THE PARENTING STYLES AND DIMENSIONS

QUESTIONNAIRE: A RECONCEPTUALIZATION

AND VALIDATION

By

ASHLEY BLAKELY KIMBLE

Bachelor of Science in Human Development and

Family Science

Oklahoma State University

Stillwater, OK

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Thesis Approved:

Laura Hubbs-Tait, Ph.D.

Thesis Adviser

Glade Topham, Ph.D.

Robert Larzelere, Ph.D.

Amanda Harrist, Ph.D.

Name: ASHLEY BLAKELY KIMBLE

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Abstract: The purpose of this study was to reconceptualize scales of the Parenting Styles and Dimensions Questionnaire (PSDQ) as a typology based on the parenting styles conceptual framework, so that all four parenting styles could be categorized from the continuous measure. Exploratory factor analysis of a sample of 378 mothers of first-grade children revealed four factors, each one representing a distinct parenting style. These were used to categorize mothers as predominantly authoritative (n=101), authoritarian (n = 100), permissive (n = 82), uninvolved (n = 85), or an undifferentiated group that did not fit any of the four styles (n = 74). Validity was supported with predicted differences in parent and family emotion-related practices, maternal depression, and feeding practices among parenting types. Minimizing responses to child negative emotion were greater for uninvolved mothers than permissive and authoritative mothers. Distress responses were higher for authoritarian and uninvolved mothers than authoritative and permissive mothers. Family problem solving was higher for permissive and authoritative mothers than the other two styles. Problem-focused responses were higher for authoritative than permissive mothers. Affective responsiveness was greater for authoritative and permissive mothers than authoritarian mothers, while lowest for uninvolved mothers. Maternal depressive symptoms were higher in uninvolved mothers than authoritative and permissive mothers. Feeding practices also differed among parenting types. Authoritarian mothers used greater restriction than permissive mothers. Authoritative mothers reported greater monitoring and encouraging healthy practices than uninvolved mothers. Permissive mothers used significantly lower levels of pressure to eat than authoritarian mothers. Modeling healthy eating was higher for authoritative and permissive than authoritarian and uninvolved. Findings expand the use of the PSDQ to measure the uninvolved parenting style and to enhance the validity of the permissive scale. Replication and further validation of these scales are needed.

Keywords: parenting styles; parenting typology; uninvolved parenting; response to negative emotion; depression; feeding practices

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CHAPTER I

INTRODUCTION

Parenting styles have been widely studied in recent research and have been related

to many parent characteristics and child outcomes. The Parenting Styles and Dimensions

Questionnaire (PSDQ; Robinson, Mandleco, Olsen, & Hart, 2001) is one measure that is

widely utilized in current research to examine parenting styles (see review by Olivari,

Tagliabue, & Confalonieri, 2013). Although the PSDQ is comprised of authoritative,

authoritarian, and permissive subscales, it does not measure the uninvolved parenting

style. Additionally, this measure provides continuous variable-centered scores rather than

categorizing parenting style typologies. A reconceptualization of the PSDQ may allow

researchers to improve and expand on the measurement of parenting styles and identify

new ways in which parenting styles relate to parents and families.

The aim of the current study is to examine the factor structure of the PSDQ and to

determine whether it is possible to measure the uninvolved parenting style as well as

authoritative, authoritarian, and permissive styles using this instrument. In addition, this

study aims to classify categories of parenting based on the underlying factors so

parenting styles can be examined typologically. Finally this new conceptualization of the

PSDQ is validated in two ways. First, construct validity is established by examining

whether the new parenting style categories differ as expected on measures of parent

response to children's emotions, maternal depression, and family interaction. Next,

criterion-related validity is established by examining whether there are significant

differences in feeding practices among the four parenting style categories.

CHAPTER II

REVIEW OF LITERATURE

Parenting Styles Framework

Decades of research have been dedicated to developing a framework for parenting styles. A circumplex model to describe the overall pattern of parent behavior was first introduced by Schaefer (1959, 1965) and was based on three dichotomies: acceptance versus rejection, psychological autonomy versus psychological control, and firm behavioral control versus lax behavioral control. Stemming from this work, Baumrind (1966, 1968) conceptualized three parenting prototypes, authoritative, authoritarian, and permissive, to describe patterns of parental control and child socialization. These typologies were subsequently reclassified based on the orthogonal dimensions of responsiveness and demandingness, and uninvolved parenting was added as a fourth parenting style (Maccoby & Martin, 1983). This parenting style has also been referred to as unengaged (Baumrind, 1989; 1991), disengaged (Baumrind, Larzelere, & Owens, 2010), neglecting (Steinberg et al., 1994), and rejecting-neglecting (Baumrind, 1989; 2013). For clarity and consistency, the term uninvolved is used throughout this paper. Since this time, many researchers have continued to examine parenting styles and specific characteristics that comprise each typology. The dimension of responsiveness

refers to parental acceptance, support, warmth, and attunement to the child's needs (Maccoby & Martin, 1983; see also Baumrind et al., 2010; Baumrind, 2013). The dimension of demandingness refers to parental control or parental power assertion (Maccoby & Martin, 1983). Baumrind (2012) suggests that the dimension of demandingness is qualitatively different between parenting styles and the differences must be distinguished. One type of demandingness, confrontive control, which is firm and direct power assertion, also known as behavioral control, has been related to positive outcomes for children (Baumrind, 2012; Baumrind et al., 2010). Confrontive behavioral control is goal oriented and uses reasoning (Baumrind, 2012). Conversely, coercive control is a negative type of power assertion that is intrusive, harsh, and punitive and has been related to negative outcomes for children (Baumrind 2012; Baumrind et al., 2010). Finally, psychological control is covert, manipulative, and undermines the child's sense of self (Barber & Xia, 2013; Baumrind, 2013). Some aspects of psychological control include coercion, manipulation, conditional regard, and disrespect (Barber & Xia, 2013). In a recent review, Baumrind (2013) suggests that rather than responsiveness and demandingness, the dichotomies of acceptance versus rejection, psychological autonomy versus psychological control, and firm behavioral control versus lax behavioral control can be used to conceptualize each of the four parenting typologies.

Parenting Style Typologies

Defining authoritative, authoritarian, permissive, and uninvolved parenting typologies can be achieved by examining differing levels of the dimensions of acceptance and rejection, behavioral control, and psychological control that are unique to each style.

In addition, parenting types can be distinguished from one another by identifying other parenting characteristics that have been empirically linked to each style.

Authoritative parents are those who are high on acceptance and behavioral control, but low on psychological control (Baumrind 2013; Baumrind et al., 2010). Baumrind (1966) conceptualized authoritative parents as rational, warm, encouraging, and controlling in a way that promotes child autonomy. Similarly, Maccoby and Martin (1983) describe authoritative parents as clearly setting rules and using reasoning to enforce them, encouraging open communication, supporting children's independence, and expressing love and affection. Authoritative parenting style has been deemed the optimal parenting style (e.g. Baumrind, 1966; Baumrind, 2013; Maccoby & Martin, 1983) and has been related to positive child outcomes such as self-reliance (Baumrind, 1968; 1971), social responsibility (Baumrind, 1971), and adjustment (Baumrind et al., 2010).

Authoritarian parents are rejecting and psychologically controlling. (Baumrind, 2013; Baumrind et al., 2010). Authoritarian parents are highly demanding and are often punitive and forceful in order to adhere to an absolute standard for behavior (Baumrind, 1966). Authoritarian parental control is coercive and domineering (Baumrind, 2012). This parenting type has been related to less optimal child outcomes, including lower self-efficacy (Baumrind et al., 2010), more externalizing problems (Maccoby & Martin, 1983), and rebellion (Baumrind, 1968).

Permissive parents promote psychological autonomy, are accepting, and exhibit lax behavioral control (Baumrind, 2013; Baumrind et al., 2010). Parents included in this type are affirming and place few behavioral demands on the child (Baumrind, 1966).

Permissive parents avoid coercive or confrontive practices as much as possible

(Baumrind, 1989). Additionally, permissive parents have been conceptualized as

indulgent and allowing children to make their own rules and decisions (Maccoby &

Martin, 1983). This parenting type has been related to child outcomes such as lower

achievement (Baumrind, 1971), lack of impulse control (Maccoby & Martin, 1983), and

lower autonomy (Baumrind et al., 2010).

Finally, *uninvolved* parents are rejecting and have lax behavioral control

(Baumrind, 2013). Parents in this type behave in any way necessary to minimize

parenting effort and time (Maccoby & Martin, 1983). Thus, uninvolved parents may

respond to a child with hostility or may not respond at all, neglecting the needs of the

child altogether (Maccoby & Martin, 1983). Baumrind (1989) found that the uninvolved

parenting style was related to the use of coercive practices and a lack of monitoring.

Currently these four parenting styles are of particular interest in research examining many

parenting domains, two of which are feeding- and emotion-related parenting.

Parenting Styles and Other Parent and Family Practices

In a recent review Morris, Cui, and Steinberg (2013) indicated that parenting style

is related to emotional development in children through parental responsiveness to child

emotions, parental expression of emotion, and the overall emotional climate of the

parent-child relationship. This is important for the current project because these authors

take the position that emotion-related parenting practices can be used to better understand

parenting styles. Similarly, family functioning and patterns of interaction can be used to

gain information about the parent-child relationship and overall parenting style. Two

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pertinent areas of research are the way parents respond to children's negative emotions and the examination of family interaction.

Response to Negative Emotions

One area of parent child interaction that has been related to parenting styles is the examination of how parents respond to children's negative emotions. Because it is normative for children to experience negative emotions, the way parents respond influences children's emotion socialization and how children cope with their own emotions in the future (Eisenberg et al., 1999). Parents who respond to children's negative emotions in a way that is supportive, such as using problem-focused, emotion-focused, or encouraging responses, help the children become more socially and emotionally competent (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Conversely, parents may respond in a way that is unsupportive, by minimizing or dismissing the emotions, punishing the child, or becoming distressed themselves (Fabes et al., 2002). It is worth noting that these parenting effects may be instances of parental response to the child and that the direction of effects may be from child to parent (Bell, 1968).

Just as parenting style is a stable indication of the overall climate of the parent-child relationship over time (Baumrind, 2013), parental responses to children's negative emotions are thought to endure over time (Eisenberg et al., 1999; Fabes et al., 2002). There is some empirical evidence suggesting that these two constructs are related. In a sample of mothers of preschoolers, Fabes et al. (2002) examined the relation between responsive parental control and parenting response to children's negative emotions. They found that parental control, measured using maternal self-report on continuous subscales

of the Parental Control Scale, that is firm and responsive (i.e., authoritative) was positively correlated with encouraging emotional expression, problem-focused responses, and emotion-focused responses, while negatively correlated with to distress reactions. Topham et al. (2011) found that authoritative parenting style, measured using continuous scales of the PSDQ, was negatively correlated with minimizing and punitive responses. In a study of Turkish mothers of preschoolers, Altan-Aytun, Yagmurlu, and Yavuz (2013) related maternal responses to negative emotion to four continuous dimensions of parenting: induction, warmth, demanding obedience, and punishment, which were obtained from maternal self-report on the Child Rearing Questionnaire. They found that maternal inductive reasoning (conceptually linked to authoritative parenting style) was positively related to encouragement of emotional expression and problem-focused reactions, while maternal warmth (central to both authoritative and permissive styles) was positively related to emotion-focused reactions and negatively related to distress reactions. In a sample of Chinese mothers of 6- to 8- year-old children, Chan, Bowes, and Wyver (2009) found that parents categorized as authoritative , based on maternal self-report on the Parenting Behavior Questionnaire (Wu et al., 2002) were more likely to encourage emotion expression. Authoritarian parenting has been related to unsupportive reactions to children's negative emotions. Topham et al. (2011) found that authoritarian parenting was positively related to minimizing and punitive responses. Fabes et al. (2002) and Altan-Aytun et al. (2013) both found that harsh parental control was positively related to punitive and minimizing responses, and negatively related to expressive encouragement. Chan et al. (2009) reported a positive relation between authoritarian

parenting and emotion dismissing reactions. Finally, Fabes et al. (2002) found that lax parental control was positively related to minimization and distress responses.

Family Interaction

Researchers have identified four aspects of family interaction that may be conceptually and empirically linked to parenting styles or patterns of behaviors that may be reflective of parenting styles: problem solving, communication, affective responsiveness, and affective involvement. Family problem solving refers to the ability of the family to find a resolution for problems as they arise, in order to maintain family functioning (Epstein, Baldwin, & Bishop, 1983). According to Epstein, Bishop, and Levin (1978) families who solve problems easily and effectively have higher levels of functioning, which requires negotiation and understanding. Another important aspect of family interaction is family communication. Family communication can be understood as the clarity and effectiveness of verbal exchanges within the family (Epstein et al., 1978; Epstein et al., 1983). Family affective responsiveness refers to whether family members appropriately display emotions and affect across a range of situations (Epstein et al., 1983). Families with high levels of affective responsiveness have a wide range of emotions that are appropriately shared within the family (Epstein et al., 1978). Baumrind (1989) indicates that authoritative parents show high levels of warmth and love, but are also willing to express anger and confront children when needed, which provides evidence that authoritative parents display a wide range of appropriate emotions. According to conceptual definitions (Baumrind, 2013; Maccoby & Martin, 1983) authoritarian parents show less warmth than authoritative parents, permissive parents show less hostility and do not confront children, and uninvolved parents show lower

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levels of both. Finally, affective involvement refers to the extent to which families value and show interest in each other (Epstein et al., 1983). High functioning families show affective involvement that is empathic without being over-involved or self-centered.

