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PERCEIVED EFFICACY OF ALTERNATIVE DISCIPLINE STRATEGIES

Childhood Experiences and Attitudes toward Corporal Punishment: The Mediating Role of Perceived Efficacy of Alternative Discipline Strategies among Low-income Black, Hispanic, and White Parents

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income Black, Hispanic, and White Parents**

Abstract

Corporal punishment (CP) is associated with harmful outcomes to child development. Favorable attitudes toward CP are a major predictor of CP use. Thus, identifying and changing factors influencing such attitudes help to prevent CP. Although research has confirmed the effect of childhood experiences of CP on attitudes toward CP, few studies have examined mechanisms underpinning this association. To fill this gap, this study investigated the role of perceived efficacy of alternative discipline strategies in mediating the association between childhood experiences of CP and attitudes toward CP among low-income Black, Hispanic, and White parents. A cross-sectional online survey was conducted with 230 parents ($M_{age} = 31$; Black = 62, Hispanic = 62; White = 106). Structural equation modeling results revealed that more positive childhood experiences of CP were associated with lower perceived efficacy of alternative discipline strategies. In turn, lower perceived efficacy of alternative discipline strategies was associated with more favorable attitudes toward CP. Mediation analysis performed by the bootstrapping methods confirmed the mediating effect of perceived efficacy of alternative discipline strategies. When race was considered, this mediation pathway held for Hispanic and White parent groups. These results suggested that future research should pay more attention to the role of perceived efficacy of alternative discipline strategies. Additionally, public education campaigns should consider incorporating efficacy messages to effectively reduce positive attitudes toward CP among low-income parents.

**Childhood Experiences and Attitudes toward Corporal Punishment:
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income Black, Hispanic, and White Parents**

Corporal punishment (CP) is defined as “the use of physical force with the intention of causing a child to experience pain but not injury for the purposes of correction or control of the child’s behavior” (Straus, 2001, p. 4). Research reveals that CP fails to improve children’s behavior and simultaneously poses harmful effects on child development (Durrant & Ensom, 2012; Gershoff et al., 2019; Gershoff, 2002). However, CP is still prevalent in the United States (US) due to favorable attitudes toward CP (Bell & Romano, 2012; Holden, 2020). Research has indicated that positive childhood experiences of CP shape favorable attitudes toward CP, which subsequently predict the use of CP (Ateah & Durrant, 2005; Durrant et al., 2018; Holden, 2020). Thus, changing parents’ attitudes toward CP is necessary to reduce this disciplinary practice.

The most efficient approach to changing attitudes toward CP in an entire community or country is through public education campaigns (Gershoff et al., 2017). Persuasive messages disseminated through public services announcements, posters, and the Internet are an important component of such campaigns. Studies indicate that attitudes toward CP can be changed through exposure to messages that present information related to the harmful consequences of CP and recommendations to use alternative discipline strategies (Chavis et al., 2013; Holden et al., 2014; Perrin et al., 2017; Reich et al., 2012; Robinson et al., 2005; Scholer et al., 2010). Alternative discipline strategies are disciplinary methods that exclude the use of physical force (Chavis et al., 2013). Parents’ perceptions of their ability to effectively conduct alternative discipline strategies are defined as perceived efficacy of alternative discipline strategies (Duong et al., 2021a). As such, examining this protective factor might provide insights to public education campaigns.

However, little research has empirically investigated how parents form their perceptions of efficacy of alternative discipline strategies and how such perceptions might affect attitudes. The present study reports the results of a cross-sectional study designed to test a model theorizing the association between childhood experience of CP, perceived efficacy of alternative discipline strategies, and attitudes toward CP. The main objective of this study is to explore the role of perceived efficacy of alternative discipline strategies as one possible mechanism that explains the association between childhood experiences of CP and attitudes toward CP. To this end, a mediation model is proposed and tested with low-income Black, Hispanic, and White parents.

Prevalence and Outcomes of Corporal Punishment

Despite accumulative scientific evidence showing the detrimental effects of CP on children, CP remains prevalent in the US (Simons & Wurtele, 2010; Taylor et al., 2016). It is estimated that around 76 percent of men and 66 percent of women endorse CP, although the percentage varies by racial groups (Child Trend, 2014). A survey of 1,298 American families in 20 cities showed that 53 percent of mothers and 44 percent of fathers of 3-year-old children had spanked their child at least once in the past month (Lee et al., 2015). Another survey of 800 rural, low-income adults indicated that 62 percent of participants reported experiencing at least one type of adverse childhood experiences, of which 18.9 percent reported having some forms of CP (Iniguez & Stankowski, 2016). Research shows that CP tends to be more prevalent in low-income families (Mitchell, 2008). A recent study with low-income parents ($N = 2,500$) revealed that the frequency of spanking for children less than 5 years old remains high for Hispanic parents (73%), Black parents (64%) and White parents (59%) (Klevens et al., 2019).

