarely), 2 (Some of the time), 3 (Most of the time), and 4 (Always). Five items make up three subscales: *child disclosure*; *parental solicitation*; and *parental control*; however, items were only used from the *parental solicitation* and *parental control* subscales of the measure. Sample items measuring *parental solicitation* include, “Do you talk with this child’s friends when they come to your home?” and “In the last month, how often have you started a conversation with this child about his or her free time?” *Parental control* is measured with items such as, “Does this child need to ask you before he or she can decide with friends what to do on a Saturday night?” and “Do you require that this child tell you where he or she is at night, whom he or she is with, and what they do together?” For the current study, the coefficient alpha was .74.

**Youth Externalizing.** The Aggression and Conduct Problems subscales of the Child Behavior Checklist (CBCL; Achenbach, 1991) were used to assess the adolescent’s externalizing behaviors in the past 6 months. Mothers answered 32 items, and the two subscales were combined get a total score for aggression and conduct problems. The items are rated on a 3-point scale: 0 (not true), 1 (sometimes or somewhat true), and 2 (very or often true). Raw scores were used in the analyses, with higher scores indicating more aggression and conduct problems

(Achenbach, 1991). The Externalizing Score is the sum of the items on the Aggression and Conduct Problems subscales. The coefficient alpha for the Externalizing Score was .86.

## PLAN OF ANALYSES

### **Preliminary analyses**

During preliminary data analysis, descriptive statistics, including means and standard deviations for continuous variables, as well as percentages for count variables, were conducted on sociodemographic and major study variables. The association between sociodemographic and outcome variables was also examined (See Table 1 and Table 2).

Ninety-two percent of the cases had complete data (i.e., 178 out of 194 cases) on the primary constructs of interest for these analyses. Because there was only a relatively small proportion of missing data (range from .01 percent to 4 percent), due to caregivers skipping items or because some items were not applicable to all respondents, single imputation was used for implementing the expectation-maximization (EM) algorithm to estimate missing values.

### **Primary Analyses**

Given the study's focus on understanding variability in parenting styles within African American single mother families, a person-oriented approach was employed. In order to identify the cluster variates (i.e., parenting behaviors, including maternal warmth and control) for the cluster analyses, latent class analysis (LCA) implemented by the Latent Gold Program (Vermunt & Magidson, 2005) was used to determine maternal warmth and a maternal control clusters from the expert data. LCA is a model-based cluster analysis that provides statistical criteria for selecting plausible cluster solutions (Magidson & Vermunt, 2004). Then, cluster analysis was employed to classify individuals into homogenous subgroups based on the cluster variates, with

the goal of maximizing distance between subgroups and minimizing the variance within subgroups (Hair & Black, 2008; von Eye & Bogat, 2006).

In order to complete the cluster analyses, Hair and Black's (2008) 6-stage process was used. After examining the data, the cluster variates were standardized and a distance matrix was created using Gower's distance (Everitt, 1993; Hair & Black, 2008). In order to empirically derive the clusters, a combination of hierarchical analyses (i.e., Ward's method) and non-hierarchical analyses (i.e., *k*-means) were used. Ward's Method attempts to maximize the differences between clusters by treating each individual case as a separate cluster and then combining the most similar clusters systematically until there is one all-inclusive cluster (Ward, 1963). The centroids derived in the agglomerative analysis were used as seed points in the second (non-hierarchical) cluster analysis, as well as the number of clusters derived by investigating cluster trees and pseudo-*T*-squared coefficients. The final cluster solution was accepted by examining the correspondence of the solutions between the hierarchical and non-hierarchical procedures and the matching of clusters with theory. Cluster means of the two constructs (warmth and control) were investigated to label the final clusters.

Given the multi-category nominal outcome (parenting style clusters generated in Aim 1), a multinomial regression model was used to test the hypothesized link between family SES (maternal income and education) and parenting style in Aim 2.

Finally, in order to examine the final hypothesis that SES moderated the relationship between parenting style, specifically no nonsense parenting, and youth externalizing behavior, the generated parenting cluster solutions were coded in order to contrast each parenting style with the other parenting styles. The coded parenting variables were entered in a multiple regression model to investigate the association between family SES, maternal parenting style,

and youth externalizing behavior, and to examine the moderating role of SES on the relationship between parenting style and African American youth externalizing behavior. The overall average association of parenting style and income on youth externalizing behavior will be investigated separately, as well as the relationship parenting style and youth externalizing behavior, holding income constant at the mean. Any significant interactions were explicated.

Power analyses were conducted to ensure that all study aims, including the model with the interaction term, were sufficiently powered (i.e.,  $\beta = .80$  or greater) to test the proposed hypotheses with the available sample size (i.e., 194 participants).

## RESULTS

### **Expert Ratings**

Latent class analysis (LCA) was used to derive cluster variates from the expert ratings of three parenting behavior measures. For the current analyses, a two-cluster solution LCA was tested first for maternal warmth and then for maternal control. Results from these analyses indicated that items from the Interaction Behavior Questionnaire (IBQ; Prinz et al., 1979), a measure of maternal warmth, and on the Parenting Knowledge Scale (PKS; Stattin & Kerr, 2000), a measure of maternal knowledge, were identified as part of the maternal warmth construct. In addition, these analyses suggested that items from both the Parenting Knowledge Scale (PKS; Stattin & Kerr, 2000), as well as a measure of maternal monitoring (Stattin & Kerr, 2000) represent maternal control. Analyses indicated that a maternal warmth and control factor with good internal consistencies (alpha = 0.61; 12 items for warmth; alpha = 0.96; 16 items for control) could be derived from three measures of parenting behavior.

Seventeen of the 39 items were classified as measuring maternal control. All variables had at least a 95 percent probability of being assigned to the maternal control cluster. In addition,

13 items were classified as measuring maternal warmth. The probabilities of being assigned to the maternal warmth cluster ranged from 77 percent to 100 percent. One item, "*In the last month, how often have you started a conversation with this child about his or her free time?*," was classified in both the maternal warmth and control clusters. This item was removed in order to increase the differentiation between the two constructs. Therefore, 12 maternal warmth variables and 16 maternal control variables were retained for the cluster analyses.

### **Cluster Analyses**

The cluster analyses began by addressing missing data with single imputation. Single imputation provides consistent estimates of parameter values, but standard errors may be affected because of overestimation of sample sizes (Schafer & Graham, 2002). Because cluster analyses do not rely on or use precision estimates, the potential standard error biases should not influence the results. Some of the imputed values were outside the range of the data due to the means of items being near the boundaries of the range of the data. These values were rounded down to be within the range of the data (e.g., 4.01 was rounded to 4). No notable differences in the variable distributions were observed after the missing data were imputed.