Some empirical support for these associations has been documented. Gauvain, Perez, and Beebe (2013) provide evidence that authoritative parents, engage in higher levels of problem solving than other parenting styles. This was accomplished by using archival data from Baumrind's (1989) longitudinal work to examine parenting styles, classified through parent and child interviews, questionnaires, and observations, in relation to parent-child conversations about problem-solving (Guavain & Huard, 1999). In an adolescent sample, Cacioppo, Pace, and Zappulla (2013) found that adolescent perception of parental psychological control (assessed using the Dependency-oriented and Acheivement-oriented Psychological control scale), conceptually central to authoritarian parenting style, was negatively correlated with family communication, affective responsiveness, and family affective involvement. Finally, Topham et al. (2011) found that a continuous measure of authoritative parenting style was positively related to family affective involvement and responsiveness, while continuous measures of authoritarian and permissive parenting styles were negatively related to these practices.

Parenting Styles and Maternal Depression

The effects of maternal depression on parenting have been widely studied. There is a strong body of empirical evidence that suggests that maternal depression influences maternal engagement and interaction with children in a multitude of ways (Dix & Meunier, 2009). First, maternal depression has been linked to higher levels of hostile, intrusive, and harsh behavior in a meta-analytic review (Lovejoy, Graczyk, O'Hare, &

Heuman, 2000). Second, maternal depression has been linked to higher levels of disengagement, negative affect, and lower levels of responsiveness (Lovejoy et al., 2000). Thus, it is logical for maternal depression to be associated with a parenting style that is hostile and controlling (i.e., authoritarian) or disengaged and uninvolved. Further, Turney (2011) provides evidence that depressed mothers report lower engagement, and higher psychological aggression and neglect than non-depressed mothers when children are ages one, three, and five.

Several studies have found evidence for the link between maternal depressive symptoms and parenting styles. Pelaez, Field, Pickens, and Hart (2008) found that depressed mothers of toddlers were more likely to be classified as exhibiting authoritarian or disengaged parenting styles than non-depressed mothers during an observation of a play task. Similarly, Pelaez et al. (2008) found that permissive mothers were less likely to be clinically diagnosed as depressed than the other two parenting styles. In a sample of sixth-grade children and their mothers, Leinonen, Solantaus, and Punamäki (2003) found that maternal depression (measured using summed self-report of depressive symptoms) negatively predicted maternal self-report (on a modified version of the scales used for the Iowa Youth and Families Project) of authoritative parenting style and positively predicted both punitive and noninvolved parenting styles. Additionally, Aubuchon–Endsley, Thomas, Kennedy, Grant, and Valtr (2012) reported a positive association between maternal depression, measured using maternal self-report of clinical depressive symptoms, and authoritarian and permissive parenting styles, measured using maternal-report on the PSDQ. The finding in this study that maternal depression was positively related to authoritarian parenting is to be expected. However, the positive relation

between permissive parenting style and depressive symptoms was not expected because permissive parenting style is characterized by high levels of warmth and responsiveness. Aubuchon-Endsley et al. (2012) used the PSDQ to measure parenting styles, so their findings may provide evidence that the permissive subscale of the PSDQ is tapping into both lax behavioral control and disengagement and ignoring positive aspects of permissive parenting, such as acceptance. Alternatively, the fact that the children in this study were infants may have contributed to these findings.

Parenting Styles and Feeding Practices

Many recent studies, especially those focusing on childhood obesity, have examined parenting styles in relation to feeding practices. Parental feeding practices are specific strategies used by parents, which can directly or indirectly influence children's eating patterns and weight status (Blissett, 2011). Three feeding practices have been identified in which parents attempt to control children's eating: restriction, pressure to eat, and monitoring. Restriction refers to parental attempts to limit unhealthy foods, but has been linked to increased consumption of those foods (Birch et al., 2001). Thus, this type of controlling feeding practice is not optimal for promoting healthy habits in children. Similarly, pressure to eat refers to parental attempts to get children to eat more healthy foods, but has been linked to decreased consumption of these foods (Birch et al., 2001). However, the feeding practice of monitoring the amount and type of food a child eats has been regarded as a more positive way to control what children eat (Hubbs-Tait, Kennedy, Page, Topham, & Harrist, 2008). One positive feeding practice that is not controlling is modeling healthy eating. Modeling the eating of fruits and vegetables has been associated with greater intake of these foods (Draxten, Fulkerson, Friend, Flattum,

& Schow, 2014). A second positive feeding practice is encouraging healthy eating practices (Cullen et al., 2001). This parenting practice promotes healthful eating behavior without being overly controlling (Hubbs-Tait et al., 2008).

A synthesis of recent empirical findings reveals that authoritative parenting style, measured using maternal-report on the PSDQ, is negatively related to pressure to eat (Blissett & Haycraft, 2008) and positively related to monitoring and encouraging and modeling healthy eating practices (Hubbs-Tait et al., 2008). Permissive parenting has been negatively associated with monitoring (Blissett & Haycraft, 2008; Hubbs-Tait et al., 2008) as well as modeling and encouraging healthy eating practices (Hubbs-Tait et al., 2008). Finally, authoritarian parenting has been positively associated with restriction and pressure to eat (Blissett & Haycraft, 2008; Hubbs-Tait et al., 2008). A recent review of parenting styles and feeding practices (Collins, Duncanson, & Burrows, 2014) summarizes these same findings. However, these authors suggest these associations are moderate at best, and there is not enough evidence to establish a direct association between feeding practices and parenting styles (Collins et al., 2014)

Measurement of Parenting Styles

As the conceptualization of and domains related to parenting styles have changed, so have the methods used to measure them. Initial measurement of parenting styles was conducted through observations of child behavior and parent-child interaction as well as interviews with parents and children (see review by Baumrind, 2013). Additionally, *Q*-sorts were often used to classify parent and child behavior (e.g. Baumrind, 1971; Baumrind & Black, 1967; Baumrind et al., 2010; Block, 1965). Over time, researchers began to use questionnaires and surveys to assess parenting styles (e.g. Steinberg,

Mounts, Lamborn, & Dornbusch, 1991) due to high costs and impracticality related to the use of observations and interviews. One specific example of this is Robinson, Mandleco, Olsen, and Hart's (1995) Parenting Practices Questionnaire (PPQ). This 62-item, self-report measure was developed specifically from Block's (1965) Child Rearing Practices Report, and was intended to identify continuous scales of authoritative, authoritarian, and permissive parenting styles (Robinson et al., 1995). From the 1960s when Block developed his measure to the 1990s, conceptualizations of parenting styles shifted and became more variable centered (e.g. Darling & Steinberg, 1993), and the variable-centered nature of the PPQ (Robinson et al., 1995) reflects this shift. Within each parenting style scale of the PPQ are several subscales measuring underlying dimensions of parenting styles. The authoritative scale is made up of the dimensions of warmth, reasoning, democratic participation, and good natured/easy going (Robinson et al., 1995). The authoritarian scale of the PPQ combines subscales of verbal hostility, corporal punishment, punitive strategies, and directiveness (Robinson et al., 1995). Finally, the permissive scale of the PPQ includes subscales of low self-confidence, ignoring misbehavior, and lack of follow through (Robinson et al., 1995). Several variations of this measure have been developed in recent years (e.g., Coolahan, McWayne, Fantuzzo, & Grim, 2002; Robinson et al., 1998; Robinson et al., 2001; Wu et al., 2002). The current study focuses on one of these.

The PSDQ

Robinson et al. (2001) developed the PSDQ as an adaptation of the PPQ. The PSDQ is an abbreviated version of the PPQ, with 32 self-report items, measuring continuous scales of authoritative, authoritarian, and permissive parenting styles. Only

some of the original items and dimensions from the PPQ were retained in the PSDQ. The authoritative scale was reduced from 27 to 15 items. Eleven items were removed from the warmth dimension, two items were removed from the reasoning and induction dimension, one item was removed from the democratic participation dimension, and all of the good natured and easy going items were removed except one, which was combined with the democratic items. The authoritarian scale was reduced from 20 items to 15 items and from four dimensions to three. The corporal punishment dimension was renamed physical coercion and two items were removed; two items were removed from the punitive dimension; and the verbal hostility and directiveness dimensions were reduced by two items each and combined. Finally, the permissive scale was reduced from 15 to 5 items and from three dimensions to one. All of the ignoring misbehavior items were removed. Four lack-of-follow-through items and one low self-confidence item were retained to form an indulgent dimension.

The PSDQ has been widely used in recent years, and its development has made it possible to examine parenting styles affordably in large samples (e.g. Padilla-Walker & Coyne, 2011; Topham et al., 2011; Williams et al., 2009) and across many cultures (e.g., Kern & Jonyniene, 2012, Önder & Gülay, 2009; Porter et al., 2005). However, several limitations of this measure have been identified. Three main issues regarding the use of the PSDQ are relevant to this study. First, the PSDQ only includes measures of authoritative, authoritarian, and permissive parenting. There is not a measure of the fourth parenting style, uninvolved parenting. As previously stated, uninvolved parenting style has been linked to unique outcomes, and thus should be considered as a unique category of parenting styles.

A second limitation of the PSDQ is that reliability and validity related to the permissive scale have been mixed. A recent review (Olivari et al., 2013) suggests that internal consistencies among studies using the permissive subscale of the PSDQ have ranged from α=.38- .84, indicating inconsistency in reliability. Although few studies have provided detailed reports on the validity of the PSDQ (Olivari et al., 2013), some have argued that the items on the permissive subscale have been identified as indicators of *inconsistency* in parenting rather than permissiveness (e.g. Williams et al., 2009). It is important to re-emphasize that the permissive parenting style scale of the original PPQ included three subscales, but was reduced in the PSDQ to include only four items from the lack-of-follow-through dimension and one item from the self-confidence dimension. Thus, the permissive scale of the PSDQ is predominantly a measure of whether or not parents follow through with directives and punishment. Because permissive parenting style is defined as parents who are warm and accepting, have low levels of demandingness, and provide support for autonomy (Baumrind, 2013; Maccoby & Martin, 1983), the PSDQ measure of permissive parenting style does not seem to exhibit face validity. Further, according to conceptual definitions, one would not expect authoritarian and permissive parenting styles to be positively related, yet numerous studies utilizing the PSDQ have found a significant positive correlation between the two (Kern & Jonyniene, 2012; Langer, Crain, Senso, Levy, & Sherwood, 2014; Topham et al., 2011; Williams et al., 2009). In a study utilizing a similar measure, which was also derived from the PPQ, Coolahan et al. (2002) explicitly state that the permissive scale is more conceptually similar to the uninvolved parenting style than the permissive parenting style. This evidence suggests that a re-evaluation of the validity of the PSDQ is warranted with a

focus on whether PSDQ items assess the uninvolved parenting style and on whether inclusion of an uninvolved parenting style factor improves the measurement of the permissive parenting style.

A final limitation of the PSDQ is a concern that the measure deviates from the original conceptual framework for parenting styles as categories (e.g., Baumrind, 2013). Parenting styles were initially conceptualized typologically and each type can be understood as representing a synthesis of parent-child interactions and parenting practices that have an effect that is greater than the sum of these interactions and practices (Baumrind, 1971; Baumrind et al., 2010). Darling and Steinberg (1993) suggest that parenting styles are an indicator of the emotional climate of the parent-child relationship, rather than the sum of specific parent practices. Baumrind (1989) utilized both typological and dimensional analyses, and suggests that the typological approach more accurately depicts the relation between parenting types and child characteristics. Further, Mandara (2003) suggests that utilizing a typological approach allows for data systematically to be described and analyzed according to behavioral classifications. Thus, in order to match method of analysis and operationalized definitions, parenting styles should be examined categorically using a typological method rather than as continuous dimensions. The current study aims to address all of these issues related to the PSDQ.

The Current Study

The current study proposes three research questions and several hypotheses. First, which approaches to mapping PSDQ scales to parenting style categories are supported empirically? The first hypothesis is that the PSDQ can be used to measure four conceptually based scales of parenting styles (1a) or three underlying dimensions of

parenting styles (1b), and that these *a priori* theoretical approaches will be empirically supported using exploratory factor analysis. These hypothesized scales are outlined in Table 1 and Table 2. Second, does the underlying factor structure in this sample allow for the four parenting styles to be measured categorically by type? The second hypothesis is that parents will be categorized into types not only for authoritative, authoritarian, and permissive styles, but also for uninvolved parenting style. In other words, the null hypothesis is that the PSDQ cannot be used to classify parents into an uninvolved style. Finally, the third research question is: can other parent characteristics and practices be used to distinguish among parenting style categories in order to demonstrate construct and criterion-related validity? The third hypothesis contains eight parts (a-h) and is summarized in Table 3.

   a. Mothers categorized as uninvolved will have lower mean levels of family
      affective involvement and emotion-focused responses to child negative emotions
      and higher levels of minimizing responses to child negative emotions than parents
      categorized as permissive.

   b. The uninvolved parenting style category will be differentiated from the
      authoritarian parenting style category by having lower punitive and higher
      minimizing responses to child negative emotion.

   c. The authoritative parenting style category will be differentiated from the
      permissive parenting style category by having higher levels of problem-focused
      responses to child negative emotion, higher levels of family problem solving, and
      lower levels of expressive encouragement responses to child negative emotion.

d. Mean levels of distress responses to child negative emotions will differ among all four parenting style categories as follows: uninvolved will have the highest levels, followed by authoritarian, permissive, and authoritative parenting style will have the lowest.

e. Family communication will differ among all four parenting style categories such that: authoritative will be highest, then permissive, authoritarian, and uninvolved will be the lowest.

f. Family affective responsiveness will be highest for authoritative and permissive, low for authoritarian, and lowest for uninvolved.

g. Authoritarian and uninvolved parenting styles will have higher levels of maternal depression than permissive style, and authoritative parenting style will have the lowest levels of maternal depression.

h. In terms of feeding practices, the mothers with an authoritative parenting style will have high levels of monitoring, modeling, and encouraging healthy practices and low levels of restriction and pressure to eat. Authoritarian mothers will have high levels of controlling feeding practices including restriction, pressure to eat, and monitoring. Mothers with a permissive parenting style will have low levels of restriction, pressure to eat, monitoring, and encouraging. Finally, uninvolved parenting style will have the lowest levels of modeling, encouraging, pressure, and monitoring and moderate levels of restriction.