Scholars identify four major reasons explaining the persistence of CP in the US (Miller-Perrin & Perrin, 2018). The first is the argument about the Fourteen Amendment that protects

parental rights to control children, which serves as a basis for parents to protest institutional interventions on parental rights and freedoms (Miller-Perrin & Perrin, 2018). The second is Americans' adherence to religious teaching about "spare the rod, spoil the child" (Ellison, 1996; Greven, 1991; Petts & Kysar-Moon, 2012). Many Christians believe in "beating the devils out of them" as an effective way to correct a misbehaved child (Gershoff et al., 1999; Straus, 2001). The third pertains to the view that CP is not associated with physical abuse and thus is harmless to children. Finally, attitudes and collective norms supporting CP have been reinforced through generations, which are difficult to change (Klika et al., 2019; Vaughan-Eden et al., 2018).

The effects of CP on child development have been examined through meta-analyses. Gershoff (2002) analyzed 88 studies and found that CP is associated with a number of detrimental outcomes, such as decreased moral internalization, increased child aggression, low quality of parent-child relationship, and mental health problems among several other long-term adverse effects. Their study shows that immediate compliance is the only positive outcome of CP. Another meta-analysis of 75 studies focusing solely on spanking reveals that spanking alone is associated with harmful outcomes for children (Gershoff & Grogan-Kaylor, 2016). When comparing the effect sizes of spanking and physical abuse, the researchers found that the two behaviors share a similar magnitude and direction of influence on negative outcomes. Thus, scholars conclude that substantial evidence has confirmed the positive relationship between CP and unhealthy outcomes affecting child development (Gershoff et al., 2018). They recommend that researchers and practitioners should find ways to prevent CP.

Formation of Attitudes toward Corporal Punishment

Researchers argue that attitudes are a major risk factor of CP (Ateah & Durrant, 2005; Chavis et al., 2013; Holden, 2020, Gallitto et al., 2019; Vittrup et al., 2006). Attitudes are a

function of beliefs that reflect the positive or negative evaluations of beliefs (Holden, 2020). Although endorsement of CP in the US has recently declined, attitudes toward CP remain generally favorable (Finkelhor et al., 2019; Ryan et al., 2016). For example, Taylor et al. (2016) found that 76 percent of men and 65 percent of women in the US hold positive attitudes toward CP. Overall, many parents still believe that CP is a necessary tool to discipline children (Duong et al., 2021a; Fréchette & Romano, 2017; Taylor et al., 2011).

The theory of intergenerational transmission of violence postulates that children learn behaviors through modeling and reinforcement (Bandura, 1989; Berlin et al., 2011). Specifically, approval of physical aggression within the family serves as a model for children to learn and reproduce. Longitudinal research suggests the association between being a victim of CP and subsequent use of CP in adulthood (Ertem et al., 2000; Widom & Wilson, 2015). Mothers exposed to childhood physical abuse are more likely to report infant spanking (Chung et al., 2009). Adolescents who have been hit by their parents are also more likely to approve CP (Deater-Deckard et al., 2003; Walker et al., 2018). Young parents with childhood experiences of CP are five times more likely to repeat the behavior when disciplining their own children (Kim, 2009). Research further reveals that positive assessments of CP experiences influence future approval of CP (Gagné et al., 2007). Thus, parents who were physically punished during their childhoods and perceived such experiences as positive are more likely to endorse CP.

Perceived Efficacy of Alternative Discipline Strategies

Researchers contend that parents' use of alternative discipline strategies decreases the use of CP (Dupper & Montgomery Dingus, 2008; Gagné et al., 2007; Winstok, 2016). Several strategies to manage children have been raised in scholarly literature and practical guidelines. Socolar (1997) classifies alternative discipline strategies into seven types: verbal communication,

withdrawal of reward or privilege, changing the environment to make misbehavior unlikely, making parental monitoring evident, modeling desired behavior, ignoring, and natural consequences. Research suggests that the use of praising for children is positively associated with children's self-concept (i.e., a perception of self with respect to achievements, Sangawi et al., 2018). Timeout is widely applied to manage children's behavior and parents view it as effective when combined with reasoning (Riley et al., 2017). Parents also use withdrawal of privileges (taking away toys, cellphone, tablets, laptops, and video games), and report that the strategy work across races (Duong et al., 2021a).

The role of parents' perceived efficacy of alternative discipline strategies is critical to adopting alternative discipline strategies and simultaneously abandoning CP (Coleman & Karraker, 1998; Duong et al., 2021a). The literature suggests that perceived efficacy includes two dimensions: self-efficacy and response efficacy (Bandura, 1989; Rimal, 2001). Self-efficacy refers to beliefs in one's ability to exercise control over an intended behavior. Response efficacy pertains to beliefs that a specific behavioral response is effective. Theorists argue that a behavior that is difficult to change and its perceived outcomes are uncertain may largely be dependent on response efficacy (Strecher et al., 1986). In positive parenting context, perceived efficacy has been conceptualized as parents' confidence in their ability to conduct a parenting task (self-efficacy) and the beliefs that their children will respond as expected (response efficacy) (Coleman & Karraker, 1998). Thus, self-efficacy and response efficacy are essential components of parents' perceived efficacy of alternative discipline strategies.