Next, Ward's method of agglomeration was used with Gower's distance to determine the number of clusters and cluster seeds for the *k*-means cluster analysis. This procedure was conducted with the 28 variates selected in the LCAs on two aspects of parenting (warmth and control). Prior to the analyses, scores on the parenting variates were standardized to ensure that classification would not be influenced by differences in scale variability. Because a definitive approach to determining the number of clusters is not agreed upon (Milligan & Cooper 1985), a number of approaches were used. First, cluster trees and pseudo-T-squared coefficients helped determine an appropriate number of clusters. Cluster trees indicated that there were between

three and five clusters of African American single mother parenting styles. When examining the pseudo-*T*-squared coefficients, it is suggested that the number of clusters is determined based on the relative stability in change in the coefficient from one stage to the next (Hair & Black, 2008). Based on this criterion, the 3-cluster solution, including the cluster seeds was carried forward into the non-hierarchical or *k*-means analysis.

A *k*-means cluster analysis with an a priori three clusters solution was conducted using the cluster centroids from the Ward's Method analysis as the cluster seeds. In order to profile the clusters, the average of each construct, maternal warmth and control, was found. The three clusters that emerged are: 1) Cluster 1, labeled Authoritative ( $n = 71$ ), and was characterized by the highest scores on the maternal warmth and maternal control constructs; 2) Cluster 2, labeled Permissive ( $n = 72$ ), was characterized by moderately above average levels of maternal warmth and moderately low levels of maternal control; 3) Cluster 3, labeled Disengaged, was the least prevalent cluster ( $n = 51$ ), and was characterized by relatively low scores on maternal warmth and moderately low scores on maternal control. Cluster means on each construct (warmth and control) for these final clusters are presented in Table 3, and cluster profiles are depicted in Figure 1.

### **Multinomial Regression**

A multinomial logistic regression was performed to assess the relationship between maternal education and income (SES) and the empirically derived parenting style clusters. Results indicate that when maternal education and income were entered together in the model there was not a statistically significant relationship between these predictors and parenting style,  $\chi^2 = 7.95$ ,  $df = 4$ ,  $p = .09$ . In addition, neither maternal education,  $\chi^2 = 5.01$ ,  $df = 2$ ,  $p = .08$ , nor maternal income,  $\chi^2 = 1.25$ ,  $df = 2$ ,  $p = .53$ , were statistically significant predictors of parenting

style cluster. The overall model and the association between education and parenting style, however, approached statistical significance (i.e.,  $p < .10$ ).

In order to better understand the patterns associated with the marginal significance of this overall model, nine subpopulations were defined to represent the sample. Values of relatively low, medium, and high income (\$10,000, \$30,000, and \$50,000, respectively) and education (high school/GED, college degree, and more than college degree, respectively) were selected to best capture the majority of the sample and variation within the sample. Results from these analyses suggested that, although the model and parameter estimates are not statistically significant, there is a substantial model effect in the data (see Table 4). That is, at the highest income (\$50,000) and education level (graduate, law, or medical school degree) the likelihood of falling in the Authoritative parenting cluster was more than 93%, while at the lowest income (\$10,000) and education level (high school diploma/GED) the likelihood of falling in either of the non-optimal parenting clusters (i.e., Permissive or Disengaged parenting) was more than 61%.

### **Multiple Regression Model**

Finally, a multiple regression model was performed to examine the relationship between the empirically derived parenting style clusters, maternal income, and child externalizing problems (see Table 5 for significance levels and  $t$ -values). The third hypothesis initially pertained to No Nonsense parenting in particular; however, as noted above, a No Nonsense parenting cluster was not obtained in this sample. Accordingly, a post hoc decision was made to examine the interrelationship between all of the empirically derived parenting clusters, maternal income, and youth externalizing problems. In addition, both maternal income and education were included in the analysis of Aim 2; however, income and education were highly correlated ( $r = .41, p < .01$ ). Previous research also suggests that more simplified models of SES often yield

similar results to more complex models, with family income a potentially more powerful indicator of overall SES than education (Cirino et al., 2002; Duncan, Daly, McDonough, & Williams, 2002). As such, in order to maximize independent variance and enhance interpretability, only maternal income was included at this stage of analysis.

Overall, parenting style, maternal income, and the interaction between parenting style and income accounted for approximately 32% of the variance in youth externalizing behavior,  $F(5, 188) = 17.67, p < .0001$ . Both parenting style and income were statistically significantly associated with youth externalizing behavior, however, the interaction was not a statistically significant predictor. Given this pattern of findings, main effects will be examined in more detail and the pattern of the interaction, although not significant, will be explored.

Holding income constant at its mean (\$29,734), parenting style was statistically significantly associated youth externalizing problems,  $F(2, 188) = 37.26, p < .0001$ . As such, the parameter estimates indicate that for cluster 1, Authoritative Parenting, the modeled average youth externalizing score is 3.35, for cluster 2, Permissive Parenting, the modeled average youth externalizing score is 5.69, and for cluster 3, Disengaged Parenting, the modeled average youth externalizing score is 12.04. The combined effect of parenting style accounted for approximately 28% of the variance in youth externalizing problems. Across parenting clusters, the average association between maternal income and youth externalizing behaviors was -0.74, indicating that with \$10,000 increase in income is associated with a 0.74 unit decrease in youth externalizing behavior scores,  $F(1, 188) = 9.76, p = .002$ . Maternal income accounted for about 3% of the variance in youth externalizing behavior. Although the overall interaction was not significant (i.e., the slopes of each line do not significantly differ from one another,  $F(2, 188) = 0.75, p = .47$ ; see Figure 2), the parameter estimates indicated that the association between

Permissive and Disengaged parenting with externalizing problems across income was significantly different than zero. Specifically, the interaction between Permissive parenting and income indicates that for every \$10,000 increase in maternal income externalizing behaviors decrease .92 units, while the interaction between Disengaged parenting and income indicates that for every \$10,000 increase in maternal income externalizing behaviors decrease .94 units (see Figure 2). The slope associated with the interaction between Authoritative parenting and Income, however, was not statistically significantly different than zero.

## DISCUSSION

This study examined variability in parenting styles *within* an African American single mother sample, as well as sociocultural predictors (i.e., SES) and child outcomes (i.e., externalizing problems) associated with the derived parenting styles. Results from the study confirmed variability in parenting styles *within* African American single mother families; however, the empirically derived parenting styles differed to some extent from what was predicted based on prior theory and research. Although not statistically significant, the pattern of results also suggested a trend consistent with study hypotheses regarding SES and parenting. Finally, although the original hypothesis pertained to a parenting style that was not observed in this study (i.e., No Nonsense parenting), results indicate that the derived parenting styles and maternal income predicted youth externalizing behaviors, and for certain parenting styles youth externalizing behavior varied by maternal income. Each of these findings will be discussed in more detail in the subsequent sections.

