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Understanding the Determinants of Parental Decision-Making and Harsh Parenting Behavior

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UNDERSTANDING THE DETERMINANTS OF PARENTAL DECISION-MAKING AND HARSH PARENTING BEHAVIOR

by

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ABSTRACT

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The high prevalence and negative consequences of hash parenting among US parents is well-documented. However, intervention and prevention efforts aimed at reducing the rates of harsh parenting have had limited success. A goal of this paper was to provide a novel method of studying parenting behavior; moving beyond correlational findings. Specifically, I argued that preventing harsh parenting has been a challenge, in part because of lack of understanding of the decision-making processes underlying the behavior. In an effort to incorporate tradition decision making methodology, I designed a between subjects, single-blind, randomized experiment. The experimental manipulations were design to induced emotional and cognitive stress, mimicking the parenting experiences immediately prior to discipline decision making of new parents. Findings reviled that although the harshness of preferred discipline strategy for participants who were new to parenting was mostly impacted by distal factors (e.g., age, race, traditional beliefs about parenting); negative affect inducing conditions had an effect on their increase in preference for harsh parenting. Specific individual differences in the effect of cognitive-emotional strain are described. Methodological implications and recommendations for future research are discussed.

This dissertation is dedicated to Dr. James F. Paulson. For his advice, his patience, and his witty jokes.

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CHAPTER 1

INTRODUCTION

Harsh parenting (e.g., yelling, spanking, or hitting) is a common practice for parents in the United States (Lansford et al., 2009), with rates reaching as high as 87% for mothers in high-risk environments (Kim, Pears, Fisher, Connelly, & Landsverk, 2010). The use of harsh parenting practices is a costly public health problem because it has been reliably associated with negative behavioral (Gardner, Ward, Burton, & Wilson, 2003), social and emotional (Chang, Schwartz, Dodge, & McBride-Chang, 2003) outcomes for children. For example, harsh parenting practices have been linked to symptoms of child externalizing (i.e. aggressive) and internalizing (i.e. anxiety) behaviors (Hill & Bush, 2001; Stormshak, Bierman, McMahon, & Lengua, 2000; Wilson, Norris, Rack, & Shi, 2010). In addition, harsh parenting has been shown to negatively affect children's ability to delay gratification, which in turn leads to an increased risk of becoming overweight in adolescence (Connell & Francis, 2013). Furthermore, experiencing harsh parenting in childhood has been linked to higher rates of heart disease and chronic respiratory disease over the lifespan of an individual (Kazdin, 2008).

Despite its negative effects on child psychological well-being, harsh parenting is strongly endorsed by parents with traditional beliefs about raising children. A wealth of theoretical and empirical parenting research has identified predictors which lead to the endorsement of harsh parenting strategies. Environmental influences such as financial instability in the family, parental age and ethnicity, and lower levels of parental education are amongst the most important predictors (Galovan, et al., 2013; Hill, et al., 2003; Lee, 2013; McGroder, 2000; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000). Furthermore, family research has provided evidence that emotionally and cognitively stressful conditions, such as parenting children with difficult

temperament or working long hours result in a compromised emotional state for parents (e.g., depressive symptoms, negative affect; (McLoyd, 1990; Pereira, Negrão, Soares, & Mesman, 2013), which then has a large effect on the increased likelihood of engaging in harsh parenting (Pinderhughes, et al., 2000). The identified in literature socio economic predictors are often slow to change, if not immutable. Therefore, expanding our understanding of the individual cognitive-emotional processes that trigger the use of harsh parenting may be essential for preventing the behavior. Moreover, the effects of socio economic predictors are often mediated and moderated by factors such as emotion regulation, complicating our understanding of the role that individual cognitive-emotional processes may have separately and together. For that reason, the current research aimed to focus explicitly on investigating the complex interaction between specific contextual cognitive and emotional processes which may affect likelihood of harsh parenting practice endorsement.

Parenting Behavior: Harsh Parenting

Although most parents strive to be warm and supportive towards their children, most parents also report that they have used harsh discipline with their children (Kazdin, & Rotella, 2013). The term "harsh parenting" has multiple interpretations. Physical and psychological transgressions towards a child have been used independently (Straus & Filed, 2003; Straus & Paschall, 2009), and in combination (Pakalniskiene, 2008) to define the term harsh parenting. There are verbal (yelling, swearing, and using threats, rejection, and coercion) and nonverbal (spanking, hitting, kicking, beating) examples of harsh parenting practices. Therefore, in this paper, I define harsh parenting as either physical and/or psychological parenting tactics aimed at causing discomfort so as to correct a child's behavior.

Table 1 presents a summary of studies reporting the prevalence of harsh parenting practices (i.e. from the early postpartum to mid-teenage years). Comparing rates of harsh parenting is important because it provides a description of when harsh parenting practices are most likely to be used. Overall, there appears to be an escalation of harsh parenting practices during the first two years of the child's life, followed by a decline after age 5 (Kim, et al., 2010; Lansford et al., 2009; Straus & Paschall, 2009). Following is a discussion of well-studied theoretical models of parenting behavior which have been used in the past to predict harsh parenting: the process model of the determinants of parenting behavior (Belsky, 1984), Abidin's (1992) model of determinants of parenting behavior, and The Discipline-Mediated Model of Greenwald and colleagues (1997).

Table 1

Prevalence in research studies with community/national samples.

Study	Age of the Child	Sample Size	Population	Harsh Parenting Type	Harsh Parenting Prevalence
Bugental, et al., 2010	Birth - 1	*N* = 96	At-risk	Harsh physical discipline - infant spanking or slapping	Control condition – 42% Enhanced home-visitation condition – 18%
Kim, Pears, Fisher, Connelly, & Landsverk, 2010	1-3	*N* = 488	At-risk	Physical assault and psychological aggression	Age 1 – 67% Age 2 and 3 – 87%
Lansford et al., 2009 Study 1	6-9	*N* = 499	SES varied	Mild physical discipline – spanking with hand	On average - between "*about once a month*" and "*less than once a month*"
				Harsh physical discipline – spankings with object	On average - between "never" and "*less than once a month*"
Lansford et al., 2009 Study 2	10-15	*N* = 258	SES varied	Mild physical discipline – spanking with hand	On average - between "*about once a month*" and "*less than once a month*"
				Harsh physical discipline – spankings with object	On average - between "*never*" and "*less than once a month*"
Straus & Filed, 2003	Birth-17	*N* = 991	SES varied	Psychological Aggression - Ordinary	Age 0-1 – 50% (Shout) 26% (Threaten Spank) Age 2-4 – 90% (Shout) 67% (Threaten Spank) Age 5-8 – 91% (Shout) 70% (Threaten Spank) Age 9-12 – 89% (Shout) 55% (Threaten Spank) Age 13-17 – 86% (Shout) 34% (Threaten Spank)
				Psychological Aggression - Severe	Age 0-1 – 8% (Curse) 0% (Name calling) 0% (TKOH) Age 2-4 – 19% (Curse) 3% (Name calling) 2% (TKOH) Age 5-8 - 22% (Curse) 12% (Name calling) 4% (TKOH) Age 9-12 - 29% (Curse) 24% (Name calling) 1% (TKOH)

Table 1 continued

Prevalence in research studies with community/national samples.

Study	Age of the Child	Sample Size	Population	Harsh Parenting Type	Harsh Parenting Prevalence
Straus & Paschall, 2009	2-4 5-9	*N* = 806 *N* = 704	SES varied	Corporal Punishment - spanking or slapping	Age 2-4 – 93% Age 5-9 – 58%
Straus & Stewart, 1999	Birth-17	*N* = 991	SES varied	Corporal Punishment - Ordinary	Age 0-1 – 32% (Spank w/ hand) 36% (Slap) Age 2-4 – 72% (Spank w/ hand) 63% (Slap) Age 5-8 –71% (Spank w/ hand) 48% (Slap) Age 9-12 – 43% (Spank w/ hand) 27% (Slap) Age 13-17 – 14% (Spank w/ hand) 16% (Slap)
				Corporal Punishment - Severe	Age 0-1 – 8% (Hit w/object) 1% (Slap face) 3% (Pinch) Age 2-4 – 18% (Hit w/object) 5% (Slap face) 3% (Pinch) Age 5-8 - 28% (Hit w/object) 7% (Slap face) 8% (Pinch) Age 9-12 - 29% (Hit w/object) 3% (Slap face) 5% (Pinch) Age 13-17- 15% (Hit w/object) 6% (Slap face)2% (Pinch)
				Corporal Punishment - Other	Age 0-1 – 4% (Shake) 23% (Threaten Spank) Age 2-4 – 13% (Shake) 66% (Threaten Spank) Age 5-8 –11% (Shake) 71% (Threaten Spank) Age 9-12 – 11% (Shake) 56% (Threaten Spank) Age 13-17 – 6% (Shake) 39% (Threaten Spank)

Note. TKOH = Threaten to kick out of the house.

Belsky's process model.

Interested in better understanding the etiology of child mistreatment, Belsky proposed a process model of the determinants of parenting behavior (1984). The model consists of three domains of determinants of parenting: personal psychological characteristics of the parents, child characteristics, and stress and support. Belsky's model of parenting has been empirically supported by researchers identifying determinants such as work (Jackson & Huang, 2000) and quality of the marital relationship (Krishnakumar & Buehler, 2000) as significant predictors of parental functioning. Furthermore, literature based on Belsky's predictors has been somewhat effective in informing interventions aimed at improving the parent-child relationship (Browne & Talmi, 2005). However, the explanatory power of the model is limited, as some evidence exists that even after improvement in the parent-child relationship, parents may still engage in maltreatment, particularly those who are inexperienced or high-risk (Browne & Talmi, 2005).

Indeed, the effectiveness of intervention programs aimed at high-risk parents has been a challenge for practitioners, with post-intervention effect sizes often reported as small to medium (Hurlburt, Nguyen, Reid, Webster-Stratton, & Zhang, 2013; Knerr, Gardner, & Cluver, 2013). Belsky's model forecasts that a person's socioeconomic context, developmental history, personality, and marriage quality will be the strongest predictors of parenting behavior. However, those predictors are generally static or slowly-changing, posing a problem for the development of functional interventions. Because of the less variable nature of the abovementioned predictors, it is also important to focus on more malleable determinants of parenting behavior.

As Belsky (1984, p. 84) pointed out "…parenting, like most dimensions of human functioning, may be influenced by the enduring characteristics of the individual…" yet the model

he proposed in 1984 focused almost exclusively on distal (i.e. environmental) influences, with the possible exception of personality. Even personality, although a somewhat more dynamic individual characteristic, tends to be based on beliefs that are fixed and relatively resistant to change (Dweck, 2008). To address the aforementioned limitation, the cognitive-emotional model to be presented in the current study highlights more malleable, proximal (i.e. individual) predictors of parenting behavior (e.g., decision-making ability). In particular, we know very little about the decisions that are made immediately before a harsh parenting event (Scarnier, Schmader, & Lickel, 2009).

Abidin's model of Determinates of Parenting Behavior.

Abidin's model of parenting behavior advanced Belsky's model by moving beyond the behavioral and sociological examination of determinates of parenting (Abidin, 1990). By placing parenting stress at the center of his model, Abidin (1990) highlighted the importance of recognizing the wide range of individual, cognitive-psychological differences between parents. In 1992, Abidin published a revised model which kept variables such as parental environment and quality of the marital relationship as distal predictors of parenting behavior, but added a new focus on the empirically supported proximal influences of parenting behavior such as cognitive coping and parenting skills. Cognitive coping was conceptualized as the ability of the parent to engage in reappraisal of parenting stress. Abidin hypothesized that a parent's interpretation of the severity of a child behavior in context may play a key role in parental emotion regulation and the ultimate behavioral response that is chosen.

The discipline-mediated model.

Another empirically supported model of parenting behavior is the Discipline-Mediated Model proposed by Greenwald and colleagues (1997). In this model, punitive parenting (i.e.,

aggression and harsh discipline) is predicted by the parent's knowledge and use of adequate discipline tactics and skills. Adequate discipline is predicted by distal predictors such as unemployment, adjusted income, and daily hassles, as well as proximal predictors such as, parent irritability, hostility, aggression, and trait anger.

The main premise of the Discipline-Mediated model is that physical abuse by parents occurs due to parental inability to influence the behavior of their child. Greenwald and colleagues (1997) tested their theory by analysing a series of structural equation models until they reached a viable model that best fit their data. In all the models tested, parental effectiveness appeared to be most influential in parent discipline. In particular, higher levels of self-reported parental efficacy predicted lower levels of punitive parenting. Unfortunately, Greenwald and colleagues (1997) did not investigate the cognitive-emotional mechanisms underlying the relationship between parental self-efficacy and harsh parenting behavior. For example, outcome and efficacy expectations are not differentiated. There is a difference between a person cognitively understanding that their parenting behavior would lead to a certain child outcome, and a person actually feeling confident that they can perform that action. There appears to be an underlying, individual level, decision-making process that if better understood may lead to a reduction in the current pervasiveness and future incidence of harsh parenting practices.

Theory of Decision-Making and Choice

There are two categories of decision-making theories: the philosophical normative theories (e.g., how people should make decisions) and the empirically supported descriptive theories (e.g., how people actually make decisions; Beresford & Sloper, 2008). This paper reviewed only the descriptive decision-making theories, as they apply directly to parenting. Most

such theories subscribe the two-system dual-process view of decision-making (Hogarth, 2005; Kahneman, 2011; Sloman, 1996).

The leading dual process theory of decision-making is Prospect Theory, developed by Daniel Kahneman and Amos Tversky (1979). Prospect theory was developed as an alternative to the previously dominant Expected Utility Theory (Neumann & Morgenstern, 1953) which asserted that humans make choices according to a rational process. Prospect theory is an experience-based theory of decision making under uncertainty and risk. It explains how individuals without extensive education or experience attempt to make optimal choices. A main premise of the theory is that people use heuristics (quickly-applied rules of thumb that guide behaviors without the need for deep processing) in order to make decisions under uncertainty. Heuristics are generally subjective and individualized, such that a person's use of heuristics is based solely on what they know at the point of decision-making. Heuristics do not suppose additional information-seeking before a decision is made (Kahneman, 2011). Similar to habits, heuristics are developed based on individual experiences.

In terms of new parents, their choices likely arise from existing heuristics that come from their family, social group, educational history, and broader culture. Although this sort of process has not been examined in terms of discipline choices and harsh parenting, it has been investigated in parent choices to vaccinate their children (Serpell & Green, 2006). Parents, most of whom have no training in medicine or epidemiology, tend to rely on more available cultural information and their own experience to guide decisions, which, while convenient, sometimes lead to poor health decisions for their children.

Dual-process model of decision-making.

The dual-process model of decision-making describes two different modes or processing styles under which decisions are made. These are referred to as *System 1* and *System 2.* System 1 thinking is intuitive, operates automatically and quickly, requires little effort, and is often strongly influenced by emotions. An example of System 1 thinking is stereotyping (Kahneman, 2011); humans often make impressions of others only seconds after meeting them. Although hostile stereotyping can be harmful, the overall process of categorizing people (e.g., angry and dangerous vs. friendly and harmless) is evolutionarily adaptive, useful, efficient and fast. The need to categorize and make judgments of situations quickly, without using more complex and effortful reasoning, is the basic function of System 1 (Evans, 2008).

In terms of parenting, System 1 thinking can be highly beneficial. It allows parents to react quickly in situations that are potentially harmful to their child. For example, when a child is reaching for a dangerous item, the parent's reaction to prevent the behavior is quick and intuitive, and there are strong emotions related to the process (e.g., anxiety and anger). Furthermore, the effortless nature of System 1 thinking provides parents with cognitive ease in that it makes everyday tasks less exhausting. In other words, System 1 thinking allows parents to use their cognitive resources for more critical dilemmas regarding the needs of the child. Unfortunately, System 1 driven parental thinking may not be optimal when the parent's reaction to an unthreatening situation (e.g., child writes on the walls) is too emotional, non-rational and in itself harmful to the child (e.g., yelling, spanking, or hitting), or when the System 1 response is maladaptive, arising perhaps from a problematic learning history.

Unlike System 1, System 2 thinking is deliberate, analytical, and requires much cognitive effort and attention (Kahneman, 2011). An example of System 2 thinking is performing a

mathematical calculation. There is little use of intuitive thought when performing complex calculations. Instead a person focuses their attention to the problem and engages in the cognitively effortful activity of following mathematical rules. Similarly, a parent could also be engaging in System 2 thinking if they are actively considering the best discipline option for their child. This process would require a cognitively effortful activity of making a decision based on numerous parameters: the severity of their child's misbehavior, his or her developmental stage and/or chronological age, and the long-term goals for their child's future behavior.

Continuing with the previous example, once a parent has made the decision to engage in the corrective behavior (i.e., stopping their child from running across the road) they have to decide on the method to prevent this undesired child behavior from occurring in the future. This System 2 thinking may lead to a variety of parenting behaviors such as discussing the incident with the child or time-out, if the parent believes that those are the most effective ways to correct their child's behavior. Conversely, System 2 thinking may also lead to spanking or hitting, if the parent, after deliberation, concludes that physical punishment is the most effective way for preventing misbehavior in the future.

Although System 2 thinking tends to be deliberate and cognitively straining, engaging this mode of thinking is often a major aim of parent education programs. However, many parents may not have the ability to engage in System 2 thinking. Indeed, System 2 thinking may be too effortful for parents who are already exhausted and/or under a heavy cognitive load for other reasons. Furthermore, System 2 may also no longer be preferred for parenting decisions that are already well-practiced (i.e., habits that have already been acquired and cemented in place by experience).

An intuitive-analytical continuum.

It is important to note that System 1 and System 2 thinking do not operate in isolation of one another or of other influences. Decision-making theorists agree that the two systems are at the ends of a continuum and that people are often making decisions by employing both analytical and intuitive thought (Simon, 1983). The end of the continuum on which a parent's decision falls would vary based on their prior life experiences or learning, and based on the individual's cognitive and emotion regulation abilities. In particular, Deater-Deckard and Dodge (1997) found that the negative effects of harsh parenting on child outcomes were much less severe when the parent disciplined their child in an emotionally controlled manner. Indeed, from the work of Wilson and Whipple (1995; 2001) we see evidence that parents who have poor emotion regulation often default into intuitive/emotion driven thinking and behavior, and this results in less-controlled and more risky parenting behavior. Most parent education programs do not include specific emotion regulation strategies directed to help the parent. With a few exceptions (Whipple & Wilson, 1996) those programs that do have information on emotion regulation often address it in the context of the child's ability to regulate emotions. As a result, parenting researchers have called for research aimed at examining how parental emotion regulation affects their discipline strategies (Barros, Goes, & Pereira, 2015). From a decision-making perspective, it would be expected that learning how to better regulate emotions via brief parenting training would allow parents to have more System 2 activation (i.e., analytical thinking), resulting in less emotionally charged harsh parenting decisions. Indeed, the study by Whipple and Wilson (1996) showed that emphasis on educating parents how to identify and express emotions has led to development of empathy and utilization of healthy techniques for managing child misbehavior.