According to attachment theory (Bowlby, 1988), children naturally form an attachment to their caregivers to increase their chance of survival. Attachment patterns are reinforced throughout parents-children relationships, which turn into social schemas that guide cognitive,

affective, and behavioral responses in parents-children relationship (Bowlby, 1988; Crittenden, 2005; Crittenden & Ainsworth, 1989). As such, parents who had childhood experiences of CP likely form a representational prototype of behavioral choices that prioritize CP over alternative discipline strategies. In other words, alternative discipline strategies might be ill-perceived because they do not fit with the representational model of their childhood experiences. Additionally, parents with substantial childhood experiences of CP might depend on their schemas of using CP as an effective approach to manage children, instead of carefully considering alternative discipline approaches. This coercive ideology of child rearing may then be perpetuated through generations in the family (Gagné et al., 2007). For example, Simons et al. (1993) hypothesize that after countless incidents of conforming to parents' use of CP, children form the beliefs that this disciplinary style is the most effective way to gain behavioral compliance. The researchers tested this hypothesis with 451 two-parent families in the US and found that childhood experiences of CP predict current use of harsh discipline via the beliefs in the effectiveness of CP for both fathers and mothers. Thus, it is possible that childhood experiences of CP lead to parents forming biased information processing of disciplinary strategies and, in turn, perceive that alternative discipline strategies are more difficult to implement and less effective than CP. Thus, this study hypothesizes:

H1: Childhood experiences of CP will be negatively associated with perceived efficacy of alternative discipline strategies.

Several behavioral change theories postulate that perceived efficacy of alternative and healthy behaviors predicts the adoption of that behavior and simultaneously the decrease, or abandonment, of related unhealthy behaviors (e.g., the Social Cognitive Theory, Bandura, 2004; the Reasoned Action Approach, Fishbein & Ajzen, 2011; the Risk Perception Attitude

Framework, Rimal & Real, 2003). For example, research shows that perceived efficacy of healthy eating predicts more consumptions of a healthy diet and less unhealthy diet (Williams, 2012), and more physical exercise is accompanied by less inactivity (McAuley & Jacobson, 1991). In child discipline context, research reveals that when parents perceive that they have skills and resources to implement alternative discipline strategies that bring about expected outcomes, they report the use of these strategies more frequently than CP (Duong et al., 2021a; Sanders & Woolley, 2005). Thus, perceived efficacy of alternative discipline strategies might play a role in influencing attitudes toward CP.

H2: Perceived efficacy of alternative discipline strategies will be negatively associated with attitudes toward CP.

Research reveals that parents are aware of several alternative discipline strategies; however, they are also concerned about their ability to effectively apply these strategies and thus continue viewing CP as a favorable discipline choice (Duong et al., 2021a). Thus, perceived efficacy of alternative discipline strategies might be shaped by childhood experiences of CP and in turn, affecting the way parents evaluate the behavioral outcomes of CP. It follows that perceived efficacy of alternative discipline strategies might mediate the association between positive childhood experiences of CP and attitudes toward CP. This proposition, however, has not been empirically examined. Thus, this study also tests the following hypothesis:

H3: Perceived efficacy of alternative discipline strategies will mediate the association between childhood experiences of CP and attitudes toward CP.

Methods

Participants and Procedure

Data were collected by Qualtrics - a market research company - through its online survey panels, which included potential participants from across the US. Participants were recruited through an opt-in panel hosted by Qualtrics.com. Qualtrics' population came closest to the US national probability sample on several demographic variables, including race and ethnicity (Boas et al., 2018). Several selection criteria were used to ensure participants were from the most vulnerable population (Dietz, 2000; Klevens et al., 2019; Straus, 2011). First, participants were US citizens at or over 18 years old, who identified themselves as Black, Hispanic, or White. Second, participants were parents and currently living with at least one child up to six years old. Third, participants were from low-income families (below \$40,000 USD - the poverty threshold set by the US Census Bureau, 2019). Fourth, participants' highest education level was capped at some colleges or a technical school. Finally, parents must have reported that they experienced some commonly-used forms of CP (e.g., beating with parents' hands or legs, tree branches, spoons, or belts). The reference time for such experiences was when participants were between 6 to 10 years old, as guided by prior research (Fleming & Borrego, 2019; Flynn, 1998).

Qualtrics sent a survey link that hosted a questionnaire to potential participants over the course of three weeks. Eligible participants who agreed with the informed consent participated in the survey, which was designed to be active within one hour. Attention check items were included in the questionnaire to ensure participants' attention. Each participant was paid approximately \$3 by Qualtrics as a compensation for their time. No personal information that could identify participants was collected. Moreover, the survey did not ask participants to identify their states and regions to ensure participants feel comfortable with reporting their own CP experiences and behavior. The research protocol received ethical approval from a University's Institutional Review Board.

