THE EFFECT OF PARENTING STRESS ON THE RELATIONSHIP BETWEEN A BRIEF PARENTING INTERVENTION AND ATTITUDES TOWARD SPANKING

by

Olivia S. Lynch, EdS

July, 2021

Director of Dissertation: Brandon K. Schultz, EdD

Major Department: Department of Psychology

Parenting stress may adversely impact treatment response among parents in a behavioral parent training intervention, but existing research has not directly measured this effect. *Play Nicely* is a brief, multimedia parenting intervention developed through Vanderbilt University; previous research has indicated that *Play Nicely* is effective at reducing positive attitudes toward spanking. The current study aimed to determine the degree to which parenting stress statistically moderates the relationship between participating in *Play Nicely* and attitudes toward spanking. Participants (n = 150) were recruited through Qualtrics' survey panels and randomly assigned to an experimental group or wait-list control group. Results suggest that as levels of parenting stress increase positive attitudes toward spanking increase as well. There were no statistically significant differences in attitudes toward spanking when comparing the experimental group and wait-list control group. Parenting stress was not found to moderate the relationship between participating in *Play Nicely* and lower positive attitudes toward spanking, as originally hypothesized. Limitations of the current study, finding implications, and suggestions for future research are discussed.

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Olivia S. Lynch, EdS

APPROVED BY:

DIRECTOR OF DISSERTATION: _____
Brandon K. Schultz, EdD

COMMITTEE MEMBER: _____
Christy M. Walcott, PhD

COMMITTEE MEMBER: _____
Alexander M. Schoemann, PhD

COMMITTEE MEMBER: _____
Marissa E. Carraway, PhD

CHAIR, DEPARTMENT OF PSYCHOLOGY: _____
Alan J. Christensen, PhD

DEAN OF THE GRADUATE SCHOOL: _____
Paul J. Gemperline, PhD

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CHAPTER I: INTRODUCTION AND LITERATURE REVIEW

Corporal punishment is a common method of discipline in the United States and around the world. It is physical force inflicted upon children, by their parents or other caregivers, with an intent to cause the child pain and with an intent to correct or control the child's behavior. A key distinction between corporal punishment and other forms of abuse is that parents do not typically intend to inflict lasting injury (e.g., bruising, scarring) when administering corporal punishment; however, "transient injury" (e.g., a red mark which will go away within hours) is sometimes an expected consequence of corporal punishment administration (Straus, 1994). Spanking, which is usually hitting a child on the buttocks, is a form of corporal punishment (Straus, 2010). Spanking can vary in severity, including either one quick hit or multiple repeated hits. Some parents administer spanking using an open hand, while others use an object, such as a belt or wooden spoon. If parents use an object and/or repeated hits when administering spanking, they increase the chances of child injury (Baumrind et al., 2002). Despite the distinction between the definitions of corporal punishment and child abuse in the research literature, evidence exists that the negative outcomes associated with corporal punishment are similar to the negative outcomes associated with child abuse (King et al., 2018).

Corporal punishment is a practice that occurs all over the world in homes, schools, and communities (United Nations Committee on the Rights of the Child [UNCRC], 2007). Many children are exposed to corporal punishment from a young age. For example, Vittrup et al. (2006) found that among 132 mothers, 21% reported slapping their child's hand approximately once or twice per week and 14% reported spanking their child approximately once per week by the time their children were 12 months old. Spanking continued to increase in frequency throughout the toddler years, with rates of spanking peaking at age 4 (Vittrup et al., 2006). A

2014 national telephone survey, the National Survey of Children Exposed to Violence, surveyed approximately 4,000 parents, children, and adolescents. Overall, 37% of the children and adolescents participating in the survey were spanked within the past year; this percentage was higher for children under age 9 (49%) and lower for children ages 10 to 17 (23%). Given that these rates only included a period of a year, it is likely most children have exposure to spanking, at some point, over the course of their childhood and teen years (Finkelhor et al., 2019). Additional research estimated approximately 80% of parents have used spanking as a method of discipline when raising their children (Gershoff et al., 2012).

There are many demographic and family characteristics which may impact how frequently corporal punishment is used. Rates of corporal punishment use are lower for children who live in the Northeast compared to children who live in the South. Additionally, rates of corporal punishment use among Whites are lower than rates of corporal punishment use among Blacks (Finkelhor et al., 2019). American Indian/Alaskan Native children are more likely than Whites to experience higher rates of corporal punishment, while Asian/Native Hawaiian/Pacific Islander children are less likely than White children to experience corporal punishment (Taillieu et al., 2014). Rates of corporal punishment use are lower in families who have obtained higher education compared to those who have not (Finkelhor et al., 2019; Taillieu et al., 2014); rates are also lower in families with a higher income (i.e., $40,000 or more compared to $19,999 or less) (Taillieu et al., 2014). The research is mixed regarding whether boys or girls are more at risk for experiencing corporal punishment throughout childhood and adolescence; however, some studies have found that rates are lower for girls compared to boys (Finkelhor et al., 2019; Taillieu et al., 2014). Children who grow up in homes receiving government assistance and children who grow

up in homes with separated, divorced, or widowed parents may also be at a higher risk of corporal punishment use (Taillieu et al., 2014).

Overall, rates of spanking in the United States are decreasing with time. The National Survey of Children Exposed to Violence found that there was around a 28% decline in children spanked from 1975 to 2014 (Finkelhor et al., 2019). Ryan et al. (2016) found that, from 1988 to 2011, there was a 26-40% decrease in the rates of kindergarten children who were spanked in their home. Despite this decrease in spanking use overall, the decline may not be consistent across race and gender. Taillieu et al. (2014) found that the decrease over time was only apparent for Whites; the rates of use among Blacks remained consistent, while the rates of use among Hispanics were increasing. The magnitude of this overall decrease was stronger for boys compared to girls.

Even though spanking is frequently used, it is ineffective in ensuring sustained behavioral compliance (Durrant & Enson, 2012). One reason spanking may not be as effective as many parents perceive it to be is because children see it as unfair. In a sample of 6- to 10-year-old children (n = 108), spanking was ranked as the least fair method of discipline in comparison to time out, using reasoning, and taking away privileges (Vittrup & Holden, 2010). If children do not see their parents' method of discipline as fair, they are less likely to comply with parental demands (Laupa & Turiel, 1986; Tisak, 1986). Along with being ineffective, the research supporting the negative impact of spanking is overwhelming. Externalizing problems, including arguing and getting in fights, are more prevalent in children who have been spanked (Afifi et al., 2006; Lansford et al., 2012; Maguire-Jack et al., 2012); for over 50 years, research has supported the connection between exposure to spanking and being at-risk for childhood behavioral problems and engaging in physical aggression (Douglas & Straus, 2006). Boys and girls who are

frequently spanked are more likely to view aggression as the best way to solve problems among their siblings and peers (Simons & Wurtele, 2010).

Along with externalizing problems, spanking can increase a child's risk of antisocial behavior (Slade & Wissow, 2004), mood and personality disorders (Afifi et al., 2006; Afifi et al., 2012), and internalizing problems, such as anxiety and depression. Among children who are frequently spanked, internalizing problems can present in childhood and can also present later in adulthood (Afifi et al., 2006; Durrant & Ensom, 2012; Lansford et al., 2005; Maguire et al., 2012). In a study with New England college students (n = 649), students who were spanked as a child were more at risk for depression in college than college students who were not spanked as a child; interestingly, their perceptions of their parents' anger during administration of spanking were the strongest predictor of later depression (Mackenbach et al., 2014). Being spanked in childhood can also increase the risk of alcohol and drug dependence in adulthood (Afifi et al., 2006; Afifi et al., 2012).

Perhaps the most concerning consequence of spanking is the way in which it increases a child's risk of abuse. Harsh physical punishment, including spanking, is associated with an increased risk of childhood emotional abuse, sexual abuse, physical abuse, physical neglect, emotional neglect, and exposure to interpersonal violence, even after controlling for factors such as socioeconomic status, family history of dysfunction, and other types of child maltreatment. Children who experience harsh physical punishment are also at a greater risk of experiencing interpersonal violence in adulthood (Afifi, Mota, et al., 2017). In the National Survey of Adolescents-Replication, 8.5% of the adolescents surveyed indicated they had been spanked so hard that it caused injury, such as bruises, cuts, and welts (Hawkins et al., 2010). Spanking has also been associated with an increased risk of injury in the first year of a child's life (Crandall et

al., 2006). For spanking to remain salient over time, the parent must continue hitting harder and harder; this may partially explain the relationship between spanking and higher risk for abuse (Gershoff, 2002; Stein & Perrin, 1998).

Adverse childhood experiences (ACEs) are often used in longitudinal research to better understand the effect of childhood experiences on adult outcomes and functioning (Afifi, Ford, et al., 2017). Given the acute and longitudinal impact of corporal punishment use, Afifi, Ford, et al. (2017) proposed that corporal punishment should be considered an adverse childhood experience (ACE) in future research, falling on a continuum of physical abuse. On a societal level, corporal punishment use may be associated with dating violence among college students (Douglas & Straus, 2006), warfare, interpersonal violence among adults (Lansford & Dodge, 2008), and an increased need for Child Protective Services involvement in families and communities (Lee et al., 2014).

Attitudes Toward Spanking Among American Parents

Due to the research previously described, as well as conversations among world leaders regarding whether corporal punishment use is a human rights violation (Durrant, 2008), there has been an international change in perspectives regarding corporal punishment (Durrant & Ensom, 2012). Many countries have banned corporal punishment use nationwide (UNCRC, 2007). Despite this worldwide movement, the United States is the only country in the United Nations which is not a part of the Committee on the Rights of the Child. The Committee on the Rights of a Child is a United Nations initiative requiring members to adopt certain conventions and submit regular reports regarding how child rights are implemented. Federal steps are not being taken to reduce corporal punishment use, with corporal punishment still legal in all 50 states (Miller-Perrin & Perrin, 2018; UNCRC, 2007). Public opinion is also largely positive regarding the

necessity of maintaining corporal punishment use, and spanking more specifically, with approximately 75% of adults in the United States agreeing with the statement, "It is sometimes necessary to discipline a child with a good, hard spanking" (Smith et al., 2015).

Persisting support for spanking in the United States exists due to multiple, complex reasons. Parental freedom and rights to make decisions regarding child upbringing is a core component of family values in the United States - one that is seen as protected under the Fourteenth Amendment to the United States Constitution. Even in cases when corporal punishment results in bruising or injury, courts in the United States still typically uphold parental rights (Miller-Perrin & Perrin, 2018; Moya-Smith, 2013). Written decisions made in previous United States Supreme Court cases stated that the interpretation of the Fourteenth Amendment, with components noting that the State shall not deprive individuals of life, liberty, and property, indicate that parents have the liberty to direct the upbringing of their children (Perry, 1996). Religious influence in the United States also plays a role in maintaining positive attitudes toward spanking, given the strong influence of Christianity (Miller-Perrin & Perrin, 2018; Perrin et al., 2017; Sidebotham, 2015). Many Christians believe that passages in the Bible indicate that parents have both a right and a responsibility to engage in spanking, largely due to passages in the book of Proverbs (e.g., "Punish them with the rod and save them from death [NIV]") (Sidebotham, 2015).