Finally, the end of the continuum on which a parent's decision falls depends on their level of experience. As argued in the previous section, after parents gain more experience and are less sensitive to influences on their parenting repertoires, System 2 thinking may be much more uncommon. The decision-making of experienced parents, as it relates to routine discipline methods, is largely based on habits. Little is known however about the decision-making processes that occur *during* the sensitive period of early parenthood. Therefore, this paper makes the argument that integration of decision-making theory in existing models of parenting behavior is the necessary next step for researchers and interventionists. Such integrative approach is expected to clarify the processes surrounding the development of parenting habits and ultimately provide a better understanding of harsh parenting behavior.

Early Parenthood – A Sensitive Period

Depleted cognitive and emotional resources.

The transition to parenthood is a unique developmental period during which an individual learns how to navigate their new parenting roles (Bower, 2012). For many individuals, a sense of insecurity and even crisis is common during the period immediately after becoming a parent (Nomaguchi & Milkie, 2003). Individuals are forced to learn how to adjust to a new family system and, in the process, learn important skills and behaviors that are unique to parenthood (Palkovitz, Marks, Appleby, & Holmes, 2002). From a developmental perspective, the sense of parenting insecurity may be even stronger for parents who are having these new parenting challenges in adolescence or early adulthood. Indeed we know that characteristics of younger parents, such as less education and a lower income-to-needs ratio, are strong predictors of harsher parenting (Bugental et al., 2010). Therefore, the transition to parenthood adds additional stress to the life course of individuals who are already experiencing cognitive and affective

challenges (Shapiro & Gottman, 2005). Even for the most typically functioning families, the stress of parenting leads to the depletion of resources such as self-control (i.e. ego depletion) because new parents are under a high cognitive load (Baumeister, 2002). Moreover, inhibition of negative emotions also leads to ego depletion (Robinson & Demaree, 2009). Combined, these early effects, which tend to occur proximal to parenting decisions, may play a substantial role in harsh parenting.

A sensitive parental decision-making period.

From a decision-making perspective, the thinking process of inexperienced decision-makers is likely to be slower and more deliberate (Kahneman, 2011). For example, for individuals who are inexperienced drivers, changing lanes in traffic is a slower, more effortful task. For novice parents who are not yet familiar with the methods that lead to the desired child behaviors, learning how to influence their child's behavior could similarly be slower and more effortful. This may not be the case for all parents however. It is also possible that for some individuals, parental decision-making process may still be relatively fast and reactive. Some parents who have relatively poorer impulse control, caused or exacerbated by other life stress, may be too impulsive to engage in less reactive child disciplining behavior (Levy-Shiff, 1994). Furthermore, inexperienced parents may have developed a list of disciplining heuristics, modeled after certain parenting behaviors they have learned from their parents or other influential figures.

Regardless of whether early parenting behaviors are deliberate or impulsive, new parents ultimately develop more consistent and less deliberate parenting habits through continuous repetition. As decision-making research suggests, decisions that can be made quickly are favored as individuals preferentially select a low-effort mode of processing when possible (Kahneman, 2011). The fast decision-making of parents who already have experience with violence and other

maladaptive methods of interpersonal problem-solving is expected to lead tot harsh parenting methods as part of a continued practice of inappropriate interpersonal behavior. On the other hand, the fast decision-making of parents who have learned to use non-harsh child behavior management would lead to the use of successful discipline strategies.

In summary, once a person has developed a habitual behavioral response to environmental cues such as child demands, decision-making theory suggests that the same type of response is likely to be used even when a parent attempts deliberate, slow decision-making (Kahneman, 2011). Because of this, attempts at changing the parenting behaviors of individuals may be most successfully during the sensitive period, before the previously "new" disciplining behaviors become automatic, easier to access, and harder to change.

Predicting Parenting Decision-Making

Although the focus of this paper to advance the understanding of the proximal (i.e., individual level) factors that influence parenting behavior, such factors are undeniably influenced by many aspects of the individual's environment (i.e. distal factors). Following is an overview of well-known distal factors followed by an overview of proximal factors that may place parents at higher risk for physical and psychological transgressions towards their child.

Distal factors.

***Socio-demographic vulnerability*.** Multiple distal factors have been found to influence the use of harsh parenting. For example, cross-sectional and longitudinal research has found that lower income, non-Caucasian, single parents, tend to use harsh parenting more often (Hill, Bush, & Roosa, 2003; Lee, Brooks-Gunn, McLanahan, Notterman, & Garfinkel, 2013; McGroder, 2000). Young and uneducated parents are also more likely to use harsh parenting practices (Galovan, et al., 2013; Hill, et al., 2003). Family economic strain (e.g., dual vs. single earner

households, multiple children in household) and employment characteristics (e.g., unemployed, employed part time, or full-time) also have been identified as influential factors for harsh parenting behaviors in mothers and fathers (Whitbeck, Simons, Conger, Wickrama, Ackley, & Elder, 1997). Furthermore, it has also been established that due to an overall socio-demographic hardship which vulnerable parents have to endure, their parenting stress is higher when compared to non-vulnerable individuals (Lee, Brooks-Gunn, McLanahan, Notterman, & Garfinkel, 2013. Subsequently, more stressed parents have been shown to use harsher parenting practices (Haskett, Ahern, Ward, & Allaire, 2006). Finally, a larger number of children in the household translates into less available resources per child; thereby increasing parenting stress. Indeed one study showed that the rates of positive disciplining practices decreased in households with more than one child (Fox, Platz, & Bentley, 1995).

Individual beliefs about parenting. Parenting values and beliefs are undoubtedly influential to parental decisions and behaviors. The formulation of these beliefs has been shown to be influenced by intergenerational transmission (e.g., belief in the acceptability of corporal punishment is communicated from grandparents to parents to children; Simons, Whitbeck, Conger, & Wu, 1991). Furthermore, intergenerational transmission of beliefs also leads to intergenerational transmission of behaviors. In particular, a history of experiencing harsh parenting as a child has been linked to use of harsh parenting as a parent across diverse study samples and methodologies (Conger, Belsky, & Capaldi, 2009).

The characteristics of a person's family of origin (e.g., ethnicity, race, cultural background) may also shape their beliefs about harsh parenting. For example, some research suggests that African-American families endorse the use of harsh parenting practices more often than European American families (Deater-Deckard, Dodge, Bates, & Pettit, 1996). Nevertheless,

other research suggests that socio-demographic influences such as income and education account for some of the effect that ethnicity may have on the variance in use of harsh parenting (Hill, Bush, & Roosa, 2003).

Finally, once established, attitudes and beliefs about parenting are strongly linked to parenting behaviors (Socolar & Stein, 1995). Parents with traditional beliefs often believe that child behavior should follow adult directives at all times, whereas progressive parents favor more self-directed child behavior (Shaefer & Edgerton, 1985). Parents who rate themselves as traditional/authoritarian parents tend to use harsher or punitive parenting practices than parents who are more progressive/democratic (Jocson, Rosanne, Alampay, & Lansford, 2012).

Proximal factors.

The above-mentioned findings, although informative, tend to emphasize distal determinants of parenting behavior. Parenting research has paid much less attention to proximal processes, particularly those internal to the parent. A few studies offer support for the importance of examining the effects of situationally based, cognitive-emotional processes of parents (e.g., Dix, 1993), but their findings tend not to play a central role in most accepted conceptual understandings of parenting behavior.

Affective influences.

Emotional Regulation. The term *emotion regulation* refers to the manner in which an individual experiences, expresses, and controls their emotions (Gross, 1998). Adult maladaptive behaviors such as substance abuse, alcohol-related aggression, and disordered eating have been shown result, in part, from deficiency in emotion regulation (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Furthermore, dangerous impulsivity, such as what is often seen in substance use, or even in cases of individuals with borderline personality disorder, has been managed

successfully by emotion regulation interventions (Axelrod, Perepletchikova, Holtzman, & Sinha, 2011). Because parenting behavior is often done in the context of intense emotion (Coplan, Reichel, & Rowan, 2009; Jones, Brett, Ehrlich, Lejuez, & Cassidy, 2014), emotional regulation may play a substantial role in its expression.

Negative affect. Anger has been shown to trigger harsh parenting behavior (Knutson, DeGarmo, Koeppl, & Reid, 2005). Ateah and Durrant (2005) examined the effect of anger on maternal use of physical punishment. In their study, mothers of 3 year-old children were asked to report physical discipline use in the past two weeks and specify the type of child misbehavior that elicited a physical disciplinary response, as well as a separate misbehavior which was corrected via non-physical discipline (e.g., time-out). Mothers reported using physical discipline when they felt angry, when the child's transgression was perceived as having serious consequences, and when they believed that the child had misbehaved intentionally. Maternal reports of anger were the strongest predictor of physical punishment. Such reports suggest that there is an emotion-specific influence affecting parental decision-making. Indeed, research on judgment and choice supports this claim, as it has consistently highlighted the powerful influence of negative emotions on human decision-making (Lerner & Keltner, 2000, 2001; Zajonc, 1998).

Cognitive influences.

Lack of self-efficacy. Negative affect often works together with cognitive distortions to trigger harsh parenting behavior (Lee, 2009; Out et al., 2010). Research suggests that emotions such as feeling depressed or anxious may lead to a belief that a parent is unable to successfully affect child's behavior, which in turn leads to a less sensitive parenting responses to a child crying (Leerkes, Parade, & Gudmundson, 2011).

Knowledge of alternatives to physical punishment is not a significant protective factor against the use of harsh parenting strategies (Ateah & Durrant, 2005). It is possible that mothers who have been taught alternatives to physical punishment, but who are not confident in their ability to successfully utilize non-harsh discipline strategies are not using those strategies because they do not perceive themselves as effective disciplinarians. Parental self-efficacy has been conceptualized as the perceived ability of parents to successfully perform tasks related to rearing a child (Leahy-Warren, McCarthy, & Corcoran, 2012). Self-efficacy is a well-studied predictor of parenting behaviors and, in particular, harsh parenting. A study by Giallo, Rose, & Vittorino (2011) showed that for parents rearing children with sleep problems, low parental self-efficacy predicted harsh parenting behaviors such as losing one's temper and raising one's voice. Furthermore, a recent intervention study showed that maternal self-efficacy could be improved via social comparison and positive feedback (e.g., a parent being told by the researchers that they are performing in the top 10% of parents in the study; Mouton & Roskam, 2014). Mothers who reported having higher self-efficacy as a result of the intervention also reported using less harsh punishment and ignoring, and more positive parenting techniques. It is noteworthy that in the Mouton and Roskam (2014) study, child behavior (assessed by the Child Behavior Checklist) improved significantly as well, even though children did not participate directly in the study. The authors inferred from their results that self-efficacy training for parents may be a powerful tool for improving overall family wellbeing, beyond the direct effect it has on parent behavior (e.g., it may contribute to improvement in children's behavior).

Finally, in a study by Bugenatl and colleagues (2010), at-risk mothers were enrolled in three treatment conditions: a self-efficacy enhanced home visitation condition, an unenhanced home visitations condition or a control condition. During the one-year study, which began

immediately after the birth of the child, the rates of infant spanking and slapping were 18% for mothers in the enhanced home visitation condition, compared to 42% in each of the other two conditions. The findings of Bugental and colleagues support the notion that improving parental self-efficacy can directly reduce the rates of harsh parenting during the first postpartum year.

Cognitive strain and ability. The decision-making literature defines cognitive strain as a state in which extra effort is needed to solve a problem (p. 59; Kahneman, 2011). Often, the individual processes decisions under cognitive strain very differently than decisions made under cognitive ease (i.e., when things are going well; p. 59; Kahneman, 2011). Disciplining a child, especially for inexperienced parents, may involve increased cognitive strain because of its novelty. Without the necessary information and experience, parents who are not as confident in their parenting abilities may struggle to manage dilemmas such as selecting the best method to correct their child's misbehavior. Furthermore, cognitive strain increase with the social context in which a parenting decision is made. For example, the same parent may discipline their child differently if the child misbehaves in a restaurant, a grocery store, or at home because of the different social rules and expectation attached to each situation. Finally, empirical evidence suggests that cognitive strain mediates the effects of employment stress on parenting behavior (e.g., rejecting/avoidance behaviors towards the child; MacEwen, & Barling, 1991). Specifically, if a parent reported high conflict between work and family demands they reported more cognitive difficulties in the past month (e.g., failure to concentrate, inability to attend to everyday activities) which in turn resulted in withdrawal from the parenting role.

It is important to note that there may be general differences between the magnitude of effect of cognitive strain on parenting decision-making for parents who have poorer cognitive abilities overall (an enduring trait). A study conducted by van Bakel and Riksen-Walraven

(2002) showed that parents' intelligence was an important determinant of parenting behavior and observed quality of parenting. In contrast with Belsky's (1984) theoretical assertion that parental personality was the most important determinant of parenting, Bakel and Riksen-Walraven (2002) found that parental intelligence and parental education were of equal importance in predicting parenting behavior. Furthermore, research on parental communication suggests that functional disciplining behavior requires planning and opportunity for practicing (Socha, 2006), which may not occur when cognitive strain is present.

Moving Beyond Correlational Research

Parenting researchers have expressed the concern that parenting research appears to be grounded in correlational research due to the practical and ethical constraints of experimentally manipulating harsh parenting behavior (Benjet & Kazdin, 2003). Although an experiment that assigns families to spanking and non-spanking conditions is not feasible, it is possible to experimentally manipulate the conditions under which the likelihood of choosing harsh parenting changes. Such methodology can demonstrate, for example, the effects cognitive-emotional factors on harsh parenting practices.

Although there is some experimental parenting literature in existence (reveiwed below), studies specifically focusing on manipulating harsh pareting are limited. To a great extent, the existing parenting literature answers the question of *what* leads to harsh parenting behavior. There is a general gap in the literature, however, when searching for answers to the questions of *why* and *how* certain parent-level predictors lead to certain parenting behaviors.

A related research that informs the question at hand is the double-blind experimental study by Bakermans-Kranenburg et al. (2011). The researchers used infant crying to elicit the use of excessive force using a hand-grip dynamometer. The excessive force task was used as a proxy

for impatient or harsher parenting behavior. The participants were 22 pairs of female twins (N=44; half monozygotic, half dizygotic). Participants had no children of their own. Each sibling pair was split and then randomly assigned to either an oxytocin condition (six puffs of nasal spray containing oxytocin were administered) or a placebo condition (six puff of saline solution were administered). Next, after training on how to use the hand-grip dynamometer, participants were asked to squeeze the hand-grip eight times. During the first 4 squeezes they were listening to a baby laughing sound (two minutes) followed by a baby crying sound (two minutes) for the last four squeezes. The researchers hypothesized that the oxytocin would reduce the use of excessive force when listening to a baby crying sound. Oxytocin, a hormone produced by mammals including humans, that plays a role in affection and bonding, has been empirically linked to increase emotional empathy (Hurlemann, R. et al, 2010) and positive affect on observed parenting (Naber et al., 2010). The results of the study revealed that the presence of oxytocin led to less use of excessive force when listening to an infant crying noise. Interestingly, the researchers found that the results of their experiment were significantly moderated by the self-reported by participants history of harsh parenting. The positive effects of oxytocin were only significant when participants had no experiences of harsh parenting as a child. Overall, this study is an example that sensitive vs. harsh responsiveness to infant crying sounds can be manipulated in a lab. Most importantly, the above-mentioned experimental research has applied implications for clinicians who may consider recommending breastfeeding or other oxytocin producing activates to young mothers. The findings were consistent with previous studies showing the strong moderating effect of participant's childhood caregiving experiences.

Another study that used infant crying as an experimental manipulation reported that a high-pitch infant cry could yield both affectionate caregiving and harsher parenting (Out et al.,

2010; N = 368). The researchers found an interesting split between the responses. For some of the participants the high-pitch crying noise signaled urgency for attention which led to those participants immediate affectionate caregiving response. For others, however, the high-pitch crying noise elicited distorted attribution of hostility and frustration rather than urgency. Similarly to Bakermans-Kranenburg et al. (2011), Out and colleagues (2010) stated that the largest amount of variance in harsh caregiving responses was due to unique environmental factors, instead of genetic factors (the participants in Out et al. were also twin pairs thus genetic variability was assessed). In summary the aforementioned findings suggest that people are not genetically predisposed to harsher parenting but their past experiences moderate the manner in which they make decisions and ultimately attend to their children's behavior.

The Present Study

Correlational research has demonstrated that environmentally distressed individuals tend to use harsher parenting strategies (Kim et al., 2010). Furthermore, we know that negative affect leads to an increase in the rates of harsh parenting (Ateah & Durant, 2005). However, there appears to be a gap in literature explaining the processes responsible for this increase. The present study was interested in whether situational stressors (i.e., crying child and cognitive demands) would predict and increase in individual hostility and fast/intuitive decision-making, which in turn would lead to endorsement of harsher parenting behavior. Grounded in decision-making theory, I proposed that the use of faster, more intuitive and less rational decision-making choices moderates the effect of emotionality on harsh parenting behavior.

Two main aims and their associated hypotheses guided this experimental research. The investigation of these aims and hypotheses via an experimental methodology was an important next step in advancing our understanding of harsh parenting. A factorial design in particular

extended the currently limited body of harsh parenting research by allowing for a test of different combinations between factors with fewer participants than would have been needed in a correlational design (Shadish, Cook, & Campbell, 2002).

		Factor B **Noise**		
		(1) Baby Crying	(2) Other Noise	(3) No Noise
Factor A **Cognitive demand**	(1) Low/Easy	A_1B_1	A_1B_2	A_1B_3
	(2) High/Difficult	A_2B_1	A_2B_2	A_2B_3

Figure 1. Hypothesized effect of cognitive-emotional stress on hostility, decision-making time, and harsh parenting behavior. *Note*. The hypothesized contrast between cell A_2B_1 and all other cells were tested for the all dependent variables.

The present study proposed three specific contrasts and three mediated models.

Aim 1: To examine the direct relationship between the main effects and interaction of cognitive stress and emotional stress, on hostility, fast decision-making, and harsh parenting.