With regard to parenting style, descriptive analyses revealed that the majority of mothers in the study reported engaging in relatively high levels of both maternal warmth and control. The finding that African American single mothers reported relatively high levels of control is

consistent with previous work with both African American and single mothers (e.g., Baumrind, 1997; Brody & Flor, 1998; McLoyd, 1990). Yet, the finding that mothers in our sample reported relatively high levels of warmth is inconsistent with previous literature suggesting that African American and single mothers are less likely to engage in behaviors conveying warmth, such as hugging or praising their children, than European Americans (e.g., Baumrind, 1972; Baumrind, 1997; Hashima & Amato, 1994). Maternal warmth is associated with a myriad of positive youth outcomes, such as academic achievement, decreased aggression, and social competence (e.g., Deater-Deckard et al., 1996; Dodge et al., 1994; McHale et al., 2006). Better understanding which mothers engage in behaviors demonstrating warmth may help us identify factors associated with this positive parenting dimension, and, in turn, design interventions to promote positive parenting practices. Accordingly, the within group approach used in this investigation, rather than the comparative approach more typically used in the literature, may help to better clarify relative variability *within* African American single mother families (Hill, 2006).

Despite the overall high levels of warmth and control reported by mothers in the sample, cluster analyses highlight variability in levels of these two parenting behaviors across the sample. Cluster analyses generated three distinct subgroups of mothers within the sample, which were labeled Authoritative, Permissive, and Disengaged based on the average level of each parenting behavior within the clusters. Contrary to the existing literature, cluster analyses not only indicated that there is variability in parenting style within African American single mothers, but also the parenting style considered to be the most prevalent among African Americans, Authoritarian, was not derived (Baumrind, 1972; Baumrind, 1997; Hashima & Amato, 1994). In addition, the parenting style considered to be specific to and protective for African American children, No Nonsense parenting, did not emerge (Brody & Flor, 1998). In fact, more than a third

of the sample engaged in the parenting style long considered optimal for child outcomes, regardless of sociocontextual variables (i.e., Authoritative) (e.g., Deater-Deckard et al., 1996; Dodge et al., 1994; McGroder, 2000).

Moving beyond the parenting clusters, existing literature tends to focus on marital status and race as predictors of parenting (Baumrind, 1972; Baumrind, 1997; Hashima & Amato, 1994); yet, this study suggests that other important contextual variables, primarily SES, may predict parenting *within* African American single mother families. While not statistically significant, a substantial model effect within the data and the trends towards significance for the overall model ( $p < .10$ ), are worthy of consideration. In line with previous research (Hill, 2006; Hoff et al., 2002), the trends towards significance suggest that family SES (maternal income and education) is associated with parenting style.

The modeled probabilities within this sample further explicate this relationship. The modeled probabilities suggest that, as maternal income decreases the probability of engaging in Authoritative parenting decreases, while the probability of engaging in both Permissive and Disengaged parenting styles increases. This finding is consistent with the literature suggesting that families with lower SES are more susceptible to stressors that compromise parenting practices (e.g., Conger & Donnellan, 2007; Hill, 2006; McLoyd, 1990). It is possible that lower income African American single mother families have more demands, such as more hours at work relative to higher income families, which prevent mothers from engaging in parental control, such as monitoring their children afterschool.

Interestingly, however, as maternal education increases, the probability of engaging in Authoritative parenting behaviors increases, while the likelihood of engaging in Disengaged parenting decreases, and the probability, although low, of engaging in Permissive parenting does

not decrease. Although levels of maternal control are about equivalent between the Permissive and Disengaged parenting clusters, the level of warmth substantially differs between these two parenting styles (i.e., moderately high warmth for Permissive parenting and low warmth for Disengaged families). Although these findings need to be interpreted cautiously given non-significance, previous research suggests that maternal education level in particular may be a better predictor of warmth than income (Davis- Kean, 2005; Klebanov, Brooks-Gunn & Duncan, 1997). Research suggesting a positive association between maternal education level and maternal coping skills may provide one explanation for this finding (Judge, 1998; Klebanov et al., 1994; Lee, 2003). It is possible that increased education and, in turn, increased coping strategies that may evolve with higher levels of education may help mothers exhibit warmth even in the face of life stressors, such as financial strain and child behavior problems.

In addition to beginning to elucidate specific socioeconomic factors associated with variability within African American single mother parenting styles, results also begin to reveal socioeconomic and parenting contexts associated with African American youth externalizing behaviors. As predicted, the results from the multiple regression indicate that adolescents with mothers who engage in Authoritative parenting are more likely to have below average externalizing behaviors, while youth from homes where mothers engage in Permissive or Disengaged parenting styles are more likely to have externalizing behaviors above the mean for the sample. The decreased levels of maternal control in both the Permissive and Disengaged parenting styles may result in increased levels of acting out or aggressive behavior. It is possible that parents who fall within these two clusters do not exhibit controlling behaviors, such as monitoring, do not set limits on youth behavior, and negatively reinforce youth externalizing behavior or engage in inconsistent discipline. Moreover, parents who engage in Permissive

parenting may engage in behaviors that convey warmth, which, in turn, may be slightly more protective than Disengaged parenting resulting in relatively lower levels of externalizing behaviors. Alternatively, Disengaged parents may lack the supervision or behavioral control necessary to ameliorate or end youth problem behaviors (Baumrind, 1991; Kawabata, Alink, Tseng, van IJzendoorn, & Crick, 2011).

Less maternal income was also associated with increases in youth externalizing behavior. Poverty may be associated with environments, such as homes that are less cognitively stimulating and dangerous neighborhoods, which may be detrimental for youth psychological well being, including increased externalizing behavior (Davis-Kean, 2005; Dearing, McCartney, & Taylor, 2006). Another possibility supported by the literature (e.g., Conger & Donnellan, 2007; Cook et al., 2012, Hoff et al., 2002; McLoyd, 1990) is that the relationship between income and youth externalizing behavior operates through compromised parenting. Although the categorical parenting predictor prevented the examination of mediators, future research should examine parenting and other potential mechanism.