A total of 274 participants were recruited. Participants who failed the attention check ($n = 14$) and who reported no childhood experiences of CP ($n = 30$) were removed. The working sample included 230 parents (Blacks = 62, Latino = 62, Whites = 106; mean age = 31; average number of children = 2). There were more females (77%) than males (23%). The majority of participants lived in urban location (65.2%) and had completed some college or technical school degrees (50.4%). Participants reported a relatively equal amount of full-time employment and unemployment (26% and 25.7%, respectively). They identified as Protestant (34.8%), Catholic (16.1%), other religions (11.7%), and non-religious (37.4%). Among racial groups, data showed no significant difference in age ($F(2,257) = 2.302, p = .10$), education ($\chi^2(6) = 3.050; p = .81$), number of children ($F(2,257) = .453, p = .64$), religious affiliation ($\chi^2(6) = 10.851, p = .09$), and employment ($\chi^2(12) = 14.549, p = .27$). Table 1 reported participants' profiles by racial groups.

[Table 1]

Measures

Attitudes toward CP. Attitudes was assessed with 10 items adopted from the Attitudes Toward Spanking Scale (Holden, 2001). Sample items were “Sometimes, a spank and/or a slap is the best way to get a child to listen” and “When all is said and done, spanking and/or slapping is harmful for a child (recode)” (1-*strongly disagree*; 5-*strongly agree*, $\alpha = .93$).

Perceived efficacy of alternative discipline strategies. Eight efficacy items were created as informed by qualitative findings of CP studies (Duong et al., 2021a; Klevens et al., 2019) and well-established efficacy measures (Fishbein & Ajzen, 2011). Participants' responded to five self-efficacy items (e.g., “I know the best way to use non-physical disciplines to effectively correct my child's misbehavior”) and three response-efficacy items (e.g., “I believe that the non-physical types of discipline work well to correct my child's misbehavior.” Self-efficacy and

response efficacy were combined to create a scale measuring perceived efficacy of alternative discipline strategies (1-*strongly disagree*; 5-*strongly agree*, $\alpha = .91$).

Childhood experiences. Childhood experiences of CP included the behavioral aspect and perceptual aspect (Winstok, 2016). While the behavioral aspect pertains to the frequency of actual use of force, the perceptual aspect refers to perceptions of whether or not CP being purposefully and effectively used to correct a child's behavior. Scholars argue that it is individuals' cognitive appraisal of their childhood experiences of CP, rather than the behavioral frequency, that influences attitudes toward CP (Durrant et al., 2018; Winstok, 2016). For example, if individuals perceive that the punishment was effective in correcting their behaviors, they are more likely to harbor favorable attitudes toward CP regardless of the frequency of CP that was applied to them (Duong et al., 2020b; Taylor et al., 2016). Thus, a measure developed by Winstok (2016) was adapted to assess the degree to which participants evaluate their childhood experiences of CP. Participants responded to three questions: "Do you agree or disagree that your parents had good intentions when they use physical discipline with you?"; "Do you agree or disagree that your parents' use of physical discipline was helpful to you?" (1-*strongly disagree*; 5-*strongly agree*), and "To what extent do you think your parents' use of physical discipline is effective in correcting your behavior?" (1-*not at all effective*; 5-*extremely effective*, $\alpha = .88$).

Covariates. Psychological stress tends to affect perceptions of efficacy (Bandura, 1977) and attitudes toward CP (Straus, 2001; Holden et al., 2014). Thus, it was measured as a covariate. The Short Form Perceived Stress Scale (Warttig et al., 2013) was used with four items assessing the extent to which participants felt their lives were overwhelming, uncontrollable, or unpredictable in the past month (1-*never*; 5-*very often*, $M = 2.67$; $SD = .89$; $\alpha = .74$). Following

prior research practice (Taylor et al., 2011), gender, age, race, education, religious affiliation, and employment status were measured as covariates.

Statistical Analysis

Structural equation modelling (SEM) using STATA 16 with maximum likelihood estimation was used to assess the hypothesized mediation model. Prior to fitting a SEM model, the measurement model using confirmatory factor analyses (CFA) was examined. Several fit indices were used to assess the fit between the hypothesized model and the observed data, including the Chi-square (χ^2) goodness-of-fit test, the comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Because the Chi-square test is sensitive to sample size (Kline, 2015), values of CFI and TLI $\geq .95$, RMSEA $\leq .06$, and SRMR $\leq .08$ were deemed as indicating a good model fit (Hu & Bentler, 1998). After establishing an adequate measurement model fit, measurement invariance was estimated for three racial groups. Next, a structural model was fitted with key variables and covariates. The structural model fit was assessed using the same fit indices as described above. The mediation analysis was conducted, with childhood experiences serving as an independent variable, perceived efficacy of alternative strategies as mediator, and attitudes toward CP as a dependent variable. The indirect effect was estimated using bootstrapping methods with 5,000 resampling to generate 95% confidence intervals (CI). The parameter estimates are statistically significant when the 95% CI does not include zero (Hayes, 2013). Standardized coefficients for parameter estimates were reported for ease with interpretation. Table 2 reported descriptive statistics and correlations among key observed variables for the combined sample and the three racial groups. Table 3 reported measured items and factor loadings for key variables.