Aim 1A: To examine the independent and combined effects of baby crying and cognitive demand on levels of hostility. Hypothesis $1A_1$: It was hypothesized that there would be a significant main effect of experimental condition on change in hostility. Hypothesis $1A_2$: If there is a significant main effect of experimental condition, hostility would be higher in the baby crying and high cognitive demand conditions independently, and highest in when both conditions are present (A_2B_1; Figure 1)

Aim 1B: To examine the independent and combined effects of baby crying and cognitive demand on decision making time. Hypothesis $1B_1$: It was hypothesized that there would be a

significant main effect of experimental condition on decision making time. Hypothesis $1A_2$: If there is a significant main effect of experimental condition, it was hypothesized that decision making would be faster in the baby crying noise and cognitive demand conditions independently, and fastest when both conditions are present (A_2B_1; Figure 1)

Aim 1C: To examine the independent and combined effects of baby crying and cognitive demand on endorsement of harsh parenting strategies. Hypothesis $1C_1$: It is hypothesized that there will be a significant main effect of experimental condition on endorsement of harsh parenting strategies. Hypothesis $1C_2$: If there was a significant main effect of experimental condition, it was hypothesized that endorsement of harsh parenting strategies would be higher in the baby crying and cognitive demand conditions independently, and highest when both conditions are present (A_2B_1; Figure 1)

Aim 2: To examine the indirect effect of hostility and decision-making speed on the relationship between experimental conditions and parenting behavior.

Aim 2A: To examine the indirect effect of hostility on the relationship between experimental conditions and parenting behavior (Figure 2, Model 1). It was hypothesized that cognitive and noise demands would contribute uniquely to greater hostility which in turn would lead to harsher parenting behavior.

Aim 2B: To examine the indirect effect of decision-making speed on the relationship between experimental conditions and parenting behavior (Figure 2, Model 2). It is hypothesized that cognitive and noise demands would contribute uniquely to faster decision-making which in turn will lead to harsher parenting behavior.

Aim 2C: To examine the combined indirect effects of both hostility and decision-making speed on the relationship between experimental conditions and parenting behavior (Figure 2,

Model 2). It was hypothesized that cognitive and noise demands will contribute uniquely to faster decision-making and hostility which together will lead to harsher parenting behavior.

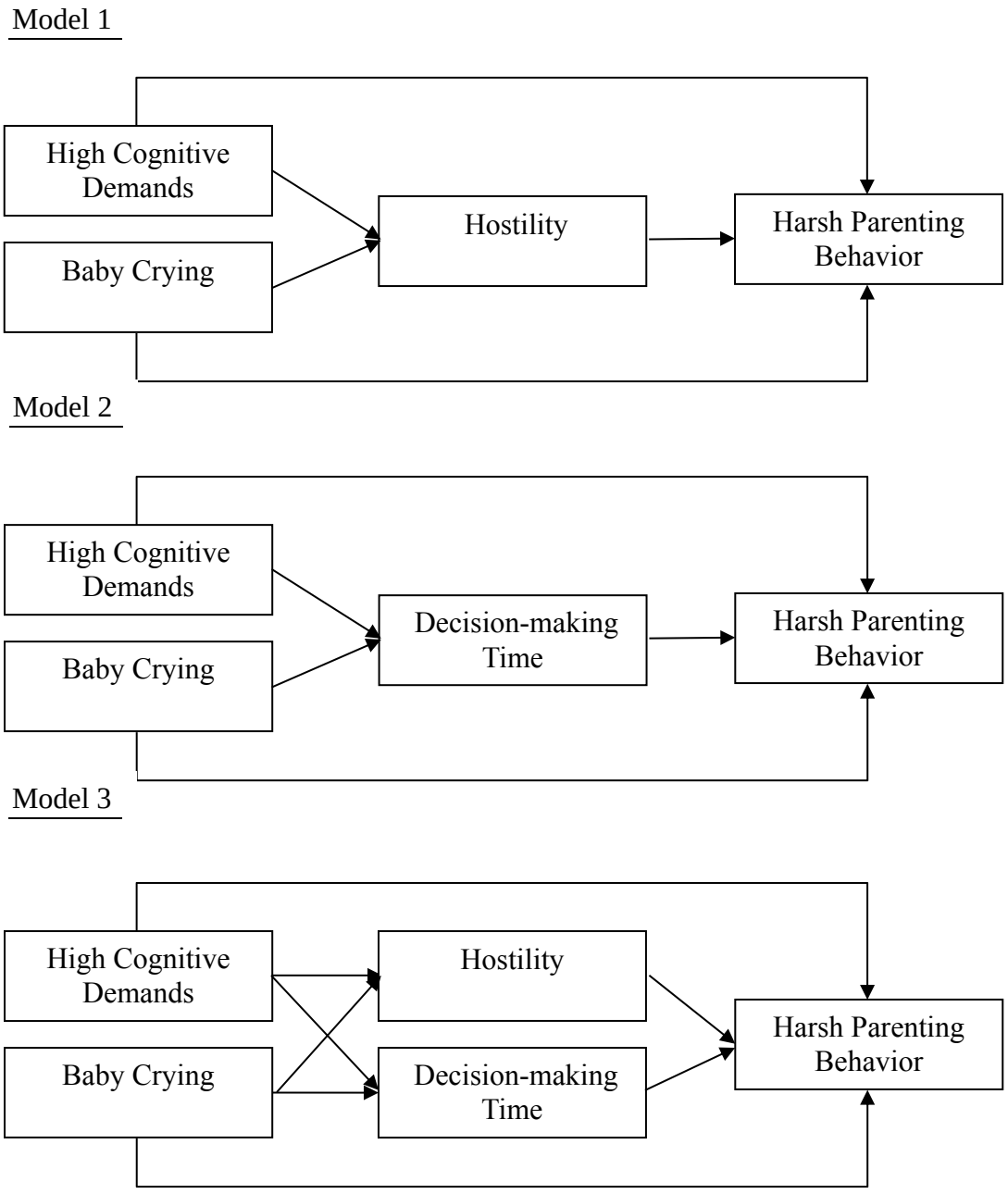


Figure 2. Models examining the indirect effect of hostility and decision-making speed on the relationship between experimental conditions and parenting behavior.

CHAPTER 2

METHOD

Participants

The subject population included 200 undergraduate students at Old Dominion University. Participants were allowed to vary based on age, gender, ethnicity, and other demographic variables (see Table 2).

Exclusion criteria. In order to participate in the experiment, individuals had to be at least 18 years old. Participants had to have no personal parenting experience, have never raised or babysat a child, and have never worked at a daycare facility, have never taken any formal parenting training classes as a course or employment requirement. Participants were also be informed that the data are not anonymous, but the results and all identifying information will be kept strictly confidential.

Recruitment and procedure. A general recruitment announcement was distributed on the SONA web site. Undergraduate students interested in participating in the experiment were pre-screened by the university research participation system SONA. If a participant was a non-parent and 18 years old or older they qualified. Those who qualified were then prompted to sign up for a specific date and time. A between subjects vs a within subjects design was used as it protected against carryover effects (i.e. left over emotional arousal or cognitive strain) that threaten the validity of within subject designs. Each participant was randomly assigned to a date and time allotted to one of the six experimental conditions (Figure 1):

- A_1B_1 – Participant was exposed to baby crying noise for the duration of the experimental session. They were given an easy cognitive task.
- A_1B_2 – Participant were exposed to domestic noise for the duration of the experimental

session. They were given an easy cognitive task.

- A_1B_3 – Participant were not exposed to any noise for the duration of the experimental session. They were given an easy cognitive task.
- A_2B_1 – Participant were exposed to baby crying noise for the duration of the experimental session. They were given a difficult cognitive task.
- A_2B_2 – Participant were exposed to domestic noise for the duration of the experimental session. They were given a difficult cognitive task.
- A_2B_3 – Participant were not exposed to any noise for the duration of the experimental session. They were given a difficult cognitive task.

Upon arrival, participants were assigned a seat in the room and were provided with two copies of an informed consent and non-disclosure agreement forms (see Appendix A and B). Each study session allowed for a maximum of 12 participants at a time. In order to avoid nonverbal communication between participants (e.g. eye contact), participants were seated on every other computer. Participants were asked to sign both types of forms, one copy were given to them for their records and another was kept on file by the. The informed consent described the objectives, risks, and benefits of the study. Each participant had to read and accept all elements of informed consent, which were also verbally explained by the researcher, before proceeding to complete the study.

Following the informed consent procedure, the experiment would begin. For the participants in the noise conditions, the sound level was set to 82 dBA which was in accordance with the noise exposure regulation set by the Occupational Safety and Health Administration (U.S. Department of Labor, 2008). Participant had to complete a set of measures identical for all experimental conditions. The measures were completed in the following order: (1) attitudes

about parenting, (2) emotion regulation, (3) cognitive task (two practice trials before the experimental trial), (4) parenting vignettes, (5) MAACL-R, (6) Dispositional Aggression, (7) History of Harsh Parenting, (8) Self-regulation, (9) Demographics. The survey software recorded participant response time (for each measure and for the study as a whole).

Institutional review board (IRB). The proposed project was reviewed and approved by the university IRB prior to the onset of data collection. All participants were treated in accordance with the American Psychological Association guidelines for ethical treatment of participants.

Measures

Attitudes about parenting (see Appendix C). *The Parental Modernity Inventory* (Schaefer & Edgerton, 1985) was used to assess one's attitudes about childrearing. The 30 item measure used a 4-point Likert scale from *1 = strongly disagree* to *4 = strongly agree*. Based on the responses to items such as "Children have a right to their own point of view and should be allowed to express it", each person receives a progressive and traditional childrearing attitudes score. In the original study, the measure had Cronbach's α range for progressive and traditional score at .88 and .94 respectively. Furthermore, a good test-retest reliability was reported, with a correlation of .84 between time points. In a later study, Schaefer (1989) established the measures predictive validity and overall stability. In the current study the Parental Modernity Inventory had good internal consistency (α = .74). Nevertheless, the high reliability score was mostly due to the performance of the items on the traditional subscale α = .81 and despite the items on the progressive attitudes subscale α = .46.

Emotion Regulation (see Appendix D). *The Emotion Regulation Questionnaire* (ERQ) is a 10-item scale designed to measure respondents' tendencies to regulate their emotions along

the dimensions of Cognitive Reappraisal and Expressive Suppression (Gross & John, 2003). Each item uses a 7-point Likert-type response format from *1=strongly disagree* to *7 = strongly agree*. An example item from the Cognitive Reappraisal facet is "When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about". An example item from the Expressive Suppression facet is "I keep my emotions to myself". The instrument had strong psychometric qualities including good reliability (Cronbach's alpha = .88 and .71 for the Reappraisal and Suppression subscales, respectively). Furthermore, the authors provided evidence for the construct validity of the ERQ by finding a significant correlation (r = .53, p <.001) between the ERQ and a peer-related suppression measure within an independent data source (Gross & John, 2003).

Cognitive Task (see Appendix E). In order to evoke mental effort, the present study used the digit transformation task as outlined by Kahneman, Tursky, Shapiro and Crider (1969). While in the original study there were three levels of difficulty, in the present study I reduced the difficulty levels of the digit transofrmation task to two: Add-3 (difficult) and Add-0 (easy). The following is a description of the task.

Participants were instructed to add either 0 or 3 to a string of four digits. Therefore the original digits will either be incremented by 3 or 0. Each string of four digits was written on a 4 by 6 card and revealed by the experimenter immediately prior to each trial. An example of an Add-3 task would be first, a presentation of a card with the digits 5214. If done correctly, the participant's written response would be 8547. Keeping the rhythm was important as each attempt was allowed 3 second between presentation of the digits and expected response. The researcher's rang a call bell at the end of each trial. In the Add-0 task, the digits on the card were identical to the digits that the participants were expected to write down. The cognitive task was discontinued

after 30 trials (10 trials - 10 sec break, 10 trials- 10 sec break, 10 trials). In the original study the participants verbalized the results of each trial, however in the current study they were asked to write the response down as there was more than one participant in the room and verbalization was expected to cause confusion.

In addition to face validity, this task has demonstrated criterion validly as it has shown to have a significant relationship with physiological measures of mental effort such as pupil dilation (Kahneman & Beatty, 1966). Furthermore, the digit transformation task has been shown to interfere with secondary tasks imposed on participants, thus providing further evidence for its usefulness as a short-term cognitive strain task (Kimchi, 1982).

Parenting Behavior (see Appendix F). Parenting behavior was assessed via the *Analog for Parental Decision-making (APD)* measure. A series of eight child behavioral vignettes were developed for this study and were validated as part of a pilot conducted in Fall 2014 at Old Dominion University. Specifically, the results of the pilot provided evidence for the convergent validity of the APD vignettes. We found that traditional parenting attitudes were associated with an increased preference for harsh parenting choices whereas progressive parenting attitudes were associated with a reduced preference for harsh parenting choices. Per dissertation committee's recommendations the actions choices were modified from the original 6 to a total of 9 (3 non-harsh, 3 verbally harsh, and 3 physically harsh). The following is a detailed description of the APD vignettes.

Two types of misbehavior vignettes are presented for each of four different child ages: 10 months, 1.5 years, 2.5 years, and 3.5 years bringing the vignettes to a total to eight. One type of vignette for each age represents a behavior that is dangerous to the child's health and safety while the other represents child defiant or oppositional behavior organized around a denied want.

There are three subscales of the APD: Importance of Action, Action Choice, and Preference for Action Choice.

Importance of Action. After reading each vignette, respondents are asked to rate how important is it that they do something to address the child's behavior. The options range from *1 = extremely unimportant* to *7 = extremely important*. A total score is computed by deriving the mean of each 8 responses. The importance of action subscale had excellent reliability with Cronbach's alpha of .91.

Action Choice. After reading each vignette, respondents are asked to choose a specific parenting response. The choices are as follows: 1 = *ignore the behavior*, 2 = attempt to distract the child by talking, playing, singing, etc., 3 = *time out, then explain to the child why their behavior is not appropriate*, 4 = *raise your voice to the child*, 5 = *threaten to punish the child*, 6 = *Yell, curse, or call the child names,* 7 = *Spank on the bottom with bare hand,* 8 = *Slap or pinch on the hand, arm or leg ,* and 9 = *Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object*. A total score is computed by deriving the mean of all 8 vignette responses. The APD action choice subscale had good reliability with Cronbach's alpha of .75.

Preference for Action Choice. After choosing a parenting action, respondents are asked to rate how strongly they prefer each of the responses provided to them in the action choice. The responses range from *1 = strongly not prefer* to *7 = strongly prefer.* Three factors are derived from this subscale: Preference for non-harsh choice, preference for verbal harsh choice and preference for physical harsh choice. A preference for non-harsh choice is calculated by summing items 1, 2 and 3 across vignettes, preference for verbal harsh choice is calculated by summing items 4, 5 and 6, and preference for physical harsh choice is calculated by summing items 7, 8 and 9 across vignettes. All three factors had good reliability: Cronbach's alphas of .76,

.90, and .92 respectively.

Negative Affect (see Appendix G). *Multiple Affect Adjective Check List-Revised* (MAACL-R; Lubin & Zuckerman, 1999). The MAACL-R is a 132 adjective checklist which can be used for both a state and a trait measure depending on the research question. The MAACL-R yields a negative affect and a positive affect score. In the current study we used the MAACL-R as a state measure of negative affect that was administered before and after the experimental manipulation. Participants completing the MAACL-R were asked to describe how they felt at the end of the experiment. Negative affect scores were obtained on Anxiety (e.g., afraid, fearful, frightened, panicky, shaky, tense), Depression (e.g., alone, destroyed, forlorn, lonely, lost, miserable), and Hostility (e.g., annoyed, critical, cross, cruel, disagreeable). A score for each negative affect measure is derived by counting the number of endorsed adjectives for each scale (anxiety – 10 items, depression – 12 items, and hostility – 14 items). The Positive affect score is a single score derived by the endorsement of 21 positive adjectives (e.g., happy, joyful, pleasant).

The MAACL-R was shown to be reliable (Cronbach's alphas for the pre-tests of anxiety, depression, hostility, and positive affect were .71, .79, .82, .90 respectively; Cronbach's alphas for the post-tests of anxiety, depression, hostility, and positive affect were .65, .80, .70, .92 respectively). Evidence for convergent and discriminate validity is reported in the MAACL-R manual and additional research by Lubin, Van Whitlock, Reddy, and Petren (2001).

Dispositional Aggression (see Appendix H). *The aggression questionnaire* (Buss & Perry, 1992) is a 29 item measure assessing four specific aspects of dispositional aggression: Physical Aggression, Verbal Aggression, Anger, and Hostility. All four subscale are measured on a 5-point Liker-type scale from *1 = extremely uncharacteristic of me* to *5 = extremely characteristic of me*. Based on the responses to items such as "Given enough provocation I will

hit another person", "When people annoy me, I tell them what I think of them", "Some of my friends think I'm a hothead", and "At times I feel I have gotten a raw deal out of life", each person receives a Physical Aggression, Verbal Aggression, Anger, and Hostility score respectively. In the current study, the above listed subscales had Cronbach's α at .79, .66, .76, and .79 respectively. The total aggression score had good internal consistency (α = .89). The measure has been used in variety of research setting and has been independently validated (Harris, 1997).

History of Harsh Parenting (see Appendix I). *Exposure to Abusive and Supporting Environment-Parenting Inventory* (EASE-PI; Nicholas & Bieber, 1997) assesses the frequency of positive and negative experiences with parent during childhood. For the purposes of this study, the Physical and Emotional Abusiveness subscales were used to assess participant history of physical and psychological harsh parenting, separately for father figures and mother figures). The subscales are measured on a 5-point Likert scale from 0 *(Never*) to 4 (*Very Often*). Sample items from the Physical and Emotional Abusiveness subscale include "Your mother (father) kicked you" and "Your mother (father) insulted or swore at you", respectively. The subscales had excellent internal consistency (Mother: Physical Abusiveness α = .96, Emotional Abusiveness α = .90, Total Exposure to Abusiveness α = .96; Father: Physical Abusiveness α = .96, Emotional Abusiveness α = .92, Total Exposure to Abusiveness α = .97). Construct validity support for this measure has been provided by Nicholas and Bieber (1997) and Shaw (2009).

Self-regulation (see Appendix J). *The Short Self-Regulation Questionnaire* (SSRQ; Carey, Neal, & Collins, 2004) is a 31-item questionnaire which reflects behaviors such as participants' ability to follow through with a plan and to accomplish goals set for themselves. Items range from 1 (*strongly disagree*) to (*strongly agree*). Sample items from the SSRQ

include “I have trouble making plans to help me reach goals” and “When it comes to deciding about a change, I feel overwhelmed by the choices”. The SSRQ had excellent internal consistency, $\alpha = .92$. In previous research it was highly correlated with the longer SRQ (Neal, & Carey, 2005) and has established validity (Carey et al., 2004).

Demographics (see Appendix K). The demographics questionnaire included all typical questions such as race, gender, age, annual income, academic major, and education. Furthermore, the questionnaire asked about the income and education of the participant’s mother and father.

