

Attributions and discipline history as predictors of child abuse potential and future discipline practices

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Abstract:

Objectives:

We attempted to identify factors that can be applied in primary and secondary prevention programs and expand the understanding of why those who were not abused may engage in abusive behavior. The purpose of this research was to explore how young adults' attributions of whether they deserved their childhood discipline, as well as their abuse history, relate to physical child abuse potential and their discipline plans for their future children.

Method:

A sample of 140 non-parent college students were asked to report on their discipline history, perceptions of that discipline, child abuse potential, and expected discipline practices. An age range of 18–20 was targeted for multiple reasons, including the suitability of these young adults for primary and secondary prevention programs.

Results:

Analyses revealed that both physical child abuse potential and future discipline practices were independently predicted by respondents' belief that they deserved their discipline in conjunction with the harshness of their childhood discipline.

Discussion:

These results suggest that the attributions of self-blame held by young adults about their discipline experiences are significant for increasing physical abuse potential regardless of whether the individual reports a history of abuse.

Keywords: Child physical abuse; Abuse history; Physical discipline; Responsibility attributions

Article:

Introduction

Despite continued struggles to contend with the complex issue of child maltreatment, child physical abuse still impacts the lives of countless children across the United States. Reasons for the inadequacy of the current child protection system are complex, although many of its limitations stem from minimal resources (e.g., finances and personnel) available to redesign the child welfare system from a reactive model to a preventative model (Wolfe, 1991). Dependence on a response approach to child abuse can lead to removal of children from their families and potentially further traumatize the family unit (Wekerle & Wolfe, 1993), compared to a preventative approach. Although admittedly complicated, the design of prevention programs offer many advantages, although much of research throughout the field has been hampered by methodological shortcomings.

Issues in prevention

Prevention strategies are categorized as either primary, secondary, or tertiary (Helfer, 1982). Primary prevention combats the antecedents of abuse in the general population, secondary prevention focuses on minimizing factors that augment abuse potential in identified high-risk individuals, and tertiary prevention initiates intervention to prevent further abuse (Helfer, 1982). Although implementation of all three prevention approaches are solid cornerstones in effectively responding to the problem of child abuse, the present welfare system's reliance on tertiary prevention cannot inhibit abuse from occurring in the first place nor does it meet the needs of children who do not encounter the system. A more progressive tactic would tackle both primary and secondary prevention, which is necessary to broaden the scope of current strategies and thereby impact the lives of more children (Wekerle & Wolfe, 1993).

Because of their limited life experience and developmental maturity level (Newberger & Cook, 1983), parents who are adolescents or young adults are at increased risk to perpetrate abuse (Wekerle & Wolfe, 1993), exemplifying a potential secondary prevention group. Not only does this age group represent a set of parents at risk to abuse, individuals in this age range can also serve as a primary prevention group because most have not yet had children. Although scarce, abuse prevention programs structured around educational models targeting adolescents and young adults have proven to be successful (Wolfe et al., 1997). Some programs have demonstrated that young adults' perceptions of positive parenting increase with child development education (Lewko, Carriere, Whissell, & Radford, 1986), but long-term follow-up evaluating the ability of such programs to prevent child abuse is limited (Wolfe et al., 1997). Therefore, further exploration of young adults' perspectives may clarify how best to design effective primary and secondary prevention programs.

Methodological complications

Even though decades have been spent researching the many possible characteristics of a physical abuser, a decisive profile has yet to emerge. The ability to develop an accurate profile has proven exceedingly difficult, in part because research on child physical trauma can be limited by methodological problems.

One such problem involves reliance on retrospective reporting, which is often the only means available to obtain data on abusive experiences. However, such recall poses the risk of memory distortion (Berger, 1980 and Widom, 1989). Thus, choosing a target population close in age to the actual occurrence of the experience in question may minimize errors due to retrospective reporting. Another potential pitfall is that child abuse research often does not control for responses that are socially desirable, which is essential when studying abuse given societal disapproval of severe violence towards children (Herrenkohl, Herrenkohl, & Toedter, 1983; Widom, 1989). Therefore, inclusion of strategies to minimize such bias in responding is imperative for studies employing self-report measures.