[Tables 2 & 3]

Results

The initial CFA showed a poor fit, CFI = .87, TLI = .85, RMSEA = .10 (90% CI = [.093, .110]), SRMR = .08, $\chi^2(206) = 694.510$, $p < .001$. Using the robust factor loading criterion (a cutoff value at .70, Hair et al., 2010), 3 attitude items and 3 perceived efficacy items were removed. The CFA results then exhibited a good fit to the observed data, CFI = .96, TLI = .96, RMSEA = .06 (90% CI = [.058, .089]), SRMR = .05, $\chi^2(74) = 166.111$, $p < .001$. Postestimation test for group invariance indicated no Wald χ^2 score was significant (the null hypothesis is that a constraint would be valid). SEM results showed that the model fit well with the data, CFI = .96, TLI = .95, RMSEA = .06 (90% CI = [.045, .069]), SRMR = .05, $\chi^2(134) = 235.063$, $p < .001$.

H1 predicted that childhood experiences of CP would be negatively associated with perceived efficacy of alternative discipline strategies. *H2* predicted that perceived efficacy of alternative discipline strategies would be negatively associated with attitudes toward CP. As shown in Figure 1, results with the combined sample supported *H1* and *H2*. When analyzed by race, *H1* was supported for Hispanic parents ($\beta = -.42$, $p < .001$) and White parents ($\beta = -.49$, $p < .001$), but not for Black parents ($\beta = -.19$, $p = .14$). However, *H2* was supported for three racial groups: Black parents ($\beta = -.30$, $p < .001$), Hispanic parents ($\beta = -.64$, $p < .001$), and White parents ($\beta = -.27$, $p < .01$). *H3* predicted that perceived efficacy of alternative discipline strategies would mediate the association between childhood experiences of CP and attitudes toward CP. Data provided support to *H3* for the combined sample ($\beta = .16$, $SE = .04$, 95% CI [.101, .251]). Additionally, multigroup analyses revealed that this mediation effect held for Hispanic parents ($\beta = .22$, $SE = .07$, 95% CI [.054, .371]) and White parents ($\beta = .14$, $SE = .05$; 95% CI [.057, .269]), but not for Black parents ($\beta = .05$, $SE = .06$; 95% CI [-.020, .211]).

[Figure 1]

Among the control variables, results with the combined sample revealed that psychological stress was negatively associated with perceived efficacy of alternative discipline strategies ($\beta = -.17, p < .01$), but had no significant association with attitudes toward CP ($\beta = .07, p = .14$). Further analysis revealed that stress did not differ between racial groups ($F(2,257) = .203, p = .82$). Other demographic factors (i.e., age, gender, religious affiliation, education, and employment status) were neither significantly associated with perceived efficacy nor attitudes.

Discussion

Informed by the literature related to perceived efficacy of alternative discipline strategies (Bandura, 1989; Coleman & Karraker, 1998; Duong et al., 2021a; Klevens et al., 2019; Leijten et al., 2018), the present study proposed and tested the mediating role of perceived efficacy of alternative discipline strategies in linking childhood experiences of CP and attitudes toward CP among low-income Black, Latino, and White parents. Overall, results showed a negative association between childhood experiences and perceived efficacy of alternative discipline strategies for the combined sample and for the Hispanic and White samples. Results also revealed that perceived efficacy of alternative discipline strategies was negatively associated with attitudes toward CP for the combined sample and for Black, Hispanic, and White parent groups. Finally, results confirmed the mediating role of perceived efficacy of alternative strategies in linking childhood experiences of CP and attitudes toward CP for the combined sample and for the Hispanic and White parent groups.

The negative association between childhood experiences and perceived efficacy of alternative discipline strategies was supported for the combined sample and for the Hispanic and White parent groups. This finding indicated that these parents evaluated their experiences of CP

as positive and effective tended to perceive a lower ability to conduct alternative discipline strategies, while also viewing those strategies as less effective. Researchers contended that childhood experiences of CP results in an insecure attachment that causes impairment in parental ability to use communication to solve problems with their children (Crittenden, 2005). Parents' positive communication with their children, such as verbal reasoning, talking, and non-verbal warmth, are essential components of several alternative discipline strategies (David, 1999; Duong et al., 2021a). Thus, results suggested that one possible outcome of childhood experiences of CP might be a subsequently lower perceived efficacy of alternative discipline strategies.