Data Analytic Approach

The experimental design was studied via a full factorial analysis of variance (ANOVA) which allowed me to test the effects of more complex designs (i.e. having more than one independent variables). Furthermore, the mediation hypotheses were tested via path analyses. Finally, the exploratory moderation analyses were tested with structural equation models (SEM).

2X3 ANOVA. In order to meet the required ANOVA assumptions (e.g., homogeneity, normality, skewness) were examined. Furthermore, a bivariate correlation matrix was conducted in order to show the relationships between predictors, outcomes and covariates in the sample. The decision regarding which variables are going to be include as covariates was both theory and data driven (i.e. bivariate relationships). Finally, three univariate full factorial models were tested.

Path analyses. The hypothesized mediation and exploratory moderation indirect effects were examined via path analysis using Mplus v. 7.1 (Muthén & Muthén, 1998 -2012). All models were bootstraped at 1000. Individual indirect effects as well as the sum of indirect effect we reported. Root mean square of approximation (RMSEA), Tucker-Lewis index (TLI), comparative fit index (CFI), and Standardized Root Mean Square Residual (SRMR) were used to

assess overall model fit (Browne, Cudeck, Bollen, & Long, 1993).

Sample size rationale. Based on power analyses done with G*Power (Faul & Erfelder, 1992) 204 participants were needed. This estimate was based on a power analysis that had α error probability of .05, a medium effect size *f* =.33, six groups, and eight covariates. The size of the effect used for this analysis was informed by the effect reported in a similar experimental design using similar independent and dependent variables (Bakermans-Kranenburg et al., 2011).

CHAPTER III

RESULTS

Descriptive Statistics

Prior to conducting any tests, the data were examined and missingness was found to be less than 1% for most variables with exception of gender (6%) and history of harsh parenting (7%). Due to the low level of missigness overall, the data were not modified.

The bivariate correlations among the demographic measures, and the predictor and outcome measures are presented in Tables 3, 4, and 5. The bivariate correlations between predictor and the outcome measures are presented in Table 6. Demographic variables significantly related to the outcomes include age, race, education of mother and education of father; therefore they were included in all analyses. Other covariates significantly related to the outcomes include all dispositional aggression subscales, self-regulation, and traditional beliefs about parenting; therefore they were included in all analyses. Finally, the correlations between hypothesized mediators and outcomes are presented in Table 6.

Table 3.

Bivariate Correlations – Demographics characteristics and Outcomes.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Import. Choice	-	.08	-.06	-.02	.06	-.05	.03	-.10	.10	-.01	-.03	-.06	-.14*	.05	-.10
2. Action Choice		-	-.51**	.45**	.65**	-.10	-.19**	-.08	.36**	-.22**	.06	-.05	-.04	-.14*	-.02
3. Pref. - non-harsh			-	-.09	-.21**	.52*	.12	-.08	-.20**	.08	-.08	.002	-.003	-.06	.05
4. Pref.- verbal harsh				-	.56**	.25*	-.20**	-.03	.14*	-.12	.08	.01	.02	-.09	-.02
5. Pref.- physical harsh					-	.28	-.20**	.02	-.33**	-.25**	-.02	-.06	.14*	-.15*	.06
6. Decision time						-	.08	.12	.14	.19**	-.12	-.11	-.004	-.03	-.02
7. Age							-	.18*	-.18*	.15*	-.12	-.11	.21**	-.20	-.02
8. Gender								-	-.23**	.09	-.06	-.11	-.76**	-.01	.06
9. Race - AA									-	-.59**	.07	.03	-.06	.13	-.15*
10. Race - Caucasian										-	.09	.14	.08	.02	.12
11. Family Income											-	.61**	.05	.43**	.32**
12. Soc. Class Family												-	-.14	.36**	.35**
13. Education - self													-	-.01	.02
14. Education - mother														-	-14*
15. Education - father															-

Note. *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed). Gender was dummy coded as 1 = women 2 = men. AA = African American.

Table 4.

Bivariate Correlations – Demographics characteristics and Predictors - Part 1.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Physical Aggression	-	.46**	.59***	.45**	-.10	-.20**	.03	.10	.13	-.21**	-.16*	-.12	.03	-.12	-.16*
2. Verbal Aggression		-	.52**	.31**	.02	.01	-.20**	-.03	.14	-.15*	-.15	-.08	.12	-.02	-.10
3. Trait Anger			-	.55**	-.20**	.16*	-.12	-.15	.07	-.04	-.12	.01	.06	-.06	-.10
4. Trait Hostility				-	-.26**	.16*	-.01	-.01	.01	-.12	-.11	-.07	.12	.01	-.08
5. Cognitive Reappraisal					-	-.13	-.16*	-.20**	.21**	-.20**	-.11	.14	-.08	-.03	-.08
6. Expressive Suppression						-	.07	.13	-.05	-.11	-.14	-.06	.04	.04	-.13
7. Age							-	.18*	-.18*	-.15*	-.12	-.19	.21**	-.20	-.02
8. Gender								-	-.23**	-.09	-.06	-.11	-.08	-.01	.06
9. Race - AA									-	-.59**	.07	.03	-.06	.03	-.15
10. Race-Caucasian										-	.09	.14	.08	.02	.12
11. Family Income											-	.61**	.05	.43**	.32**
12. Soc. Class Family												-	-.14	.36**	.35**
13. Education - self													-	-.01	.02
14. Education - mother														-	.42**
15. Education - father															-

Note. *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed). Gender was dummy coded as 1 = women 2 = men. AA = African American.

Table 5.

Bivariate Correlations and Statistics – Demographics characteristics and Predictors part 2

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
1. Harsh Parent - Mother	-	.61**	.06	-.05	.25**	.03	-.08	-.08	-.09	-.29**	.02	-.11	-.07
2. Harsh Parent - Father		-	.01	-.06	.29**	-.08	-.14	.03	-.08	-.14	.08	-.07	-.06
3. Parenting Modernity			-	.12	.03	-.08	.15*	-.23**	-.07	-.01	-.01	-.03	-.18*
4. Self-regulation				-	.11	-.07	.03	.01	-.09	.08	-.09	.04	.01
5. Age					-	.18*	-.18*	.15*	-.12	-.11	.21**	-.10	-.02
6. Gender						-	-.23**	.09	-.06	-.11	-.08	-.01	.06
7. Race - AA							-	-.59**	.07	.03	-.06	-13	-.15*
8. Race - Caucasian								-	.09	.14	.08	.02	.12
9. Family Income									-	.61**	.05	.43**	.32**
10. Soc. Class Family										-	-.14	.36**	.35**
11. Education - self											-	-.01	.02
12. Education - mother												-	.42**
13. Education - father													-

Note. *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed). Gender was dummy coded as 1 = women 2 = men. AA = African American.

Table 6.

Bivariate Correlations – Predictors and Outcomes.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Import. Choice	-	.08	-.06	-.02	.06	-.05	.01	-.05	.02	-.07	.06	-.03	-.09	-.10	.02	.05
2. Action Choice		-	-.51**	.45**	.65*	.10	.17*	-.15*	-.15*	.01	.06	-.03	.04	-.04	.11	.00
3. Pref. - non-harsh			-	-.09	-.21**	.15*	-.08	.012	-.01	.12	-.06	.09	.14	.14	.06	-.14*
4. Pref, - verbal harsh				-	.56**	.25**	.18*	.16*	.21**	.27**	-.02	.03	.09	-.09	.22**	-.16*
5. Pref.- physical harsh					-	.28**	.26**	.17*	.24**	.15*	.04	.10	.10	-.001	.20**	-.12
6. Decision time						-	.15*	-.03	.05	-.11	-.14	.10	.12	.02	.19	-.12
7. Physical Aggression							-	.46**	.59**	.45**	.83**	.20**	.28**	.21**	.04	-.25**
8. Verbal Aggression								-	.52**	.31**	.02	.01	.09	-.02	.08	-.07
9. Trait Anger									-	.55**	.20**	.16*	.17*	.08	.02	-.42**
10. Trait Hostility										-	-.26	.30**	.09**	.13	-.14	-.43**
11. Cognitive Reappraisal											-	-.13	-.11	-.18*	.14*	.39**
12. Expressive Suppression												-	.05	.10	.16*	.39**
13. Harsh Parent - Mother													-	.61**	.06	-.05
14 Harsh Parent - Father														-	.01	-.06
15. Parenting Modernity															-	.12
16. Self-regulation																-

Note. *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed). Gender was dummy coded as 1 = women 2 = men.

Dependent variables were screened for extreme outliers and 2 cases were deleted due to extreme scores of more than 3SD above the mean on the preference for harsh physical punishment, bringing the final sample size to 200. In an effort to be conservative in trimming the current sample, the two outlier cases with scores less than 3SD below the mean in the non-harsh preference condition were not removed. I examined each case and found that those were moderate participants, who although preferred actions, other than those provided in the non-harsh category, were not extreme in their preference for harsher disciplining responses (verbal or physical).

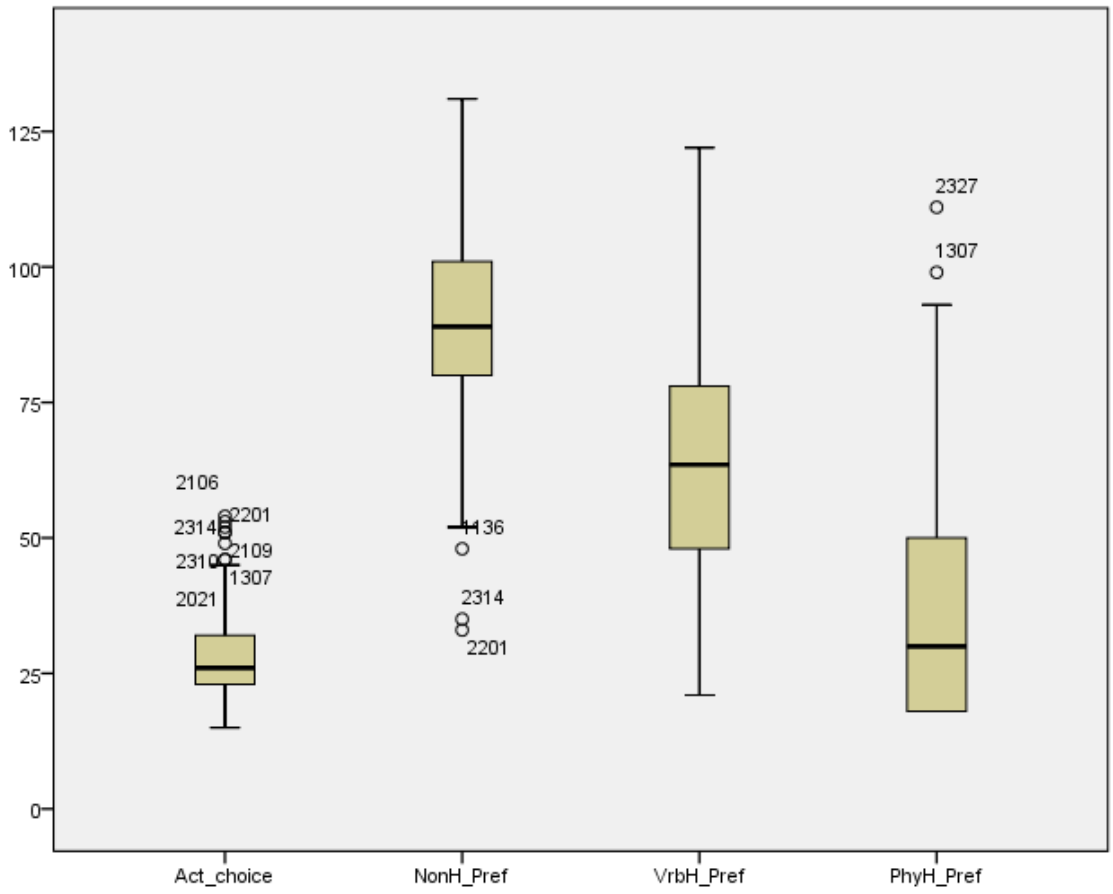


Figure 3. Boxplot of Outlier Values on Vignette Responses. Act_choice = Dicipline action choice; NonH_Pref = Preference for non-harsh discipline; VrbH_Pref = Preference for Verbally Harsh Discipline; PhyH_Pref = Preference for Physically Harsh Dicipline.

The floor and ceiling effects, and distribution shape of all variables was furthered examined. The variable representing race of the participants was dummy coded to African American = 1 (42%) or Other = 0 (58%). Descriptive statistics and frequencies for demographic and primary study variables can be found in Tables 2a and 2b.

Table 2a

Demographic and Outcome Variable Information

Continuous	**M(SD)**	**Min-Max**	**Skewness (S.E.)**	**Kurtosis (S.E)**
Importance of Choice	51.22(6.38)	8-56	-4.062(.172)	20.914(.342)
Discipline Action Choice	28.15(7.80)	15-54	1.108(.172)	1.045(.342)
Non-Harsh Preference	90.13(16.69)	33-131	-.32(.172)	.715(.342)
Verbal Harsh Preference	62.51(21.75)	21-122	.154(.172)	-.314(.342)
Physical Harsh Preference	35.35(18.89)	18-93	.919(.172)	-.087(.342)
Decision-making Time	199.05(59.65)	66.11-399.84	.581(.172)	.576(.342)

Table 2b

Demographic and Outcome Variable Information

Categorical	**N**	**%**
Experimental Conditions		
1 (Baby/Easy)	37	18.5
2 (Domestic/Easy)	33	16.5
3 (No noise/Easy)	28	14.0
4 (Baby/Hard)	37	18.5
5 (Domestic/Hard)	31	15.5
6 (No noise/Hard)	34	17.0
Gender		
Female	146	73.0
Male	42	21.0
Missing	12	6.0
Race		
American Indian or Alaska Native	1	.5
Asian	15	7.5
Black or African American	84	42.0
Native Hawaiian or Other Pacific Islander	2	1.0
White	65	32.5
Other	32	16.0
Not Sure	1	.5
Family of Origin Income		
Less than $10,000	13	6.5
$10,001- 20,000	16	8.0
$20,001 - 30,000	25	12.5
$30,001 - 40,000	15	7.5
$40,001 - 50,000	32	16.0
$50,001 - 75,000	38	19.0
More than $75,000	59	29.5
Missing	2	1.0
Family of Origin Social Class		
Lower Class	11	5.5
Lower Middle Class	42	21
Middle Class	108	54
Upper Middle Class	39	19.5
Upper Class	200	100
Education - Self		
Some High School	6	3.0
High School Diploma/GED	62	31.0
Trade School	0	.0
Some College	128	64.0
Bachelor's Degree	1	.5

Table 2b continued

Demographic and Outcome Variable Information		
Master's Degree	2	1.0
Doctoral Degree	0	.0
Not Sure	1	.5
Education - Mother		
Some High School	9	4.5
High School Diploma/GED	31	15.5
Trade School	7	3.5
Some College	59	29.5
Bachelor's Degree	55	27.5
Master's Degree	30	15.0
Doctoral Degree	4	2.0
Not Sure	4	2.0
Missing	1	.5
Education - Father		
Some High School	15	7.5
High School Diploma/GED	61	30.5
Trade School	9	4.5
Some College	37	18.5
Bachelor's Degree	40	20.0
Master's Degree	20	10.0
Doctoral Degree	3	1.5
Not Sure	15	7.5
Missing	0	.0

Manipulation Checks

Emotionality. The design of the current study allowed for a manipulation check of the change in participants' emotional state due to the baby crying condition vs. other noise conditions. As expected, I found a significant increase from the pre and post manipulation on state hostility scores of participants in the baby crying condition (pre $M = .73$, post $M = 1.24$; $F(1) = 5.72$, $p = .02$), whereas I did not find a significant difference in the other conditions. Furthermore, I found a significant decrease from pre to post manipulation on state positive affect of participants in the baby crying condition (pre $M = 6.324$, post $M = 3.11$; $F(1) = 10.97$, $p = .001$), whereas I did not find a significant difference in the other conditions.

Cognitive strain. Although I did not have a direct way of verifying that the Add3 tasks was an effective manipulation of cognitive strain (e.g., participants' pupil dilation and constriction patterns), I examined a possible proxy for cognitive strain, that is answer time on the first vignette. Although the mean answer time in the Add-3 (hard) condition was higher (37.02) than the time in the Add-0 (easy) condition (35.66),that difference was not significant $F(1) = .30$, $p = .59$.

Aim 1: To examine the main effects and interaction of cognitive stress and emotional stress, on hostility, fast decision-making, and harsh parenting.

Aim 1A: To examine the independent and combined effects of baby crying and cognitive demand on levels of hostility.

Hypothesis 1A$_1$: It was hypothesized that there would be significant main effects of experimental conditions on change in hostility, with higher levels of state hostility in the baby crying noise and high cognitive demand conditions. Hypothesis 1A$_2$: If there was a significant main effect of experimental condition, hostility would be highest when both experimental manipulations are present (A_2B_1; Figure 1).

Hypothesis 1A Assumptions. The independent variables (experimental conditions) and covariates (age, race, maternal education, paternal education, self-regulation, traditionality, and total dispositional aggression) were examined for Hypothesis 1A to determine if any interactions were present between independent variables and covariates. There were significant interactions between the age covariate and the two experimental manipulations (see Table 7). The homogeneity of variance assumption, as assessed by a Levene's Test, $F(5, 178) = 2.086$, $p = .069$, suggesting that the assumption was met.

Hypothesis 1A Results. Hypothesis $1A_1$: An ANCOVA with experimental conditions as the IV and change in hostility as the DV showed statistically significant difference in hostility based on the main effect of the noise conditions $F(2, 184) = 5.31$, $p = .006$, partial $\eta^2 = .060$, but not the cognitive demand conditions, $F(1, 184) = 1.417$, $p = .236$, partial $\eta^2 = .008$. See Table 8.

Specific pairwise comparisons based on the significant main effect of noise conditions reviled a statistically significant significant difference between baby crying condition *M*=1.279 and no noise *M*=.586 (contrast $p = .002$) and domestic noise, *M*=.879 (contrast $p = .054$). There was no significant difference between domestic noise, *M*=.879 and no noise, *M*=.586, contrast $p = .183$. See Figure 4.