CHAPTER III

METHOD AND ANALYSIS

Procedures

The archival data for this study were collected from 2005 to 2007 in the first two years of the Families and Schools for Health (FiSH) project, supported by the National Institute of Food and Agriculture, United States Department of Agriculture Research Grant #2004-05545 to Amanda W. Harrist (PI), Tay S. Kennedy, Glade Topham, Laura Hubbs-Tait, and Melanie Page. The FiSH project was a large randomized-controlled intervention study that examined parenting, peer, and psychosocial correlates of childhood obesity longitudinally in rural Oklahoma. Participants were recruited from 29 rural public elementary schools, which were assigned to control or intervention conditions using stratified random sampling. Parent, child, teacher, and intervention data were collected over the course of 5 waves for two different cohorts. However, for the purposes of this study only data obtained from parents in the first wave of data collection (before any interventions) will be used. In the fall of 2005 (cohort 1) and 2006 (cohort 2), questionnaire packets were mailed or distributed to all parents. Parents were given $15.00 for completing and returning the questionnaire packet.

Participants

Of the 1171 children participating in the FiSH project, 494 parents completed and returned the parent questionnaire packet. For this study, only female caregivers who identified themselves as the target child's mother on either the demographic or parenting questionnaire (*n* = 445) were included. Of these female caregivers, three identified themselves as grandmothers and three as stepmothers on the demographic information questionnaire, while self-identifying as "mother" on the first page of the packet of parenting questionnaires (see Table 4). Additionally, 10 participants identified themselves as mothers on the demographic information form, but did not provide that information in the parenting packet. As noted below in the results, three mothers did not complete sufficient items on the PSDQ to be included in the analyses testing the study's hypotheses, yielding a total sample size of 442 mothers.

The number of mothers who answered questions about demographic information ranged from 376 to 437. The mean age was 33.92 (*SD* = 6.09). Of the 442 mothers in the sample, 437 provided data on the sex of their child: 52.7% had a son participating in the FiSH project and 46.2% had a daughter participating. The distribution of ethnicity for the mothers was 68.6% Caucasian, 12% Native American, 1.6% Hispanic, .9% African American, .5% Asian, 3.6% Multiethnic, and 12% did not report ethnicity. The majority of the mothers were married for the first time (51.1%), while 18.3% were remarried, 11.3% were divorced, 2.3% were separated, 4.5% were single and never married, and 12.2% had missing data for this item. The highest level of education was completion of 8th grade for 1.1% of mothers, some high school for 2.8% of mothers, high school graduate for 11.3%, some vo-tech for 4.5% of mothers, vo-tech graduate for 9.7% of

mothers, some college courses for 24.2% of mothers, college graduate for 31.9%, and was missing for 12.4% of mothers. Almost half (45.5%) of mothers were unemployed at the time of data collection, while 39.6% were employed, and 14.9% had missing data.

<div align="center">Measures</div>

Parenting Styles

Female caregivers completed the PSDQ (Robinson et al., 2001) to evaluate parenting styles. Currently the PSDQ measures dimensions of parenting styles using *authoritative* (15 items grouped into three subscales: reasoning/induction, warmth and support, and autonomy granting), *authoritarian* (12 items grouped into three subscales: non-reasoning, physical coercion, and verbal hostility), and *permissive* (5 items) scales. Participants rated responses to each item using a five-point scale from "never" to "always" (coded 1 to 5). In a review of the psychometric properties of the PSDQ, Olivari et al. (2013) suggest that few articles have provided information about reliability and validity of this measure. Robinson et al. (2001) reports the reliabilities as follows: *authoritative* ($\alpha = .86$), *authoritarian* ($\alpha = .82$), and *permissive* ($\alpha = .64$). Olivari et al. suggest that Cronbach's alpha levels are generally adequate for authoritarian (.62-.95) and authoritative (.71-.97) scales, but reliability is consistently lower for the permissive scale (.38-.95). Reliability analyses revealed the following Cronbach's alpha levels for each of the scales in the current sample: *authoritative* ($\alpha = .84$), *authoritarian* ($\alpha = .74$), and *permissive* ($\alpha = .73$).

Exploratory factor analysis (EFA) was used to examine the underlying factor structure in this sample and determine whether there is support for an *uninvolved* style. Next, these factors were used to classify mothers into four parenting style categories:

authoritative, authoritarian, *permissive,* and *uninvolved*. Reliabilities for these newly

derived factors were calculated using tests of internal consistency (Cronbach's α) and are

presented in the analysis of hypothesis 1a. Validity was established by relating the

parenting style types created in the test of research question 2 to the parenting practices

proposed in hypothesis 3.

Parent Response to Child Emotion

Parental response to child emotion was examined using the Coping with

Children's Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzweig, 1990).

Parents reported how likely they were, from "very unlikely" to "very likely," to respond

to child emotion in certain ways for 12 hypothetical situations. Six subscales representing

the types of responses are used: *problem-focused, emotion-focused, minimizing*, *punitive*,

expressive encouragement, and *distress* responses to child emotion. Continuous mean

scores were calculated based on responses for each subscale. In a review and examination

of the psychometric properties of the CCNES, Fabes et al. (2002) reported that internal

consistency was adequate in a series of previous studies, and scores were consistent over

time when tested and retested four months apart. Fabes et al. found the following

Cronbach's alpha levels for each of the subscales: *problem-focused* (α = .78), *emotion-

focused* (α = .80), *minimizing* (α = .78), *punitive* (α = .69), *expressive encouragement* (α =

.85), and *distress* (α = .70). In the same study, Fabes et al. examined the validity of this

measure in two ways. First, in a sample of mothers of children ages 3 to 6 years, CCNES

subscales were related to parenting indexes in order to establish construct validity. In a

second sample of mothers of preschool children, Fabes et al. examined whether CCNES

subscales could be used to predict children's emotional competence. In both of these

studies, findings provided support for the validity of this measure.

In this sample, Cronbach's alpha levels for all of the scales were found to be similar to those previously reported: *problem-focused* (α = .77), *emotion-focused* (α = .79), *minimizing* (α =.77), *punitive* (α = .73), *expressive encouragement* (α = .87), and *distress* (α = .68). Descriptive statistics for each subscale are presented in Table 5.

Family Interaction

Participants completed a shortened version of the McMaster Family Assessment Device (FAD; Epstein et al., 1983) in order to measure *family problem solving, family communication, family affective involvement* and *family affective responsiveness*. Parents reported on how items relate to their family, ranging from "strongly agree" to "strongly disagree." The *problem solving* subscale (6 items) was used to evaluate the family's ability to solve problems relating to family functioning, while the *communication* subscale (6 items) evaluated whether family verbal interactions are clear and direct. The *family affective involvement* subscale (6 items) was used to evaluate the level of concern and connection between family members, and the *family affective responsiveness* subscale (6 items) reflected the amount of emotion expressed within the family. Responses were coded such that higher scores reflect higher levels of functioning for each subscale. Continuous mean scores were calculated based on scores for items in each subscale. Epstein et al. (1983) established validity of the FAD by assessing whether it could discriminate between families with clinical and non-clinical problems in family functioning. Additionally, Epstein et al. reported the following Cronbach's alpha (internal consistency) levels for each of the scales: *family problem solving* (α = .74), *family communication* (α = .75), *family affective involvement* (α = .78.), and *family affective*

responsiveness (α = .83). Reliability analyses in the current sample were similar for

family problem solving (α = .75) but lower for *family communication* (α = .66), *family*

affective involvement (α = .67.), and *family affective responsiveness* (α = .71).

Maternal Depression

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977)

was used to measure maternal depressive symptoms. This is a 20- item self-report

measure in which mothers rated how often they experienced certain feelings (e.g. "I was

happy" and "I felt that people dislike me") or behaviors (e.g. "I talked less than usual"

and "My sleep was restless") in the previous week. Ratings for each item use a four-point

Likert-type scale ranging from "rarely or none of the time" (0) to "most or all of the

time" (3). Continuous scores were calculated from the sum of all item scores. Scores in

this sample range from 0 to 51 (see Table 5), with higher scores reflecting higher levels

of depression. Although clinical cut-off scores have been established (e.g., Husaini, Neff,

Harrington, Hughes, & Stone, 1980), they were not used in this study because Lovejoy et

al. (2002) suggest that depressive symptoms may influence parenting behavior even when

they are below clinical levels. The CES-D is widely used and has been deemed to have

adequate reliability and validity (Radloff, 1977). Specifically, Radloff (1977) examined

test-retest reliability and internal consistency across a wide range of groups (e.g., age,

socioeconomic status, ethnicity). Radloff et al., established concurrent validity by

comparing CES-D scores to other self-report and clinical measures of depressive

symptoms. Notably, this measure has also been validated in a sample of rural adults

(Husaini et al., 1980). Cronbach's *α* for the current sample was high (.90).

Child Feeding Practices

The Child Feeding Questionnaire (CFQ; Birch et al., 2001) was used to examine parent practices and perceptions regarding child feeding. Subscales of *restriction*, *pressure*, and *monitoring* were used. Item responses were reported using five-point Likert-type scales ranging from "never" to "always" or "agree" to "disagree". Continuous scores were computed for each subscale. Validity for this measure has been previously established (Birch et al., 2001) by conducting confirmatory factor analysis in samples comprised of parents of 5- to 9-year-olds and parents of 8- to 11-year-olds from diverse backgrounds. Validity has also been established by comparing subscales of the measure to each other and to child weight status (Birch et al., 2001).Internal consistency reliabilities for the subscales were reported as .73 for *restriction*, .70 for *pressure*, and .92 for *monitoring* by Birch et al. (2001). Reliability analyses for the current sample revealed the following internal consistencies: *restriction* ($\alpha = .67$), *pressure* ($\alpha = .72$), and *monitoring* ($\alpha = .87$).

Encourage Healthy Eating and Modeling

Two questionnaires on *encouraging* and *modeling* healthy eating (Cullen et al., 2001) were used to evaluate parental influences on child feeding. As indicated by Hubbs-Tait et al. (2008) items were revised from the original Cullen et al. (2001) measure to reflect parent rather than child perspectives. Items were ranked from "encourages a lot" to "discourages a lot" and "never" to "always". Continuous scores for each scale were calculated. Validity has been established in a slightly older (grades 4-6) sample by relating *encouraging* and *modeling* scales to recall of child consumption of healthy foods (Cullen et al., 2001). Previous reliability for these scales was .88 for *encouraging* and .78

for *modeling* (Cullen et al., 2001). Reliability analyses for the current sample revealed the following Cronbach's *α* values: *encouraging* ($\alpha = .80$) and *modeling* ($\alpha = .87$). Descriptive statistics for this sample are presented in Table 5.

Data Analysis

All data analyses were conducted with IBM SPSS 21.0 Unless otherwise specified, significance levels were set at $p \leq .05$.

Research Question One

The underlying factors of the PSDQ were examined using EFA. Consistent with procedures outlined by Tabachnick and Fidell (2006), the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to determine whether the use of EFA is appropriate in this data set. This measure provides the ratio of partial correlations among variables, and Tabachnick and Fidell (2006) suggest a score of at least .60. Principal axis factoring was used because this extraction method maximizes variance extracted from the factors while accounting for unique and error variance (Tabachnick & Fidel, 2006). Additionally, principal axis factor analysis was the method initially used by Robinson et al. (1995). Orthogonal (i.e. varimax) rotation was used. Next, the number of factors to extract was considered for only factors with eigenvalues above 1, but determined by examining the scree plot and conducting parallel analysis. Parallel analysis involves comparing eigenvalues for the sample to eigenvalues that are generated randomly for a sample with the same number of subjects and items (Pallant, 2010). Only factors with eigenvalues that exceed the values from the randomly generated sample were retained (Pallant, 2010; Tabachnick & Fidell, 2006). Monte Carlo PCA for Parallel Analysis (Watkins, 2000) was used to conduct the parallel analysis. The final factors were

examined and items with loadings with an absolute magnitude of .30 or greater were retained. These factors were compared to previous subscales of the PSDQ as well as to the two conceptual approaches proposed in hypotheses 1a and 1b.