Along with the influence of religion and value of parental rights, a cycle of repeating the practices one grew up with is also maintaining positive attitudes toward the use of spanking in the United States. Parents who were spanked as children are more likely to have positive attitudes toward spanking and are more likely to end up spanking their own children when compared to parents who were not spanked as children (Simons & Wurtele, 2010). A

longitudinal study found that adolescents (n = 425) who were spanked by their mothers were likely to approve of spanking as a strategy of discipline, regardless of how often they were spanked (Deater-Deckard et al., 2003). This effect may be partially due to the "I was spanked, but I turned out okay" attitude, which is commonly used as a defense among those in favor of spanking (Kish & Newcombe, 2015).

Support for the use of spanking may also exist in the United States due to the advice parents are being given. In a survey conducted in a medical center, less than half of the staff agreed that spanking is harmful to children. Therefore, parents may not get correct guidance from their medical providers, religious leaders, family members, and others they go to for input on discipline strategies (Gershoff et al., 2016). Attitudes in favor of spanking persist due to numerous myths regarding its use. Along with the myth that spanking is not harmful (Gagné et al., 2007), many parents believe it is irreplaceable as a discipline strategy (Kish & Newcombe, 2015; Taylor et al., 2011). Parents may not know there are other strategies that work better than spanking (Knox, 2010; Taylor et al., 2011). Some parents believe that children who are not spanked demonstrate uncontrolled behavior and disrespect authority, whereas children who are spanked are disciplined and learn to respect authority (Benjet & Kazdin, 2003).

Parenting Stress and Attitudes Toward Spanking

There may be a relationship between parenting stress and attitudes toward spanking. Any type of psychological stress is a negative experience, resulting from interactions between a person and their environment (Lazarus & Folkman, 1984). For parents, the continuous, daily interactions with their children can result in parenting stress if these interactions are overwhelmingly negative. Parenting stress, as defined by Deater-Deckard (1998), is a perceived mismatch between the demands of a parent's situation or environment and their resources related

to parenthood (e.g., social support, guidance on discipline, assistance from a spouse or partner), resulting in an unpleasant psychological reaction to parenting. Although various factors result in parenting stress, it is often conceptualized as a concept arising from three broader factors: characteristics of the child (e.g., child temperament), characteristics of the parent (e.g., parent temperament), and the context (e.g., a stressor, such as sickness in the family); not only do these interactions independently contribute to parenting stress, but they all three also interact with each other. Some parent-child temperament interactions may result in more stress than others (Abidin, 1986; Ostberg & Hagekull, 2000). For example, if children have frequent externalizing behaviors (e.g., hyperactivity, aggression) and a difficult temperament, parenting stress levels are likely to be high (Ostberg & Hagekull, 2000; Williford et al., 2007). Parenting stress is a bidirectional relationship occurring over time, and child behavior problems can serve as an antecedent and a consequence of parenting stress. In other words, child behavior problems can result in parenting stress but can also arise due to prolonged exposure to parents who are stressed (Neece et al., 2012).

Additionally, parenting stress can result from external circumstances (e.g., difficult child behavior), the parent's cognitive appraisal of the event (e.g., Do they interpret the difficult child behavior as typical or as extremely concerning? Do they interpret the child behavior as a threat to their authority?), the parent's stress reaction (e.g., heart racing, tense muscles), and the parent's current coping mechanisms in response to the event (e.g., behavioral strategies used to manage child behavior) (Lazarus, 1993). A key factor in initiating and maintaining parenting stress includes parenting self-efficacy; parents who feel more competent in their role as a parent typically remain less stressed than parents who do not feel competent (Abidin, 1997; Abidin & Burke, 1978). Many parents seeking behavioral health support due to difficult child behavior

may be questioning their efficacy as a parent, due to rising frustration and feeling unsuccessful in managing child behavior.

Over time, parenting stress can negatively impact the parent-child relationship and child behavior. Parents who are stressed are more likely to use harsh, negative, and authoritarian parenting practices, such as spanking; as a result, parenting stress is thought to play a role in increasing the risk for abuse and neglect. Children who have an extremely stressed parent are also at a higher risk of having an insecure attachment with their parent (Crnic & Low, 2002; Deater-Deckard, 1998). Parenting stress may result in chronic exposure to negative child-parent interactions which can result in children having difficulty with emotion regulation. Emotion dysregulation has been associated with the development of child behavior problems, particularly by the time children are 5 years old (Crnic et al., 2005). Parenting stress contributes to parents' perceptions regarding their child's behavior. Crnic et al. (2005) found that mothers' ratings of parenting stress independently contributed to their judgement of their child's behavior, over and above the child's actual behavior.

Considering parenting levels of stress is valid when intervening to reduce corporal punishment attitudes and practices (Crouch & Behl, 2001). Many parents who endorse parenting stress also endorse fatigue (Dunning & Giallo, 2012). Parents who are fatigued are more likely to engage in overreactive discipline (e.g., spanking) than parents who are not fatigued (Lesniowska et al., 2016). As previously mentioned, higher levels of parenting stress are also associated with lower parental self-efficacy (Lesniowska et al., 2016), and lower levels of parental self-efficacy have been associated with higher levels of punishing caretaking (e.g., spanking) (Coleman & Karraker, 1998).

Most research differentiates child abuse from corporal punishment, in that child abuse is motivated by anger and corporal punishment is not. As previously mentioned, child abusers intend to cause injury, whereas adults using corporal punishment do not intend to cause lasting bodily harm. A similarity between spanking and child abuse is that both intend to cause physical pain (American Academy of Pediatrics, 1998; King et al., 2018). There is a positive relationship between level of parenting stress and the potential for physical child abuse; as parents report increased stress, they are more likely to engage in child abuse. This effect only exists, however, among parents who report a high level of belief in the use of spanking. Attitudes toward spanking have an important role in increasing the association between parenting stress and potential child abuse (Crouch & Behl, 2001). Parenting stress can result in increased positive attitudes toward spanking and increased spanking, due to parents becoming highly critical of their child's behaviors over time. Highly critical parents then begin to have a low tolerance for otherwise normal child behaviors and problems (Mackenbach et al., 2014).

Shifting Attitudes Toward Spanking

Parental attitudes toward spanking are a critical consideration when implementing interventions to reduce spanking and increase positive parenting strategies. Although it may seem intuitive, it is important to note that parents who have positive attitudes toward spanking (e.g., see it as necessary, unharmful, effective) are more likely to spank their children than parents who do not view spanking favorably (Vittrup et al., 2006). Belief in spanking is strongly correlated with both the frequency of using spanking as a discipline strategy and the severity of spanking administration (Socolar & Stein, 1995). Additionally, the earlier intervention efforts can target attitudes toward spanking, the better. Combs-Orme and Cain (2008) found that younger mothers, particularly those who report not knowing other alternatives to spanking, are

the most likely to use spanking. Given that attitudes predict actual practices, attitudinal change may be a promising intervention (Bower-Russa, 2005).

Fortunately, attitudes toward spanking can change. Various cross-sectional surveys have recently indicated that public support in the United States for spanking is declining, even if it is not declining at the same rate as in other countries (Straus, 2010). There seems to be multiple ways to work to change parental attitudes, such as challenging existing beliefs, presenting existing research, and providing alternative strategies for behavioral management besides spanking. Although it may seem that religious ideas may be the hardest area to target when working to shift attitudes on spanking, particularly if parents feel not using spanking contradicts their religious beliefs, Perrin et al. (2017) used a religious argument to counter the commonly held biblical interpretations in support of spanking. These researchers encouraged parents to consider the cultural context in which the biblical passages were written. Based on historical knowledge, violence against children was common during the time in which the Bible was written; additionally, better alternatives to hitting children were not yet discovered through research. This approach (i.e., targeting the religious belief) was effective in changing parental attitudes toward spanking (Perrin et al., 2017).

Showing parents existing research on spanking is also an effective strategy in changing positive attitudes toward spanking. In a study with both parents and non-parent adults, being shown brief research studies documenting the problems associated with spanking reduced favorable attitudes toward spanking for both the parents and non-parents. The parents who reported they were previously unaware of the research on the negative effects of spanking showed the greatest change in their attitudes (Holden et al., 2014). Once parents realize spanking is an ineffective discipline strategy, which can cause harm, attitudes can change

(Fleckman et al., 2018). Providing parents with alternative strategies to spanking can also reduce parental support for spanking. Parents in a pediatric primary care setting who were given educational baby books, providing guidance on discipline strategies through a story format (e.g., using redirection and distraction, instead of hitting, to correct behavior), reported lower support for the use of spanking compared to parents who were not given educational baby books (Reich et al., 2012).

A brief parenting intervention, *Play Nicely* (Vanderbilt University, 2005), is an interactive multimedia program used to provide parents with feedback regarding ways to discipline children. This program explains why spanking is not the best choice for responding to child behavior and presents parents with alternative evidence-based strategies. *Play Nicely* was developed at Vanderbilt University, using content from the National Association for Young Children, American Academy of Pediatrics, and American Psychological Association (Chavis et al., 2013; Scholer et al., 2006). Various versions of the program were designed for parents, teachers, and healthcare workers. *Play Nicely* is free, open-access, and has an English and Spanish version (Scholer et al., 2006). *Play Nicely* is the only intervention found to support parents in developing discipline plans within a routine primary care appointment (Scholer, Hudnut-Beumler, & Dietrich, 2010). *Play Nicely* has been studied multiple times in various environments, such as primary care clinics, childcare centers, homes, and community centers (e.g., Scholer et al., 2005; Scholer et al., 2006; Chavis et al., 2013; Burkhart et al., 2018) and has also been effective with a socioeconomically disadvantaged population (Burkhart et al., 2018). *Play Nicely* is culturally sensitive; in a study with mostly minority parents (n = 197), over 80% of the participants within each ethnic group (i.e., Black, White, and Hispanic) reported that the program increased their knowledge related to effective behavioral strategies, addressed the

individual needs of their family, was presented in an easy-to-understand format, respected their family values, and was sensitive to their personal beliefs (Smith et al., 2017).

Participating in *Play Nicely* also impacts attitudes toward spanking. Parents who viewed options for discipline in the *Play Nicely* program viewed spanking less favorably when compared to a control group who received care as usual during a well-child visit. Parents in the control group were also twice as likely to report they would spank their child if they were misbehaving, compared to parents in the intervention group (Chavis et al., 2013). But most importantly, there may be long-lasting effects of *Play Nicely*. Parents who received *Play Nicely* continued to have lower positive attitudes toward spanking at a 4-month follow-up, compared to their initial clinic visit. For parents in the control group, attitudes toward spanking did not change at the 4-month follow-up (Scholer, Hamilton, et al., 2010).