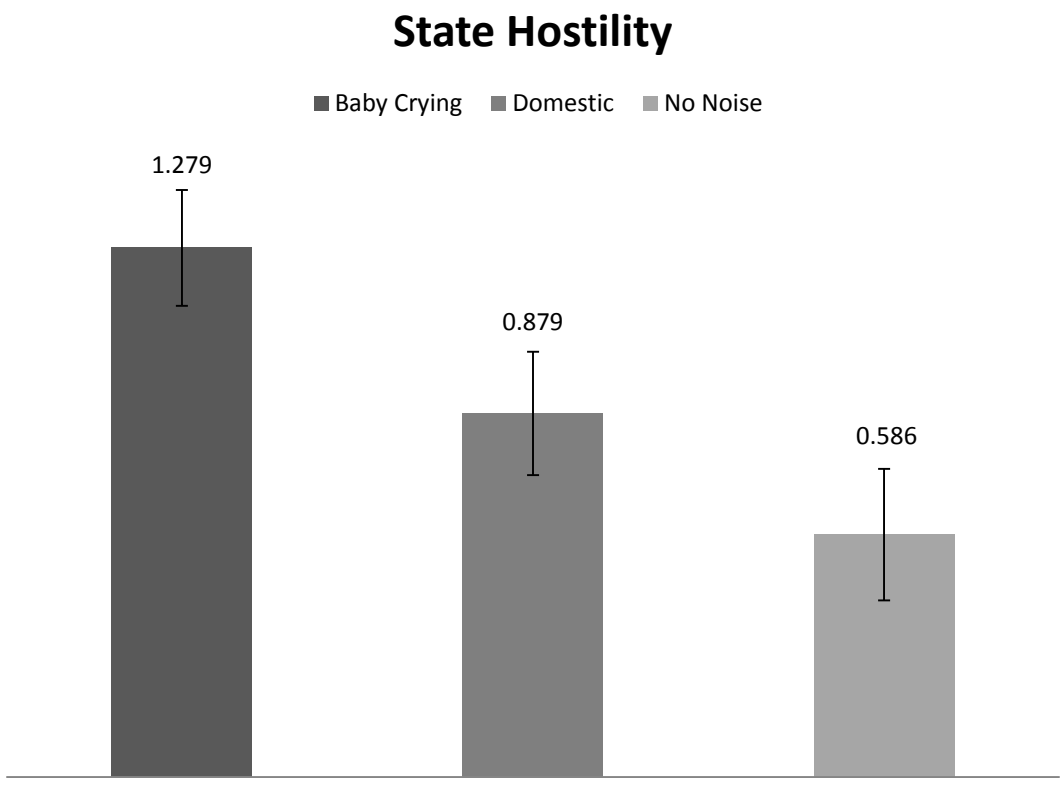


Figure 4. Average change in state hostility after the experiment. Error bars represent standard error of the mean (baby crying *SE*=.140; Domestic *SE*=.149; No noise *SE*=.159)

Hypothesis $1A_2$: A specific contrast was performed testing if change in hostility would be highest in the child crying and high cognitive demand conditions together. An ANCOVA with a high cognitive strain/baby crying dummy variable (cognitive hard/baby crying = 1, others = 0) as an IV and change in hostility as the DV did not show a statistically significant difference in hostility based on belongingness to either group, $F(1, 184) = 1.188$, $p = .277$, partial $\eta^2 = .007$.

Aim 1B: To examine the independent and combined effects of baby crying and cognitive demand on decision making time.

Hypothesis $1B_1$: It was hypothesized that there would be significant main effects of experimental conditions on decision making time with faster decision making in the baby crying noise and high cognitive demand conditions . Hypothesis $1A_2$: If there was a significant main effect of experimental condition, decision making would be fastest when both experimental manipulations are present (A_2B_1; Figure 1.)

Hypothesis 1B Assumptions. The independent variables (experimental conditions) and covariates (age, race, maternal education, paternal education, self-regulation, traditionality, and total dispositional aggression) were examined for Hypothesis 1B to determine if any interactions were present between independent variables and covariates. There were no significant interactions in the emotion condition, whereas there were two significant interactions in the cognitive strain condition (age and modernity of parenting beliefs; see Table 7). The homogeneity of variance assumption, was assessed by a Levene's Test, $F(5, 178) = 1.499$, $p = .192$, suggesting that the homogeneity of regression assumption was met.

Hypothesis 1B Results. Hypothesis $1B_1$: An ANCOVA with experimental conditions as the IV and decision making time as the DV showed no statistically significant difference in hostility based on the main effect of the noise conditions $F(2, 184) = .218$, $p = .805$, partial $\eta^2 =$

.003, or the cognitive demand conditions, $F(1, 184) = .000073$, $p = .993$, partial $\eta^2 = .000$. See Table 8.

Hypothesis $1B_2$ could not be tested due to lack of significant main effect in Hypothesis $1B_1$.

Aim 1C: To examine the independent and combined effects of baby crying and cognitive demand on endorsement of harsh parenting strategies.

Hypothesis $1C_1$: It was hypothesized that there would be a significant main effect of experimental conditions on endorsement of harsh parenting strategies, with harsher parenting strategies endorsed in the baby crying noise and high cognitive demand conditions. Hypothesis $1C_2$: If there was a significant main effect of experimental conditions, it was hypothesized that endorsement of harsh parenting strategies would be highest when both conditions are present (A_2B_1; Figure 1).

Hypothesis 1C Assumptions. The independent variables (experimental conditions) and covariates (age, race, maternal education, paternal education, self-regulation, traditionality, and total dispositional aggression) were examined for Hypothesis 1C to determine if any interactions were present between independent variables and covariates. There was a significant interactions of race in the emotion condition, whereas there were two significant interactions in the cognitive strain condition (race and dispositional hostility; see Table 7). The homogeneity of variance assumption, was assessed by a Levene's Test, $F(5, 178) = .945$, $p = .453$, suggesting that the assumption was met.

Hypothesis 1C Results. Hypothesis $1C_1$: An ANCOVA with experimental conditions as the IV and decision making time as the DV showed no statistically significant difference in hostility based on the main effect of the noise conditions $F(2, 184) = .342$, $p = .711$, partial $\eta^2 =$

.004, or the cognitive demand conditions $F(1, 184) = .000194$, $p = .989$, partial $\eta^2 = .000$. See Table 8.

Hypothesis $1C_2$ could not be tested due to lack of significant main effect in Hypothesis $1C_1$.

Table 7

Assumptions for Hypotheses 1a, b, and c

	Dependent Variables		
	Change in Hostility (1a)	Decision-making Time (1b)	Discipline Action Choice (1c)
Covariate by Emotional Condition	F (*p*)	F (*p*)	F (*p*)
Race X Condition	1.34(.26)	1.11(.35)	4.73**(.003)
Age X Condition	5.45**(.001)	.65(.59)	1.21(.31)
Mother Education X Condition	.01(.99)	.51(.67)	.83(.48)
Father Education X Condition	.76(.52)	.50(.81)	.40(.75)
Modernity Beliefs X Condition	1.34(.26)	.68(.57)	.57(.64)
Self-regulation X Condition	.91(.44)	.87(.46)	.16(.93)
Trait Physical Aggres X Condition	.66(.58)	.88(.45)	1.70(.17)
Trait Verbal Aggres X Condition	.09(.97)	1.18(.32)	.17(.92)
Trait Anger X Condition	1.18(.32)	.61(.61)	1.30(.28)
Trait Hostility X Condition	1.20(.31)	.39(.76)	1.06(.37)
Covariate by Cognitive Condition	F (*p*)	F (*p*)	F (*p*)
Race X Condition	.11(.90)	1.35(.26)	7.20**(.001)
Age X Condition	7.34**(.001)	3.36*(.04)	1.39(.15)
Mother Education X Condition	.09(.92)	.27(.76)	1.91(.15)
Father Education X Condition	.53(.59)	.96(.39)	1.58(.21)
Modernity Beliefs X Condition	2.15(.12)	3.21*(.04)	.81(.45)
Self-regulation X Condition	.82(.44)	1.70(.19)	1.00(.37)
Trait Physical Aggres X Condition	2.30(.11)	1.23(.30)	.92(.40)
Trait Verbal Aggres X Condition	.65(.52)	.33(.72)	.02(.98)
Trait Anger X Condition	1.11(.33)	.50(.61)	.84(.44)
Trait Hostility X Condition	.01(.99)	.31(.73)	4.56*(.01)

Note. *$p < .05$, **$p < .01$, ***$p < .001$; Emotional condition is coded 1= Baby, 2 = Domestic, 3 = Other noise; Cognitive Strain condition is coded 1 = Hard, 2 = Easy;

Table 8

Analyses of Covariance for Hypotheses 1a, b, and c

	Dependent Variables					
	Change in Hostility		Decision-making Time		Discipline Action Choice	
Independent Variable`	Mean (*95% CI*)	F (*p*)	Mean (*95% CI*)	F (*p*)	Mean (*95% CI*)	F (*p*)
Emotion Condition		5.31**(.006)		.22 (.81)		.34 (.71)
Baby Crying	1.28 (1.00 1.56)		198.09 (183.44 212.75)		27.65 (25.97 29.33)	
Domestic	.88 (.59 1.17)		202.45 (186.88 218.02)		27.57 (25.57 29.36)	
No noise	.59 (.27 .90)		194.86 (178.17 211.55)		28.58 (26.66 30.49)	
Cognitive Strain Condition		1.42(.23)		.00 (.99)		.00 (.99)
Hard	1.47 (1.09 1.86)		198.51 (185.92 211.10)		27.94 (26.49 29.39)	
Easy	.91 (.50 1.32)		198.43 (185.33 211.53)		27.93 (26.42 29.43)	
Covariates						
Race		.573 (.45)		2.83(.09)		14.15***(<.001)
Age		4.25* (.04)		1.89(.17)		3.13(.08)
Mother Education		.433 (.51)		1.15(.29)		2.88(.09)
Father Education		.431 (.53)		.71(.40)		.01(.93)
Modernity Beliefs		.758 (.39)		1.93(.17)		1.03(.31)
Self-regulation		.09 (.77)		2.02(.16)		.00(.99)
Trait Physical Aggres		.65 (.42)		1.83(.18)		2.68(.10)
Trait Verbal Aggres		.65 (.42)		.03(.85)		.00(.99)
Trait Anger		1.35 (.25)		.14(.71)		.62(.43)
Trait Hostility		.190 (.66)		.01(.93)		2.41(.12)
State Hostility (Pre)		71.67***(<.001)		--		--

Note. *$p < .05$, **$p < .01$, ***$p < .001$; Race is dummy coded as 1= African American, 0 = other.

Aim 2: To examine the indirect effect of hostility and decision-making speed on the relationship between experimental conditions and parenting behavior.

Aims 2A, 2B, and 2C were dependent upon significant findings in Aims 1C. Due to lack of such findings, the testing of Aims 2 A, B and C was not possible. Nevertheless, upon review of the bivariate correlations new exploratory models were specified.

Exploratory models (EM's). As there was only one significant finding from the primary hypotheses, additional analyses were done in order to understand differences based on participant characteristics. The following models are exploratory in nature and are interpreted with caution.

Although the experimental condition did not have an effect on choice of parenting strategies (i.e. action choice), bivariate correlations showed that discipline action choice was strongly correlated to the three discipline preference subscores: preference for non-harsh discipline (r = -.51, p <.001), preference for verbally harsh discipline (r = .45, p <.001), and preference for physically harsh discipline (r = .65, p <.001). Furthermore, the individual characteristics of someone's physical and verbal dispositional aggression (the only two action oriented covariate measures) were significantly correlated with the abovementioned outcomes, therefore I decided to test whether high or low dispositional aggression would moderate the effect that experimental condition had on the four outcomes assessing parenting discipline choices and preferences (i.e. parenting behavior outcomes).

EM results. There were three exploratory, bootstrapped, path models, estimated using full information maximum likelihood (FIML). Models were just identified therefore they had a perfect fit χ^2 (0) = 0.00, p < .001; CFI = 1.00; TFI = 1.00; RMSEA = 0.00; SRMR = 0.00. All models had age, race, maternal education, paternal education, self-regulation, and traditionality

as covariates. Figure 5 graphically represents the conceptual framework for the exploratory models.

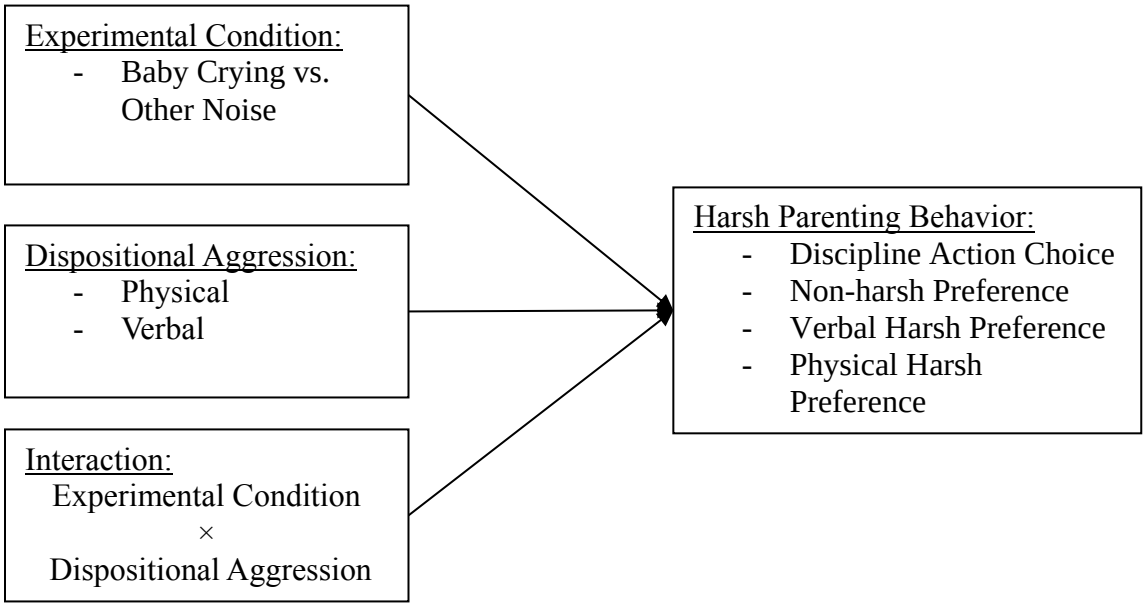


Figure 5. Conceptual framework for the exploratory models.

Dispositional physical aggression as a moderator – EM 1(see Table 9).

Main effects. In Model EM1, action choice, non-harsh discipline preference, and verbally harsh discipline preference were not significantly predicted by experimental condition (b^* = -.004, p = .95; b^* = -.07, p = .34; b^* = -.06, p = .36, respectively), dispositional physical aggression (b^* = .12, p = .16; b^* = -.11, p = .23; b^* = .07, p = .45, respectively), or their interaction terms (b^* = .08, p =.41; b^* = -0.55, p = .55; b^* = .15, p = .08, respectively).

The baby crying experimental condition and dispositional physical aggression did not significantly predict preference for physical discipline (b^* = -.08, p = .23; b^*=.13, p = .10, respectively), however, their interaction did (b^* = .18, p = .04). This path model explained 17% of the variance in action choice, 11% of the variance in non-harsh discipline preference, 17%

verbally harsh discipline preference, and 25% of the variance in preference for physical discipline. See Figure 6.

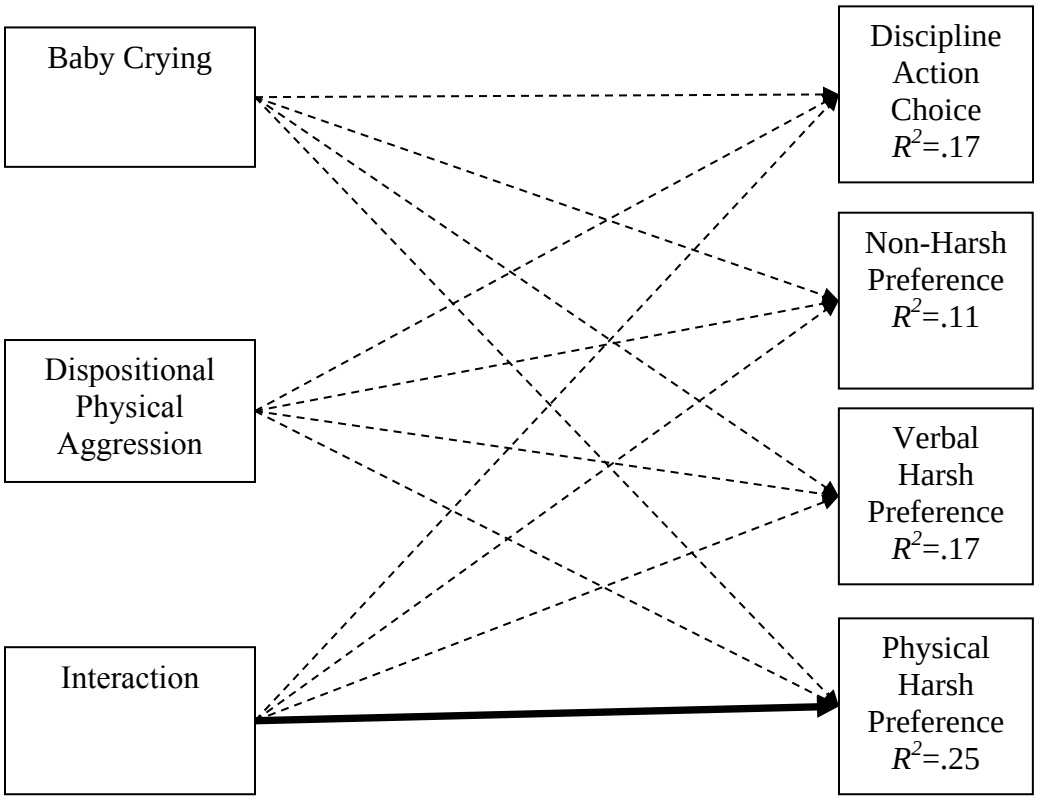


Figure 6. EM1: Standardized Direct Effects Predicting Action Choice, Non-Harsh Preference, Verbal Harsh Preference, and Physical Harsh Preference. Solid lines represent significant paths.

Table 9

Exploratory Model for Baby Crying Condition and Physical Aggression – EM 1: Standardized Direct Effects Predicting Action Choice, Non-Harsh Preference, Verbal Harsh Preference, and Physical Harsh Preference

Direct Effects	*b**	*b*	*S.E.*	*Est./S.E*	*p*	*95% BC CI*
Action Choice						
Baby Crying Condition	-.004	-.06	1.05	-.06	.95	[-2.12, 1.87]
Dispositional Physical Aggression	.12	.13	.09	1.37	.17	[-.07, .30]
Interaction	.08	.15	.19	.80	.43	[-.20, .56]
Non-Harsh Preference						
Baby Crying Condition	-.07	-2.45	-2.40	-1.02	.31	[-7.30, 1.10]
Dispositional Physical Aggression	-.08	-.20	.22	-.93	.35	[-.62, .23]
Interaction	-.07	-.29	.38	-.76	.45	[-1.06, .40]
Verbal Harsh Preference						
Baby Crying Condition	-.06	-2.84	3.07	-.93	.35	[-9.20, 2.10]
Dispositional Physical Aggression	.07	.21	.27	.77	.44	[-.30, .76]
Interaction	.15	.89	.50	1.76	.08	[-.07, 1.93]
Physical Harsh Preference						
Baby Crying Condition	-.08	-2.96	2.48	-1.19	.23	[-7.89, 1.81]
Dispositional Physical Aggression	.13	.36	.21	1.72	.09	[-.06, .77]
Interaction	**.18**	**.89**	**.43**	**2.06**	**.04**	**[.03, 1.70]**

Note. *b** = STDYX standardization. Bolded paths are statistically significant.