Finally, in order to preliminarily examine the effect of income on the association between parenting style and externalizing behavior, the moderating role of maternal income was investigated. Although the overall interaction was not significant, the model suggests that across the range of maternal income, youth externalizing behavior remains relatively low and stable for the families who engage in Authoritative parenting, while externalizing behaviors increase as maternal income decreases for both families who engaged in Permissive and Disengaged parenting. In addition, results suggest that externalizing behavior was highest for those youth in low-income homes with mothers who engage in Disengaged parenting. Consistent with past research (e.g., Deater-Deckard et al., 1996; Dodge et al., 1994; McGroder, 2000), Authoritative

parenting is the most optimal for youth externalizing behavior, while Permissive parenting leads to externalizing behavior that is average for the sample, and Disengaged parenting is the most deleterious for youth externalizing behavior. Consistent with the cumulative risk model, (Appleyard, Egeland, Dulmen, & Sroufe, 2005; Burchinal et al., 1996), these results highlight that Authoritative parenting is not only optimal for youth externalizing behavior, but that it protects youth with multiple risk factors (i.e., low-income, single mother household, racial minority).

As with all research, study findings must be interpreted in the context of the study limitations. First, these analyses are cross-sectional, which prohibits the analysis of the stability of parenting styles or the extent to which maternal income changes over time and the influence that may have on both parenting style and youth externalizing behavior. Because previous research suggests that parenting and SES are dynamic processes that change overtime (Bronfenbrenner, 1979; Cook et al., 2012; McLoyd, 1990), research in the future should investigate parenting and the effect of SES on parenting and youth externalizing behavior longitudinally. Although this study included two time points, the attrition between time points prohibited longitudinal analyses. Second, although results preliminarily suggest aspects of SES that influence parenting practices (i.e., less maternal education is associated with less maternal warmth), the categorical nature of the parenting clusters precluded the examination of mediation. Third, this study used a single reporter for all major study variables. While there are pros and cons to using mother self report for all variables, it is possible that this increased the likelihood of finding significant associations between our variables of interest. Fourth, the parenting behavior measures used to empirically derive African American single mother parenting styles were originally developed to assess parenting constructs established and normed with middle-

income, intact, European American families. While cluster analyses are a first step toward a more culturally-sensitive understanding of parenting practices within African American single mother families, an important direction for future works is to investigate the construct validity of these measures for African American and single mother families. Fifth, given several non-significant, but marginal, findings and the empirically driven nature of some of the analyses, research should replicate these analyses to increase the confidence of some of the observed patterns in this sample. Finally, this study focused on African American single mother families, so findings may not generalize to other racial or ethnic groups or two parent African American families. Yet, we believe that the focus on African American single mother families in particular is a strength of the study, which we turn to next.

This study also has strengths. First, this study focuses on African American youth from single-mother households between the age of 11 and 16 years. This age range, which is relatively ignored in the parenting literature, is critical given the importance of parenting in promoting a safe adolescent transition and the prevention of risky behavior and outcomes (Tragesser, Beauvais, Swaim, Edwards, & Oetting, 2007). In addition, 67 percent of African American youth live in single-mother households at some point during their childhood or adolescence (Barrett & Turner, 2005; Mather, 2010; The Annie E. Casey Foundation, 2012). As such, findings are informative for meeting the needs of a growing, yet underrepresented, segment of the United States population. Third, much of the research on African American single mothers (e.g., Jones, Forehand, Dorsey, Foster, & Brody, 2005; Jones, Shaffer, Forehand, Brody, & Armistead, 2003; Shook, Jones, Forehand, Dorsey, & Brody, 2010) focuses exclusively on very low-income families or simply controls for SES or income (Hill, 2006). Such an approach limits the generalizability of findings to only the most vulnerable youth and families.

Accordingly, the current study examined parenting, SES, and youth externalizing problems within a sample that more closely approximates national statistics on African American single-mother families in the United States (Shattuck & Kreider, 2013). This more representative sample, as well as the within group analyses of African American parenting yielded more variability in parenting style and youth outcomes than is traditionally discussed or recognized within African American single-mother families, work that has traditionally relied on comparative designs (Hill, 2006; Hoff et al., 2002). Fourth, the broader literature on race has emphasized the need to disentangle the contextual roles of race and SES (e.g., Hoff et al, 2002; McLoyd, 1990; Pinderhughes & Le, 2008). As such, these within group analyses and a relatively economically diverse sample allowed for the examination of SES within African American single mother families. Finally, and perhaps most importantly, this study reverted back to the person-oriented approach used at the advent of the parenting literature (McGroder, 2000). This approach helped elucidate variability in parenting styles within African American single-mother families, which, in turn, may better inform family-focused interventions targeting this relatively underserved group.

In summary, this study provides preliminary evidence of variability in parenting styles within an all African American single mother sample with the aim of best understanding the parenting and socioeconomic contexts that influence African American youth from single-mother households. To date, the parenting literature often fails to consider variability *within* the African American and single mother family contexts (Barrett & Turner, 2005; also see Jones et al., 2007; Murry et al., 2001 for reviews); yet, this study suggests that it precisely such an approach that may be necessary to continue to move beyond the risk or deficit-focused perspective that characterizes theory and research on single mother and African American

parenting. Findings suggest promise for this approach to further elucidate the contexts in which African American single mothers engage in optimal parenting practices, as well as subgroups of African American youth from single mother homes that may be at increased risk for the development of externalizing problems. In the future, combining the person-oriented approach with a variable oriented or dimensional approach may provide additional information about the influence of parenting style on youth problem behaviors (McNamara, Selig, & Hawley, 2010). For example, future research should examine parenting styles with both person-oriented and variable oriented approaches to determine which method accounts for more of the variability in externalizing problems, and should extend this approach to determine how parenting patterns may be associated with other youth outcomes, such as internalizing problems. In addition, given the importance and integral involvement of extended family support and non-marital coparents in African American single-mother childrearing, future research should include fathers and non-marital coparents (e.g., grandparents and other extended family) in analyses of parenting style and investigate the joint effects of parenting style on youth outcomes (Hoeve, Dubas, Gerris, van der Laan, & Smeenk, 2011; Hoff et al., 2002; Martin, Ryan, & Brooks-Gunn, 2007). It is the combination of this work that will yield a more culturally relevant understanding of the parenting practices *within* African American single mother families that has the potential to inform more targeted and tailored preventative interventions and policies for this relatively underserved and at-risk population (e.g., Kotchick & Forehand, 2002; Le et al., 2008; McLoyd, 1990). Findings suggest that youth externalizing problems may be malleable in response to family environment change, including parenting and sociocultural factors. Preventive interventions targeting parenting in African American families have already yielded progress on this front (e.g., Brody et al., 2005; Coard, Wallace, Stevenson, & Brotman, 2004; Forehand, Miller, Armistead,

Kotchick, & Long, 2004). Interventions designed to increase African American single mother's coping skills in particular may increase the capacity for maternal warmth in the face of economic hardship and youth problem behaviors (Judge, 1998; Klebanov et al., 1994; Lee, 2003). Then, interventions that target the quality of home *and* neighborhood environments for disadvantaged families in particular may further or maximally promote youth well being and decrease youth externalizing behavior (Davis-Kean, 2005; Dearing et al., 2006). Although sociocultural factors, such as maternal income and education may be less amenable to intervention, long-term public policies can be implemented to provide resources and incentives to support at-risk and underserved populations. For example, findings suggest that increasing maternal education may lead to increased maternal warmth and, in turn, optimal parenting practices and enhanced youth outcomes. Yet, current welfare policy often provides financial support, while few incentives are provided for continuing education. This remains the case in spite of research that suggests small increases in maternal education can have substantial impacts on family environment and parenting, and lead to more stable financial situations (Davis-Kean, 2005; Klebanov et al., 1994). Creating policies that support educational growth for African American single mothers may lead to optimal parenting practices, and, in turn, promote youth well being in the face of multiple risk factors.