Multigroup analysis results, however, showed a nonsignificant association between childhood experiences of CP and perceived efficacy of alternative discipline strategies for Black parents. This nonsignificant finding might be explained by Black parents' child rearing practices. Scholars argued that Black parents may use CP in a purposeful and controlled manner to instruct children how to behave and survive in a racist society (Thomas & Dettlaf, 2011). Thus, Black parents tended to view CP as an instrumental tool to promote respect, internalize lessons for adulthood survival, and express love with children (Ispa & Halgunseth, 2004; Taylor et al., 2011). It was possible that these functional roles of CP as perceived by Black parents influenced the way they viewed alternative discipline strategies beyond the impact of their childhood experiences of CP. It should be noted that although the association between childhood experiences of CP and perceived efficacy of alternative discipline strategies was not statistically significant, the negative coefficient result indicated that the direction of association was as hypothesized. This finding might suggest the need for more studies to test the relationship between these two variables for Black parents.

Results indicated that perceived efficacy of alternative discipline strategies was negatively associated with attitudes toward CP for the combined sample. This association remained significant in multigroup analysis for Black, Hispanic, and White parent groups. Thus, the more parents perceived that they were capable of using these strategies effectively to replace CP, the less favorable attitudes they showed toward CP. This finding brought to the fore the important role of perceived efficacy of alternative discipline strategies to reduce favorable attitudes toward CP. Qualitative research indicated that low-income Black, Hispanic, and White parents often considered the perceived efficacy of alternative strategies before applying discipline methods (Duong et al., 2021a). For example, when they viewed a strategy as effective to correct their children's behaviors, they tended to disapprove of the use of CP. In contrast, they argued that CP should be used as a back-up strategy when they regarded an alternative strategy as being difficult to implement and likely ineffective. Thus, results of the current study lent support to prior qualitative research by showing that parents tended to endorse CP if their perceived efficacy of alternative discipline strategies was low.

Further, results confirmed that perceived efficacy of alternative discipline strategies mediated the effect of childhood experiences of CP on attitudes toward CP for the full sample and the White and Hispanic parent groups. Prior research mostly focused on the direct relationships between attitudes toward CP and childhood adverse experiences, child's age, conservative ideology, religion, social economic status, and racial groups (Deater-Deckard et al., 2003). Although these are important risk factors, they are difficult to modify through public education campaigns using media messages to change attitudes and behaviors (Gershoff et al., 2017). The current study addressed this challenge by focusing on perceived efficacy of alternative discipline strategies - a psychologically modifiable mediator. It offered evidence

showing how childhood experiences of CP might indirectly influence favorable attitudes toward CP through perceived efficacy of alternative discipline strategies.

Results showed that perceived efficacy of alternative discipline strategies did not mediate the association between childhood experiences of CP and attitudes toward CP in the Black parent sample. This finding bolstered existing evidence suggesting that Black parents' perspective of CP could be that CP was not merely a tool to discipline children's misbehaviors. Indeed, researchers found that some Black parents viewed CP as a form of physical and mental training that was passed down from older generations (Duong et al., 2021a). Black parents also showed appreciation of their own parents' use of CP as an educational message to help them become better human beings (Duong et al., 2021b). It was possible that such beliefs asserted a direct effect on attitudes of the Black parents in this study. It should be noted that results also indicated that perceived efficacy of alternative discipline strategies did not fully mediate the association between childhood experiences of CP and attitudes toward CP. This finding might indicate the presence of other mediating variables. For example, research suggested that perceived norms (i.e., perceptions of CP prevalence and socially approval by others, Cialdini et al., 1990) were an outcome of childhood experiences of CP due to parents assuming that such experiences were common and shared among other parents in their communities (Duong et al., 2021b). In turn, perceived norms were found to predict attitudes toward CP (Taylor et al., 2011). Thus, perceived norms might be another pathway linking childhood experiences of CP and attitudes toward CP. Future research is needed to identify modifiable risk factors affecting the formation of favorable attitudes toward CP.

From a public health perspective, identifying plausible pathways leading to favorable attitudes toward CP provides evidence for practitioners to design effective public education

campaigns to prevent CP. Results of this study suggested that behavioral change interventions to reduce parents' use of CP should target perceived efficacy of alternative discipline strategies, along with existing tactics to change attitudinal beliefs. Informing parents that CP is harmful and ineffective might not be sufficiently persuasive without changing their perceived efficacy of alternative discipline strategies. Ultimately, parents need to know and believe that there are several non-physical discipline options that are doable, more beneficial, and more effective than CP in both short-term and long-term. If parents do not believe that these alternative discipline strategies can be effectively conducted, their favorable attitudes toward CP likely persist and might even be solidified. This is pertinent to public education campaigns aiming at creating behavioral change at the population level. Several experimental studies found that media-based messages worked to reduce favorable attitudes toward CP. For example, messages using progressive biblical interpretations of scripture could reduce positive attitudes toward CP (Miller-Perrin & Perrin, 2017). Alternatively, providing parents with scientific evidence on the detrimental outcomes of using CP with children also decreased positive attitudes toward CP (Holden et al., 2014). The Baby Books Project incorporated messages discouraging physical punishment and promoting alternative discipline strategies was found to decrease mothers' approval of CP (Reich et al., 2012). As such, results of the current study lent further support to this media-based intervention approach.