Dispositional physical aggression as a Moderator – follow up. To follow up on the significant interaction direct effect, I conducted a test of measurement invariance between participants who scored below the average (marked as "low") vs. above the average (marked as "high") on the dispositional physical aggression scale. The results revealed that the baby crying condition had a significant effect on preference for physical discipline for participants who were low on dispositional physical aggression ($b^* = -.227$, $p = .009$), but it did not significantly affect participants who were high on dispositional physical aggression ($b^* = .031$, $p = .739$). The difference between groups was statistically significant, $\chi^2 (16) = 29.73$, $p = .019$.

Table 10

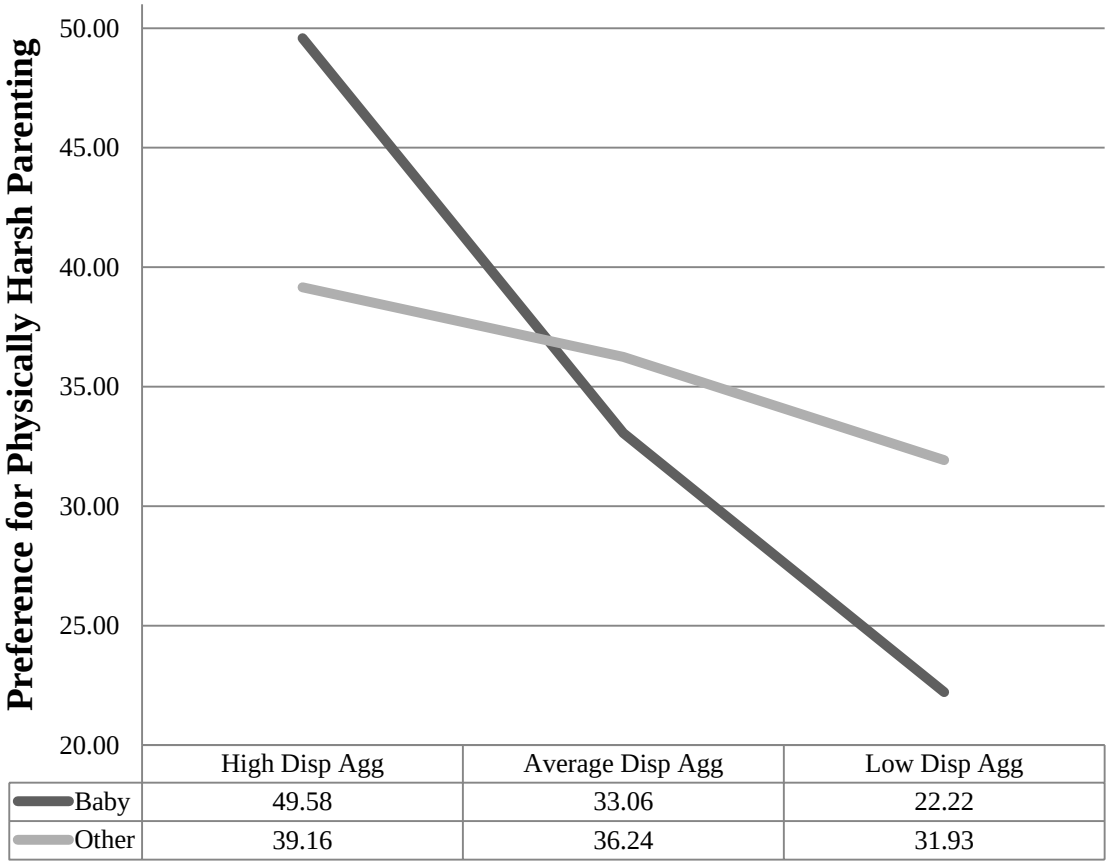
Invariance test: Direct effects of Baby Crying on Physical Harsh Preference in Low vs. High Dispositional Physical Aggressiveness Groups

	Dispositional Physical Aggressiveness							
	Low				***High***			
Free estimates	*b**	*S.E.*	*p*	*95% BC CI*	*b**	*S.E.*	*p*	*95% BC CI*
Preference for Physical Harsh Baby Condition	-.19	3.45	.03	[-13.97, -.32]	.07	4.27	.50	[-5.13, 11.48]
Constrained Estimates	*b**	*S.E.*	*p*	*95% BC CI*	*b**	*S.E.*	*p*	*95% BC CI*
Preference for Physical Harsh Baby Condition	-.06	2.63	.38	[-7.22, 3.23]	-.06	2.63	.38	[-7.22, 3.23]

Note. b^* = STDYX standardization. $\chi^2 (16) = 29.73$, $p = .019$.

Unlike in the interaction model EM1 in which the beta coefficient for the interaction was positive, in the invariance model the beta coefficient for baby crying condition within the low dispositionally aggressive group was negative, suggesting that belonging in the baby crying condition and having low dispositional aggression predicts lower preference for harsh physical discipline. This finding was unexpected. I conducted a follow up ANOVA in which the IV was belongingness to baby condition or other and DV was preference for harsh discipline. The follow-up ANOVA was run with dispositional aggression split into three groups: low (coded as 1SD below average), average (between -1sd and 1sd), and high (1sd above average). Although all three groups showed non-significant effects, examination of the means was informative. See Figure 7.

For the low dispositional aggression group $F(1, 36) = 2.07$, $p = .16$, partial $\eta^2 = .06$, people who were in the baby condition scored lower on preference for harsh physical discipline ($M = 22.22$) than people in the other conditions ($M = 31.93$). For the average dispositional aggression group $F(1, 127) = .933$, $p = .34$, partial $\eta^2 = .01$, people who were in the baby crying condition also scored lower on preference for harsh physical discipline ($M = 33.06$) than people in the other conditions ($M = 36.246$). Unlike the first two groups, for the high dispositional aggression group $F(1, 37) = 2.29$, $p = .139$, partial $\eta^2 = .06$, people who were in the baby condition scored higher on preference for harsh physical discipline ($M = 49.58$) than people in the other conditions ($M = 39.16$). Unfortunately, due to the small sample size (lack of power) in the two extreme dispositional physical aggressiveness groups (*1SD* above/below), invariance testing path models comparing the conditions within each groups could not be done.



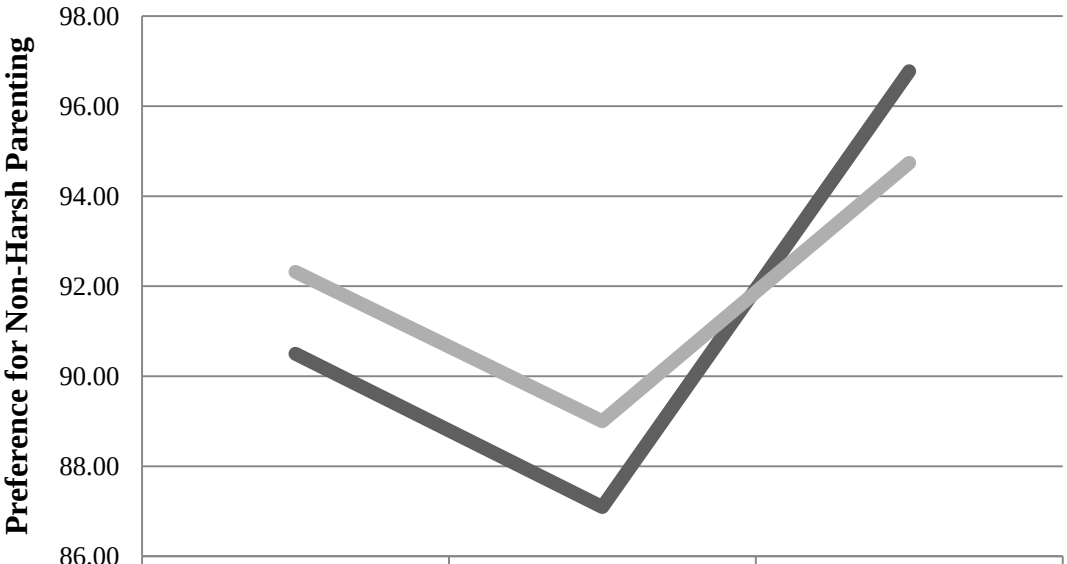
	High Disp Agg	Average Disp Agg	Low Disp Agg
Baby	49.58	33.06	22.22
Other	39.16	36.24	31.93

Figure 7. Effects of the interaction between levels of physical dispositional aggression and baby crying vs. other experimental conditions on preference for physically harsh parenting.

Finally, I examined the moderation effects of physical dispositional aggression on preference for non-harsh discipline. My goal was to answer the following exploratory question: *If people who rate themselves high on dispositional physical aggressiveness have the highest preference for physically harsh discipline, then would people who are lowest is dispositional aggression have the highest preference for non-harsh discipline*.

As with the previous results, we lacked power to perform a true test of invariance (i.e. comparing constrained and free models for participants who scored high vs. average vs. low on dispositional aggression). Therefore, I conducted another follow up ANOVA in which the IV was belongingness to baby condition or other and DV was preference for non-harsh harsh discipline.

There was no statistically significant differences between groups on preference for non-harsh parenting discipline (low dispositional aggression group $F(1, 34) = .10$, $p = .76$, partial $\eta^2 = .003$, baby condition ($M = 96.78$), other conditions ($M = 94.74$); average dispositional aggression group $F(1, 125) = .41$, $p = .53$, partial $\eta^2 = .003$, baby condition ($M = 87.09$), other conditions ($M = 89.00$); high dispositional aggression group $F(1, 35) = 2.29$, $p = .10$, partial $\eta^2 = .003$, baby condition ($M = 90.50$) than people in the other conditions ($M = 92.32$). Although, three was no statistically significant differences between groups, the numerical difference in the mean comparison between the groups was in the expected direction (see Figure 8).



	High Disp Agg	Average Disp Agg	Low Disp Agg
Baby	90.50	87.09	96.78
Other	92.32	89.00	94.74

Figure 8. Effects of the interaction between levels of physical dispositional aggression and baby crying vs. other experimental conditions on preference for non-harsh parenting. Table 11 shows the results of the verbal aggression as a moderator. There were no significant paths therefore EM 2 was not examined further.

Table 11

Exploratory Model for Baby Crying Condition and Verbal Aggression – EM2: Standardized Direct Effects Predicting Action Choice, Non-Harsh Preference, Verbal Harsh Preference, and Physical Harsh Preference

Direct Effects	*b**	*b*	*S.E.*	*Est./S.E*	*p*	*95% BC CI*
Action Choice						
Baby Crying Condition	.004	.07	1.09	.06	.95	[-1.97, 2.21]
Dispositional Verbal Aggression	.03	.06	.19	.33	.74	[-.31, .44]
Interaction	.09	.29	.31	.93	.35	[-.27, .92]
Non-Harsh Preference						
Baby Crying Condition	-.07	-2.50	2.47	-1.01	.31	[-7.56, 2.04]
Dispositional Verbal Aggression	.07	.30	.44	.68	.49	[-.50, 1.50]
Interaction	-.05	-.38	.72	-.53	.59	[-1.97, .90]
Verbal Harsh Preference						
Baby Crying Condition	-.05	-2.33	3.14	-.74	.46	[-8.59, 3.94]
Dispositional Verbal Aggression	.06	.37	.43	.86	.39	[-.43, 1.18]
Interaction	.06	.60	.86	.70	.48	[-1.18, 2.20]
Physical Harsh Preference						
Baby Crying Condition	-.06	-2.47	2.67	-.93	.35	[-8.13, 2.43]
Dispositional Verbal Aggression	.006	.03	.41	.08	.94	[-.74, .86]
Interaction	.14	1.17	.73	1.60	.11	[-.36, 2.54]

Note. *b** = STDYX standardization. Bolded paths are statistically significant.

CHAPTER IV

DISCUSSION

The present study examined the effects of emotional and cognitive stress on the endorsement of harsh parenting practices and the potential mediating role that hostility and quick reactions can have on the relationship between emotional-cognitive stress and endorsement of harsh parenting. It was hypothesized that state hostility would be higher and decision-making times would be quicker in the conditions where there was high parent-relevant emotional distress and when the participants were being cognitively taxed. The hypothesis regarding change in state hostility was supported while the faster decision-making time hypothesis was not. Furthermore, it was hypothesized that endorsement of harsh parenting strategies will be higher for participants exposed to more parent-relevant emotional distress or high cognitive demand, and highest when both conditions were present. This hypothesis was not supported, but results included a number of exploratory analyses that revealed evidence for the hypothesized effects in certain populations. Finally, results replicated findings in the extant harsh parenting literature regarding a number of distal factors that are significantly associated with harsh parenting behavior, as well as provided evidence of the applicability of decision-making theory in parenting research.

Parenting Behavior: Harsh Parenting

Consistent with previous literature that identifies age as an important individual parenting characteristic (Galovan et al., 2013; Hill et al., 2003), the present study found that younger participants endorsed significantly harsher parenting strategies. Furthermore, similarly to the findings of Deater-Deckard et al. (1996), the current study's results suggest that individuals who identified as Caucasian endorsed significantly lower preference for harsh parenting strategies compared to participants who identified as African American. Previous literature suggests that

one reason why African American parenting tends to be harsher is due to the attempts of African American parents to prepare their children (sons more so then daughters) for the many potential dangers facing them (Longest, Taylor, Barnett, & Raver, 2007). The report by Longest and colleagues (2007) also shows that harsh practices by African American parents normalize aggressive and violent behavior for African American children. Based on the framework by Garcia and colleagues (1996), there is functionality in normalizing aggressive behaviors among certain ethnic subgroups as those behaviors serve as adaptive strategies rather than deficits in high-risk environments.

The aforementioned assumptions about African American parenting could not be supported or refuted with the data from the current study, as self-reported social class and household family of origin income of participant were not significant predictors of harsh parenting preferences. This contradicts, at least partially, the suggestion by Hill, Bush, and Roosa (2003) that the role of socioeconomic status is stronger than the role of ethnicity when studying discipline. Future research using a more variable, non-college student sample, should attempt to clarify the abovementioned inconsistency.

Finally, the results of this study replicated previous research that asserts that preferred parenting techniques are closely aligned with the level of modernity of individuals' beliefs regarding child behavior. Similarly to Jocson et al. (2012), I found that endorsement of more traditional/authoritarian beliefs about child behavior predicted significantly more endorsement of verbal and physical harsh parenting.

Theory of Parenting Decision-Making

The effect of cognitive-emotional strain on decision-making time, hostility, and endorsement of harsh parenting.

Cognitive strain. Cognitive strain, as induced by the add-3 task, had no effect on the three outcomes (i.e. hostility, decision-making time, and endorsement of harsh parenting). The lack of effect is most likely due to the inability of the Add-3 task to significantly deplete the resources of our study participants. Our participants were college students; therefore they may have had a cognitive advantage over a group of hypothetical parents that did not attend college. In addition, it is possible that the task was too short in duration or, because it was given in the isolation of a lab setting, was easier to recover from, compared to the reality of parents being continuously cognitively taxed without an opportunity to recover. According to decision-making theory (Kahneman, 2011), System 1 thinking in non-experts occurs as a reaction to cognitive exhaustion. However, due to the limited information on the length of endurance of the ego depletion effect caused by the add-3 task, I could not assess if the System 1 mechanism of my participants was triggered.

Furthermore, a study by Tice, Baumeister, Shmueli, and Muraven (2007) provided strong evidence for the theory that positive mood can counteract the negative effects of cognitive strain on self-regulation. In the current study, I was able to increase hostility in our participants. However, based on the exploratory findings I discovered that hostility in my sample was not high enough to trigger harsher responses on the vignettes. Indeed, the only instance in which I found evidence for the significant relationship between hostility and harsh parenting responses was with participants who were already high in dispositional aggression. Future research should aim at not only increasing negative affect, but also assess and keep positive affect at a constant as

theory and empirical research suggest that the two constructs are orthogonal (Marcus, Neuman, & MacKuen, 2000). In other words, increase in negative affect does not mean decrease in positive affect.

Emotional strain. The goal of the present study was to manipulate participants' state hostility in order to observe the subsequent effect on parenting decision making. The results suggest that level of hostility was successfully manipulated, as the participants in the baby crying noise group reported feeling more hostile compared to the participants in the domestic noise and no noise condition groups. These initial results are of great importance for research on parent-relevant emotional distress, since the experimental manipulation of a variable allows a better definition and a clearer understanding of the interaction between this and other related variables. The results are also congruent with previous parenting literature that identified baby crying noise (i.e. emotional strain) as a predictor of hostility (Crouch, Skowronski, Milner, & Harris, 2008; Out et al., 2010). Although emotional strain did have an effect on state hostility, its effect on endorsement of harsh parenting behavior, however, was harder or more complicated to detect.

Belongingness to one or a combination of experimental conditions did not directly predict the parenting action participants chose, or their preference for non-harsh, verbally harsh or physically harsh parenting strategies. However, exploratory results showed that the interaction between someone's individual dispositional physical aggressiveness and baby crying experimental condition had a significant effect on that person's preferences for physically harsh parenting strategies. Although not statistically significant at $\alpha < .05$ level there was a difference between people who were high on dispositional aggression and were in the baby crying conditions had the highest preference for physically harsh responses. This trend is consistent with both parenting research's findings (Ateah & Durrant, 2005; Knutson, DeGarmo, Koeppl, &

Reid, 2005) and decision-making literature's notion of ego depletion. In particular, previously decision-making literature has shown that aggression increases when aggressive impulses are stimulated by some provocation (DeWall, Baumeister, Stillman, & Gailliot, 2007). In the present study, although the provovation of a baby crying was close to envocing the trait aggresiveness of participants, it was clear that the ego depletion manipulation (add-3 task) did not lead to an increase in preference for harsher parenting.

Furthermore, for those individuals who were low on dispositional physical aggression, listening to the baby crying sounds appeared to have the opposite effect on their preference for physically harsh responses (i.e. those individuals had the lowest scores). Although this is a new area of study, there is some literature to suggest that although all parents have heightened reactivity to infant crying (Frodi & Lamb, 1980) for some people that reactivity translates into more sympathy and less aversion, while others are more likely to interpret the crying as too excessive (Reijneveld et al., 2004). Indeed, this interpretation is supported by the findings of Out et al. (2010) where the researchers identified two streams of perception of infant crying: urgent – linked to more affectionate caregiving, and excessive – linked to more negative and even harsh parenting. Although the present study did not explicitly asses participant's subjective perception of the baby crying noise, this dual perception hypothesis should be pursued in future research.