The reason *Play Nicely* seems to be effective is because it not only changes attitudes toward spanking but also teaches alternative behavioral strategies. Out of 197 parents surveyed after engaging in *Play Nicely*, 128 parents reported they planned to spank less. Most of the parents who noted they would spank less (i.e., 63.2%), stated that this change occurred because *Play Nicely* taught them other discipline options (Hudnut-Beumler et al., 2018). Along with providing parents with alternative strategies for discipline, *Play Nicely* assists parents in developing plans for discipline with their healthcare providers. Parents who received the *Play Nicely* intervention were 12 times more likely to report that they were helped in developing a plan to discipline than parents who did not receive *Play Nicely* as a part of their well-child visit (Scholer, Hudnut-Beumler, et al., 2010).

Purpose of the Study and Hypotheses

As previously mentioned, *Play Nicely* has been shown to reduce positive attitudes toward spanking among parents (e.g., Burkhart et al., 2018; Scholer, Hamilton, et al., 2010). But, in reviewing the literature on existing evidence-based interventions to target attitudes toward spanking (including *Play Nicely*), parenting stress has not been adequately considered. Parenting stress may be a critical determinant of which parents respond to a brief intervention like *Play Nicely*. The aim of the current study is to determine if parenting stress moderates the relationship between participating in *Play Nicely* and attitudes toward spanking. Results from the current study may have implications for incorporating assessment of parenting stress into the *Play Nicely* intervention design, as well as implications regarding the importance of providing parents with resources to decrease their levels of stress (e.g., self-care practices) within the context of offering a parenting intervention.

The effect of *Play Nicely* on attitudes toward spanking. Parents who view options for discipline in *Play Nicely*, compared to control groups who receive care as usual, report lower positive attitudes toward spanking immediately after the intervention is administered and at a 4-month follow-up (Chavis et al., 2013; Scholer, Hamilton, et al., 2010).

Hypothesis 1: Parents who participate in a brief parent-training intervention (i.e., *Play Nicely*) before completing the Attitudes Toward Spanking (ATS) scale (*experimental group*) will have lower positive attitudes toward spanking, when compared to parents who receive the brief parent-training intervention after completing the ATS scale (*wait-list control group*).

Correlation between attitudes toward spanking and parenting stress. Over time, parenting stress can negatively impact the parent-child relationship and child behavior. Parents who are stressed are more likely to use harsh, negative, and authoritarian parenting practices,

such as spanking (Coleman & Karraker, 1998; Crnic & Low, 2002; Crouch & Behl, 2001; Deater-Deckard, 1998).

Hypothesis 2: Parents who report increased parenting stress will have increased positive attitudes toward spanking, as measured by scores on the ATS scale and the Parental Stress Scale (PSS), regardless of whether parents are in the experimental or wait-list control conditions.

Parenting stress as a moderator. Parenting stress can result in increased positive attitudes toward spanking and increased use of spanking, due to parents becoming highly critical of their child's behaviors over time and due to parents having a low tolerance for otherwise normal child behaviors and problems (Mackenbach et al., 2014). This cumulative stress may result in parents becoming less responsive to information working against these attitudes and beliefs, particularly if they perceive spanking as a necessary tool for managing their children's behaviors and managing their own stress.

Hypothesis 3: Parenting stress will weaken the relationship between participating in the brief parent-training intervention and lower positive attitudes toward spanking by moderating this relationship. In other words, higher levels of parenting stress, as measured on the PSS, will adversely impact the effect of *Play Nicely* on lower positive attitudes toward spanking, as measured on the ATS scale.

CHAPTER II: METHOD

Participants

Parents or guardians of children ages 1 to 7 years old were recruited through Qualtrics' survey panels (i.e., a group of participants recruited by Qualtrics to complete a study, based on their ability to meet participation criteria). Participants had to be over the age of 18 years old to participate in the study. An a priori power analysis was conducted using GPower 3.1 to test the difference between two independent group means using a linear multiple regression ($\alpha = .05$) with a large effect size ($f^2 = .50$). Results indicated that a total sample of 150 participants with two approximately equal sized groups ($n = 75$) was required to achieve a power of .80. Qualtrics' survey panel was able to recruit the 150 participants needed for this study. The average age of participants was 33.64 years ($SD = 7.20$, *range* = 19 years – 57 years). Demographic information for all participants is included in Table 1.

Independent samples *t*-tests and chi square tests were used to determine if the experimental and wait-list control groups significantly differed on any of the demographic variables, which theoretically could impact the results. There was no significant difference in mean time spent engaging with the study, when comparing the experimental group ($M = 386.25$ seconds, $SD = 560.79$ seconds) and the wait-list control group ($M = 692.08$ seconds, $SD = 3372.61$ seconds), $M_{diff} = -305.83$, 95% CI [-1101.43, 489.77], $t(148) = -0.76$, $p = .134$., $d = -.12$, 95% CI [-.45, .20]. There was no significant difference in parents' age, when comparing the experimental group ($M = 33.66$ years, $SD = 7.29$ years) and the wait-list control group ($M = 33.63$ years, $SD = 7.16$ years), $M_{diff} = 0.03$, 95% CI [-2.39, 2.44], $t(138) = 0.02$, $p = .983$., $d = .004$, 95% CI [-.33, .34].

Chi-square tests were used to determine differences among the categorical demographic variables in the study, when comparing experimental and wait-list control groups. There was not a statistically significant difference among participants in each group among any of the demographic variables (see Table 2). See Table 1 for frequency count values for the crosstabulation of group membership and demographic variables. These results must be interpreted with caution, given that for all demographic variables, expect region, children's gender, and children's diagnoses, there were cell counts with frequencies less than five. This violates one of the assumptions of the chi-square test of independence. Differences in group membership for the demographic variable of religion approached significance ($p = .05$), and religion theoretically may impact results given the influence of Christianity on attitudes toward spanking. But after regrouping religion into the two groups meeting the $N > 5$ assumption for the chi-square test of independence (i.e., Christianity and None) and rerunning the analysis, there were no significant differences found when comparing the experimental and wait-list control groups, $\chi^2(1) = 0.48$, $p = .49$.

Table 1

Sample Demographics (n = 150)

	Total Sample		Experimental Group (*n* = 72)		Wait-List Control Group (*n* = 78)	
Variable	*n*	%	*n*	%	*n*	%
Gender						
Women	90	60.0%	37	51.4%	53	67.9%
Men	59	39.3%	35	48.6%	24	30.8%
Transgender	1	0.7%	0	0.0%	1	1.3%
Race						
Asian/Pacific Islander	10	6.7%	7	9.7%	3	3.8%
Black/African American	12	8.0%	7	9.7%	5	6.4%
Hispanic or Latino	7	4.7%	4	5.6%	3	3.8%
Native American/American Indian	2	1.3%	2	2.8%	0	0.0%
White	114	76.0%	51	70.8%	63	80.8%
Multi-Racial	5	3.4%	1	1.4%	1	1.3%
Marital Status						
Divorced	3	2.0%	2	2.8%	1	1.3%
Domestic Partnership	4	2.7%	1	1.4%	3	3.8%
Married, Blended Family	33	22.0%	15	20.8%	18	23.1%
Married, Nuclear Family	78	52.0%	41	56.9%	37	47.4%
Never Married	26	17.3%	9	12.5%	17	21.8%
Separated	6	4.0%	4	5.6%	2	2.6%
Region						
Midwest	23	15.3%	12	16.7%	11	14.1%
Northeast	45	30.0%	19	26.4%	26	33.3%
South	58	38.7%	28	38.9%	30	38.5%
West	24	16.0%	13	18.1%	11	14.1%
Highest Level of Education						
Doctoral Degree	7	4.7%	4	5.6%	3	3.8%
Certification beyond Master's Degree	2	1.3%	0	0.0%	2	2.6%
Master's Degree	29	19.3%	13	18.1%	16	20.5%
Bachelor's Degree	32	21.3%	15	20.8%	17	21.8%
Associate's Degree	22	14.7%	15	20.8%	7	9.0%
High School Diploma or GED	55	36.7%	23	31.9%	32	41.0%
Some High School	3	2.0%	2	2.8%	1	1.3%

Variable	Total Sample		Experimental Group (n = 72)		Wait-List Control Group (n = 78)	
	n	%	*n*	%	*n*	%
Income						
More than $150,000	16	10.7%	9	12.5%	7	9.0%
$125,000 - $150,000	16	10.7%	7	9.7%	9	11.5%
$100,000 - $125,000	13	8.7%	4	5.6%	9	11.5%
$75,000 - $100,000	17	11.3%	11	15.3%	6	7.7%
$50,000 - $75,000	21	14.0%	9	12.5%	12	15.4%
$25,000 - $50,000	40	26.7%	19	26.4%	21	26.9%
Less than $25,000	26	17.3%	13	18.1%	13	16.7%
Language						
English	145	98.7%	69	95.8%	76	97.4%
Portuguese	1	0.7%	1	1.4%	0	0.0%
Spanish	4	2.7%	2	2.8%	2	2.6%
Religion						
Buddhism	2	1.3%	1	1.4%	1	1.3%
Christianity	96	64.0%	44	61.1%	52	66.7%
Hinduism	2	1.3%	2	2.8%	0	0.0%
Islam	8	5.3%	8	11.1%	0	0.0%
Judaism	2	1.3%	1	1.4%	1	1.3%
None	31	20.7%	12	16.7%	19	24.4%
Other	7	4.7%	4	5.6%	3	3.8%
Prefer to not respond	2	1.3%	0	0.0%	2	2.6%
Child(ren)’s Gender						
Female	69	46.0%	34	47.2%	35	44.9%
Male	50	33.3%	24	33.3%	26	33.3%
Both	31	20.7%	14	19.4%	17	21.8%
Number of Children						
1	53	35.3%	27	37.5%	26	33.3%
2	57	38.0%	27	37.5%	30	38.5%
3	18	12.0%	5	6.9%	13	16.7%
4	13	8.7%	8	11.1%	5	6.4%
More than 4	9	6.0%	5	6.9%	4	5.1%
Child(ren)’s Physical and/or Mental Health						
Has at least one diagnosis	31	20.7%	14	19.40%	17	21.80%
Does not have any diagnoses	119	79.3%	58	80.60%	61	78.20%

Table 2

Chi-Square Tests for Group Membership and Demographic Variables

Variable	χ^2	*p*	Cramer's *V*
Gender	5.66 (2)	.06	0.19
Race	10.12 (7)	.18	0.26
Marital Status	4.71 (5)	.45	0.18
Region	1.13 (3)	.77	0.09
Highest Level of Education	7.07 (6)	.32	0.22
Income	5.19 (7)	.64	0.19
Language	1.10 (2)	.58	0.09
Religion	14.17 (7)	.05	0.31
Children's Gender	0.15 (2)	.93	0.03
Number of Children	4.30 (4)	.37	0.17
Child(ren)'s Physical and/or Mental Health	0.13 (1)	.72	0.03

Note. Numbers in parentheses represent degrees of freedom for each chi square test.