Research Question Two

The method used to categorize types depended on the factors resulting from the analysis of research question 1. Based on the hypotheses, the strategy was as follows: If four factors representing the four parenting styles were identified (hypothesis 1a), then scores on each scale would be converted to *z*-scores, and mothers would be categorized according the parenting style for which they had the highest *z*-score, as long as this *z*-score was at least .125 *SD* above the next highest parenting style. Mothers who had *z*-scores that were within .125 *SD* would be assigned to an undifferentiated category (Larzelere, personal communication, 2014). If factors relating to the underlying constructs within parenting styles were identified (i.e., acceptance, psychological control, behavioral control; hypothesis 1b), then mothers would be categorized according to high and low levels of each factor as they corresponded to each parenting style. This has been previously accomplished in several ways. Rhee, Lumeng, Appugliese, Kaciroti, and Bradley (2006) categorized parenting styles by dichotomizing dimensions using a median split and classifying parents based on high and low levels of two dimensions. Simon and Conger (2007) also used two dimensions, but instead of median splits, they classified parents based on cut-off scores representing reports of exhibiting that behavior at least half the time. This method reduces misclassification of parents based on skewed data (Simon & Conger, 2007). The final method of categorization was decided in consultation with a research methodologist and statistician based on the factors derived from EFA.

Research Question Three

        Validity of the new conceptualization was tested in several ways. First, construct-related validity was tested. Planned comparisons were used to test whether continuous scales of emotion-related parenting practices can be used to distinguish among parenting style types. Specifically, a series of one-way Analyses of Variance (ANOVA) tests were used to test for differences between categories of uninvolved parenting style and permissive parenting style (hypothesis 3a), uninvolved parenting style and authoritarian parenting style (3b), and authoritative and permissive parenting style (3c) for the key dependent variables identified in each hypothesis. Next, differences in distress response to child negative emotion (hypothesis 3d), family communication (3e), family affective responsiveness (3f), and maternal depression (3g) were compared among all four parenting style categories using one-way ANOVAs. *Post-hoc* comparisons were made using Tukey's HSD to determine which parenting style categories differ significantly. Next criterion-related validity was tested by exploring differences among the four parenting style categories for each of the five continuous measures of feeding practices identified in hypothesis 3h and displayed in Table 3. This was done using one-way ANOVAs and *post-hoc* Tukey HSD comparisons.

CHAPTER IV

RESULTS

Exploratory Factor Analysis

In order to test Research Question 1, EFA was used to examine the underlying

factor structure of the PSDQ. Only participants who completed all items of the PSDQ

were included in the EFA ($n = 378$). When compared to the mothers with incomplete data

($n = 64$), these 378 mothers did not significantly differ in age $t(1, 397) = -.91$, $p = .31$,

marital status $\chi^2(5) = 6.32$, $p = .28$, ethnicity $\chi^2(6) = 7.67$, $p = .26$, education $\chi^2(8) = 7.01$,

$p = .53$, employment status $\chi^2(1) = 2.51$, $p = .11$, or child gender $\chi^2(1) = 1.88$, $p = .66$.

This sample was suitable for factor analysis because the sample size exceeds the

recommendation by Tabachnick and Fidell (2006) of 300 participants or a ratio of at least

five participants for every item included in the EFA. Additionally, the KMO value of .84

suggests that factor analysis is appropriate, as it is well above the minimum of .60

suggested by Tabachnick and Fidell (2006).

Initially, an EFA was conducted on the 32 items of the PSDQ, using principal axis

extraction, varimax rotation, and extracting all factors with eigenvalues greater than one.

A total of eight factors had initial eigenvalues above 1.0 and accounted for 57.45% of the

variance. However, examination of the scree plot (Figure 1) suggested that three or four

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factors should be retained. Finally, parallel analysis revealed that for this sample of 378 participants and 32 items, four factors have eigenvalues greater than those that may randomly occur (Table 6). Thus, it was determined that an EFA forcing a four- factor solution (Hypothesis 1a) or a three factor-solution (Hypothesis 1b) would be appropriate.

Test of Hypothesis 1a

An EFA was conducted using principal axis factor extraction, varimax rotation, and a forced four-factor solution. Factor loadings after rotation are displayed in Table 7. Factor 1 explained 12.73% of the variance and included 14 items. Cronbach's α for this factor was 0.84. Factor 2 accounted for 9.18% of the variance and included 8 items. Reliability for this factor was good ($\alpha = .78$). Factor 3 contained 12 items and accounted for 8.34% of the variance. Four of these 12 items also loaded on either Factor 1 or Factor 2, but were retained as components of Factor 3 as well. In addition, two of those four items loaded negatively on Factor 3 and were therefore reverse coded before incorporation into Factor 3. After reverse coding those two items, Cronbach's α for this factor was .77. Finally, Factor 4 was comprised of eight items and accounted for 4.27% of the variance. Seven of those items also loaded on one of the other factors. Three of them loaded negatively on Factor 4 and were, therefore, reverse coded. This factor had Cronbach's α of .63.

Each of the four factors were evaluated by comparing items loading on each factor to those proposed in hypothesis 1a and previous PSDQ scales (see Table 8). A comparison of items loading on the first factor revealed that 11 of the 14 items are the 11 items hypothesized to load on a factor of authoritative parenting style in hypothesis 1a.

Thus, the first factor was named *authoritative* and was determined to represent this parenting style. The items loading on the second factor include eight of the nine hypothesized authoritarian items, so factor two was named *authoritarian*. The third factor includes all five of the hypothesized items for the uninvolved style with the addition of seven other items representing hostility, lack of involvement, and lack of regulation. This factor was named the *uninvolved* factor. Finally, the fourth factor includes five of the seven hypothesized permissive items and three additional items that loaded negatively on the factor. Two of the items with negative loadings measured physical coercion and one measured non-reasoning punitive control, with lower scores on responses to these three questions reflecting Factor 4. The five permissive items and the three reverse-coded punitive and coercive items were all consistent with a tolerant and permissive parenting style, so this factor was named *permissive.*

The four factors extracted from this EFA are consistent with the four factors proposed in hypothesis 1a. Twenty-nine of the 32 items in the factor analysis loaded on the expected parenting style factors. The inclusion of 11 items on two factors apiece was not anticipated, but improves the conceptual fit of the final factors with the standard conceptualization of parenting styles. Therefore, the decision was made to use these four factors for analyses in hypotheses 2 and 3.

Test of Hypothesis 1b

A final EFA was conducted using the same extraction and rotation as the two previous EFAs, but this time a three factor solution was forced. Factor loadings are displayed in Table 9. The first factor contained 15 items and explained 13.27% of the

variance. The second factor had 9 items with factor loadings above 0.3 and explained 9.32% of the total variance. The third factor had 10 items and explained 8.64% of the variance. Finally, two items "When my child asks why he/she has to conform, I state, "Because I said so," or "I am the parent and I want you to" and "I punish by putting my child off somewhere alone with little if any explanation" did not have factor loadings with an absolute magnitude above 0.3 on any of the three factors.

Similar to methods used in the test of hypothesis 1a, these three factors were evaluated by comparing them to the factors proposed in hypothesis 1b (see Table 10). Examination of the first factor revealed that it contains items from all three factors (i.e., acceptance, firm behavioral control, and psychological autonomy) of underlying dimensions proposed in hypothesis 1b. The second factor resulting from this EFA contains four rejection items from the hypothesized acceptance and rejection factor and three items from the psychological control and psychological autonomy factor in hypothesis 1b. The third factor contains two items from the psychological control and autonomy factor, one rejection item, and four items from the firm and lax behavioral control factor from hypothesis 1b. None of these factors provide support for hypothesis 1b because the items do not load to form the hypothesized underlying dimensions of parenting styles (i.e., a factor of acceptance and rejection, a factor of psychological autonomy and control, and a factor of firm and lax behavioral control). Accordingly, the decision was made to reject hypothesis 1b.

Further analyses were conducted to compare the factors from this EFA to the PSDQ scales previously established by Robinson et al. (2001). These comparisons are presented in Table 10. The first factor corresponds well with the original *authoritative*

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scale of the PSDQ, as it consisted of the same 15 items included on the authoritative scale developed by Robinson et al. The second factor contains eight of the nine items on Robinson et al.'s authoritarian scale; and one item, "I show respect for my child's opinions by encouraging my child to express them," from the authoritative scale loads negatively on this factor. Thus, this factor appears to represent *authoritarian* parenting. The third factor includes all five items from Robinson et al.'s PSDQ permissive scale as well as three positively loading authoritarian items from the non-reasoning and punitive subscale, and two negatively loading authoritative items from the regulation subscale, one that assessed explaining consequences and the other that assessed emphasizing reasons for rules. This factor appears to represent permissive as well as uninvolved parenting styles. These factors are virtually a match to the Robinson et al. scales of three parenting styles. The only difference between these factors and Robinson et al.'s PSDQ scales are the loadings of items relating to non-reasoning and punitive control on the third factor and the items that were allowed to load on two factors.

Although this three-factor solution corresponds to the standard PSDQ dimensions, the four-factor solution was retained for several reasons. First, the four-factor solution is more consistent with the current conceptualization of parenting styles as comprising four categories because it adds an uninvolved style. Additionally, it revises the permissive style, as identified by Robinson et al. to include Baumrind's responsiveness dimension, particularly, autonomy support. Finally, a greater percentage of hypothesized items load on the pertinent proposed factor in the four-factor solution than the three-factor solution. Thus, the four-factor solution from Hypothesis 1a was used to categorize mothers into parenting style types.

Establishing Parenting Style Types

Test of Hypothesis 2

The next step, after deciding to move forward with the four-factor solution, was to categorize parents into dominant types from their four continuous factor-based summary scores. To do this, mean scores were calculated for mothers for each of the four factors. Three mothers did not complete enough items (75% on each factor) to have mean scores for all four factors. These participants were removed from the sample and were not categorized. Descriptive statistics for these factors are presented in Table 5. Next, all scores were standardized and mothers were assigned a z-score for each of the four continuous parenting style factors. This was done to account for differences in the distribution of scores between the four factors and allow for comparison among them. First, mothers were assigned to a parenting style category when their highest z-score was at least .25 SD higher than the next highest z-score for a factor. However, using this criterion yielded 33% of mothers who were unable to be classified because their top two z-scores were within .25 SD of one another. In order to reduce the size of the undifferentiated group, the criterion was reduced to .125 SD difference between the two highest factor scores. Results of this classification revealed that 101 mothers (22.9%) were authoritative, 100 mothers (22.6%) were authoritarian, 82 mothers (18.6%) were permissive, 85 (19.2%) were uninvolved, and 74 (16.7%) were categorized as undifferentiated. For these undifferentiated mothers the distribution of factors with z-scores within .125 SD of one another are as follows: 32 authoritative and permissive, 17 authoritarian and uninvolved, seven authoritative and authoritarian, six authoritarian and permissive, six uninvolved and permissive, four authoritative and uninvolved, and two

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with close scores on three parenting styles. The next series of tests of validity compared the four categories of parenting styles and did not include undifferentiated mothers in the analyses.

Tests of Construct Validity

Planned Comparisons

In order to test hypotheses 3a-c, a series of one-way ANOVA tests examining differences in emotion-related parenting practices by parenting style category were conducted. Significant between-groups differences are summarized in Table 11.

Test of hypothesis 3a. The aim of hypothesis 3a was to test for differences between uninvolved and permissive categories in order to differentiate these two parenting style types. As expected, mothers in the uninvolved parenting style category reported significantly lower family affective involvement [$F(1,165) = 23.61, p < .001$] and significantly higher minimizing reactions to child negative emotions [$F(1,164) = 39.76, p < .001$] than mothers categorized as permissive. Emotion-focused responses to child negative emotions did not significantly differ between these two groups [$F(1,164) = 2.9, p = .009$].

Test of hypothesis 3b. Hypothesis 3b predicted differences in uninvolved and authoritarian parenting style categories for punitive and minimizing reactions to children's negative emotions. Results of one-way ANOVA tests indicate that differences in punitive reactions did not significantly differ [$F(1,182) = .89, p = .35$ nor did minimizing responses [$F(1,182) = 1.61, p = .21$].

Test of hypothesis 3c. It was hypothesized that mothers categorized as authoritative would report significantly higher family problem solving, higher problem-focused, and lower expressive encouragement responses to child negative emotions than mothers categorized as permissive. Results indicate that authoritative mothers had significantly higher problem-focused responses [$F(1,178) = 6.98$, $p = .009$], but differences were not significant for expressive encouragement [$F(1,178) = 1.61$, $p = .21$] or family problem solving [$F(1,178) = 1.71$, $p = .19$].

Planned Comparisons Among Four Parenting Styles

It was hypothesized that differences in distress response to child negative emotions (3d), family communication (3e), family affective responsiveness (3f), and maternal depression (3g) could be used to differentiate among all four parenting style categories. In order to test these hypotheses, four one-way ANOVA tests were conducted to test for overall between-groups differences. Next *post-hoc* comparisons were made using Tukey's HSD to identify which categories differed significantly. All significant *post-hoc* differences that are reported were significant at the $p \leq .05$ level. These results are summarized in Table 11.

Test of hypothesis 3d. It was predicted that mean levels of distress responses would be highest for mothers categorized as uninvolved, followed by authoritarian, then permissive, and with mothers categorized as authoritative reporting the lowest levels of distress responses. The overall ANOVA was significant [$F(3,360) = 18.13$, $p < .001$], so *post-hoc* comparisons were tested. Overall the results supported the hypothesized rank ordering of distress responses. Authoritarian mothers reported significantly higher levels

of distress responses than authoritative and permissive. Similarly, uninvolved mothers reported significantly higher distress responses than authoritative and permissive mothers. However, differences were not significant in the pairs of parenting styles at the extremes, either between authoritative and permissive or between authoritarian and uninvolved.