Results suggested that differences between racial groups should be understood and carefully considered in intervention campaigns. The literature suggested that group norms and perceived instrumentality of CP could be risk factors affecting Black parents' attitudes toward CP (Duong et al., 2021b; Taylor et al., 2011). Specifically, Black parents might consider CP an instrumental form of home training to prevent future undesirable consequences. For example,

Black parents argued that their use of CP helped to shape the children's manner when they grew up and thereby, preventing them from being killed by the cops (Duong et al., 2021b). There might also be other factors, such as the pro-CP normative pressure in the Black communities and possibly high stress levels deriving from a combination of multiple socio-economic hardships (Mitchell, 2008; Taylor et al., 2011). Thus, intervention campaigns aiming at this population should carefully consider these possible risk factors. Elsewhere, researchers have suggested the using normative messages to change attitudes and behaviors with appropriate reference groups in the CP context (Duong et al., 2021b; Klevens et al., 2019; Klika et al., 2019).

Limitations and Strengths

This study has several limitations. First, as the study was conducted with an online non-representative survey panel, results should not be overgeneralized to a broader population. Due to the cross-sectional design of this study, interpretations of findings should be made with an association model rather than causal inferences. Despite this design, the temporal sequence of childhood experiences of CP and current attitudes toward CP suggested some degrees of causality. Second, the reliance on retrospective recall of childhood experiences might be a limitation given that parents might not accurately recollect past events. However, this study measured specific CP behaviors (e.g., spanking, throwing flip-flops), which was well-informed by the literature (Straus, 2001). These items likely captured the various ways CP was used among racial groups and might help to reduce recall bias. Additionally, as suggested by researchers (Durrant et al., 2018; Winstok, 2016), childhood experiences of CP were operationalized by assessing cognitive evaluations of such experiences rather than recalling CP use frequencies. Because these cognitive evaluations were current and readily retrievable, this measurement approach might be more accurate than participants' recall of frequencies of CP

events in the distant past. Third, although an a priori analysis was conducted to guide sample size recruitment, Black and Hispanic samples were relatively small. Despite Qualtrics' extensive data collection efforts lasting for three weeks, several stringent selection criteria might have made it hard to recruit participants. Finally, this study did not consider factors that might affect psychological stress, which was found to have a significantly negative association with perceived efficacy of alternative discipline strategies. Given that parents with higher stress tended to use more CP and less alternative discipline strategies (Tucker & Rodriguez, 2014), future research should further examine the association between psychological stress, perceived efficacy, attitudes, and behavior. These limitations, however, were compensated by the quality of the data with a sample drawn from a hard-to-reach and most vulnerable population, and by the originality of the theoretical model that was tested across and separately with the three racial groups.

Conclusion

The current study proposed a model examining the mediating effect of perceived efficacy of alternative discipline strategies in linking childhood experiences of CP and favorable attitudes toward CP among low-income Black, Hispanic, and White parents. The model fit the data reasonably well and the mediating effect of perceived efficacy of alternative discipline strategies was significant when tested with the combined sample and the Hispanic and White parent groups. These results underscore the need for further studies to examine perceived efficacy of alternative discipline strategies as a psychological factor that has potential to change attitudes toward CP. Such studies likely provide further support to the design of media-based messages in public education campaigns aiming at preventing CP among vulnerable groups and communities.

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Table 1. Participant profiles by racial groups

	Black	White	Hispanic
Age			
Mean	30.8	32.6	29.6
SD	10.7	9.3	8.01
Number of children			
Mean	1.97	1.85	1.85
SD	1.09	.83	1.00
Gender			
Male	29.3%	23.7%	11.9%
Female	70.7%	76.3%	88.1%
Location			
Rural	22.7%	53.4%	19.4%
Urban	77.3%	46.6%	80.6%
Employment			
Employed full-time	33.9%	27.4%	27.3%
Employed part-time	19.6%	12.9%	11.4%
Unemployed	28.6%	25.8%	30.7%
Student	14.3%	8.1%	4.5%
Retired	1.8%	4.8%	2.3%
Self-employed	0%	11.3%	9.1%
Unable to work	1.8%	9.7%	14.8%