Finally, the narrow focus on intergenerational pathways to abuse impedes progress in physical abuse research (Milner, Murphy, Valle, & Tolliver, 1998; Widom, 1989). Many studies concentrate on individuals who were abused, and theories championing the concept of cyclic physical abuse went unchallenged for decades (Bandura, 1973 and Curtis, 1963; Oliver & Taylor, 1971; Silver, Dublin, & Lourie, 1969). Consequently, these studies cultivated the widespread misconception that intergenerational abuse is the primary defining feature of abuse potential. However, after closer scrutiny, the link between physical abuse as a child and becoming physically abusive as an adult is no longer accepted as a necessary or sufficient condition (Ertem, Leventhal, & Dobbs, 2000; Herrenkohl et al., 1983 and Gelles, 1987). For instance, in one landmark study, the majority of abusive parents were found to not have an abusive childhood (Gelles, 1987). Therefore, discerning why those who were not physically abused choose to implement harsh discipline or abuse is as equally important as ascertaining why those who were physically abused perpetuate abuse or discipline harshly.

Abuse-relevant attributions

Thus, uncovering risk factors that might apply to those with and without abusive histories is warranted. Cognitive behavioral models theorize that various cognitive processes mediate physical aggression towards children (Milner & Dopke, 1997). One such cognitive approach posits an information processing model

whereby parents possess perceptions of behavior that influence their response to their child's behavior (Milner, 1993). According to this model, based on distorted perceptions of behavior, parents may engage in inappropriate expectations of their child and interpret and evaluate their child's behaviors negatively, particularly with regard to negative and hostile attributions of their child's behavior. In particular, child behavior that is judged wrong seems especially critical in influencing parental abusive behavior (Milner, 1993). Such parental attributions of child behavior likely influence their child's own evolving attributions.

Research on abuse-relevant attributions has emerged as an important and promising line of inquiry, although confusion regarding terminology continues to complicate the process, with the terms "perception" and "attribution" used interchangeably (Fincham, 2002). One proposal has been to distinguish attributions about what factors cause an event from attributions about blame/responsibility, given no evident distinction in the latter two concepts, responsibility or blame attributions (Fincham, 2002). The current research project thus focused on attributions of blame/responsibility, qualified as whether an individual blames themselves (i.e., considers themselves deserving the action) versus considers other individuals or factors responsible.

One factor that has been addressed therapeutically with child abuse victims is the point of view that children hold about their past disciplinary experiences (Kolko, Brown, & Berliner, 2002). Attributions of abuse are known to influence individual functioning, and altering maladaptive attributions has been effectively utilized in treatments (Kolko & Feiring, 2002). One group of researchers suggests that a child's adjustment following abuse is more dependent on the type of attribution a child makes about the parent-child interaction than the actual behavior involved (Valle & Silovsky, 2002).

Attributions about parent-child interactions developed during childhood may be carried into adulthood such that the child maintains beliefs about their personal responsibility in discipline interactions that could potentially shape their attributions about discipline situations when they become parents themselves. Whether such attributions are in fact carried into parenthood may differ across individuals. One theory suggests that similar events affect individuals differently depending on the manner in which they process the information, on the nature of their past experiences, and on what link is made between the present event and their expectations for the future (Herzberger, 1983). Cognitions and attributions about one's own discipline history originating from childhood may thus influence a parent's judgments and attributions about discipline in the present. However, a myriad of cognitions about discipline are possible, and thus pinpointing the relevant and salient aspects of abuse-specific attributions remains a much needed area of study (Kolko & Feiring, 2002).