Test of hypothesis 3e. Hypothesis 3e predicted that mothers categorized as authoritative would report the highest family communication, followed by permissive, authoritarian, and with the mothers in the uninvolved category having the lowest levels of family communication. Because the overall ANOVA was significant [$F(3,363) = 12.97$, $p < .001$] differences were analyzed between categories. Consistent with the hypothesis, family communication was significantly higher for authoritative and permissive mother categories than authoritarian and uninvolved categories. There were no significant differences between authoritative and permissive or between authoritarian and uninvolved groups.

Test of hypothesis 3f. It was proposed that family affective responsiveness would be highest for authoritative and permissive mothers, low for authoritarian mothers, and lowest for uninvolved mothers. The one-way ANOVA suggested that there were significant differences in mother report of family affective responsiveness among categories [$F(3,361) = 15.43$, $p < .001$]. *Post-hoc* comparisons indicated that authoritative and permissive mothers had significantly higher scores for affective responsiveness than authoritarian and uninvolved mothers. Also as predicted, authoritarian mothers reported significantly higher family affective responsiveness than uninvolved mothers.

Test of hypothesis 3g. Hypothesis 3g predicted that mothers categorized as authoritarian and uninvolved would have higher levels of depression than mothers categorized as permissive and authoritative. The one-way ANOVA was significant [$F(3,361) = 4.85$, $p = .003$] and *post-hoc* comparisons revealed that depression scores were significantly higher for uninvolved mothers than permissive and authoritative mother categories. There were no significant differences for the authoritarian category.

Tests of Criterion-Related Validity

Differences among parenting style categories on maternal report of five feeding practices were examined to determine whether these criteria could be used to differentiate between parenting style types (hypothesis 3h). This was accomplished by using one-way ANOVA tests for each of the feeding practices and *post-hoc* Tukey's HSD tests for all feeding practices with significant ANOVAs.

The test of differences between groups for restriction was significant [$F(3,364) = 4.99$, $p = .002$]. Tukey's *post-hoc* HSD test revealed that authoritarian mothers had significantly higher scores on restriction than permissive mothers. No other differences between groups were significant. Pressure to eat was found to differ significantly between groups [$F(3,362) = 7.03$, $p < .001$]. *Post-hoc* comparisons reveal that authoritative, authoritarian, and uninvolved mothers reported significantly higher use of pressure than permissive mothers. Differences among uninvolved, authoritative, and authoritarian were not significant. The one-way ANOVA was significant for monitoring [$F(3,363) = 5.49$, $p = .001$]. Examination of Tukey's HSD indicates that authoritative mothers use higher levels of monitoring than uninvolved mothers. No other categories were significantly different. Results of the ANOVA for encouraging [$F(3,362) = 3.30$, p

= .02] led to *post-hoc* comparisons suggesting that the only significant differences was

that authoritative mothers use more encouragement than uninvolved mothers. Finally,

between groups differences were also significant for modeling [$F(3,63) = 11.24$, *p* <

.001]. Results of Tukey's HSD indicate that modeling was significantly higher for

authoritative and permissive mothers than authoritarian and uninvolved. Differences in

modeling for authoritative and permissive or authoritarian and uninvolved mothers were

not significant.

CHAPTER V

DISCUSSION

Summary and Interpretation of Results

The purpose of this study was to examine the underlying factor structure of the

PSDQ and to use the factors identified to develop a method of categorizing mothers into

four parenting style types. Findings in this study provide preliminary support for the use

of the PSDQ as a measure of four continuous scales of parenting styles: authoritative,

authoritarian, permissive, and uninvolved, as well as a method for categorical

classification of mothers into these four styles. Additionally, strategic comparison among

parenting style categories on continuous scales of emotion-related parenting and family

practices demonstrates aspects of validity of these parenting style categories.

PSDQ Factor Structure

Exploration of the underlying factor structure of the PSDQ provided support for

the examination of four parenting styles in several ways. It was hypothesized that either

four factors corresponding to each of the parenting styles or three factors relating to the

underlying dimensions of parenting styles would emerge. Results of the EFA tests

revealed that the hypothesized four-factor solution was empirically supported (hypothesis

1a) while the factors relating to the three underlying dimensions were not supported

(hypothesis 1b). In both circumstances, the results of EFA differed from the scales created by Robinson et al. (2001). While the authoritative scale derived from EFA in the three-factor solution in this study was consistent with the authoritative scale identified by Robinson et al. (2001), the authoritarian scale contained only some of the original items, and the permissive scale differed from the original items in that some of the authoritarian and authoritative items loaded with the five permissive items.

The pattern of items loading on the four factors of parenting styles identified in this study is fairly consistent with the hypothesized factors and is virtually identical to the conceptual framework proposed in this paper. One important distinction between the hypothesized factors and the final factors identified in this study is that factors were allowed to load on both items when the absolute magnitude of both loadings was above .30. This meant that 10 items were included on more than one factor in this study. This method was advantageous and can be justified in several ways. First, all of the items with multiple cross-loadings were conceptually consistent with both factors in which they were included. For example, the item "I show respect for my child's opinions by encouraging my child to express them" had positive loadings on both authoritative (.399) and permissive (.382) factors. According to the parenting styles framework, this makes sense because this item represents warmth and respect for individuality (Baumrind, 1989) which are central to both authoritative and permissive parenting styles. The inclusion of cross loadings allowed each of the four factors to have items that represented a more complete range of the constructs within each parenting style. Another reason this method was used was to allow items to load positively and negatively on two factors. For example, the item "I emphasize the reasons for rules" had a positive loading on the

authoritative factor (.558) and negative loading on the uninvolved factor (-.318). By assigning this item to both factors, it was possible to tap into high and low levels of the use of reasoning. Thus, for items loading positively on one factor and negatively on another, reverse scoring them and allowing them to cross load on two factors provided a conceptually better representation of the parenting style.

The authoritative factor included all eleven proposed authoritative items and three items identified by Robinson et al. (2001) as autonomy granting items (summarized in Table 8). It is important to include these autonomy items because, according to Baumrind (1971), parents must encourage children's individuality and independence in order to be classified as authoritative. Similarly, these items may reflect Schaeffer's (1965) psychological autonomy construct, which is central to authoritative parenting style. Notably, the highest loading items on this factor represent both behavioral control and parental warmth and acceptance. These loadings emphasize the centrality of both demandingness (behavioral control) and responsiveness (warmth and acceptance) for the authoritative factor identified in the current analyses. These findings are consistent with the conceptual framework of the authoritative parenting style for more than 40 years (Baumrind et al., 2010). To summarize, items loading on this factor included items relating to acceptance and warmth, behavioral control and regulation, and autonomy—all of which are consistent with the definitions of authoritative parenting presented by Baumrind (2013) and proposed in this study.

Items on the authoritarian factor identified through EFA are consistent with the items hypothesized for the authoritarian factor (hypothesis 1a) as well as with two subscales presented by Robinson et al. (2001)—verbal hostility and physical coercion.

Items on these two subscales address both the psychologically controlling and rejecting aspects of authoritarian parenting style emphasized by Baumrind (2013) and clearly load on the factor that is consistent with the conceptualization of these two subscales as authoritarian. In contrast, the items from the non-reasoning punitive subscale did not load with the authoritarian factor. One loaded negatively on the permissive factor and all four loaded positively on the uninvolved factor. This is consistent with hypothesis 1a because three of these four items were hypothesized to load on the uninvolved factor. Conceptually, these items are consistent with both authoritarian and uninvolved parenting styles because they represent punishment that is rejecting and punitive. However, these items loading only on the uninvolved factor makes sense because all four of these items represent punishment that requires very parental little effort (e.g., "I punish by putting my child off somewhere alone with little if any explanation"), which is characteristic of the uninvolved style (Maccoby & Martin, 1983).

Although the permissive factor identified in this study only contained five of the seven items proposed in hypothesis 1a and also included seven additional items, it is consistent with the conceptualization of permissive parenting presented by Baumrind (1971; Baumrind, 1989; Baumrind, 2013). The highest loadings on this factor are "I spoil my child," the reverse of "I spank when my child is disobedient," and "I encourage my child to freely express him/herself even when disagreeing with parents." Although there are not any items representing warmth and indulgence, all items clearly represent acceptance and low levels of demandingness. Conceptually, this is consistent with permissive parenting that is accepting, tolerant, and does not attempt to control or regulate the child's behavior in any way (Baumrind, 1966; 1989). For permissive parents,

the item relating to spoiling the child appears to represent a lack of demandingness, which is consistent with Robinson et al.'s (2001) conceptualization of permissive style. One item from the Robinson et al. (2001) permissive subscale that was predicted to load on the permissive factor (hypothesis 1a) but did not is, "I find it difficult to discipline my child." One explanation for this may be that, as presented by Maccoby and Martin (1983), permissive parents are tolerant and accepting, and thus may not see a need to discipline their child. In other words, permissive parents may find discipline as less necessary or less often used, rather than "difficult." The inclusion of high loading autonomy granting items and negatively loading items relating to punitive reactions and physical punishment is consistent with the conceptual definition of permissive parents as accepting, allowing psychological autonomy, and having lax behavioral control. In other words, this factor represents all three underlying dimensions of parenting styles, whereas Robinson et al.'s (2001) PSDQ permissive scale is dominated by one negative aspect of permissiveness (lack of follow through).

The uninvolved factor identified in this study included all five hypothesized items as well as seven additional items. Of these items, the three highest loading items are related to use of threats and lack of follow through. These items are consistent with the conceptualization of uninvolved parenting style as parents who will do anything necessary (i.e., empty threats) to minimize parenting effort (Maccoby & Martin, 1983). In addition, this factor also includes items representing rejection (i.e., "I yell or shout when my child misbehaves" and "I punish by putting my child off somewhere alone") and items related to lack of discipline and giving in to the child, both of which are conceptually consistent with uninvolved parenting style. Finally, there are two negatively

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loading items representing a lack of regulation and reasoning. Together these items address all defining aspects of uninvolved parenting: low control, rejection, and low commitment to parenting. Only one item loading on this factor that was unexpected is, "I spoil my child." One explanation for this item may be that uninvolved parents perceive themselves as spoiling the child because they use very little regulation and control. Alternatively, others may tell them that they spoil their child because others perceive their lack of effort. Finally, the fact that only one item loading was not expected underscores the empirical support of EFA for the conceptual framework of the current study.

The underlying factors identified in this sample were consistent with the conceptual framework of parenting styles and also the hypothesized factors of four parenting styles. These four factors are important for improving and expanding the current use of the PSDQ, by including an uninvolved factor and by including a more conceptually sound measure of permissive parenting. These factors also make it possible to examine four parenting style categories.

Categorizing Parenting Style Types

In this study, it was hypothesized that parents could be classified into parenting style categories representing all four parenting style types. Using criteria outlined in this study (i.e., highest standardized score for a parenting style is at least .125 SD higher than all other styles), most mothers were categorized into one of the four parenting style types. This method is useful for several reasons. First, by using standardized scores this method allows for the comparison of differing parenting styles. If raw scores had been used, mothers would not have been categorized in this way because mean scores were higher

for authoritative ($m = 2.14$) and permissive ($m = 3.57$) factors than authoritarian ($m =$ 1.81) and uninvolved ($m = 1.98$) factors (see Table 5). This may be partly due to social desirability. Thus, the use of standardized scores allowed the four factor scores to be compared for each mother, based on the distribution of the sample and relative to all other mothers. Although less rigorous, the use of .125 *SD* difference in z-scores rather than .25 *SD* allowed more mothers to be assigned to a parenting style category and included in the evaluation of construct validity instead of excluding them. Importantly, results from hypothesis 3 suggest that these types are valid using the .125 *SD* criterion.

Using the .125 *SD* criterion, a total of 368 mothers were assigned to a category. The distribution of mothers was: 101 (22.9%) authoritative, 101 (22.6%) authoritarian, 82 (18.6%) permissive and 85 (19.2%) uninvolved. However, 74 (16.7%) mothers were not able to be categorized using these criteria and were subsequently placed in an undifferentiated category. This distribution is somewhat consistent with other findings. Rhee et al. (2006) has the closest percentages for a similar sample. Rhee et al. categorized parents into parenting style types using dimensions of maternal sensitivity and expectations for self-control when children were 4.5 years-old. The distribution among parents was: 179 (20.53%) authoritative, 298 (34.17%) authoritarian, 132 (15.14%) permissive, and 263 (30.16%) neglecting. In a different study of mothers ($N = 95$) of 6 to 14 year olds, Desjardins, Zelenski and Coplan (2008) categorized parenting types by dichotomizing restrictiveness and nurturance scales of the Child Rearing Practices Report. They found that 27 (28.42%) mothers were authoritative, 22 (23.16%) were authoritarian, 27 (28.42%) were permissive, and 19 (20%) were neglectful. Finally, out of 164 families with nine-year-old children, Baumrind (1989) reported the following

frequencies for the parenting prototypes: 13 (7.93%) authoritative, 23 (14.02%) authoritarian, 12 (7.32%) permissive, and 17 (10.37%) rejecting-neglecting. The rest of the parents (60.37%) fell into parenting types that were less differentiated than the four prototypes.