Table 2. Descriptive statistics and correlations among key variables

	1	2	3	M	SD
<i>Combined sample</i>					
1. Childhood experiences of CP	1.00			3.36	1.27
2. Efficacy of alternative strategies	-.66**	1.00		3.71	.99
3. Attitudes toward CP	.62**	-.34**	1.00	2.88	1.06
<i>Black parents</i>					
1. Childhood experiences of CP	1.00			3.68	1.17
2. Efficacy of alternative strategies	-.20	1.00		3.75	.91
3. Attitudes toward CP	.61**	-.54**	1.00	2.97	.98
<i>Hispanic parents</i>					
1. Childhood experiences of CP	1.00			3.18	1.30
2. Efficacy of alternative strategies	-.34**	1.00		3.86	.94
3. Attitudes toward CP	.51**	-.77**	1.00	2.77	1.09
<i>White parents</i>					
1. Childhood experiences of CP	1.00			3.28	1.29
2. Efficacy of alternative strategies	-.42**	1.00		3.59	1.07
3. Attitudes toward CP	.68**	-.66**	1.00	2.88	1.09

** $p < .01$

Table 3. Measurement items of key variables and factor loadings

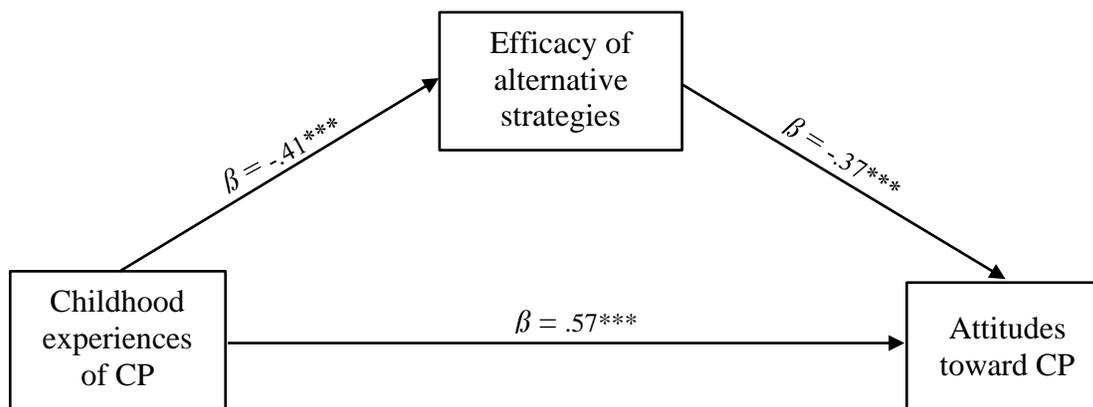
Item	Factor loading
<i>Attitudes toward CP</i>	
How much do you agree or disagree with each of the statements below?	
1. Spanking/slapping/popping a child is a normal part of parenting	.88
2. Sometimes, a spank/slap/pop is the best way to get a child to listen	.89
3. A spank/slap/pop is not an effective method to change a child's behavior for the long term (recode)	.53
4. Sometimes, spanking/slapping/popping is necessary to instill proper moral and social conduct	.83
5. Sometimes, the only way to get a child to behave is with a spank/slap/pop	.88
6. One of the best ways for a child to learn "no" is to spank/slap/pop him/her after disobedience	.74
7. If a child is spanked/slapped/popped for a misbehavior, he or she should always be spanked/slapped/popped for that misbehavior	.64
8. When all is said and done, spanking/slapping/popping is harmful for a child (recode)	.73
9. I believe it is the parent's right to spank/slap/pop their children if they think it is necessary	.76
10. Overall, I believe spanking/slapping/popping is a bad disciplinary technique (recode)	.67
<i>Efficacy of alternative strategies</i>	
Think about other types of discipline that do not involve the use of physical discipline, namely non-physical disciplines such as taking away toys/games, time out, giving warnings, or reasoning.	
1. I know the best way to use non-physical disciplines to effectively correct my child's misbehavior	.57
2. No matter how severe my child's misbehavior is, I believe I can always use non-physical disciplines to correct my child's misbehavior	.73
3. I am confident that even when I am really angry with my child, I can still use non-physical disciplines to correct his or her misbehavior	.58
4. In urgent situations where I need to keep my child from danger such as touching the hot stove or running to the street, I believe I can still use non-physical disciplines to prevent or correct his/her misbehavior	.48
5. No matter how frequently my child ignores my request, I am confident I can keep using non-physical disciplines to correct his/her misbehavior	.74
6. I believe that non-physical disciplines are very effective in correcting my child's misbehavior	.90
7. I believe that non-physical disciplines work well to correct my child's misbehavior	.89
8. I believe that non-physical disciplines are very effective at preventing my child's misbehavior	.84

Childhood experiences of CP

Think about when **you** had misbehaved (minor or severe) **between age 6 to 10** and your parents used physical discipline to correct your behavior (for example: spanking, slapping, or hitting)

1. Do you agree or disagree that your parents had **good intention** when they use physical discipline with you? .77
2. Do you agree or disagree that your parents' use of physical discipline was **helpful** to you? .90
3. To what extent do you think your parents' use of physical discipline was **effective** in correcting your misbehavior? .88

Figure 1. Structural equation model for the combined sample



*** $p < .001$