Procedures

Data was collected using Qualtrics, which is a secure online survey platform. Given that *Play Nicely* is a multimedia program which can be utilized in the home environment by caregivers, the link to *Play Nicely* was included in the Qualtrics survey. No identifying information was collected as a part of the study; however, all information collected through the survey was secured on a password protected computer. Participants were informed that the goal of the research study is to better understand the concepts of parenting stress and spanking and that the results of the study may be used to add to the current literature base on these topics (see consent form in Appendix B). Qualtrics' survey panels incentivize participants depending on how they were recruited. When participants were invited to take the survey, they were informed by Qualtrics of the compensation before agreeing to participate. The compensation is partially time-based, with a longer survey resulting in a higher amount of compensation. The amount of compensation can vary individual to individual though, regardless of time. For example, minorities are often compensated more due to being harder to reach on survey panels.

Participants were randomly assigned to either the wait-list control group or experimental group, on a 1:1 ratio, using a randomizer feature within the Qualtrics platform. Participants in both the experimental and wait-list control groups were initially asked to complete brief demographic data, including their age, marital status, race/ethnicity, gender identity, region of the United States they live in, highest level of education, annual household income, number of children, primary language, and religion. Participants also reported their child(ren)'s age, gender, and any physical and/or mental health diagnoses. After demographic data were collected, participants in both groups completed the PSS. Participants in the wait-list control

group also completed the ATS scale at this time. After completing all rating scales, participants in the wait-list control group then received the *Play Nicely* intervention and finished the study.

Participants in the experimental group engaged with *Play Nicely* after completing both demographic data and the PSS. Participants in previous studies using *Play Nicely* were asked to view at least four (e.g., Chavis et al., 2013; Hudnut-Beumler et al., 2017; Scholer et al., 2010) to eight (e.g., Scholer, Hamilton, et al., 2010) of the 16 options in the *Play Nicely* program. Therefore, in the current study, participants were asked to choose at least six out of 16 options in the *Play Nicely* program in response to the question, "Assume that you see your child hurt another child by hitting. What are some of the best ways for you to respond?" Once participants chose a response (e.g., redirect the behavior, spank your child, time-out, take away a privilege), the program provided evidence-based guidance regarding whether this was the best strategy. After choosing at least six options within *Play Nicely*, which was estimated to take approximately 10 minutes, participants were asked to complete the ATS scale.

As an initial part of the study, a soft launch was conducted with 10% of the total participants needed to complete the study. Qualtrics used this soft launch data to create a speeding check as a part of the data collection process. The speeding check was measured for future participants as one-half to one-third the median time participants in the soft launch needed to complete the study. The speeding check measured the total time to complete the study, including the time participants spent engaging with the *Play Nicely* platform. Moving forward, the speeding check was used to automatically terminate participants who were not responding thoughtfully to the study.

Measures

Attitudes Toward Spanking (ATS) scale. The ATS scale is a 10-item scale used to assess parents' views about using spanking (Vittrup et al., 2006). It has been used in many of the other research studies conducted with *Play Nicely* (e.g., Burkhart et al., 2018; Chavis et al., 2013). Items include statements such as, "Spanking is a normal part of my parenting" and "A spank is not an effective method to change my child's behavior for the long term." Items are scored on a seven-point Likert scale, with responses ranging from *strongly disagree* to *strongly agree*. There are six positively stated items and four negatively stated items. Reversed scoring is used for the four negatively stated items; higher total scores indicate that parents relatively agree that spanking is an appropriate strategy. Scores range from 10 to 70. Burkhart and colleagues (2018) found mean ATS scores of 34.1 pre-training and 27.4 post-training among their 37 participants. Chavis and colleagues (2013) found mean ATS scores of 24 in their intervention group (n = 128) and 30 in their control group (n = 130).

Based on previous research, the ATS scale appears to have acceptable internal consistency (α = 0.89–0.91) (Holden, 2001). Vittrup et al. (2006) assessed internal consistency for 132 mothers at an initial time point and found high Cronbach's coefficient values (α = 0.88). Internal consistency continued to be high when measured again at children's second (α = 0.90) and third (α = 0.89) birthdays. Holden (2001) found that over a three-week period test-retest correlations averaged 0.76. Validity (measured by correlating ATS scores with parent reports of actual weekly spanking) over a one-week period was 0.73; validity over a two-week period was 0.54 (Holden, 2001). The ATS had high internal consistency among the current sample (α = 0.83).

Parental Stress Scale (PSS). The PSS is an 18-item self-report questionnaire focusing on both positive (e.g., finding children enjoyable; feeling close to children) and negative (e.g., children being a major source of stress; financial burden) aspects of parenthood. Items are designed to reflect both parental satisfaction with their role as a parent and various distressing emotions that can come along with parenthood (e.g., anxiety) (Berry & Jones, 1995). Items are scored on a five-point Likert scale, with responses ranging from *strongly disagree* to *strongly agree*. There are eight positively stated items and 10 negatively stated items. Reversed scoring is used for the eight positively stated items; higher total scores indicate greater parenting stress. Scores range from 18 to 90. Sharry and colleagues (2005) found mean PSS scores of 49.5 pre-parenting intervention, 43.7 post-parenting intervention, and 43.8 at a 5-month follow-up.

Based on previous research, internal reliability of the PSS is strong (α = 0.83), as is test-retest reliability (r = 0.81). The PSS demonstrated satisfactory convergent validity when compared to the Perceived Stress Scale (Cohen et al., 1983), which measures the general construct of stress, and when compared to the Parenting Stress Index (Abidin, 1986), specifically measuring the construct of parenting stress. When compared to the PSI, correlations indicated that the PSS is an adequate, shorter substitute for that instrument (Berry & Jones, 1995). The PSS had high internal consistency among the current sample (α = 0.86).

Data Analysis

The statistical software package *IBM Statistical Package for the Social Sciences* (SPSS) version 27 was used for all quantitative analyses. Descriptive statistics (e.g., mean, standard deviation, and range) were obtained for all variables used in the study, as applicable. Careful data screening was conducted to identify any data-entry errors, missing values, and extreme values. Independent samples *t*-tests and chi square tests were used to determine if the

experimental and wait-list control groups significantly differed on any of the demographic variables. For the first hypothesis, considering the effect of *Play Nicely* on attitudes toward spanking, an independent-samples *t*-test was used to compare the distribution of the scores on the ATS scale in the experimental group and the wait-list control group. The second hypothesis, considering whether there is a positive correlation between attitudes toward spanking and parenting stress, was conducted using a Pearson's correlation analysis between participants' ATS and PSS scores. The third hypothesis, considering whether parenting stress impacts the relationship between participating in the *Play Nicely* intervention and lower positive attitudes toward spanking, was conducted using Andrew Hayes' PROCESS Model 1 for moderation analysis, which is based on multiple regression. A moderation analysis considers the way in which the relationship between two variables depends on the value of a third variable. Dummy coding was used for comparing the experimental group and wait-list control group to make results more interpretable. Participating in *Play Nicely* (i.e., experimental group) was coded as 1, while not participating in *Play Nicely* before completing the ATS scale (i.e., wait-list control group) was coded as 0.

CHAPTER III: RESULTS

The results of all conducted analyses are included in this chapter. Following data screening results and a description of missing data, all relevant statistical tests are reported.

Data Screening

Table 3 provides an overview of the collected data. Initial data screening results, including means, standard deviations, ranges, skewness, and kurtosis for ATS and PSS scores are reported in Table 3.

Table 3

Descriptive Statistics for ATS and PSS scores

Variable	*M*	SD	Min	Max	Range	Skewness	Kurtosis
ATS	38.51	13.01	10.00	68.00	58.00	-0.50	-0.02
Experimental	37.35	12.99	10.00	68.00	58.00	-0.30	-0.06
Wait-List Control	39.58	13.01	10.00	66.00	56.00	-0.71	0.24
PSS	45.62	11.77	18.00	66.00	48.00	-0.49	-0.90
Experimental	44.67	12.25	18.00	66.00	48.00	-0.33	-1.22
Wait-List Control	46.50	11.32	18.00	65.00	47.00	-0.65	-0.46

On average, participants spent 9.09 minutes completing the study. Due to the Qualtrics speeding check, participants who completed the study too quickly were eliminated and not included in the data set. Participant age was missing from 10 of the participants in the study, and participant income was missing for one participant in the study. A potential reason for this missing data is that in the soft launch age and income were not forced choice responses and were optional. Once it was realized these data were missing in the soft launch, the items were programmatically required for survey completion.

Independent Samples *t*-Test

An independent samples *t*-test was conducted to see if a difference exists between the mean ATS scores of participants in the experimental group compared to the wait-list control group. Comparing mean differences was used, given that participants in the experimental group completed the ATS scale after participating in *Play Nicely* and participants in the wait-list control group completed the ATS scale before participating in *Play Nicely*. The following assumptions of the independent samples *t*-test were met: the independent variable is categorical with two groups (i.e., experimental group; wait-list control group), the dependent variable is continuous (i.e., ATS scores), and there was independence of observations. In looking at a boxplot of ATS scores for the experimental group and the wait-list control group, there were outliers found for the wait-list control group (see Figure 1). The outliers, which are ATS scores more than 1.5 box lengths away from the edge of the box, are identified as circular dots. Extreme outliers, which are ATS scores more than 3 box lengths away from the edge of the box, would be identified with an asterisk. As seen in Figure 1, there were no extreme outliers in the study. In examining the outliers, none of the data points seemed to be recorded in error. Additionally, given that this study has a larger sample size, the independent samples *t*-test is robust against outliers that are not extreme. Therefore, the outliers were not removed from the data set (Laerd Statistics, 2015a).

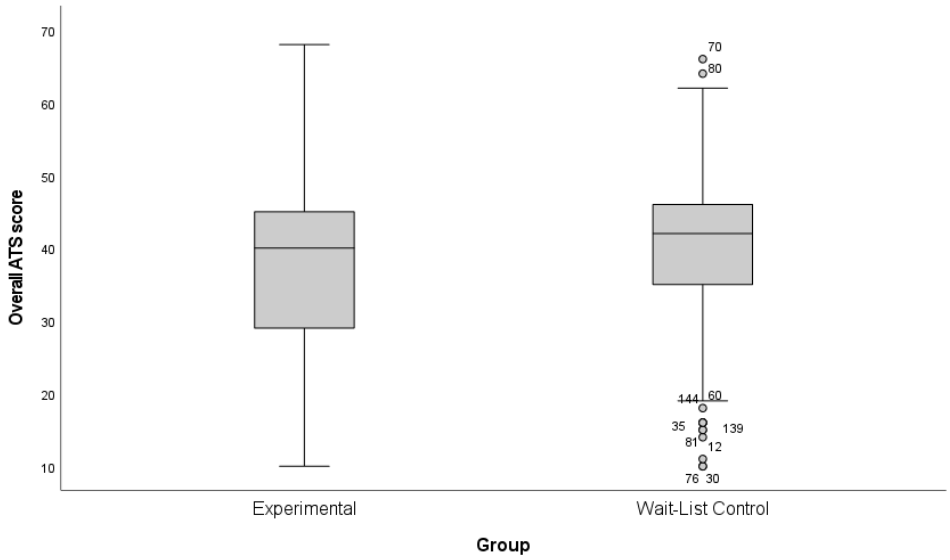

Figure 1. Boxplot of ATS scores for experimental and wait-list control groups

An additional assumption of the independent samples *t*-test is that the dependent variable is normally distributed for each group of the independent variable. For sample sizes larger than 50 participants, using Q-Q plots is the preferred method of testing normality. Based on normal Q-Q plots of ATS scores for the experimental group (see Figure 2) and the wait-list control group (see Figure 3), the data was normally distributed, given that data points fell approximately along the diagonal. Positive or negative skewness or kurtosis was not observed in visually inspecting the Q-Q plots. The assumption of homogeneity of variances was also met with approximately equal group sizes (Laerd Statistics, 2015a).