These undifferentiated mothers may not fit into the parenting style categories for several reasons. First, these mothers may be combinations of parenting style categories proposed by Baumrind (1991; 2013; Baumrind et al., 2010) such as her in-between categories of democratic, directive, and good-enough parents. For example, the largest group of undifferentiated mothers was mothers with close z-scores for authoritative and permissive (n=32). These mothers may represent democratic parenting style (Baumrind, 1991) which is made up of mothers who are medium demanding and highly responsive. However, these mothers may also have close z-scores on these two factors because they share common items or because there are not enough confrontive control items in the PSDQ to adequately differentiate between these two groups. Similarly, the second highest group of undifferentiated mothers was mothers with close scores on authoritarian and uninvolved factors. Conceptually, these are similar because these parents are characterized as hostile and rejecting, but the use of confrontive and psychological control differentiates these two styles. The PSDQ may not contain sufficient items addressing the constructs of confrontive and psychological control to fully differentiate the authoritarian and uninvolved styles.

Parenting Style Categories and Parent and Family Practices

Tests of hypothesis 3 were conducted to validate the newly derived categories of parenting style types. Results of planned comparisons indicate that each of the parenting

style categories is valid and independent of other style categories on at least some variables. Critical distinctions can be made looking at these differences.

Importantly, the new uninvolved parenting style can be differentiated from all three other parenting style categories on several hypothesized characteristics. When compared with permissive mothers, uninvolved mothers had significantly higher levels of distress and minimizing responses to children's negative emotions and lower levels of family communication, family affective responsiveness and family affective involvement. There were not any parenting practices hypothesized to be different that were not significantly different for these two parenting style categories, confirming the importance of differentiating uninvolved parents from permissive parents. Uninvolved mothers also had higher levels of distress response and lower levels of family communication and family affective responsiveness than authoritative mothers, which is consistent with expectations for these two styles. Finally, family affective responsiveness was the only variable that was significantly different for authoritarian and uninvolved mothers. In contrast, distress, minimizing, and punitive responses to negative emotion as well as family communication were not significantly different for these two groups. Failure to differentiate between these two parenting styles on these variables may be a function of the rejection and hostility that is characteristic of both of these parenting styles.

As hypothesized, distress responses to child negative emotions were higher for authoritarian mothers than permissive mothers, while family communication and affective responsiveness were higher for permissive mothers than for authoritarian mothers. This is consistent with previous assertions that these two parenting styles differ on acceptance, warmth, and responsiveness (Maccoby & Martin, 1983).

Permissive mothers reported significantly lower problem-focused responses to child negative emotions than authoritative mothers. This finding is important because problem-focused responses to children's negative emotion have previously been found to be related to firm and responsive control (Fabes et al., 2002), a dimension that was hypothesized to differ between these two parenting styles. This is consistent with Hypothesis 3c and illustrates authoritative parents use of guidance and support in helping the child cope with the emotions and alter subsequent behavior based on these emotions (e.g., if bike is broken and child is upset, help child figure out how to fix it). However, the finding that authoritative and permissive mothers did not significantly differ on family problem solving may suggest that both parenting types are proactive in solving problems relating to family relationships.

Differences between authoritative and permissive mothers were not significant for expressive encouragement or distress responses to child emotions, family communication, or family problem solving. Expressive encouragement was hypothesized to be higher for permissive mothers because this variable represents parental acceptance of children's negative emotional displays. The finding that authoritative and permissive categories of mothers do not significantly differ on expressive encouragement is consistent with the conceptualization that both of these categories have high warmth and acceptance. As previously discussed, permissive mothers were less distressed by and minimizing toward children's negative emotions, and had higher family communication, affective responsiveness, and affective involvement than uninvolved mothers. Thus, the current findings support the similarity in responsiveness between authoritative and permissive parenting style types, but not uninvolved or authoritarian parenting types.

These differences in parenting and family practices among parenting style categories provide insight into the wider constructs measured by the PSDQ. Baumrind has unfailingly (1968; 1991; 2013) conceptualized parenting style types as greater than the sum of individual items, practices, dimensions, or component parts. Findings in this study provide evidence that the categories derived from the four underlying factors of the PSDQ do go beyond the specific items to describe differences in parenting and family behavior. This is critical to demonstrate validity for these underlying constructs of the parenting typology.

Parenting Style Categories and Maternal Depression

Maternal depression was hypothesized to differ among all four parenting style categories. Findings indicated that permissive and authoritative parenting style categories had significantly lower scores on the depression scale than uninvolved mothers. This is consistent with previous findings that depressed mothers are less warm and responsive and more disengaged than non-depressed mothers (Lovejoy et al., 2002). Depression in the authoritarian parenting style category was found not to differ significantly from any other group. This finding may suggest that depression may is more closely linked to parenting behavior related rejection and disengagement typical of uninvolved mothers than the punitive and coercive control exercised by authoritarian mothers. However, this finding may be also function of the methods used to operationalize depression in this study. Comparison of clinical levels of depression among the categories may produce different results. Still, the finding that uninvolved mothers have the highest levels of depression is a critical distinction that is worth noting.

Parenting Style Categories and Feeding Practices

It was hypothesized that authoritarian mothers would report the highest levels of restriction, uninvolved mothers would use moderate amounts of restriction, and authoritative and permissive mothers would report the lowest levels of restriction. The only significant difference was that authoritarian parents were more highly restricting than permissive parents. This difference is consistent with only the highest and lowest levels of restriction hypothesized. This finding suggests that future research is needed to better understand the types and ways that restriction is used in authoritative and uninvolved parenting. Authoritarian mothers were hypothesized to report the highest use of pressure in the feeding context, and authoritative, permissive, and uninvolved mothers were hypothesized to use low levels of pressure. However, the only significant difference between types was that permissive parents use significantly less pressure than all other categories. Hypothesis 3h proposed that authoritative and authoritarian mothers would report the highest levels of monitoring children's food intake, permissive mothers would report low levels, and uninvolved mothers would engage in the lowest levels of monitoring. Results suggested that only authoritative mothers used significantly more monitoring than uninvolved mothers. It was proposed that all parenting styles would differ in the amount of encouragement reported: authoritative highest, authoritarian moderate, permissive low, uninvolved lowest, yet only authoritative mothers were significantly more encouraging than uninvolved mothers.

Finally, it was hypothesized that modeling would be high for authoritative mothers, low for authoritarian and permissive mothers, and lowest for uninvolved mothers, but findings were that authoritative and permissive were greater than

authoritarian and uninvolved. One explanation for this may be that authoritative and permissive mothers may be more engaged or spend more time with their children than authoritarian and uninvolved mothers, providing more opportunities to model healthy practices.

Although all significant differences among parenting style types were in the expected direction, only some of the hypothesized differences were significant. This is consistent with position of Collins et al. (2014) that there is not a well-established direct link between parenting styles and feeding practices. There may be other variables that moderate the effects of this relationship. A wide body of research documents parenting styles that are specific to the feeding context, referred to as *feeding styles* (Hughes, Power, Fisher, Mueller, & Nicklas, 2005). This domain-specific application of parenting styles is more closely related to feeding practices than general parenting styles (Hughes et al., 2005). In a recent review, Vollmer and Mobley (2013) suggest that several studies have found that parenting styles do not consistently match feeding styles.

Strengths

It is important to highlight the strengths of this study. The greatest strength of this study is that it expands and improves on the usefulness of the 32-item PSDQ. Results in this study support the hypotheses that four parenting styles can be validly measured using the PSDQ and that parenting style factors can be used to categorize parenting style types. The methods used in this study to reconceptualize the PSDQ were rigorous as they combined a conceptual framework with an EFA as an empirical test of proposed factors. Reise, Waller, and Comery (2000) suggest that EFA can be used to evaluate psychometric properties and to address the adequacy of representation of constructs by a

measure. Previous studies (e.g., Coolahan et al., 2002; Olivari et al., 2013) provided

evidence that the permissive scale of the PSDQ was not validly tapping into the construct

of permissive parenting style. This study provides a conceptual framework and empirical

evidence for improved and valid permissive and uninvolved parenting style factors.

Finally, the large sample size in this study is a strength because it exceeded the

recommendation of 300 participants suggested by Tabachnick and Fidell (2007) for the

use of EFA and allowed for the categorization of mothers into parenting styles with

adequate sample size in each parenting style type.

Limitations

Although this study has many strengths, there are also several limitations which

must be acknowledged. This study utilized archival data, and was therefore limited to the

measures used in the previous data collection. Validation of the new parenting styles is

limited because there were not any other parenting styles measures available to relate to

the new factors. Parenting practices measures were used to examine differences among

parenting style categories for two specific contexts: response to child negative emotions

and feeding. However, there were not any validation variables representing global

parenting styles or practices. Furthermore, this study could have been improved if a more

complete measure of psychological control and confrontive behavioral control had been

available for assessing parenting styles and for validation. The items in the PSDQ were

not developed with the intent to measure these constructs and provide limited insight into

these aspects of parenting styles. Another limitation of this study is the use of self-report

data. Utilizing data from a single informant for the PSDQ and validation measures is a

potential source of bias, including social desirability (Leary, 2012). Measures for all

variables were questionnaire format, thus responses were subject to differences in interpretation of items by participants (Leary, 2012). Questionnaire format also requires that participants must be self-aware of parenting behaviors. Baumrind (2005) suggests that this is a potential source of bias because social knowledge and behavior are not always congruent. A final limitation is that this sample was fairly ethnically homogenous. Previous studies have questioned the extension of parenting styles to different cultural groups (see Sorkhabi & Mandara, 2013). Therefore, these four factors of parenting styles may not emerge in more ethnically diverse samples, and further exploration is warranted.

Future Research Suggestions

Findings in this study are exploratory and provide strong preliminary support for the use of the PSDQ in examining four parenting style categories. However, future research is needed to determine whether these findings are replicated in other similar samples. In addition, the use of confirmatory factor analysis is needed to reproduce or further refine the measure. Future research is also needed to determine whether these findings extend to other groups including samples mothers and fathers of children in other age groups, geographic locations, and ethnicities. Further analysis of the items that had cross-loadings and were retained on two factors is needed. These items may have different meaning for parents of one style than parents of another style. For example, autonomy items may represent autonomy support for authoritative mothers but autonomy granting for permissive mothers. Refinement of these items and the addition of new items may measure these parenting styles more adequately. There is a need for the parenting style categories identified in this study to be validated using other measures of parenting styles or observational methods. Future analyses are necessary to understand the mothers

classified as undifferentiated in this study. Analysis in this study suggests that many of the undifferentiated mothers were highly authoritative and permissive, and future research is needed to determine how these mothers differ from mothers who were categorized in each of these categories. Future research is also needed to further examine the link between parenting styles and feeding practices and how these relate to child nutrition and obesity. Finally, this research should be extended to examine how these parenting styles relate to child characteristics and outcomes over time.

Conclusion

The purpose of this study was to provide validation of a novel method for measuring conceptually and empirically sound parenting style categories. Through the use of EFA, four distinct parenting style categories were developed from the PSDQ and used to categorize mothers as authoritative, authoritarian, permissive, and uninvolved. These categories were found to differ significantly on key parenting and family practices, supporting the validity of the parenting style constructs measured. Moreover, some differences in feeding practices were identified among parenting style categories. Overall, these results offer support for the current method of measuring parenting style types—including uninvolved parenting style, which may lead to a better understanding of this distinct parenting style.

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APPENDIX

Oklahoma State University Institutional Review Board
Request for Determination of Non-Research or Non-Human Subject

4. **Determination of "Research".**
   One of the following must be "no" to qualify as "non-research":

   A. Will the data/specimen(s) be obtained in a systematic manner?
      ☐ No ☒ Yes My data set was obtained in a systematic manner, but active data collection was complete for this data set in spring of 2007.

   B. Will the intent of the data/specimen collection be for the purpose of contributing to generalizable knowledge (the results (or conclusions) of the activity are intended to be extended beyond a single individual or an internal program, i.e. widely or universally applicable)?
      ☐ No ☒ Yes

5. **Determination of "Human Subject".**
   A. Does the research involve obtaining information about living individuals?
      ☐ No ☒ Yes
      If no, then research does not involve human subjects, no other information is required.
      If yes, proceed to the following questions.