Table 1  
*Demographics (n =194) for the overall sample*

Variable	Mothers			Youth		
	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%
Age (years)	38.05	6.67	--	13.00	1.59	--
Gender						
Female %	--	--	100.00	--	--	45.40
Male %	--	--	0.00	--	--	54.60
Education						
Less than high school	--	--	0.50	--	--	--
Some high school	--	--	5.20	--	--	--
High school or GED	--	--	8.80	--	--	--
Some college	--	--	51.00	--	--	--
College degree	--	--	20.10	--	--	--
Some graduate school	--	--	6.20	--	--	--
Graduate school	--	--	8.20	--	--	--
Employment Status*	--	--	82.00	--	--	--
Annual Income	\$29,734	\$17,456	--	--	--	--

*Note.* \*Percent Employed.

Table 2

*Descriptive Statistics and Correlations Among Main Study Variables*

	Variables	<i>M (SD)</i>	Range	1	2	3	4	5
1	Maternal Warmth	14.34 (2.94)	4-18	--	0.51**	0.21**	0.14	-0.56**
2	Maternal Control	57.64 (5.63)	23-60		--	0.19*	0.24**	-0.41**
3	Maternal Income	\$29,734 (\$17,456)	\$0-\$120,000			--	0.41**	-0.21**
4	Maternal Education	--	--				--	-0.25**
5	Youth Externalizing	6.49 (6.60)	0-35					--

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

Table 3

*Means on Cluster Variables (i.e., Maternal Warmth and Control) by Parenting Style Cluster*

	Maternal Warmth	Maternal Control
Cluster 1 ( $n = 71$ )	.778 (.209)	.683 (.548)
Cluster 2 ( $n = 72$ )	.221 (.376)	-.402 (.858)
Cluster 3 ( $n = 51$ )	-1.40 (.825)	-.384 (1.16)

Table 4  
 Modeled Probability (%) of Being Assigned to a Cluster Based  
 on Maternal Education and Income

Predictors		Parenting Style Clusters		
Education	Income	Authoritative ( <i>n</i> = 71) %	Permissive ( <i>n</i> = 72) %	Disengaged ( <i>n</i> = 52) %
HS/GED	10	38.32	22.68	39.00
College	10	53.87	21.36	24.78
More than College	10	67.87	18.02	14.11
HS/GED	30	61.03	3.37	35.60
College	30	76.89	2.84	20.27
More than College	30	87.42	2.16	10.42
HS/GED	50	74.66	0.38	24.96
College	50	86.61	0.30	13.09
More than College	50	93.41	0.22	6.38

*Notes.* HS/GED = High school diploma or GED; College = College degree; More than College = Graduate, law, or medical school degree; Income is in the \$10,000.

Table 5

*Multiple Regression Analyses Predicting Youth Externalizing Behaviors*

	$\Delta R^2$	Total $R^2$	$\beta$	$t$
<i>Parenting Style</i>	<b>0.28***</b>	<b>0.28</b>	--	--
Authoritative	--	--	3.35	--
Permissive	--	--	5.69	--
Disengaged	--	--	12.04	--
<i>Average Maternal Income</i>	<b>0.03**</b>	<b>0.31</b>	-0.74	3.21**
<i>Parenting Style X Maternal Income</i>	<b>0.01</b>	<b>0.32</b>	--	--
Authoritative X Maternal Income	--	--	-0.36	-0.97
Permissive X Maternal Income	--	--	-0.92	-1.94*
Disengaged x Maternal Income	--	--	-0.94	-2.47**

*Note.* \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Regression coefficients for each parenting style represent average predicted externalizing scores holding income constant at the mean; however, these coefficients are not associated with inference statistics (i.e., no significance test).