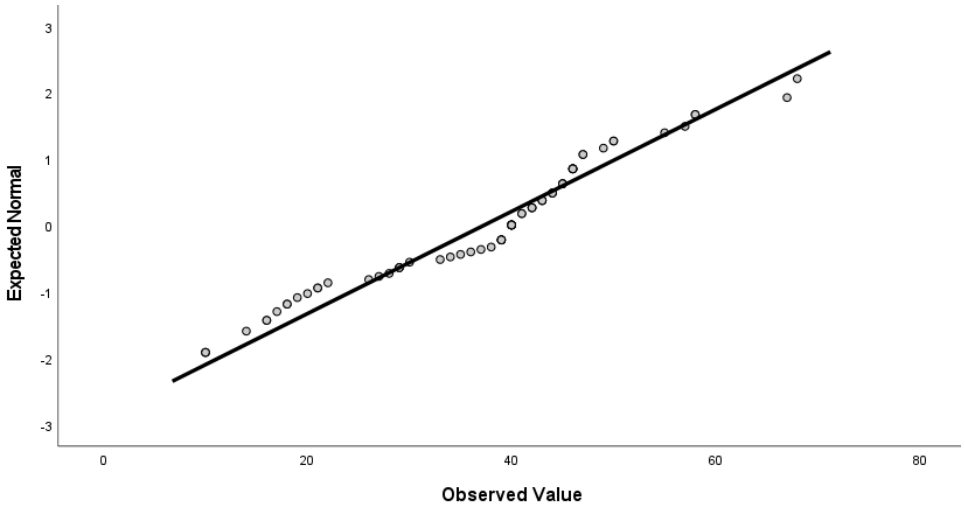

Figure 2. Normal Q-Q plot of total ATS scores for experimental group

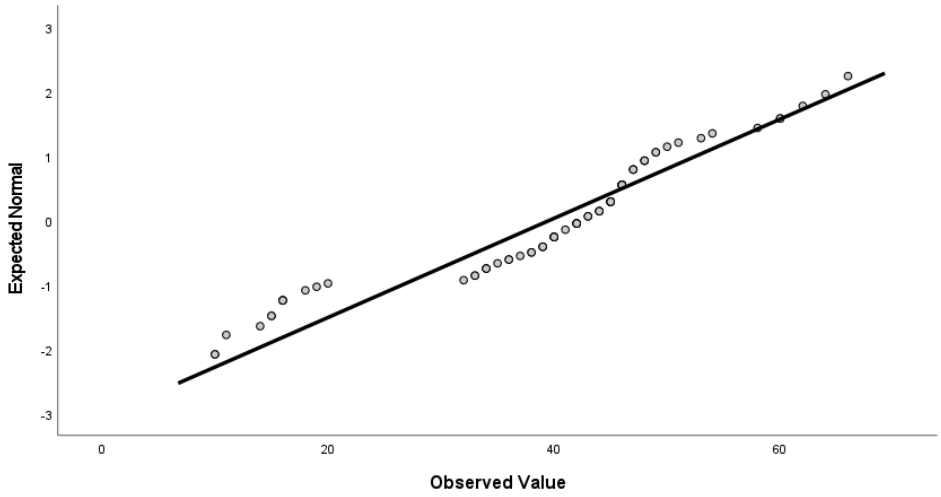

Figure 3. Normal Q-Q plot of total ATS scores for wait-list control group

Once it was determined that all assumptions were met, an independent samples *t*-test was conducted to determine if there were differences in ATS scores between the experimental group and the wait-list control group, given the hypothesis that participants who engaged in *Play Nicely* before completing the ATS scale would have lower positive attitudes toward spanking, when compared to participants who completed *Play Nicely* after completing the ATS scale. The results of the independent samples *t*-test concluded there was no significant difference in mean

ATS scores when comparing the experimental group (M = 37.35, SD = 12.99) and the wait-list control group (M = 39.58, SD = 13.01), M_{diff} = -2.23, 95% CI [-6.43, 1.97], $t(148) = -1.05$, p = .296, d = -.17, 95% CI [-.49, .15] (see Figure 4).

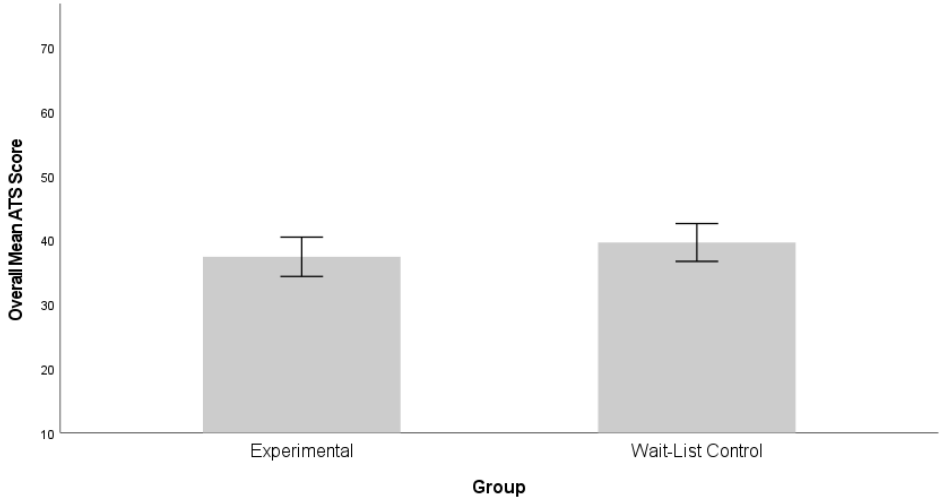

Figure 4. Bar graph of mean ATS scores measuring acceptability of spanking

Pearson's Correlation Analysis

A Pearson's correlation analysis was used to determine if parenting stress is positively correlated with increased positive attitudes toward spanking, using overall PSS and ATS scores for participants in the experimental and wait-list control groups. An assumption of the Pearson's correlation analysis is that the two continuous variables in the analysis are paired. This assumption was met, given that each participant in the study fully completed the PSS and the ATS scale. Additionally, there needs to be a linear relationship between the two continuous variables. There was a weakly positive linear relationship between PSS and ATS scores (see Figure 5). There were no significant outliers, based on the scatterplot (see Figure 5) and no data entry errors; therefore, all participant scores were included in the analysis. Normal Q-Q plots for

PSS and ATS scores were used to assess the assumption of normality. Both PSS (see Figure 6) and ATS (see Figure 7) scores were normally distributed (Laerd Statistics, 2018).

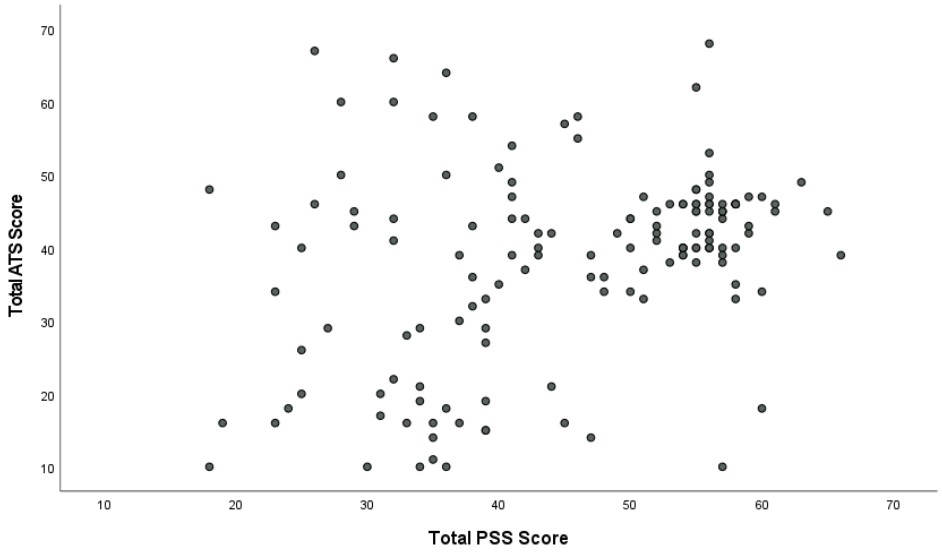

Figure 5. Scatterplot of PSS scores by ATS scores

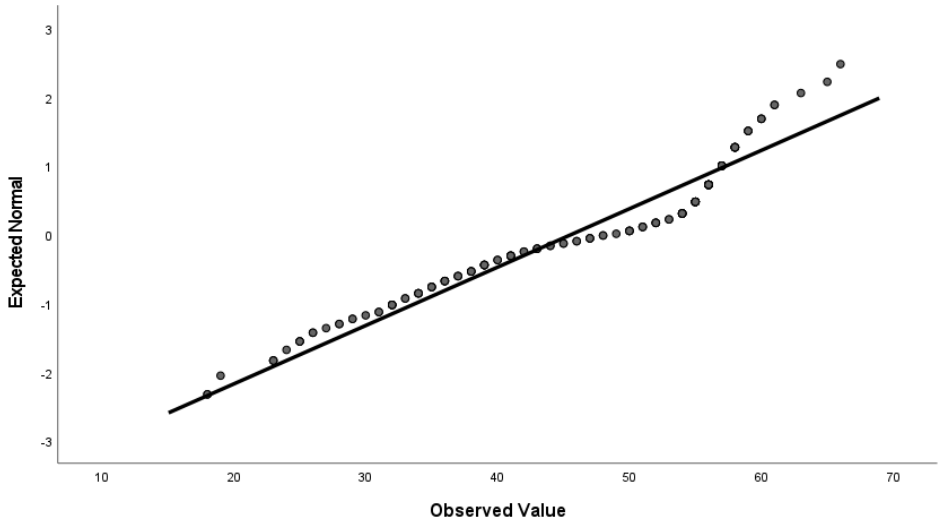

Figure 6. Normal Q-Q plot of PSS scores for experimental and wait-list control groups