   All of the following must be "no" to qualify as "non-human subject":

   B. Does the study involve intervention or interaction with a "human subject"?
      ☒ No ☐ Yes

   C. Does the study involve access to identifiable private information?
      ☒ No ☐ Yes

   D. Are data/specimens received by the investigator with identifiable private information?
      ☒ No ☐ Yes

   E. Are the data/specimen(s) coded such that a link exists that could allow the data/specimen(s) to be re-identified?
      ☒ No ☐ Yes
      If "Yes," is there a written agreement that prohibits the PI and his/her staff access to the link?
      ☐ No ☐ Yes

6. **Signatures**

   Signature of PI _____ Date 7/7/14

   Signature of Faculty

   Advisor _____ Date 07.07.14
   (If PI is a student)

   ☒ Based on the information provided, the OSU-Stillwater IRB has determined that this project **does not** qualify as human subject research as defined in 45 CFR 46.102(d) and (f) and **is not subject to oversight by the OSU IRB.**

   ☐ Based on the information provided, the OSU-Stillwater IRB has determined that this research **does** qualify as human subject research and **submission of an application for review by the IRB is required.**

   _____ 7-8-14
   Dr. Shelia Kennison, IRB Chair TAMARA Mix, Interim IRB Chair Date

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Table 1

Hypothesized 4 Factors of Parenting Styles (Hypothesis 1a)

Hypothesized Factor	PSDQ Scale	PSDQ Subscale
AUTHORITATIVE PARENTING STYLE		
7. Encourages child to talk about the child's troubles.	Authoritative	Warmth & Support
1. Responsive to child's feelings or needs	Authoritative	Warmth & Support
12. Gives comfort and understanding when child is upset.	Authoritative	Warmth & Support
14. Gives praise when child is good.	Authoritative	Warmth & Support
27. Has warm and intimate times together with child.	Authoritative	Warmth & Support
25. Gives child reasons why rules should be obeyed.	Authoritative	Regulation
31. Explains the consequences of the child's behavior.	Authoritative	Regulation
11. Emphasizes the reasons for rules.	Authoritative	Regulation
5. Explains to child how we feel about the child's good and bad behavior.	Authoritative	Regulation
29. Helps child to understand the impact of behavior by encouraging child to talk about the consequences of his/her own actions.	Authoritative	Regulation
21. Shows respect for child's opinions by encouraging child to express them.	Authoritative	Autonomy Granting
AUTHORITARIAN PARENTING STYLE		
2. Uses physical punishment as a way of disciplining our child.	Authoritarian	Physical Coercion
6. Spanks when our child is disobedient.	Authoritarian	Physical Coercion
32. Slaps child when the child misbehaves.	Authoritarian	Physical Coercion
19. Grabs child when being disobedient.	Authoritarian	Physical Coercion
16. Explodes in anger towards child.	Authoritarian	Verbal Hostility
13. Yells or shouts when child misbehaves.	Authoritarian	Verbal Hostility
23. Scolds and criticizes to make child improve.	Authoritarian	Verbal Hostility
30. Scolds and criticizes when child's behavior doesn't meet our expectations.	Authoritarian	Verbal Hostility
4. When child asks why (he)(she) has to conform, states: because I said so, or I am your parent and I want you to.	Authoritarian	Non-Reasoning/ Punitive
PERMISSIVE PARENTING STYLE		
24. Spoils child.	Permissive	Indulgent
18. Takes into account child's preferences in making plans for the family.	Authoritative	Autonomy Granting
3. Takes child's desires into account before asking the child to	Authoritative	Autonomy

do something.		Granting
9. Encourages child to freely express (him/herself) even when disagreeing with parents.	Authoritative	Autonomy Granting
15. Gives into child when (he)(she) causes a commotion about something.	Permissive	Indulgent
22. Allows child to give input into family rules.	Authoritative	Autonomy Granting
8. Finds it difficult to discipline child.	Permissive	Indulgent

UNINVOLVED PARENTING STYLE

28. Punishes by putting child off somewhere alone with little if any explanations.	Authoritarian	Non-Reasoning/ Punitive
20. States punishments to child and does not actually do them.	Permissive	Indulgent
17. Threatens child with punishment more often than actually giving it.	Permissive	Indulgent
26. Uses threats as punishment with little or no justification.	Authoritarian	Non-Reasoning/ Punitive
10. Punishes by taking privileges away from child with little if any explanations.	Authoritarian	Non-Reasoning/ Punitive

Table 2

Hypothesized Factors of Parenting Styles Dimensions (Hypothesis 1b)

Hypothesized Factor	PSDQ Scale	PSDQ Subscale
ACCEPTANCE vs. REJECTION		
ACCEPTANCE		
7. Encourages child to talk about the child's troubles.	Authoritative	Warmth & Support
1. Responsive to child's feelings or needs	Authoritative	Warmth & Support
12. Gives comfort and understanding when child is upset.	Authoritative	Warmth & Support
14. Gives praise when child is good.	Authoritative	Warmth & Support
27. Has warm and intimate times together with child.	Authoritative	Warmth & Support
18. Takes into account child's preferences in making plans for the family.	Authoritative	Autonomy Granting
REJECTION		
13. Yells or shouts when child misbehaves.	Authoritarian	Verbal Hostility
32. Slaps child when the child misbehaves.	Authoritarian	Verbal Hostility
16. Explodes in anger towards child.	Authoritarian	Verbal Hostility
28. Punishes by putting child off somewhere alone with little if any explanations.	Authoritarian	Non-Reasoning/ Punitive
FIRM vs. LAX BEHAVIORAL CONTROL		
FIRM		
25. Gives child reasons why rules should be obeyed.	Authoritative	Regulation
29. Helps child to understand the impact of behavior by encouraging child to talk about the consequences of his/her own actions.	Authoritative	Regulation
31. Explains the consequences of the child's behavior.	Authoritative	Regulation
11. Emphasizes the reasons for rules.	Authoritative	Regulation
5. Explains to child how we feel about the child's good and bad behavior.	Authoritative	Regulation
LAX		
8. Finds it difficult to discipline child.	Permissive	Indulgent
3. Takes child's desires into account before asking the child to do something.	Authoritative	Autonomy Granting
22. Allows child to give input into family rules.	Authoritative	Autonomy Granting
15. Gives into child when (he)(she) causes a commotion about something.	Permissive	Indulgent

PSYCHOLOGICAL CONTROL vs. AUTONOMY:

CONTROL

23. Scolds and criticizes to make child improve.	Authoritarian	Verbal Hostility
30. Scolds and criticizes when child's behavior doesn't meet our expectations.	Authoritarian	Verbal Hostility
26. Uses threats as punishment with little or no justification.	Authoritarian	Non-Reasoning/ Punitive
10. Punishes by taking privileges away from child with little if any explanations.	Authoritarian	Non-Reasoning/ Punitive
4. When child asks why (he)(she) has to conform, states: because I said so, or I am your parent and I want you to.	Authoritarian	Non-Reasoning/ Punitive

AUTONOMY

21. Shows respect for child's opinions by encouraging child to express them.	Authoritative	Autonomy Granting
9. Encourages child to freely express (him/herself) even when disagreeing with parents.	Authoritative	Autonomy Granting

Table 3

Hypothesized Differences Among Parenting Style Categories (Hypothesis 3)

Scale	Authoritative	Authoritarian	Permissive	Uninvolved
CCNES				
Expressive Encouragement	High		Moderate	
Problem-Focused	High		Low	
Emotion-Focused			Highest	Low
Distress	Low	Moderate-High	Low	High
Minimizing		High	Low	Highest
Punitive		High		Moderate
FAD				
Problem-Solving	High		Moderate	
Communication	High	Low	Moderate	Lowest
Affective Responsiveness	Highest	Low	High	Lowest
Affective Involvement			High	Low
Maternal Depression	Lowest	High	Low	Highest
CFQ Restriction	Low	High	Low	Moderate
CFQ Pressure	Low	High	Low	Low
CFQ Monitoring	High	High	Low	Lowest
Encouraging	High	Moderate	Low	Lowest
Modeling	High	Low	Low	Lowest

Table 4

Comparison of Participants Self-Identifying as Mother in Parenting Questionnaire (PQ)
Packet and in Demographic Questionnaire (DQ)

Response on DQ	Identify as Mother in PQ	No response in PQ	Total
Mother	368	10	378
Father	7	0	7
Step-mother	3	0	3
Grandmother	3	0	3
Left-blank	54	0	54
Total	435	10	445

Note. When both parents completed the parenting packet, mothers completed the questionnaires for mothers and fathers completed the questionnaires for fathers. Seven fathers in this group completed the demographic questionnaire.

Table 5

Descriptive Statistics

Variable	*n*	Mean (SD)	Range
Authoritative	442	4.14 (.45)	1.86-5.00
Authoritarian	442	1.81 (.46)	1.00-3.88
Permissive	442	3.57 (.51)	1.17-3.58
Uninvolved	442	1.98 (.45)	1.50-4.88
CCNES Expressive Encouragement	437	3.81 (.56)	1.83-5.00
CCNES Emotion Focused	437	4.10 (.45)	2.50-5.00
CCNES Problem Focused	437	4.17 (.40)	2.42-4.92
CCNES Minimizing	437	2.14 (.53)	1.08-4.00
CCNES Punitive	437	1.93 (.45)	1.00-4.00
CCNES Distress	437	2.19 (.44)	1.17-3.82
FAD Problem Solving	441	3.16 (.38)	2.00-4.00
FAD Communication	441	3.05 (.37)	2.00-4.00
FAD Affective Responsiveness	439	3.23 (.44)	1.50-4.00
FAD Affective Involvement	440	3.05 (.44)	1.67-4.00
CES-D Depression	439	10.50 (9.03)	0-51.00
CFQ Responsibility	440	4.47 (.56)	2.00-5.00
CFQ Monitor	441	3.83 (.82)	1.00-5.00
CFQ Pressure	440	2.58 (1.06)	1.00-5.00
CFQ Restriction	442	3.68 (.79)	1.00-5.00
Encourage	440	4.11 (.52)	1.00-5.00
Model	441	2.56 (.50)	1.43-4.00

Table 6
Parallel Analysis

Factor	Initial Eigenvalues in Sample	Randomly Selected Eigenvalues
1	**6.406**	1.5887
2	**3.054**	1.5060
3	**2.480**	1.4482
4	**1.669**	1.3983
5	1.354	1.3567
6	1.317	1.3126
7	1.099	1.2737
8	1.003	1.2371
9	.956	1.2031
10	.885	1.1687
11	.862	1.1382
12	.816	1.1065
13	.789	1.0741
14	.730	1.0454
15	.690	1.0164
16	.658	.9877
17	.647	.9612
18	.627	.9336
19	.614	.9069
20	.582	.8792
21	.549	.8524
22	.518	.8283
23	.488	.8015
24	.472	.7744
25	.430	.7475
26	.402	.7221
27	.383	.6953
28	.361	.0160
29	.331	.0171
30	.308	.0186
31	.282	.0198
32	.236	.0223

Note. Sample eigenvalues > randomly selected
eigenvalues are in boldface.

Table 7

Factor Loadings for EFA of PSDQ: Four Factor Solution

PSDQ Item	Factor			
	1	2	3	4
I explain the consequences of the child's behavior.	**.664**	.043	**-.319**	.066
I encourage my child to talk about his/her troubles.	**.652**	-.154	-.060	-.015
I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.	**.621**	.000	-.286	.181
I explain to my child how we feel about the child's good and bad behavior.	**.586**	.070	-.178	-.021
I give my child reasons why rules should be obeyed.	**.583**	.034	-.227	.090
I emphasize the reasons for rules.	**.558**	.059	**-.318**	.085
I give praise when my child is good.	**.548**	-.198	.095	-.016
I show respect for my child's opinions by encouraging my child to express them.	**.538**	-.256	.028	**.351**
I give comfort and understanding when my child is upset.	**.513**	-.221	-.046	-.016
I am responsive to my child's feelings and needs.	**.414**	-.193	.027	-.015
I encourage my child to freely express him/herself even when disagreeing with parents.	**.399**	-.095	-.014	**.382**
I have warm and intimate times together with my child.	**.391**	-.094	-.061	.080
I take my child's desires into account before asking the child to do something.	**.309**	-.006	-.013	.260
I scold or criticize when my child's behavior doesn't meet my expectations.	-.211	**.604**	-.007	.132
I explode in anger towards my child.	-.145	**.603**	.267	-.021
I grab my child when being disobedient.	-.029	**.599**	.165	-.068
I scold and criticize to make my child improve.	-.143	**.569**	.069	.067
I yell or shout when my child misbehaves.	-.153	**.548**	**.340**	-.080
I use physical punishment as a way of disciplining my child.	-.034	**.501**	-.030	**-.318**
I slap my child when the child misbehaves.	-.017	**.488**	.184	-.060
I spank when my child is disobedient.	.042	**.475**	.020	**-.445**
I state punishments to my child and do not actually do them.	-.048	.239	**.667**	.007
I threaten my child with punishment more often than actually giving it.	-.076	.217	**.648**	.057
I use threats as punishment with little or no justification.	-.230	.193	**.517**	-.043
I find it difficult to discipline my child.	-.121	.081	**.438**	.186
I give into my child when the child causes a commotion about something.	-.093	.163	**.416**	.211
I punish by taking privileges away from my child with little if any explanations.	-.034	-.049	**.413**	-.170

I punish by putting my child off somewhere alone with little if any explanation.	-.174	-.005	**.336**	-.162
I spoil my child.	-.003	.113	**.379**	**.395**
I take into account my child's preferences in making plans for the family.	.262	.023	-.016	**.348**
I allow my child to give input into family rules.	**.311**	-.180	.006	**.332**
When my child asks why he/she has to conform, I state, "Because I said so," or "I am the parent and I want you to."	.048	.209	**.322**	**-.328**

Note. Factor loadings > |.30| are in boldface.