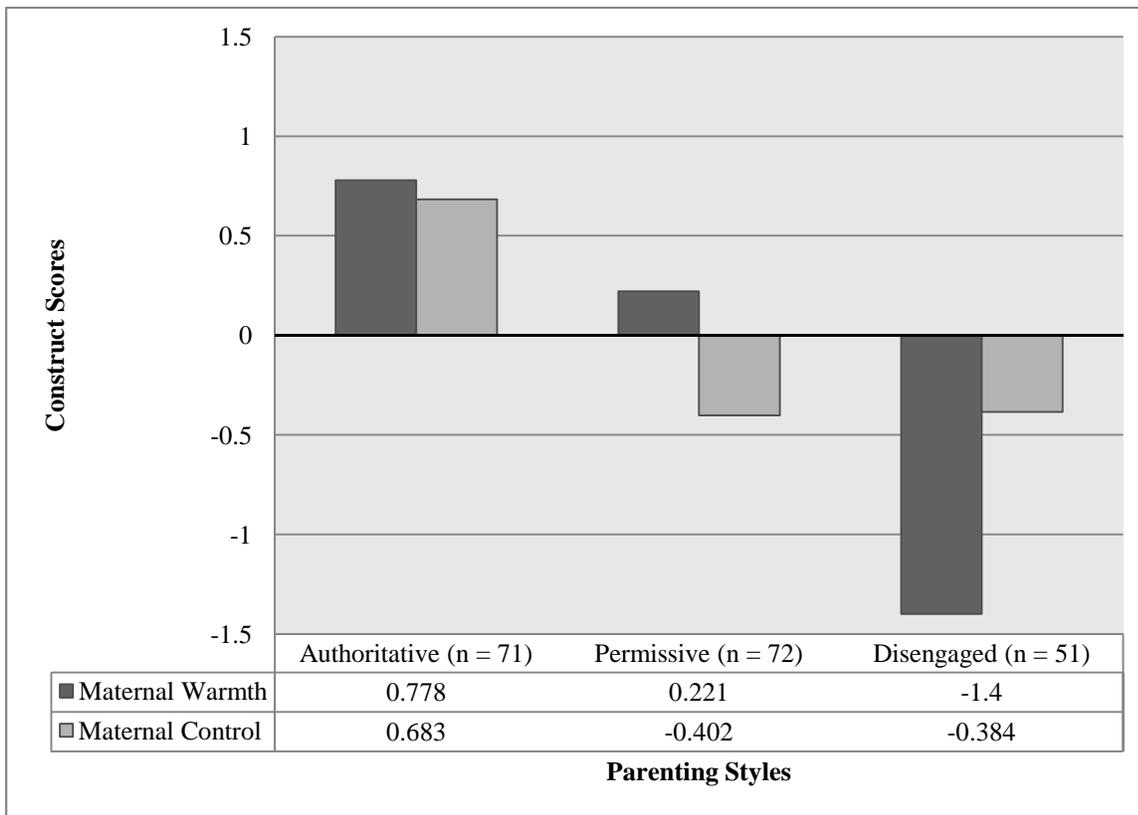


Figure 1. Three clusters of parenting styles in the full sample ( $N = 194$ ).

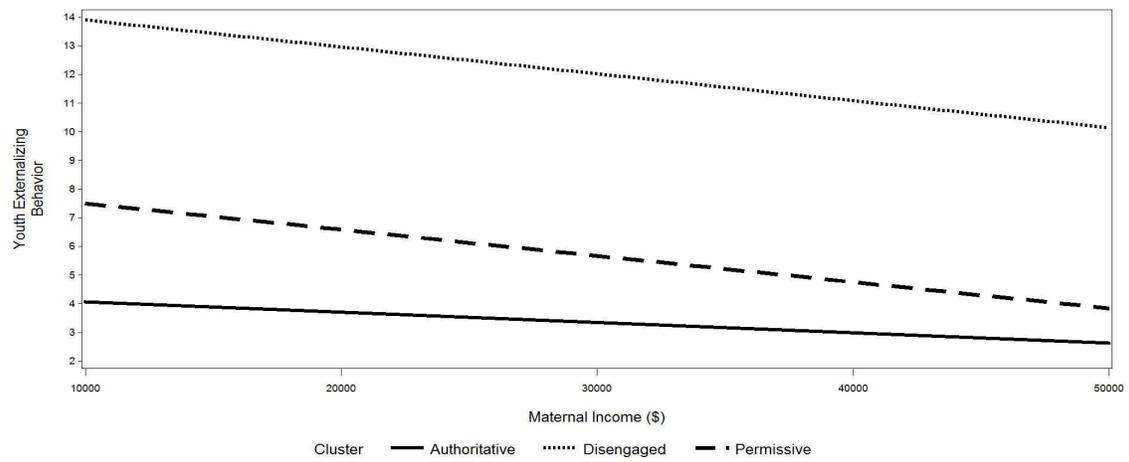


Figure 2. The interrelationship of parenting style, maternal income, and youth externalizing behavior.

APPENDIX A: DEMOGRAPHICS (MOTHER-REPORT)

Interviewers identified each family with a participation identification number and the location of data collection (home, agency, etc); interviewers also listed their own names. Mothers were asked to report on various demographic questions about their level of education, employment, income, etc.

Q4. Mother age

— — years

98 Refuse to Answer

Q5. How much schooling did you finish? (Choose one)

- 1 Less than HS
- 2 Some HS
- 3 HS diploma or GED
- 4 Some college or vocational school
- 5 College degree
- 6 Some graduate, law, or medical school
- 7 Graduate, law, or medical school degree
- 8 Refuse to Answer

Q6. Are you currently a student?

- 1 Yes
- 0 No **Skip to Q8**
- 8 Refuse to Answer **Skip to Q8**

Q7. Are you a full- or part-time student? (Choose one)

- 1 Part-time student
- 2 Full-time student
- 8 Refuse to Answer

Q8. Are you currently employed?

- 1 Yes **Skip to Q11**
- 0 No
- 8 Refuse to Answer **Skip to Q11**

Q9. Which best describes your unemployment status? (Choose one)

- 1 Unemployed not due to a disability
- 2 Unemployed due to a disability
- 3 Retired
- 8 Refuse to Answer

**If Q9 is greater than 1, then skip to Q13.**

Q10. Are you currently looking for work?

- |   |                  |                    |                    |
|---|------------------|--------------------|--------------------|
| 1 | Yes              | <i>Skip to Q13</i> |                    |
| 0 | No               |                    | <i>Skip to Q13</i> |
| 7 | Don't Know       |                    | <i>Skip to Q13</i> |
| 8 | Refuse to Answer |                    | <i>Skip to Q13</i> |

Q11. Are you employed full- or part-time? (Choose one)

- |   |                    |                    |  |
|---|--------------------|--------------------|--|
| 1 | Part-time employee |                    |  |
| 2 |                    | Full-time employee |  |
| 8 |                    | Refuse to Answer   |  |

Q12. What is it you do for a living?

-----

Q13. What was your household income last year, before taxes?

- |         |  |                  |
|---------|--|------------------|
| \$_____ |  | \$               |
| 999997  |  | Don't Know       |
| 999998  |  | Refuse to Answer |

Q14. What is your zip code?

- |        |  |                  |
|--------|--|------------------|
| _____  |  |                  |
| 999997 |  | Don't Know       |
| 999998 |  | Refuse to Answer |

Q15. How long have you lived in this zip code?

- |           |  |                          |
|-----------|--|--------------------------|
| ___ YEARS |  |                          |
| ___       |  | MONTHS                   |
| ___       |  | WEEKS                    |
| 97        |  | Don't Know (Years)       |
| 98        |  | Refuse to Answer (Years) |

Q16. Does your neighborhood have a name?

- |   |                  |  |                    |
|---|------------------|--|--------------------|
| 1 | Yes              |  |                    |
| 0 | No               |  | <i>Skip to Q18</i> |
| 7 | Don't Know       |  | <i>Skip to Q18</i> |
| 8 | Refuse to Answer |  | <i>Skip to Q18</i> |

Q17. What is your neighborhood's name?

-----

Q18. Are you the biological mother of the child participating in this study? (Choose one)

- |   |  |                   |  |
|---|--|-------------------|--|
| 1 |  | Biological mother |  |
| 2 |  | Adoptive mother   |  |
| 3 |  | Other             |  |
| 8 |  | Refuse to Answer  |  |

*If Q18 is equal to 3, then skip to Q19.*

*If Q18 is less than 3, then skip to Q20.*

Q19. Describe relation to child

-----

Q20. Have you ever been married? (Choose one)

- |   |                                |
|---|--------------------------------|
| 0 | Never married                  |
| 1 | Legally married, but separated |
| 2 | Divorced                       |
| 3 | Widowed                        |
| 8 | Refuse to Answer               |

Q21. How many children do you have, including the one in this study?