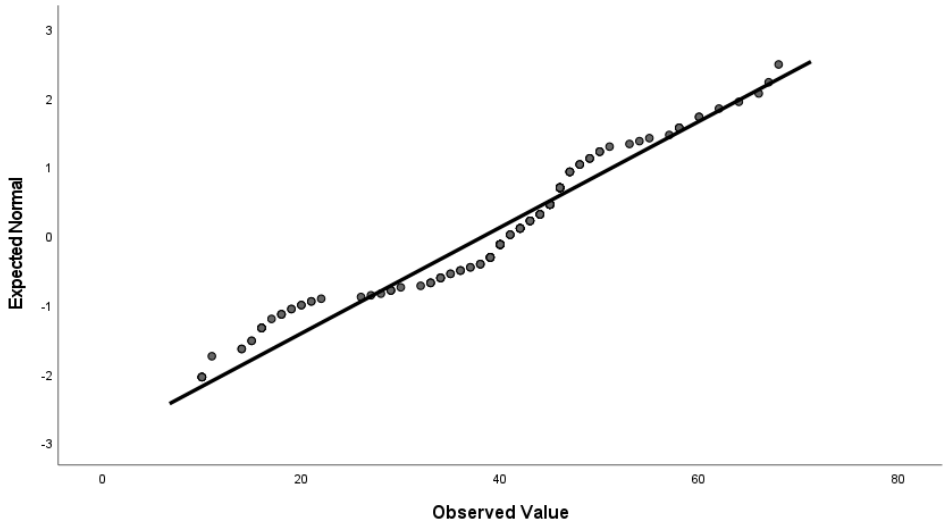

Figure 7. Normal Q-Q plot of ATS scale scores for experimental and wait-list control groups

There was a statistically significant moderate positive correlation between PSS and ATS scores, $r(148) = .33$, $p < .001$, with PSS scores explaining 11% of the variation in ATS scores. Therefore, as parenting stress increased, positive attitudes toward spanking moderately increased as well.

Moderation Analysis

A moderation analysis, using Hayes' PROCESS Model 1, was used to determine whether parenting stress moderates the relationship between participating in *Play Nicely* and attitudes toward spanking. It was hypothesized that parenting stress would decrease the effectiveness of *Play Nicely* in reducing positive attitudes toward spanking. The assumptions for a multiple regression analysis hold true for a moderation analysis, given that Hayes' PROCESS Model 1 is based on multiple regression (Hayes, 2013). Given that there was one dependent variable measured at the continuous level, two independent variables measured at the continuous or nominal level, and independence of observations, these assumptions of a multiple regression analysis were met. An additional assumption of a multiple regression analysis is that there is a

linear relationship between the dependent variable and each of the continuous independent variables in the analysis. This assumption was assessed using a partial regression plot, which showed a somewhat linear relationship between PSS and ATS scores (see Figure 8). There also needs to be a linear relationship between the dependent variable and the independent variables collectively, and this was assessed using a scatterplot of the studentized residuals against the unstandardized predicted values (see Figure 9). The assumption of homoscedasticity was met, given that the residuals did not indicate any shape and were relatively evenly spread (see Figure 9) (Laerd Statistics, 2015b).

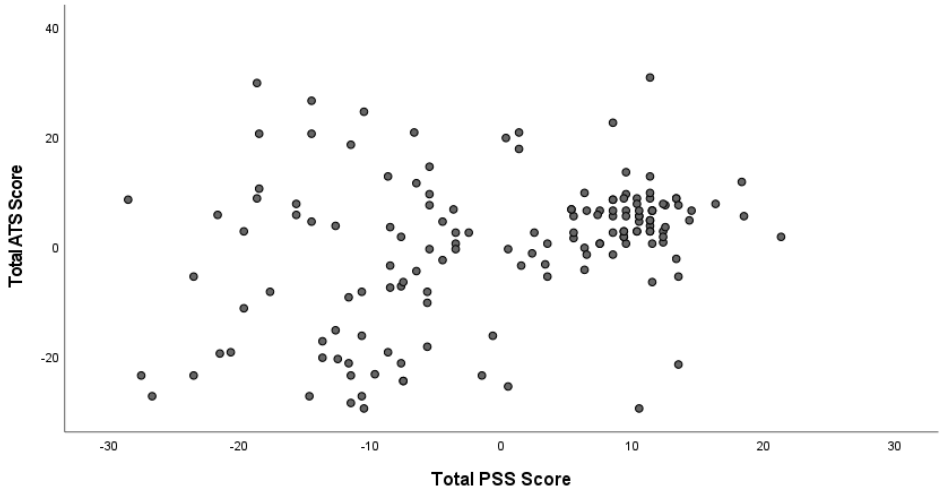

Figure 8. Partial regression plot for total PSS scores and total ATS scores

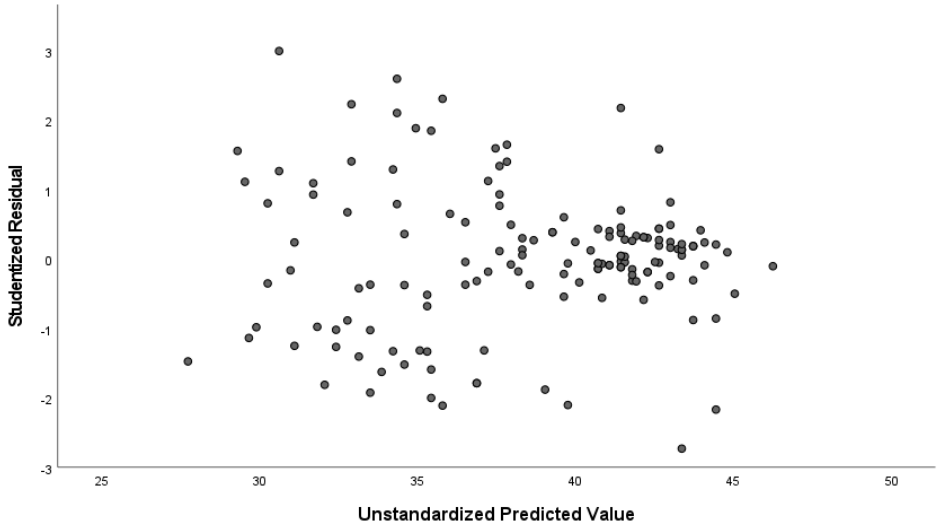

Figure 9. Scatterplot of the studentized residuals against the unstandardized predicted values

The data must also not show multicollinearity, which means the independent variables must not be highly correlated with each other. None of the independent variables had correlations higher than 0.70; total PSS and total ATS scores had a correlation of .33. The tolerance value of 0.99 was also greater than 0.10, signifying this assumption was met. There were no significant outliers, high leverage points, or highly influential points, which was assessed by analyzing standardized residuals, studentized deleted residuals, leverage points, and Cook's distance values. The data set was used to sort studentized deleted residuals, leverage values, and Cook's distance values; there were no studentized deleted residuals greater than or equal to three, no leverage values greater than 0.20, and no Cook's distance values greater than one. Additionally, the standardized residuals were approximately normally distributed (see Figure 10 and Figure 11) (Laerd Statistics, 2015b).

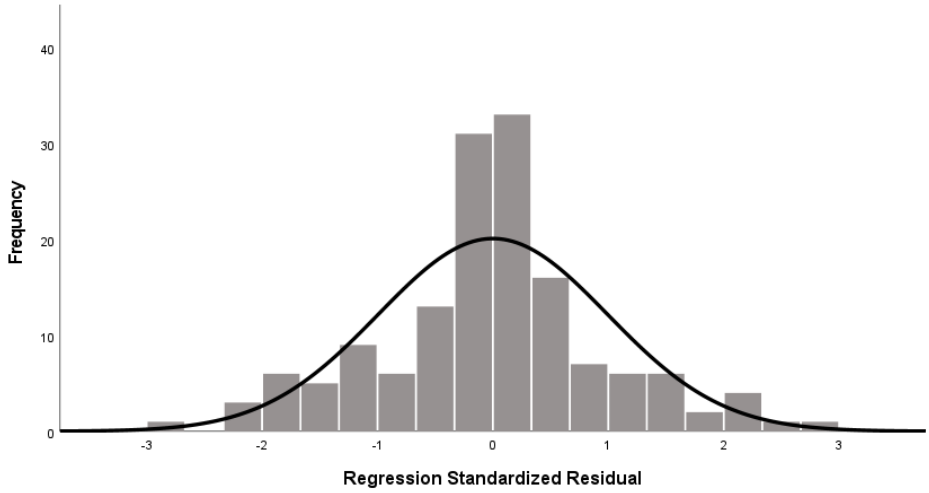

Figure 10. Histogram of the standardized residuals for total ATS scores

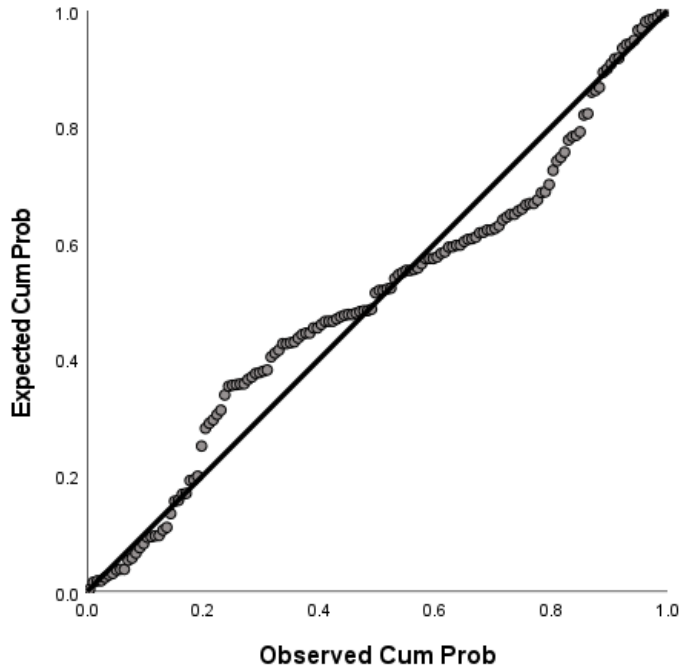

Figure 11. Normal P-P plot of the standardized residuals for total ATS scores

Participating in *Play Nicely* before completing the ATS scale and parenting stress predicted attitudes toward spanking, using scores from the PSS, F (2, 147) = 9.38, $p < .001$, R^2 = .10. An interaction term was created for participating in *Play Nicely* and PSS scores, and the

interactions at each level of parenting stress did not predict participants' ATS scores. Therefore, despite the main effect model being significant, the way in which parenting stress influenced the relationship between participating in the *Play Nicely* intervention and lower positive attitudes toward spanking was inconclusive (see Table 4 and Figure 12).