Although not statistically significantly different, the average preference for non-harsh disciplining strategies for low dispositional aggressive participants was largest in the baby condition, providing direction for the revision of the methodological approach that this project adopted in experimentally manipulating parenting decision-making and hypothetical behavior. Specifically, it is possible that participants who are low in dispositional aggression may be triggered, by the heightened emotionality associated with a baby's cry, to provide extra care to

the infant. De facto, compelling participants to engage in a slower, more rational, System 2 type decision-making.

Moving Beyond Correlational Research

Traditionally, the experimental harsh parenting literature has been limited due to the sensitive nature of the outcomes. Therefore, a goal of the current study was to establish the validity of a new method for experimentally manipulating potential determinants of harsh parenting. Specifically, I theorized that the mechanisms underlying general decision-making are the same as the mechanism underlying parenting decision-making (i.e. fast/intuitive vs. slow/rational routes). Hence, by using well established predictors of decision-making such as emotional and cognitive strain I hoped to influence individuals' emotional states and in turn shift cause their parenting behavior to vary accordingly. In the present study I found only partial support for my predictions. Randomly assigning a participant to an emotionally stressful condition influenced their feelings of hostility, but this was not translated into faster responses or harsher discipline choices.

One possible explanation for those non-significant results may be that harsh parenting response was measured by hypothetical vignettes, which may not be as sensitive of a measure for a non-parent sample as other approaches, such as the hand-grip dynamometer tools used by Bakermans-Kranenburg et al. (2011) and Crouch, Skowronski, Milner, and Harris (2008). Furthermore, forcing participants to choose a prescribed response may have limited my ability to capture any discipline responses that differed from what was offered as a response choice on the questionnaire. This assertion is further evidenced by the somewhat stronger results when the more flexible "preference for harsh response" variable was used as an outcome. Forcing a participant to choose one option may be unrealistic as parents may use a variety of the tools in

their parenting discipline kit, out of which one or a combination of many options may constitute a harsher response.

By moving beyond correlational reserch, the current study aimed to provide answers to the questions of *why* and *how* certain parent-level predictors lead to certain parenting behaviors. This research contributes some tentative answers to those questions by identifying some fine, yet important nuances in the individual perceptions of childrearing related stimuli. Specifically, the current results suggest that the way in which increase in emotional reactivity impacts the degree of preference for harsh parenting strategies may depend upon risk factors such as levels of dispositional aggression. Therefore, a methodological recommendation for future studies would be to identify and oversample potentially "high risk" and "low risk" participants.

Limitations

Although, the methodological novelty of this project was a strength, there were important limitations related to that methodology that need to be highlighted. Having a single-blind design may have had an impact on the non-significant results. As opposed to a double blind study, where both the participants and experimenters are unaware of the study's purpose, a single blind study leaves open the possibility that the experimenters may have subconsciously affected the responses of the participants.

Another limitation is that a majority of the significant results were based on exploratory findings. The likelihood of non-replicable, spurious effects, in extended analyses like this is increased and may in fact be made worse by the relatively small sample size in some of the exploratory group comparisons. The effect of the baby crying noise on the low physical decisional aggression group, for example, should be interpreted with caution. Furthermore, those effects may have been due to social desirability bias. With the available data for this research

project, I was not able to assess for social desirability effects which may have biased the answers of the participants in the experimental conditions. In general, social psychology research suggests that notable effects of social desirability bias can be found with topics considered "taboo" by the participants (e.g., bigotry, intolerance, violence, etc).

Strengths and Implications

Balancing the above mentioned limitations are several strengths. This study is the first to use a non-parent sample in order to study the inception of harsh-parenting behavior. As argued previously, because individuals tend to be prone to habit formation when behaviors occur often, a worthwhile clinical implication of the current study was its focus on understanding the onset of harsh parenting decisions in new parents. Indeed, we found a trend suggesting that for some people, listening to a baby crying noise can lead to an increase in hostility and higher preferences for physically harsh discipline. Considering that these results were exploratory and dependent upon the study's limitations, it is still safe to suggest that parent education programs emphasize on educating new parents on how to identify and express emotions in a way that may develop empathy and utilization of healthy techniques for managing child misbehavior Partial support for this recommendation can be found in the report by Whipple and Wilson (1996).

Furthermore, this study was the first to formally combine decision-making and parenting theories. The new theoretical model turned specifically to decision-making theory regarding choice under uncertainty because undoubtedly most parenting actions can have more than one possible outcome. Given the limitations of the present study and the conflicting results for the effects of emotional strain on preferences for harsh parenting strategies, it is difficult to make conclusions about the effects of fast vs. slow decision-making on harsh parenting behavior.

Nevertheless, the findings of the current study established the face validity of the proposed methodological approach, thus suggesting promising avenues for future research.

Future directions

In addition to the abovementioned ideas for future research, there are several future directions recommendations. Most importantly, when replicating this experiment, the researchers must oversample from both extremes of the trait physical aggressiveness scale. Indeed, such oversampling in a non-parent sample parallels the established usefulness of using matched non-abusive and abusive parenting samples (Wilson, Norris, Rack, & Shi, 2010). Next, future research should test a new way of inducing cognitive strain. The add-3 task utilized in this study did not significantly deplete the cognitive resources of our participants. It is possible that increasing the realism of the experimental manipulation may increase the intensity of the participant's responses to the experimental task. For example, in an effort to increase the motivation of participants, they may be deceived that their performance on a cognitive challenging task will be linked to the amount of research credits received for their participation.

Furthermore, it is recommended that researchers use a mixed, and multimethod method design. The mixed method design would be helpful in incorporating both qualitative and quantitative methods to measure harsh parenting preferences and decision-making. In addition, the multimethod approach will provide more than one way of capturing hash parenting behavior (e.g., survey answers on vignettes, hand-grip, and essay response). Finally, to prevent from the influence of social desirability bias, it may be best to have one participant at a time in each experimental condition. Working alone would also control for potential increase in endorsement of prosocial behavior due to a sense of belongingness to a group (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007).

CHAPTER V

CONCLUSIONS

The practice of harsh parenting is prevalent in disciplining children despite the scientific evidence for its long-term negative impact on child outcomes. This paper has argued that preventing harsh parenting has been a challenge in part because of lack of understanding of the decision-making processes underlying the behavior. Therefore, this paper proposed a theoretical shift from models favoring distal factors in predicting parent behavior to a new model integrating proximal factors drawn from decision-making theory. Participants who were not experienced in parenting were randomly assigned to experimental conditions where they were exposed to hostility inducing baby crying noise and ego depleting cognitive tasks. Overall, findings reviled that the preferences for physically harsh disciplining strategies for novice parents was mostly impacted by distal factors (e.g., age, race, traditional beliefs about parenting) as the primary drivers behind parenting behavior. Additionally, the effects of negative affect (i.e hostility) on preference for harsh parenting may be moderated by individual levels characteristics such as depositional physical aggression. Due to the non-significant results related to decision-making time I could not examine the hypothesized effect of fast vs. slow decision-making. Future research will benefit from comparing multiple measurements of harsh parenting behavior. Additionally, it is recommended that researchers oversample from both extremes on dispositional aggression scale.

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APPENDIX A

PARTICIPANT INFORMED CONSENT DOCUMENT
OLD DOMINION UNIVERSITY

Project Title: Parenting Decisions

Introduction: The purpose of this form is to give you information that may affect your decision whether to say YES or NO to participation in this research, and to record the consent of those who say YES. The name of this research study is “Parenting Decisions”. The study will be conducted in person.

Researchers: Project Investigators:
Dr. James Paulson, Responsible Project Investigator, Ph.D., Assistant Professor;
Ralitsa Maduro, M.S., Graduate Research Assistant, College of Sciences, Department of Psychology. Brittney Taylor, Isabelle Martin, Abigail Parsons, Undergraduate Research Assistants, College of Sciences, Department of Psychology

Description of research study: The study is about your beliefs about parenting. The study involves attending an in-person study session at ODU. You will be asked to complete series of questionnaires and other computer generated tasks such as reading vignettes about children and sharing your opinions about parenting actions. The study will take approximately 60 minutes to complete. Approximately 310 students will be participating in this study.

Exclusionary criteria: To be eligible for the present study, you must (1) be at least 18 years of age, and (2) have no personal parenting experience (e.g., have never raised or babysat a child, have never worked at a daycare facility, have never taken any formal parenting training classes as a course or employment requirement).

Risks and benefits:
Risks: If you decide to participate in this study, you may experience emotional distress as a result of making difficult decisions regarding parenting a young child. The researcher will try to reduce the risk of emotional distress by monitoring for signs of distress and offer you the option to postpone or end the survey without penalty. Another potential risk associated with all research involves breach of confidentiality. To ensure confidentiality of all participants, participant data will be coded by ID number rather than by name. Analyses and conclusions of the study data will be conducted in aggregate form, thus, no individual identifying information will be presented.

Benefits: There are no direct benefits for participation in this study. Potential benefits to participants include gaining increased self-knowledge into your own personal experiences, particularly related to your ideas about parenting.

If your participation in this study has caused you concerns, anxiety, or otherwise distressed you, you may want to contact the ODU Counseling Center at (757) 683-4401.

Costs and payments: If you decide to participate in this study, you will receive 1.0 on-site

Psychology Department research credits, which may be applied to course requirements or extra credit in certain Psychology courses. Equivalent credits may be obtained in other ways. You do not have to participate in this study, or any Psychology Department study, in order to obtain this credit.

New information: If the researchers find new information during this study that would reasonably change your decision about participating, then they will give it to you.

Confidentiality: All information obtained about you in this study is strictly confidential unless disclosure is required by law. The results of this study may be used in reports, presentations and publications, but the researcher will not identify you.

Non-disclosure: The experiment, and the ideas and concepts regarding its procedures, measures, and debriefing represent Confidential Information of the investigator sponsoring this research study ("Parenting Decisions").By signing this consent form you agree to maintain the confidentiality of information disclosed during this experiment. Violation of this agreement may results in loss of any research participation credit you have received for this study ("Parenting Decisions").

Withdrawal privilege: It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study – at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled. The researchers reserve the right to withdraw your participation in this study, at any time, if they observe potential problems with your continued participation.

Compensation for illness and injury: By signing this document, you provide your consent to participate in this study which does not waive any of your legal rights. However, in the event of harm arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation in any research project, you may contact Dr. James Paulson at (757) 683-4222 who would be glad to review the matter with you. You may also contact Dr. George Maihafer, IRB chairperson at (757) 683-4520, or The Office of Research at (757) 683-3460.

Voluntary consent: By signing this document, you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand the form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. In addition to the researchers, whose contact information appears below, you may also contact Dr. George Maihafer, IRB chairperson at (757) 683-4520, or The Office of Research at (757) 683-3460. If you have any questions later on, then the researchers should be able to answer them:

Dr. James Paulson, Ph.D.
Department of Psychology, MGB 244B
Phone: (757) 683-4222

Ralitsa S. Maduro, M.S.

Department of Psychology, MGB 335
Phone: (757) 683-6941

Full Name_____
Signature_____
Date_____

APPENDIX B

"Parenting Decisions" Experiment Non-Disclosure Agreement

Thank you for agreeing to participate in the "Parenting decisions" research project. The experiment, and the ideas and concepts regarding its procedures, measures, and debriefing represent Confidential Information of the investigator sponsoring this research study ("Parenting Decisions").

I, _____ hereby agree to maintain the confidentiality of information disclosed during this experiment or observed live as follows:

a) To hold in confidence any and all technical information (i.e. different noises) to which you were exposed;

b) To hold in confidence any and all questions, materials, documentation and records which you were given (i.e. surveys and addition tasks);

c) That you, shall at all times hold in trust, keep confidential and not disclose to any third party or make any use of the Confidential Information beyond those activities that are part of the experiment.

Violation of this agreement may results in loss of any research participation credit you have received for this study ("Parenting Decisions").
By submitting this form you will be entering a Non-Disclosure agreement with:
Dr. James Paulson, Responsible Project Investigator, Ph.D., Assistant Professor, Department of Psychology, MGB 244B

Participant Signature: _____
Date: _____

APPENDIX C

IDEAS ABOUT RAISING CHILDREN

Here are some statements other parents have made about rearing and educating children. For each one, please fill in the box that best indicates how you feel in general, not just about your own baby.

1- Strongly disagree
2- Mildly disagree
3- Not sure
4- Mildly agree
5- Strongly agree

1.	Since parents lack special training in education, they should not question the teacher's teaching methods.	1	2	3	4	5
2.	Children should be treated the same regardless of differences among them.	1	2	3	4	5
3.	Children should always obey the teacher.	1	2	3	4	5
4.	Preparing for the future is more important for a child than enjoying today.	1	2	3	4	5
5.	Children will not do the right thing unless they must.	1	2	3	4	5
6.	Children should be allowed to disagree with their parents if they feel their own ideas are better.	1	2	3	4	5
7.	Children should be kept busy with work and study at home and at school.	1	2	3	4	5
8.	The major goal of education is to put basic information into the minds of the children.	1	2	3	4	5
9.	In order to be fair, a teacher must treat all children alike.	1	2	3	4	5
10.	The most important thing to teach children is absolute obedience to whoever is in authority.	1	2	3	4	5
11.	Children learn best by doing things themselves rather than listening to others.	1	2	3	4	5
12.	Children must be carefully trained early in life or their natural impulses will make them unmanageable.	1	2	3	4	5

		1- Strongly disagree 2- Mildly disagree 3- Not sure 4- Mildly agree 5- Strongly agree
13.	Children have a right to their own point of view and should be allowed to express it.	1 2 3 4 5
14.	Children's learning results mainly from being presented basic information again and again.	1 2 3 4 5
15.	Children like to teach other children.	1 2 3 4 5
16.	The most important thing to teach children is absolute obedience to parents.	1 2 3 4 5
17.	The school has the main responsibility for a child's education.	1 2 3 4 5
18.	Children generally do not do what they should unless someone sees to it.	1 2 3 4 5
19.	Parents should teach their children that they should be doing something useful at all times.	1 2 3 4 5
20.	It's all right for a child to disagree with his/her parents.	1 2 3 4 5
21.	Children should always obey their parents.	1 2 3 4 5
22.	Teachers need not be concerned with what goes on in a child's home.	1 2 3 4 5
23.	Parents should go along with the game when their child is pretending something.	1 2 3 4 5
24.	Parents should teach their children to have unquestioning loyalty to them.	1 2 3 4 5
25.	Teachers should discipline all the children the same.	1 2 3 4 5
26.	Children should not question the authority of their parents.	1 2 3 4 5
27.	What parents teach their child at home is very important to his/her school success.	1 2 3 4 5
28.	Children will be bad unless they are taught what is right.	1 2 3 4 5
29.	A child's ideas should be seriously considered in making family decisions.	1 2 3 4 5
30.	A teacher has no right to seek information about a child's home background.	1 2 3 4 5

APPENDIX D

Emotion regulation questionnaire (ERQ)

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

1. ____ When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.

2. ____ I keep my emotions to myself.

3. ____ When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.

4. ____When I am feeling positive emotions, I am careful not to express them.

5. ____When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.

6. ____ I control my emotions by not expressing them.

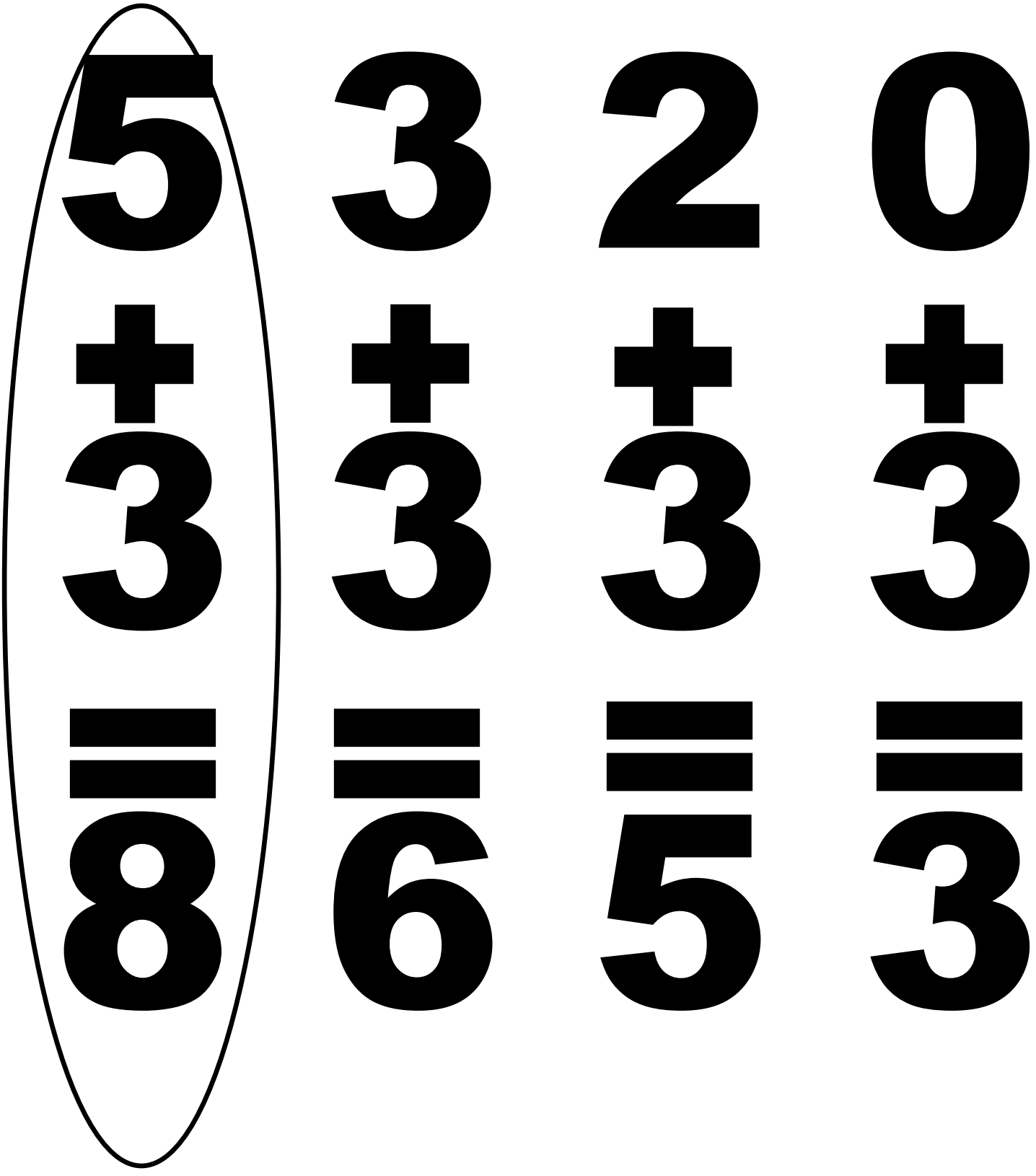
7. ____When I want to feel more positive emotion, I change the way I'm thinking about the situation.