\_\_\_ children

98 Refuse to Answer

Q22. How many adults live in your home, including yourself?

\_\_\_ people

98 Refuse to Answer

Q23. How many children live in your home, including your own children?

\_\_\_ people

98 Refuse to Answer

## APPENDIX B: MATERNAL WARMTH/SUPPORT (MOTHER-REPORT)

Think back over the last several weeks at home. Please tell us if you believe that the statement is mostly **true** or mostly **false** about you and the child participating in this study. Your answers will not be shown to your child, coparent, or anyone else in your family.

Choose: 0 = *True* 1 = *False*

1. The child is easy to get along with
2. The child is well behaved in your discussions with him or her
3. The child is receptive to criticism or listens when you correct him or her
4. For the most part he or she likes to talk to you
5. You and he or she never seem to agree
6. This child usually listens to what you tell him or her
7. At least three times a week, you and he or she get angry with each other
8. He or she says that you have no consideration or respect for his or her feelings
9. You and this child compromise or reach an agreement during arguments
10. This child often doesn't do what you ask
11. The talks that you and he or she have are frustrating
12. This child often seems angry with you
13. He or she acts impatient with you
14. In general, you don't think that you and he or she get along very well
15. This child almost never understands your side of an argument
16. This child and you have big arguments over little things
17. He or she is defensive and often doesn't listen to what you say
18. He or she thinks your opinions or ideas don't count
19. You and he or she argue a lot about rules
20. This child tells you he or she thinks you are unfair

## APPENDIX C: MATERNAL MONITORING (MOTHER-REPORT)

The next several items will ask you how much you know about the activities of the child participating in this study.

Choose: 0 = *Not at All* 1 = *Rarely* 2 = *Some of the time* 3 = *Most of the time* 4 = *Always*

How often do you know:

1. What your child does during his or her free time?
2. Who this child has as friends during his or her free time?
3. What type of homework this child has?
4. What this child spends his or her money on?
5. When this child has an exam or assignment due at school?
6. How this child does on different subjects in school?
7. Where this child goes when out at night with friends?
8. What this child does and where he or she go after school?
9. In the past month, how often have you had no idea where this child was at night?

#### APPENDIX D: MATERNAL KNOWLEDGE (MOTHER-REPORT)

The following items will ask you how often you know about the daily activities of the child participating in this study.

Choose: 0= *Not at all* 1= *Rarely* 2= *Some of the time* 3 = *Most of the time* 4 = *Always*

How often:

1. Does this child talk at home about how he or she is doing in different subjects in school?
2. Does this child usually tell you how school was when he or she gets home? For example, how he or she did on exams, relationships with teachers, etc.?
3. Does this child keep a lot of secrets from you about what he or she does with his or her free time?
4. Does this child hide a lot from you about what he or she does during nights and weekends?
5. If this child goes out at night, does he or she tell you what he or she has been doing?
6. In the last month, have you talked with the parents of this child's friends?
7. Do you talk to this child's friends when they come to your home? For example, ask what they do or think or feel about things?
8. In the last month, have you started a conversation with this child about his or her free time?
9. Do you initiate a conversation about things that happened during this child's school day?
10. Do you usually ask this child to talk about things that happened during his or her free time? For example, whom he or she met, activities, etc.?
11. Does this child need to have your permission to stay out late on a weekday evening?
12. Does this child need to ask you before he or she can decide with friends what to do on a Saturday night?
13. If this child has been out very late one night, do you require that he or she explain what he or she did and whom he or she was with?
14. Do you require that this child tell you where he or she is at night, whom he or she is with, and what they do together?
15. Before this child goes out on a Saturday night, do you require him or her to tell you where he or she is going?

## APPENDIX E: CHILD BEHAVIOR CHECKLIST (MOTHER-REPORT)

The following is a list of items that describe children and adolescents. For each item that describes your child now or within the past 6 months, please tell us whether the item is very true, somewhat true, or not true of your child. Please answer all items as well as you can, even if some do not seem to apply to your child.

Choose: 0= Not true 1= Somewhat true 2= Very true 8= Refuse to Answer

How true is this of your child:

1. Drinks alcohol without parents' approval
2. Argues a lot
3. There is very little he or she enjoys
4. Cries a lot
5. Cruelty, bullying, or meanness to others
6. Demands a lot of attention
7. Destroys his or her own things
8. Destroys things belonging to his or her family or others
9. Disobedient at home
10. Disobedient at school
11. Doesn't seem to feel guilty about misbehaving
12. Breaks rules at home, school, or elsewhere
13. Fears certain animals, situations, or places, other than school
14. Fears going to school
15. Fears he or she might think or do something bad
16. Feels he or she has to be perfect
17. Feels or complains that no one loves him or her
18. Feels worthless or inferior
19. Gets in many fights
20. Hangs around with others who get in trouble
21. Would rather be alone than with others
22. Lying or cheating
23. Nervous, high strung, or tense
24. Nightmares
25. Constipated, doesn't move bowels

26. Too fearful or anxious
27. Feels dizzy
28. Feels too guilty
29. Overtired
30. Aches or pains, (**not** stomach or headaches), without a known medical cause
31. Headaches, without a known medical cause
32. Nausea, feel sick, without a known medical
33. Problems with eyes, (**not** if corrected by glasses), without a known medical cause
34. Rashes or other skin problems, without a known medical cause
35. Stomachaches or cramps, without a known medical cause
36. Vomiting, throwing up, without a known medical cause
37. Physically attacks others
38. Prefers being with older kids
39. Refuses to talk
40. Runs away from home
41. Screams a lot
42. Secretive, keeps things to self
43. Self-conscious or easily embarrassed
44. Sets fires
45. Sexual problems
46. Shy or timid
47. Steals at home
48. Steals outside the home
49. Stubborn, sullen, or irritable
50. Sudden changes in mood or feelings
51. Sulks a lot
52. Suspicious
53. Swearing or obscene language
54. Talks about killing self
55. Teases a lot
56. Temper tantrums or hot temper
57. Thinks about sex too much
58. Threatens people

- 59. Smokes, chews, or sniffs tobacco
- 60. Truancy, skips school
- 61. Underactive, slow moving, or lacks energy
- 62. Unhappy, sad or depressed
- 63. Unusually loud
- 64. Uses drugs for nonmedical purposes, (don't include alcohol or tobacco)
- 65. Vandalism
- 66. Withdrawn, doesn't get involved with others
- 67. Worries

## APPENDIX F: EXPERT RATER SCALE

**Overview:** For over 20 years, two universal parenting dimensions have helped define patterns of parenting. Baumrind (1967) originally referred to these two dimensions as *demandingness* and *responsiveness*. Baumrind characterized *parental demandingness* as involving the use of direct confrontation and monitoring, patterns of firm and consistent discipline, and high maturity demands, while she characterized *parental responsiveness* as affective warmth, cognitive responsiveness, attachment and bonding, unconditional acceptance, sensitive attunement, involvement, and reciprocity.