Table 8

EFA of PSDQ: Four-Factor Solution Compared with Hypothesis 1a and PSDQ

	PSDQ Scale	PSDQ Subscale
AUTHORITATIVE		
I explain the consequences of the child's behavior.	Authoritative	Regulation
I encourage my child to talk about his/her troubles.	Authoritative	Warmth & Support
I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.	Authoritative	Regulation
I explain to my child how we feel about the child's good and bad behavior.	Authoritative	Regulation
I give my child reasons why rules should be obeyed.	Authoritative	Regulation
I emphasize the reasons for rules.	Authoritative	Regulation
I give praise when my child is good.	Authoritative	Warmth & Support
I show respect for my child's opinions by encouraging my child to express them.	Authoritative	Autonomy Granting
I give comfort and understanding when my child is upset.	Authoritative	Warmth & Support
I am responsive to my child's feelings and needs.	Authoritative	Warmth & Support
I encourage my child to freely express him/herself even when disagreeing with parents.	Authoritative	Autonomy Granting
I have warm and intimate times together with my child.		
I allow my child to give input into family rules.	Authoritative	Autonomy Granting
I take my child's desires into account before asking the child to do something.	Authoritative	Autonomy Granting
AUTHORITARIAN		
I scold or criticize when my child's behavior doesn't meet my expectations.	Authoritarian	Verbal Hostility
I explode in anger towards my child.	Authoritarian	Verbal Hostility
I grab my child when being disobedient.	Authoritarian	Physical Coercion
I scold and criticize to make my child improve.	Authoritarian	Verbal Hostility
I yell or shout when my child misbehaves.	Authoritarian	Verbal Hostility
I use physical punishment as a way of disciplining my child.	Authoritarian	Physical Coercion
I slap my child when the child misbehaves.	Authoritarian	Physical Coercion
I spank when my child is disobedient.	Authoritarian	Physical Coercion
UNINVOLVED		
I state punishments to my child and do not actually do them.	Permissive	Indulgent
I threaten my child with punishment more often than actually giving it.	Permissive	Indulgent
I use threats as punishment with little or no justification.	Authoritarian	Non-Reasoning/ Punitive
I find it difficult to discipline my child.	Permissive	Indulgent
I give into my child when the child causes a commotion about something.	Permissive	Indulgent
I punish by taking privileges away from my child with little if any	Authoritarian	Non-Reasoning/

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explanations.		Punitive
I spoil my child.	Permissive	Indulgent
I punish by putting my child off somewhere alone with little if any explanation.	Authoritarian	Non-Reasoning/ Punitive
I yell or shout when my child misbehaves.	Authoritarian	Verbal Hostility
When my child asks why he/she has to conform, I state, "Because I said so," or "I am the parent and I want you to."	Authoritarian	Non-Reasoning/ Punitive
- I emphasize the reasons for rules.	Authoritative	Regulation
- I explain the consequences of the child's behavior.	Authoritative	Regulation

PERMISSIVE

I spoil my child.	Permissive	Indulgent
I take into account my child's preferences in making plans for the family.	Authoritative	Autonomy Granting
I allow my child to give input into family rules.	Authoritative	Autonomy Granting
I encourage my child to freely express him/herself even when disagreeing with parents.	Authoritative	Autonomy Granting
I show respect for my child's opinions by encouraging my child to express them.	Authoritative	Autonomy Granting
-When my child asks why he/she has to conform, I state, "Because I said so," or "I am the parent and I want you to."	Authoritarian	Non-Reasoning/ Punitive
- I spank when my child is disobedient.	Authoritarian	Physical Coercion
- I use physical punishment as a way of disciplining my child.	Authoritarian	Physical Coercion

Note. Items loading on factors as hypothesized (1a) are in boldface. Items with negative factor loadings are denoted with (-).

Table 9

Factor Loadings for EFA of PSDQ: Three Factor Solution

PSDQ Item	Factor		
	1	2	3
I explain the consequences of the child's behavior.	**.658**	.056	**-.343**
I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.	**.649**	-.018	-.270
I show respect for my child's opinions by encouraging my child to express them.	**.616**	**-.306**	.078
I encourage my child to talk about his/her troubles.	**.607**	-.105	-.135
I give my child reasons why rules should be obeyed.	**.587**	.038	-.240
I emphasize the reasons for rules.	**.562**	.059	**-.323**
I explain to my child how we feel about the child's good and bad behavior.	**.554**	.103	-.229
I give praise when my child is good.	**.505**	-.145	.013
I encourage my child to freely express him/herself even when disagreeing with parents.	**.490**	-.167	.068
I give comfort and understanding when my child is upset.	**.476**	-.177	-.113
I have warm and intimate times together with my child.	**.396**	-.089	-.075
I allow my child to give input into family rules.	**.394**	-.241	.076
I am responsive to my child's feelings and needs.	**.383**	-.154	-.032
I take my child's desires into account before asking the child to do something.	**.372**	-.056	.043
I take into account my child's preferences in making plans for the family.	**.351**	-.054	.074
I grab my child when being disobedient.	-.038	**.604**	.167
I explode in anger towards my child.	-.134	**.592**	.289
I use physical punishment as a way of disciplining my child.	-.120	**.561**	-.101
I spank when my child is disobedient.	-.088	**.560**	-.099
I yell or shout when my child misbehaves.	-.162	**.558**	**.337**
I scold and criticize to make my child improve.	-.108	**.514**	.133
I scold or criticize when my child's behavior doesn't meet my expectations.	-.151	**.510**	.095
I slap my child when the child misbehaves.	-.026	**.495**	.180
When my child asks why he/she has to conform, I state, "Because I said so," or "I am the parent and I want you to."	-.055	.294	.192
I threaten my child with punishment more often than actually giving it.	-.054	.218	**.645**
I state punishments to my child and do not actually do them.	-.044	.254	**.641**
I use threats as punishment with little or no justification.	-.231	.205	**.503**

I find it difficult to discipline my child.	-.060	.039	**.491**
I spoil my child.	.112	.022	**.482**
I give into my child when the child causes a commotion about something.	-.024	.112	**.478**
I punish by taking privileges away from my child with little if any explanations.	-.088	.016	**.320**
I punish by putting my child off somewhere alone with little if any explanation.	-.216	.043	.273

Note. Factor loadings > |.30| are in boldface.

Table 10

EFA of PSDQ: Three-Factor Solution Compared with Hypothesis 1b and PSDQ

	Hypothesized Factor (1b)	PSDQ Scale	PSDQ Subscale
FACTOR 1			
I explain the consequences of the child's behavior.	Firm Behavioral Control	Authoritative	Regulation
I help my child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.	Firm Behavioral Control	Authoritative	Regulation
I show respect for my child's opinions by encouraging my child to express them.	Psychological Autonomy	Authoritative	Autonomy Granting
I encourage my child to talk about his/her troubles.	Acceptance	Authoritative	Warmth & Support
I give my child reasons why rules should be obeyed.	Firm Behavioral Control	Authoritative	Regulation
I emphasize the reasons for rules.	Firm Behavioral Control	Authoritative	Regulation
I explain to my child how we feel about the child's good and bad behavior.	Firm Behavioral Control	Authoritative	Regulation
I give praise when my child is good.	Acceptance	Authoritative	Warmth & Support
I encourage my child to freely express him/herself even when disagreeing with parents.	Psychological Autonomy	Authoritative	Autonomy Granting
I give comfort and understanding when my child is upset.	Acceptance	Authoritative	Warmth & Support
I have warm and intimate times together with my child.	Acceptance	Authoritative	Warmth & Support
I allow my child to give input into family rules.	Lax Behavioral Control	Authoritative	Regulation
I am responsive to my child's feelings and needs.	Acceptance	Authoritative	Warmth & Support
I take my child's desires into account before asking the child to do something.	Lax Behavioral Control	Authoritative	Autonomy Granting
I take into account my child's preferences in making plans for the family.	Acceptance	Authoritative	Autonomy Granting
FACTOR 2			
I grab my child when being disobedient.	Rejection	Authoritarian	Physical Coercion

I explode in anger towards my child.	Rejection	Authoritarian	Verbal Hostility
I use physical punishment as a way of disciplining my child.		Authoritarian	Physical Coercion
I spank when my child is disobedient.		Authoritarian	Physical Coercion
I yell or shout when my child misbehaves.	Rejection	Authoritarian	Verbal Hostility
I scold and criticize to make my child improve.	Psychological Control	Authoritarian	Verbal Hostility
I scold or criticize when my child's behavior doesn't meet my expectations.	Psychological Control	Authoritarian	Verbal Hostility
I slap my child when the child misbehaves.	Rejection	Authoritarian	Physical Coercion
- I show respect for my child's opinions by encouraging my child to express them.	-Psychological Autonomy	Authoritative	Autonomy Granting

FACTOR 3

|			
I threaten my child with punishment more often than actually giving it.		Permissive	Indulgent
I state punishments to my child and do not actually do them.		Permissive	Indulgent
I use threats as punishment with little or no justification.	Psychological Control	Authoritarian	Non-Reasoning/ Punitive
I find it difficult to discipline my child.	Lax Behavioral Control	Permissive	Indulgent
I spoil my child.		Permissive	Indulgent
I give into my child when the child causes a commotion about something.	Lax Behavioral Control	Permissive	Indulgent
- I explain the consequences of the child's behavior.	(Lax) Behavioral Control	Authoritative	Regulation
- I emphasize the reasons for rules.	(Lax) Behavioral Control	Authoritative	Regulation
I punish by taking privileges away from my child with little if any explanations.	Psychological Control	Authoritarian	Non-Reasoning/ Punitive
Does not load on any factors			
When my child asks why he/she has to conform, I state, "Because I said so," or "I am the parent and I want you to."	Psychological Control	Authoritarian	Non-Reasoning/ Punitive
I punish by putting my child off somewhere alone with little if any explanation.	Rejection	Authoritarian	Non-Reasoning/ Punitive

Table 11

Tests of Differences in Parenting Practices Among Parenting Style Categories (Hypothesis 3a-h)

Scale	1 Authoritative	2 Authoritarian	3 Permissive	4 Uninvolved	Significant Group Differences
CCNES Expressive Encouragement	4.11 (.47)		4.02 (.49)		ns
CCNES Problem-Focused	4.38 (.34)		4.24 (.36)		1>3
CCNES Emotion-Focused			4.18 (.05)	4.07 (.38)	ns
CCNES Distress	1.99 (.44)	2.36 (.39)	2.09 (.40)	2.34 (.45)	1,3 < 2,4
CCNES Minimizing		2.42 (.46)	1.85 (.43)	2.32 (.53)	3<4
CCNES Punitive		2.13 (.45)		2.07 (.45)	ns
FAD Problem-Solving	3.34 (.39)		3.27 (.38)		ns
FAD Communication	3.18 (.36)	3.01 (.34)	3.16 (.35)	2.90 (.37)	1,3>2,4
FAD Affective Responsiveness	3.37 (.44)	3.18 (.43)	3.36 (.38)	2.99 (.47)	1,3>2>4
FAD Affective Involvement			3.15 (.40)	2.84 (.42)	3>4
Maternal Depression	9.51 (9.66)	10.61 (8.07)	8.84 (8.33)	13.65 (9.20)	1,3<4
CFQ Restriction	3.74 (.80)	3.89 (.79)	3.45 (.75)	3.67 (.73)	2>3
CFQ Pressure	2.61 (1.10)	2.85 (1.02)	2.19 (.99)	2.78 (1.00)	1,2,4>3
CFQ Monitoring	4.07 (.84)	3.80 (.81)	3.88 (.79)	3.60 (.76)	1>4
Encouraging	4.20 (.61)	4.07 (.46)	4.19 (.48)	3.99 (.50)	1>4
Modeling	2.72 (.57)	2.44 (.46)	2.71 (.47)	2.39 (.46)	1,3>2,4

*Note:*Means and standard deviations are listed only for variables proposed to differ from each other in hypothesis 3.

Figure 1. Scree Plot
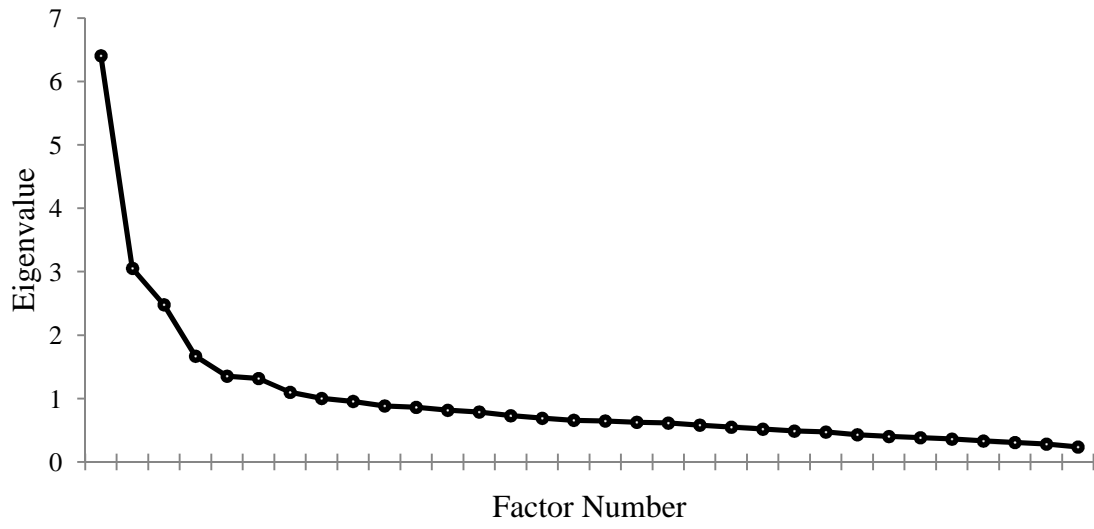
VITA

Ashley Blakely Kimble

Candidate for the Degree of

Master of Science

Thesis: THE PARENTING STYLES AND DIMENSIONS QUESTIONNAIRE: A
RECONCEPTUALIZATION AND VALIDATION

Major Field: Human Development and Family Science

Biographical:

Education:

Completed the requirements for the Master of Science in Human Development
and Family Science at Oklahoma State University, Stillwater, Oklahoma in July,
2014.

Completed the requirements for the Bachelor of Science in Human
Development and Family Science at Oklahoma State University, Stillwater,
Oklahoma in 2009.

Experience:

Graduate Research Assistant, Oklahoma State University, Stillwater, Oklahoma
Kindergarten Teacher, Putnam City Schools, Oklahoma City, Oklahoma

Professional Memberships:

Society for Research in Child Development
Society for Research in Human Development
American Society for Nutrition