Table 4

Moderation Analysis of the Relationship Between Participating in the Play Nicely Intervention and Parenting Stress on Attitudes Toward Spanking

Predictor	*b*	*se*	95% CI for *b*	*p*
Participating in *Play Nicely*[a]	-1.57	2.02	-5.56 – 2.43	.439
PSS Score	0.36	0.09	0.19 – 0.53	<.001
Participating in *Play Nicely* x PSS Score	0.27	0.17	-0.07 – 0.60	.124

[a]0 = Did not participate in *Play Nicely* before completing the ATS (Wait-List Control Group) and 1 = Participated in *Play Nicely* before completing the ATS (Experimental Group)

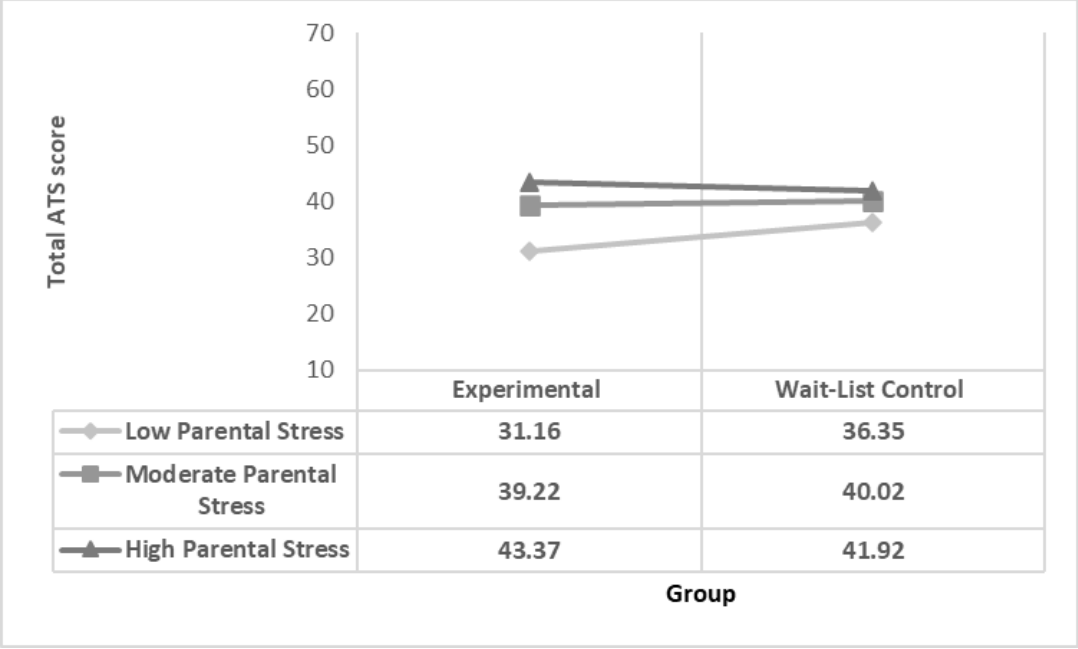

Figure 12. Impact of participating in *Play Nicely* on attitudes toward spanking, under the influence of parenting stress

CHAPTER IV: DISCUSSION

Spanking is one of the most common methods of discipline in the United States and many other countries around the world. Around 80% of parents have endorsed using spanking as a method of discipline (Gershoff et al., 2012). Despite how frequently spanking is used, it is ineffective at managing difficult child behavior (Durrant & Enson, 2012), can result in mood and behavioral difficulties (Afifi et al., 2006), and increases a child's risk of abuse (Afifi, Mota, et al., 2017). Although decades of research have supported the adverse impact of spanking (Douglas & Straus, 2006), over 75% of adults in the United States believe spanking is necessary on occasion (Smith et al., 2015).

Attitudes toward spanking are strongly associated with both frequency of using spanking as a discipline strategy and the intensity with which spanking is administered (Socolar & Stein, 1995). When implementing interventions, it is important to focus on attitudinal shifts, given that interventions impact actual practices (Bower-Russa, 2005). In considering factors which maintain spanking, parenting stress may play a core role. Parents who experience parenting stress are more likely to have positive attitudes toward spanking (Mackenbach et al., 2014), and attitudes toward spanking moderates the relationship between parenting stress and potential child abuse (Crouch & Behl, 2001).

Fortunately, attitudes toward spanking can change (Straus, 2010). One way attitudes can change is through providing parents with alternate and more effective behavioral strategies (Reich et al., 2012) during interventions such as *Play Nicely*. *Play Nicely* is brief, multimedia parenting intervention shown to reduce positive attitudes toward spanking among parents (Burkhart et al., 2018; Scholer, Hamilton, et al., 2010). In reviewing the existing literature on *Play Nicely* and other evidence-based interventions targeting attitudes toward spanking,

parenting stress was not considered. The primary goal of this study was to determine if parenting stress impacts the effectiveness of the *Play Nicely* intervention in reducing positive attitudes toward spanking. If so, this may have implications for considering parenting stress as a target of treatment when implementing *Play Nicely* and other similar interventions.

Summary of Results

Effectiveness of *Play Nicely*. Results from the independent samples *t*-test indicated no significant differences in attitudes toward spanking, when comparing the wait-list control and experimental groups. This finding was inconsistent with my hypothesis and inconsistent with previous research conducted using *Play Nicely*, despite using the identical online intervention as previous studies. In comparing the mean ATS scores, results were slightly higher (i.e., positive toward spanking) for the wait-list control group (M = 39.58) compared to the experimental group (M = 37.35), but this difference was small and inconclusive.

Relationship Between Parenting Stress and Attitudes Toward Spanking. Results indicated that as parenting stress increased positive attitudes toward spanking increased as well. The strength of the correlation between parenting stress and attitudes toward spanking was moderate. This finding was consistent with my hypothesis and with previous literature related to parenting stress and attitudes toward spanking. Given that attitudes predict actual practices, this finding suggests that as parenting stress increases, the use of spanking as a discipline strategy increases as well.

Parenting Stress as a Moderator. Participating in *Play Nicely* before completing the ATS scale and parenting stress predicted attitudes toward spanking. But results from the moderation analysis indicated that parenting stress did not meaningfully influence the relationship between participating in *Play Nicely* and attitudes toward spanking. This finding

was inconsistent with my hypothesis. When looking at the conditional effects of participating in *Play Nicely* on attitudes toward spanking, under the influence of parenting stress, the mean values of positive attitudes toward spanking steadily decreased as parenting stress decreased for participants in both the experimental group and the wait-list control group. But given that the interaction term in the moderation analysis was not significant, no conclusions can be made regarding the way in which parenting stress impacted the effectiveness of the intervention. It may be that the effect of the intervention was in the expected direction for parents reporting low stress, but there was no effect of the intervention, or the effect was reversed, for parents reporting higher stress levels (see Figure 12).

Limitations of the Present Study

Although previous research related to *Play Nicely* supported its effectiveness in reducing positive attitudes toward spanking, the current methodology may explain why I was unable to replicate those results. Due to the impact of the COVID-19 pandemic, the design of this study was altered. The original plan was to have participants complete the intervention in a primary care setting. After the COVID-19 pandemic began, the research study was altered to have participants complete the intervention from home, without the guidance of a research assistant. Therefore, there was no way to ensure participants spent adequate time engaging with the intervention and no way to ensure participants clicked through six of the 16 options in the P*lay Nicely* program as requested. Related to this, it was estimated that it would take participants approximately 25 minutes to complete the study; however, the mean time participants spent participating in the study was around nine minutes. Both the location in which the intervention was administered and the inability to ensure participants spent sufficient time thoughtfully responding to the questions/prompts and engaging with the intervention were limitations which

may partially explain the reason attitudes toward spanking did not differ in comparing the experimental group and the wait-list control group.

For parents in the experimental group, higher levels of parenting stress was negatively correlated with time spent engaging in the study, $r(70) = -.25$, $p < .05$. Parents in the experimental group who reported increased parenting stress spent less time on the Qualtrics platform overall, which may also mean they spent less time on the *Play Nicely* intervention. The same effect (i.e., significant correlation between time spent on the study and parenting stress) was not found for parents in the wait-list control group, $r(76) = -.07$, $p = .529$. The fact that parents who were more stressed in the experimental group spent less time engaging with the study may partially explain the reason *Play Nicely* was not found to be as effective in lowering positive attitudes toward spanking in the current study, compared to previous research.

The Qualtrics survey panel team stated that the compensation participants received accounted for how long the study was estimated to take. But there was no way to confirm the incentive was perceived as adequate by participants, relative to the demand required in participating in the study. Additionally, the sample for the current study was not a clinical sample with participants recruited from primary care offices and schools, where parents often discuss concerns related to child behavior. Given that this was not a clinical sample, participants may not have been as motivated to engage in an intervention focused on child behavior. Additionally, this study was completed during the COVID-19 pandemic. Parents during the COVID-19 pandemic likely spent more time around their children, which could have adversely impacted their levels of parenting stress, their attitudes toward spanking, and their willingness to engage in an intervention such as *Play Nicely*.

The number of participants needed for the current study was determined using previous research with *Play Nicely*; however, the effect sizes for these previous studies were based on using a clinical sample, instead of using participants in the public in their home environment. Additionally, effect sizes for these studies were based on assessing the effect of *Play Nicely* compared to a control group and not based on assessing the interaction between participating in *Play Nicely* and another variable. Therefore, the current study was likely underpowered, and an increased sample size may have resulted in significant results.

Implications for Future Research

The current study has multiple implications for future research related to the constructs of parenting stress, attitudes toward spanking, and behavioral parent training interventions. The current study implemented the behavioral parent training intervention by having participants complete *Play Nicely* individually from home, instead of having participants complete the intervention at a primary care clinic or school with the help of a research assistant; results indicated a non-significant treatment effect unlike many other studies using *Play Nicely* (e.g., Chavis et al., 2013; Scholer et al., 2005). *Play Nicely* has been studied by having participants complete the intervention from their home (Scholer et al., 2006), but *Play Nicely* in the home environment has not been studied as extensively as implementing *Play Nicely* in other locations. There are many potential benefits to behavioral parent training interventions that can be completed independently in the home environment. For example, parents are not required to enter a formal setting, such as a primary care clinic or school, to access the intervention, resulting in fewer constraints related to time and scheduling. With fewer constraints, the intervention might reach more participants. Rather than suggesting *Play Nicely* cannot be delivered in the home environment, the present results underscore the need for additional

research to determine how and under what conditions having participants complete *Play Nicely* in their home (or in any setting without an accompanying research assistant) can be successful. It is possible that respondents in the present study were neither in need of parent training nor willing to devote sufficient time to the treatment, given that this was not an at-risk, clinic-referred sample.

Previous research has shown a relationship between parenting stress and attitudes toward spanking (Coleman & Karraker, 1998; Crnic & Low, 2002; Crouch & Behl, 2001; Deater-Deckard, 1998), and this study replicated those findings. In short, increased parenting stress is associated with increased positive attitudes toward spanking. Results of this study further support the need to consider parenting stress when designing behavioral parent training interventions. Results from this study also indicated that parents in the experimental group who were more stressed spent less time engaging with the study, which may have implications for intervention design as well. Interventions should be designed to assist parents in reducing their parenting stress, instead of being cumbersome and time-consuming in a way which may increase overall stress levels. *Play Nicely*'s brief, easy to use, and engaging format attempts to meet this need, but there may be additional ways to modify *Play Nicely* and similar interventions to best accommodate stressed parents. For example, it may feel helpful to parents for behavioral parent training interventions, such as *Play Nicely*, to offer suggestions for managing their own levels of stress related to being a parent. Additional research is needed to determine the best way to target this construct.