Over time, the name of these constructs shifted, and the two terms are now referred to as *parental control* and *parental warmth*. *Parental control* is often defined as the amount of supervision, the decisions parents make about their children's activities and friends, and the rules parents hold for their children. In addition, *parental warmth* has been defined as a parents' expression of interest in children's activities and friends, involvement in children's activities, expression of enthusiasm and praise for children's accomplishments, and demonstration of affection and love.

**Instructions:** Below is a list of items commonly used to assess maternal parenting behaviors, specifically **maternal warmth and control**. For each item, **first** decide if the item is measuring maternal warmth. **Then**, decide if the item is measuring maternal control. Answers range from 0: Definitely not to 3: Excellent match. This scale was modeled after similar methods used in Jensen et al. (2007).

### Do the following items measure *maternal warmth/responsiveness*?

1. The child is easy to get along with

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

2. How often do you know whom this child has as friends during his or her free time?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

3. How often do you know what type of homework this child has?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

4. The child is well behaved in your discussions with him or her

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

5. How often do you initiate a conversation about things that happened during this child's school day?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
6. At least three times a week, you and he or she get angry with each other
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
7. Before this child goes out on a Saturday night, how often do you require him or her to tell you where he or she is going?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
8. He or she says that you have no consideration or respect for his or her feelings
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
9. How often do you know when this child has an exam or assignment due at school?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
10. How often do you require that this child tell you where he or she is at night, whom he or she is with, and what they do together?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
11. You and this compromise or reach an agreement during arguments
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
12. How often do you know how this child does on different subjects in school?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not

- 3- Excellent match
13. This child often doesn't do what you ask
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
14. How often in the last month, have you talked with the parents of this child's friends?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
15. The talks that you and he or she have are frustrating
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
16. In the last month, how often have you started a conversation with this child about his or her free time?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
17. In general, you don't think that you and he or she get along very well
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
18. How often do you usually ask this child to talk about things that happened during his or her free time?  
For example, whom he or she met, activities, etc.?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
19. How often does this child need to have your permission to stay out late on a weekday evening?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
20. This child and you have big arguments over little things
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not

- 3- Excellent match
21. He or she thinks your opinions or ideas don't count
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
22. How often does this child need to ask you before he or she can decide with friends what to do on a Saturday night?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
23. For the most part he or she likes to talk to you
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
24. You and he or she argue a lot about rules
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
25. How often do you know what your child does during his or her free time?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
26. You and he or she never seem to agree
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
27. This child usually listens to what you tell him or her
- 1. Definitely not
  - 2. Probably not
  - 3. Kind of; more than not
  - 4. Excellent match
28. How often do you know where this child goes when out at night with friends?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not

- 3- Excellent match
29. The child is receptive to criticism or listens when you correct him or her
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
30. How often do you know what this child does and where he or she goes after school?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
31. He or she acts impatient with you
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
32. How often do you know in the past month, how often have you had no idea where this child was at night?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
33. This child tells you he or she thinks you are unfair
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
34. How often do you talk to this child's friends when they come to your home? For example, ask what they do or think or feel about things?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
35. This child often seems angry with you
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
36. If this child has been out very late one night, how often do you require that he or she explain what he

or she did and whom he or she was with?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

37. He or she is defensive and often doesn't listen to what you say

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

38. How often do you know what this child spends his or her money on?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

39. This child almost never understands your side of an argument

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

**Now, do these items measure *maternal control/ demandingness*?**

1. The child is easy to get along with

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

2. How often do you know whom this child has as friends during his or her free time?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

3. How often do you know what type of homework this child has?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

4. The child is well behaved in your discussions with him or her

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not

- 3- Excellent match
5. How often do you initiate a conversation about things that happened during this child's school day?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
6. At least three times a week, you and he or she get angry with each other
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
7. Before this child goes out on a Saturday night, how often do you require him or her to tell you where he or she is going?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
8. He or she says that you have no consideration or respect for his or her feelings
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
9. How often do you know when this child has an exam or assignment due at school?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
10. How often do you require that this child tell you where he or she is at night, whom he or she is with, and what they do together?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
11. You and this compromise or reach an agreement during arguments
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
12. How often do you know how this child does on different subjects in school?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not

- 3- Excellent match
13. This child often doesn't do what you ask
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
14. How often in the last month, have you talked with the parents of this child's friends?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
15. The talks that you and he or she have are frustrating
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
16. In the last month, how often have you started a conversation with this child about his or her free time?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
17. In general, you don't think that you and he or she get along very well
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
18. How often do you usually ask this child to talk about things that happened during his or her free time?  
For example, whom he or she met, activities, etc.?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
19. How often does this child need to have your permission to stay out late on a weekday evening?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
20. This child and you have big arguments over little things
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match

21. He or she thinks your opinions or ideas don't count
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
22. How often does this child need to ask you before he or she can decide with friends what to do on a Saturday night?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
23. For the most part he or she likes to talk to you
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
24. You and he or she argue a lot about rules
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
25. How often do you know what your child does during his or her free time?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
26. You and he or she never seem to agree
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  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
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  - 1- Probably not
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  - 3- Excellent match
28. How often do you know where this child goes when out at night with friends?
- 0- Definitely not
  - 1- Probably not
  - 2- Kind of; more than not
  - 3- Excellent match
29. The child is receptive to criticism or listens when you correct him or her

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

30. How often do you know what this child does and where he or she goes after school?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

31. He or she acts impatient with you

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

32. How often do you know in the past month, how often have you had no idea where this child was at night?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

33. This child tells you he or she thinks you are unfair

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

34. How often do you talk to this child's friends when they come to your home? For example, ask what they do or think or feel about things?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

35. This child often seems angry with you

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

36. If this child has been out very late one night, how often do you require that he or she explain what he or she did and whom he or she was with?

- 0- Definitely not
- 1- Probably not

- 2- Kind of; more than not
- 3- Excellent match

37. He or she is defensive and often doesn't listen to what you say

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

38. How often do you know what this child spends his or her money on?

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

39. This child almost never understands your side of an argument

- 0- Definitely not
- 1- Probably not
- 2- Kind of; more than not
- 3- Excellent match

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