8. ____ I control my emotions by changing the way I think about the situation I'm in.

9. ____When I am feeling negative emotions, I make sure not to express them.

10. ____When I want to feel less negative emotion, I change the way I'm thinking about the situation.

APPENDIX E



APPENDIX F

Analog Parenting Decision-making Instrument

This questionnaire will present a series of vignettes, or stories about an episode of child behavior. As you read each of these, imagine yourself being in the position of the parent of the child who is portrayed. As you finish reading each vignette, pay close attention to the first reactions that come to your mind and use those reactions to guide your responses to the questions about the vignette.

Vignette A. You are driving on a long car trip with your **10-month old** child secured in a car seat in the back seat area of your car. The child is quietly watching a cartoon on a portable DVD player when the DVD player suddenly stops working. The child starts fussing and this fussing eventually turns into crying and screaming that becomes so loud that it makes it difficult for you to concentrate on driving.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?

1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

7pt (Strongly Prefer –Not Prefer At All)

1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

Vignette B. You are at home alone doing household chores when you realize that your **10-month-old** has crawled over to an electrical outlet that has several items plugged into it. Your child is reaching into

the electrical cords and tugging at them. This is an extremely alarming behavior and you worry that your child might be hurt. You immediately move the child away from the danger.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?

1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

Vignette C. You are at a friend's home with your **1 ½-year-old** toddler, who is playing with your friend's child of a similar age. You see your child strike and bite the other child in order to get a toy. After being struck and bitten by your child, your friend's child starts crying loudly as your child plays with their stolen toy.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?

1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.

9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

Vignette D. You are putting items into your car after a shopping trip when your **1 ½-year-old** toddler pulls away from your hand and runs into the parking lot where a car has to stop suddenly to avoid striking the child. You quickly collect your child and bring them back to the car.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?
1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

Vignette E. You are shopping in a grocery store with your **2 ½-year-old** preschooler, who is riding in the cart. When you arrive at the checkout aisle, your child asks for candy, but you deny this request. The child becomes upset, fusses, and then says "shit" loudly. Other people in the store turn to look at you and your cursing child.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?

1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

Vignette F. You are cooking pasta at home while your **2 ½-year-old** preschooler, interested in what you're doing, is in the kitchen looking on. The child unexpectedly grabs a spoon and attempts to stir the pasta, almost knocking the pot of boiling water off of the stove and onto themselves. You stop the child and move the pot of boiling water away from the front of the stove.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?

1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.

4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

Vignette G. You are eating dinner at a restaurant with your **3 ½-year-old** preschooler and other family members. Your child does well at dinner, but becomes very upset when they realize that there will be no dessert. The child's behavior rapidly deteriorates with the child ultimately tantruming –on the ground flailing arms and legs while screaming loudly.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?
1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

1. Ignore the behavior and continue on with your activities.
2. Attempt to distract the child by talking, playing, singing, etc.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.

5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

Vignette H. You are going for a walk around the neighborhood with your **3 ½-year-old** preschooler. You encounter a new neighbor walking a large unfamiliar dog. When you stop to greet the neighbor, your child gets close to the dog and excitedly pulls at the dogs whiskers, eliciting a growl. You are able to move your child back from the dog before the situation escalates.

As a parent of this child, how important is it that you do something to address this behavior?
7pt (Extremely Important – Extremely Unimportant)

As a parent of this child, which of the following responses is the closest to what you might do?

1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

[NEXT SCREEN]
As a parent of this child, please rate how strongly you would prefer each of the following responses to this troubling behavior.

1. After the child is safe, do nothing more and continue on with your activities.
2. Attempt to engage the child in an activity away from the danger.
3. Time-out, then explain to the child why their behavior is not appropriate.
4. Raise your voice to the child.
5. Threaten to punish the child.
6. Yell, curse, or call the child names.
7. Spank on the bottom with bare hand.
8. Slap or pinch on the hand, arm or leg.
9. Hit on the bottom with something like a belt, hairbrush, as stick or some other hard object

APPENDIX G

Listed below you will find words which describe different kinds of moods and feelings. Please put a check in each box that describes how you feel right now.

Work rapidly in describing your feelings (check all that apply).

☐ active	☐ fit	☐ peaceful
☐ adventurous	☐ forlorn	☐ pleased
☐ affectionate	☐ frank	☐ polite
☐ afraid	☐ free	☐ powerful
☐ agitated	☐ friendly	☐ quiet
☐ agreeable	☐ frightened	☐ reckless
☐ aggressive	☐ furious	☐ rejected
☐ alive	☐ lively	☐ rough
☐ alone	☐ gentle	☐ sad
☐ amiable	☐ glad	☐ safe
☐ amused	☐ gloomy	☐ satisfied
☐ angry	☐ good	☐ secure
☐ annoyed	☐ good-natured	☐ shaky
☐ awful	☐ grim	☐ shy
☐ bashful	☐ happy	☐ soothed
☐ bitter	☐ healthy	☐ steady
☐ blue	☐ hopeless	☐ stubborn
☐ bored	☐ hostile	☐ stormy
☐ calm	☐ impatient	☐ strong
☐ cautious	☐ incensed	☐ suffering
☐ cheerful	☐ indignant	☐ sullen
☐ clean	☐ inspired	☐ sunk
☐ complaining	☐ interested	☐ sympathetic
☐ contented	☐ irritated	☐ tame

☐ contrary	☐ jealous	☐ tender
☐ cool	☐ joyful	☐ tense
☐ cooperative	☐ kindly	☐ terrible
☐ critical	☐ lonely	☐ terrified
☐ cross	☐ lost	☐ thoughtful
☐ cruel	☐ loving	☐ timid
☐ daring	☐ low	☐ tormented
☐ desperate	☐ lucky	☐ understanding
☐ destroyed	☐ mad	☐ unhappy
☐ devoted	☐ mean	☐ unsociable
☐ disagreeable	☐ meek	☐ upset
☐ discontented	☐ merry	☐ vexed
☐ discouraged	☐ mild	☐ warm
☐ disgusted	☐ miserable	☐ whole
☐ displeased	☐ nervous	☐ wild
☐ energetic	☐ obliging	☐ willful
☐ enraged	☐ offended	☐ wilted
☐ enthusiastic	☐ outraged	☐ worrying
☐ fearful	☐ panicky	☐ young
☐ fine	☐ patient	☐

APPENDIX H

The Aggression Questionnaire

Physical Aggression
1. Once in a while I can't control the urge to strike another person.
2. Given enough provocation, I may hit another person.
3. If somebody hits me, I hit back.
4. I get into fights a little more than the average person.
5. If I have to resort to violence to protect my rights, I will.
6. There are people who pushed me so far that we came to blows.
7. I can think of no good reason for ever hitting a person.*
8. I have threatened people I know.
9. I have become so mad that I have broken things.
[Next Screen]

Verbal Aggression
1. I tell my friends openly when I disagree with them.
2. I often find myself disagreeing with people.
3. When people annoy me, I may tell them what I think of them.
4. I can't help getting into arguments when people disagree with me.
5. My friends say that I'm somewhat argumentative.
[Next Screen]

Anger
1. I flare up quickly but get over it quickly.
2. When frustrated, I let my irritation show.
3. I sometimes feel like a powder keg ready to explode.
4. I am an even-tempered person.*
5. Some of my friends think I'm a hothead.
6. Sometimes I fly off the handle for no good reason.
7. I have trouble controlling my temper.
[Next Screen]

Hostility
1. I am sometimes eaten up with jealousy.
2. At times I feel I have gotten a raw deal out of life.
3. Other people always seem to get the breaks.
4. I wonder why sometimes I feel so bitter about things.
5. I know that "friends" talk about me behind my back.
6. I am suspicious of overly friendly strangers.
7. I sometimes feel that people are laughing at me behind my back.
8. When people are especially nice, I wonder what they want.

APPENDIX I

EXPOSURE TO ABUSIVE AND SUPPORTING ENVIRONMENTS PARENTING INVENTORY (EASE-PI) PHYSICAL AND EMOTIONAL ABUSIVENESS SUBSCALES

This questionnaire covers experiences you may have had when you were a child. If you did not live with both biological parents, please answer these questions with a mother figure (e.g., stepmother, grandmother, adoptive mother) or father figure (e.g., stepfather, grandfather, adoptive father) in mind.

The maternal figure I am completing this scale about is my:
1) biological mother
2) step-mother
3) adoptive mother
4) other _____(please write in who this person was-e.g., grandmother)
5) I did not have a mother figure while growing up.

The paternal figure I am completing this scale about is my:
1) biological father
2) step-father
3) adoptive father
4) other _____(please write in who this person was-e.g., grandfather)
5) I did not have a father figure while growing up.

Please answer the questions using the following scale:
0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often, 4 = Very Often

Your mother or father:

1. Broke or smashed objects near you when angry with you.	0 1 2 3 4
2. Threw things at you.	0 1 2 3 4
3. Pulled your hair.	0 1 2 3 4
4. Pushed, grabbed, or shoved you.	0 1 2 3 4
5. Deliberately scratched you.	
6. Hit you.	0 1 2 3 4
7. Hit you with objects.	0 1 2 3 4
8. Beat you up.	0 1 2 3 4
9. Choked you.	0 1 2 3 4
10. Kicked you.	0 1 2 3 4
11. Threatened to kill you.	0 1 2 3 4
12. Threatened you with a weapon (such as a knife or gun).	0 1 2 3 4
13. Used a weapon (such as a knife or gun) on you.	0 1 2 3 4

Please answer the questions using the following scale:
0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often, 4 = Very Often

Your mother or father:

1. Made you feel vulnerable or likely to be hurt.	0 1 2 3 4
2. Insulted or swore at you.	0 1 2 3 4
3. Made you feel stupid when you didn't understand something.	0 1 2 3 4
4. Treated you like the "black sheep" of The family.	0 1 2 3 4
5. Made you want revenge.	
6. Said she (he) hated you	0 1 2 3 4
7. Threatened to hurt you.	0 1 2 3 4
8. Ridiculed your feelings.	0 1 2 3 4
9. Belittled or made fun of your physical appearance.	0 1 2 3 4
10. Ignored you for extended periods of time.	0 1 2 3 4
11. Made statements such as, "I wish you were never born."	0 1 2 3 4
12. Made you feel worthless.	0 1 2 3 4
13. Made you feel as if you were a bad person.	0 1 2 3 4
14. Ridiculed or made fun of your beliefs.	0 1 2 3 4
15. Criticized or humiliated you in front of others.	
16. Was cold or rejecting.	0 1 2 3 4
17. Let you know your brothers or sisters were loved more than you were.	0 1 2 3 4
18. Made you feel terrible when you made a mistake.	0 1 2 3 4
19. Made you feel that her (his) love was conditional (was there only if you did, or was, what she (he) wanted).	0 1 2 3 4

APPENDIX J

Short Self-Regulation Questionnaire

Instructions: Please answer the following questions by circling the response that best describes how you are. If you STRONGLY DISAGREE with a statement circle 1. If you DISAGREE circle 2. If you are UNCERTAIN or UNSURE circle 3. If you AGREE circle 4, and if you STRONGLY AGREE circle 5. There are no right or wrong answers. Work quickly and don't think too long about your answers.

	Strongly Disagree	Disagree	Uncertain/Unsure	Agree	Strongly Agree
1. I have trouble making plans to help me reach goals	1	2	3	4	5
2. I have a hard time setting goals for myself	1	2	3	4	5
3. Once I have a goal, I can usually plan how to reach it	1	2	3	4	5
4. I give up quickly	1	2	3	4	5
5. I set a goal for myself and keep track of my progress	1	2	3	4	5
6. When I am trying to change something, I pay attention to how I'm doing	1	2	3	4	5
7. I don't notice the effects of my actions until it's too late	1	2	3	4	5
8. I tend to keep doing the same thing, even when it doesn't work	1	2	3	4	5
9. I have personal standards, and try to live up to them	1	2	3	4	5
10. I get easily distracted from my plans	1	2	3	4	5
11. I have trouble following through with things once I've made up my mind to do something	1	2	3	4	5
12. I have a lot of will power	1	2	3	4	5
13. I'm able to accomplish goals I set for myself	1	2	3	4	5
14. If I make a resolution to change something, I pay a lot of attention to how I'm doing	1	2	3	4	5
15. I put off making decisions	1	2	3	4	5
16. Most of the time I don't pay attention to what I'm doing	1	2	3	4	5
17. I don't seem to learn from my mistakes	1	2	3	4	5
18. If I wanted to change, I am confident that I could do it	1	2	3	4	5
19. I usually keep track of my progress toward my goals	1	2	3	4	5
20. I usually think before I act	1	2	3	4	5
21. As soon as I see a problem of a challenge, I start looking for possible solutions	1	2	3	4	5
22. When it comes to deciding about a	1	2	3	4	5

change, I feel overwhelmed by the choices					
23. I learn from my mistakes	**1**	**2**	**3**	**4**	**5**
24. I am able to resist temptation	**1**	**2**	**3**	**4**	**5**
25. Often I don't notice what I'm doing until someone calls it to my attention	**1**	**2**	**3**	**4**	**5**
26. I have trouble making up my mind about things	**1**	**2**	**3**	**4**	**5**
27. I know how I want to be	**1**	**2**	**3**	**4**	**5**
28. I usually have to make a mistake one time in order to learn from it	**1**	**2**	**3**	**4**	**5**
29. I can stick to a plan that is working well	**1**	**2**	**3**	**4**	**5**
30. I can usually find several different possibilities when I want to change something	**1**	**2**	**3**	**4**	**5**
31. It's hard for me to notice when I've had enough (alcohol, food, sweets)	**1**	**2**	**3**	**4**	**5**

APPENDIX K

ID -

Demographics Questionnaire

Today's Date: ____/____/_____

1. What is your age in years? _____

2. What is your gender?
   - ○ Female
   - ○ Male

3. What is your race?
   - ○ American Indian or Alaska Native
   - ○ Asian
   - ○ Black or African American
   - ○ Native Hawaiian or Other Pacific Islander
   - ○ White
   - ○ Other

4. What is your ethnicity?
   - ○ Latino or Hispanic
   - ○ Not Latino or Hispanic

5. What is your household income?
   - ○ Less than $10,000
   - ○ $10,000 - 20,000
   - ○ $20,001 - 30,000
   - ○ $30,001 - 40,000
   - ○ $40,001 - 50,000
   - ○ $50,001 - 75,000
   - ○ More than $75,000
   - ○

6. What is the household income of your parents?
   - ○ Less than $10,000
   - ○ $10,000 - 20,000
   - ○ $20,001 - 30,000
   - ○ $30,001 - 40,000
   - ○ $40,001 - 50,000
   - ○ $50,001 - 75,000
   - ○ More than $75,000

7. What was the social class of your family when you were growing up?
   - ○ Lower
   - ○ Lower-middle
   - ○ Middle
   - ○ Upper-middle
   - ○ Upper

8. What is the highest level of education you completed?
   - ○ Some High School
   - ○ High School Diploma or GED
   - ○ Trade School
   - ○ Some College
   - ○ Bachelor's Degree
   - ○ Master's Degree
   - ○ Doctoral Degree
   - ○ Other (please specify): _____

9. What is the highest level of education your mother completed?

- ○ Some High School
- ○ High School Diploma or GED
- ○ Trade School
- ○ Some College
- ○ Bachelor's Degree
- ○ Master's Degree
- ○ Doctoral Degree
- ○ Other (please specify): _____

10. What is the highest level of education your father completed?
    - ○ Some High School
    - ○ High School Diploma or GED
    - ○ Trade School
    - ○ Some College
    - ○ Bachelor's Degree
    - ○ Master's Degree
    - ○ Doctoral Degree
    - ○ Other (please specify): _____

11. Please indicate your current employment status (check all that apply):
    - ○ Not Employed
    - ○ Staying home with child(ren)
    - ○ Military (Active Duty)
    - ○ Military (not Active Duty)
    - ○ Full-time student
    - ○ Part-time student
    - ○ Employed Part-time
    - ○ Employed Full-time

VITA

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Education and Training

PH.D.	**Old Dominion University**, *Norfolk, VA* Experimental Psychology Advisor: James Paulson, Ph.D. August, 2016
M.S.	**Old Dominion University**, *Norfolk, VA* Experimental Psychology Advisor: James Paulson, Ph.D. May, 2014
M.S.	**Francis Marion University**, *Florence, SC* Applied Psychology, Clinical/Counseling Advisor: Will Wattles, Ph.D. December, 2011
B.A.	**The Richard Stockton College of New Jersey**, *Pomona, NJ* Psychology *Magna cum laude* December, 2007

Background

Ralitsa Stoyneva Maduro is a fourth year graduate student at Old Dominion University. She is pursuing her Doctor of Philosophy degree in Experimental Psychology. She is currently a research assistant in the Early Family Lab of Dr. James Paulson, and the instructor of record for PSYCH 412 Psychological Tests. Ralitsa's research interests rest primarily in the early family dynamics, parenting, fathering and child outcomes.

Publications

Mason, T. B., **Maduro, R. S**., Derlega, V. J., Hacker, D. S., Winstead, B. A., & Haywood, J. E. (In Press) Individual Differences in the Impact of Vicarious Racism: African American Students React to the George Zimmerman Trial. *Cultural Diversity and Ethnic Minority Psychology.*

Hacker, D. S., Haywood, J. E., **Maduro, R. S.**, Mason, T. B., Derlega, V. J., Socha, T. J. (2016). How Prior Experiences with Racism Predict African American Students' Reactions to the George Zimmerman Trial: Co-Rumination and Thought Intrusions as Mediators. *Journal of Trauma & Loss*

Derlega, V. J., **Maduro, R. S.,** Janda, L. J., Chen, I. A., & Goodman III, B. M. (2016). What Motivates Individuals with Sickle Cell Disease (SCD) to Talk with Others about Their Illness? Reasons For and Against SCD Disclosure. *Journal of Health Psychology*

Hill- Chapman, C. R., Herzog, T. K., & **Maduro, R. S.** (2013). Aligning over the child: Parenting alliance mediates the association of Autism Spectrum Disorder atypicality with parenting stress. *Research in Developmental Disabilities. 34*, 1498-1504. doi: 10.1016/j.ridd.2013.01.004