Conclusion

Results from this study were consistent with the literature in suggesting a relationship between high levels of parenting stress and more positive attitudes toward spanking. But there was no statistically significant relationship between participating in the *Play Nicely* intervention and decreased positive attitudes toward spanking in the current study. Additionally, parenting stress was not found to moderate the relationship between participating in *Play Nicely* and attitudes toward spanking. Future research is warranted to determine how to maximize *Play Nicely* for the home environment and more generally for the online environment, when a research assistant is not present, and to determine how to best address parenting stress in behavioral parent training interventions such as *Play Nicely*.

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APPENDIX A: IRB Documentation

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office 252-744-2914 · Fax 252-744-2284 ·
rede.ecu.edu/umcirb/

Notification of Exempt Certification

From: Social/Behavioral IRB
To: Olivia Lynch
CC: Brandon Schultz
Date: 10/8/2020
Re: UMCIRB 20-001540
Parental Stress and Attitudes Toward Spanking

I am pleased to inform you that your research submission has been certified as exempt on 10/7/2020. This study is eligible for Exempt Certification under category # 3b.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document	Description
Attitudes Toward Spanking Scale(0.01)	Surveys and Questionnaires
Demographic Questions(0.01)	Surveys and Questionnaires
Dissertation Proposal (0.01)	Study Protocol or Grant Application
Informed Consent (0.01)	Consent Forms
Parental Stress Scale(0.01)	Surveys and Questionnaires
Qualtrics Information- Part 1 (0.01)	Additional Items
Qualtrics Information- Part 2(0.01)	Additional Items

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: Informed Consent

Consent for Research Participation:

Please read the information below. Contact the researchers if you have any questions before deciding whether you want to participate in this study.

Researchers: Olivia Lynch, EdS, East Carolina University (shippo12@students.ecu.edu)
Brandon Schultz, EdD, East Carolina University (schultzb@ecu.edu)

Olivia Lynch, a doctoral candidate in Health Psychology at East Carolina University, is leading this study, with the support of her faculty advisor, Dr. Brandon Schultz. Olivia and Dr. Schultz have no significant financial interest or conflict related to the research.

Voluntary Consent: You are being asked to participate in a research study, because you are the parent or guardian of a child ages 1 through 7. Participation in this research is voluntary. It is up to you whether you choose to participate or not. There will be no penalty for choosing not to participate or discontinuing participation. You have the right to withdraw participation at any time before submitting the surveys. However, once you have submitted your complete survey results, there is no way to withdraw them from the final data set. Your decision about participating will not affect your relationship with the researchers or East Carolina University.

Duration: It is expected that it will take you around 20 minutes to participate in this study.

Purpose: The purpose of this research is to better understand the concepts of parental stress and corporal punishment. Results of the study will be used to add to the current literature base on these topics. Information collected for this research will be used to publish and present results. If you volunteer to participate, you will be one of about 150 people to participate in this study.

Activities: For this study, you will be asked to complete two online questionnaires related to parental stress and corporal punishment, along with demographic information. You will also have the opportunity to participate in a brief parent training intervention.

Requirements for Participation: To participate, we ask that you are a parent or guardian of a child ages 1 through 7. We also ask that you are at least 18 years of age and fluent in the English language. There is no cost associated with participation in this study.

Privacy and Confidentiality: Data will be collected using Qualtrics, which is a secure online survey platform. All information collected through the survey will be secured on a password protected computer. No identifying information will be collected or utilized for the purposes of this study. This research is overseen by the University and Medical Center Institutional Review Board (UMCIRB) at ECU. Therefore, some of the UMCIRB members or the UMCIRB staff may need to review your research data. However, the information you provide will not be linked to you. Therefore, your responses cannot be traced back to you by anyone, including the researchers.

Risk: The only foreseeable risk of participating in this study is potentially experiencing discomfort due to recalling stressful events related to parenting. If you experience significant or prolonged distress as a part of participating in this study, please contact mental health resources in your area.

Benefits: Some of the benefits of participating in this study may include personal reflection of your own levels of stress and your parenting practices. You also are receiving a free, evidence-based intervention, which may provide some helpful tips regarding how to respond to child behavior. You will be compensated the amount you agreed upon before you entered into the survey.

Any questions not answered above can be directed to shippo12@students.ecu.edu. Any questions regarding your rights as a research participant can be directed to the ECU University and Medical Center Institutional Review Board (UMCIRB) at 252-744-2914 (M-F, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, call the Director of Human Research Protections, at 252-744-2914.

You do not have to take part in this research, and you can stop at any time. If you do not want to participate in this research, click "I do not consent. I do not wish to participate." If you decide you are willing to take part in this study, click "I consent. Begin the study."

If you click "I consent. Begin the study." below, you acknowledge:

- Participation in this study is voluntary.
- You may choose to terminate your participation at any time for any reason.
- You are at least 18 years of age.
- You are fluent in the English language.
- You are a parent of a child ages 1 through 7.

- o I consent. Begin the study.
- o I do not consent. I do not wish to participate.

APPENDIX C: Demographic Data

The following questions relate to demographic data and will be helpful in analyzing the results of this study:

- What is your age?
    - Type below:
    - Prefer to not respond

- What is your marital status?
    - Married, nuclear family
    - Married, blended family
    - Separated
    - Divorced
    - Never married
    - Other (please describe):

- What is your race/ethnicity? You may check all that apply.
    - White
    - Hispanic or Latino
    - Black/African American
    - Native American/American Indian
    - Asian/Pacific Islander
    - Other (please describe):
    - Prefer to not respond

- What gender do you identify as?
    - Male
    - Female
    - Other (please describe):
    - Prefer to not respond

- What region of the United States do you live in?
    - Northeast (DE, DC, MD, CT, ME, MA, NH, RI, VT, NJ, NY, PA)
    - South (NC, TN, VA, WV, KY, AR, LA, OK, TX, AL, FL, GA, MS, SC)
    - Midwest (IL, IN, MI, MN, OH, WI, IA, KS, MO, NE, ND, SD)
    - West (CA, HI, AK, NV, AZ, CO, ID, MT, NM, UT, WY, OR, WA)
    - I live outside of the United States.

- What is the highest degree or level of education you have completed?
    - Some high school
    - High school diploma or GED
    - Associate's degree
    - Bachelor's degree
    - Master's degree
    - Certification beyond master's degree
    - Doctoral degree

- What is your annual household income?
    - Less than $25,000
    - $25,000 - $50,000
    - $50,000 - $75,000
    - $75,000 - $100,000
    - $100,000 - $125,000
    - $125,000 - $150,000
    - More than $150,000

- How many children do you have?
    - 1
    - 2
    - 3
    - 4
    - More than 4

- What language do you now speak most often?
    - English
    - Spanish
    - Portuguese
    - French
    - Mandarin
    - Arabic
    - Other (please describe):

- Please specify your religion:
    - Christianity
    - Judaism
    - Islam
    - Buddhism
    - Hinduism
    - Other (please describe):
    - None
    - Prefer to not respond

- How old is your child(ren) (only for children ages 1-7)? You may select more than one response if you have multiple children.
    - 1-year-old
    - 2-years-old
    - 3-years-old
    - 4-years-old
    - 5-years-old
    - 6-years-old
    - 7-years-old

- What is your child(ren)'s gender identity (*optional*)? If you have more than one child ages 1-7, you can select multiple responses.
    - Male
    - Female
    - Other (please describe):
    - Prefer to not respond

- Does your child(ren) (ages 1-7) have any significant physical health diagnoses and/or mental health diagnoses?
    - Yes (please state diagnoses):
    - No

APPENDIX D: Parental Stress Scale

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I am happy in my role as a parent.	○	○	○	○	○
There is little or nothing I wouldn't do for my child(ren) if it was necessary.	○	○	○	○	○
Caring for my child(ren) sometimes takes more time and energy than I have to give.	○	○	○	○	○
I sometimes worry whether I am doing enough for my child(ren).	○	○	○	○	○
I feel close to my child(ren).	○	○	○	○	○
I enjoy spending time with my child(ren).	○	○	○	○	○
My child(ren) is an important source of affection for me.	○	○	○	○	○
Having child(ren) gives me a more certain and optimistic view for the future.	○	○	○	○	○
The major source of stress in my life is my child(ren).	○	○	○	○	○
Having child(ren) leaves little time and flexibility in my life.	○	○	○	○	○
Having child(ren) has been a financial burden.	○	○	○	○	○
It is difficult to balance different responsibilities because of my child(ren).	○	○	○	○	○
The behavior of my child(ren) is often embarrassing or stressful to me.	○	○	○	○	○
If I had it to do over again, I might decide not to have child(ren).	○	○	○	○	○
I feel overwhelmed by the responsibility of being a parent.	○	○	○	○	○
Having child(ren) has meant having too few choices and too little control over my life.	○	○	○	○	○
I am satisfied as a parent.	○	○	○	○	○
I find my child(ren) enjoyable.	○	○	○	○	○

APPENDIX E: Attitudes Toward Spanking Scale

Using the rating scale below, rate how much you currently agree or disagree with each statement about spanking your child(ren). (The word spank will be used below but you can also think of slaps or slapping.)

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither	Slightly Agree	Moderately Agree	Strongly Agree
Spanking is a normal part of my parenting.	○	○	○	○	○	○	○
Sometimes a spank is the best way to get my child to listen.	○	○	○	○	○	○	○
A spank is not an effective method to change my child's behavior for the long term.	○	○	○	○	○	○	○
Spanking is never necessary to instill proper moral and social conduct in my child.	○	○	○	○	○	○	○
Sometimes, the only way to get my child to behave is with a spank.	○	○	○	○	○	○	○
One of the best ways for my child to learn "no" is to spank him/her after disobedience.	○	○	○	○	○	○	○
If my child is spanked for a misbehavior, he or she should always be spanked for that misbehavior.	○	○	○	○	○	○	○
When all is said and done, spanking is harmful for my child.	○	○	○	○	○	○	○
I believe it is the parents' right to spank their children if they think it is necessary.	○	○	○	○	○	○	○
Overall, I believe spanking is a bad disciplinary technique.	○	○	○	○	○	○	○

APPENDIX F: *Play Nicely* Prompt

Copy and paste the following webpage in a new tab or new window: www.play-nicely.org

On this page, click on "20 options" in the top right corner. You should now see a prompt which says, "Assume that you see your child hurt another child by hitting. What are some of the best ways for you to respond?" After choosing a response, the program will provide information on why this was a good choice or if there are better ways to respond. You are welcome to click on all of the options you would like to learn more about. However, please click on at least 6 options. Then, come back to this page.

APPENDIX G: *Play Nicely* Intervention