The majority of research on abuse-related attributions center on sexually abused populations. However, some findings on responsibility attributions made by the child have emerged from studies in the physical abuse literature (e.g., Carlson, Furby, Armstrong, & Shales, 1997; Herzberger, 1983; Herzberger, Potts, & Dillon, 1981). Abused and non-abused children tend to assume responsibility for their parents' punishment (Herzberger et al., 1981). Indeed, the more brutal the experience with punishment is during childhood, the more likely adolescents and young adults are to feel increased self-blame for having received that punishment (Amsterdam, Brill, Bell, & Edwards, 1979). By adulthood, when a child is considered to blame for their punishment, discipline given to the child is likely to be described by adults as justified and less severe (Kelder, McNamara, Carlson, & Lynn, 1991; Rodriguez & Sutherland, 1999). College students were also more likely to blame an abused child in a parent-child interaction if the child is viewed as provocative (Muller, Caldwell, & Hunter, 1993). One group of researchers found that if severe punishment is considered deserved, young adults will not perceive it to be abusive (Rausch & Knutson, 1991).

The connection between discipline experiences received as children and self-blame was examined in a large study of college students, determining that those young adults who experienced physically abusive environments and believed such abuse was deserved and normal were more apt to consider harsher discipline practices appropriate (Kelder et al., 1991). Although this study provides insight into attributions of deservedness and self-blame, those young adults who did *not* report abuse were not thoroughly evaluated nor did the

researchers request participants' specific plans for disciplinary practices with future children. Research must begin to uncover the processes operating in those who have not experienced harsh discipline or abuse and elicit specific intentions of young adults' expected discipline in order to develop more meaningful, comprehensive abuse prevention programs.

Purpose of study

The current study evaluated how attribution of responsibility of whether discipline was deserved interacts with history of abuse to influence child abuse potential and physical discipline plans. Increased comprehension of factors that contribute to abuse potential enables prevention programs to direct educational needs more effectively. In the current study, young adults' disciplinary history and their responsibility attributions about these experiences were examined to predict their potential to abuse.

We hypothesized that those young adults reporting a more physically abusive childhood who believed the discipline they received was *less* deserved would demonstrate *lower* potential for abuse of their children in the future; similarly, those with more abusive childhoods but reporting *higher* self-blame would demonstrate *higher* abuse potential. Very little research is available predicting the behavior of those without abusive histories, and thus the current study theorized an inverse relationship compared to those reporting abusive backgrounds, hence suggesting a possible interaction effect. Thus, we hypothesized that those reporting a less abusive childhood and considering their discipline was *less* deserved were expected to reveal a *higher* physical abuse potential. We speculated that these individuals may have considered themselves model children and thus may be more inclined to ascribe responsibility for discipline actions to children. Similarly, we expected that those with low abuse histories but *higher* self-blame would have *lower* abuse potential, because they had experienced themselves as likely needing firmer controls but when they did not receive such a response, concluded that children are not responsible for discipline decisions. Thus, we hypothesized an interaction between abuse history and self-blame predictive of abuse potential. We targeted a population of 18 to 20-year-olds to increase the likelihood of involving participants who were relatively mature enough to have begun formulating conceptions about parenting, who were not yet parents, who were close to the age of discipline to minimize retrospective reporting confounds, and who were representative of an ideal age group for prevention programs.

Method

Participants

Three different recruitment sites were selected to diversify the sample, including approximately one third at a community college in Salt Lake City, Utah, another third at a university in Salt Lake City, and a final third at a university in Chapel Hill, North Carolina. Posted flyers requesting participants and announcements in college classrooms were employed to solicit young adults. Students were recruited from a variety of courses including biology, geology, English, and freshman academic preparation classes, as well as from flyers distributed at student union centers. From the 156 young adults who participated in the study, 16 were removed from the analysis based on their elevated validity indices on the Child Abuse Potential Inventory. The validity indices demonstrated that 11 participants were Randomly Responding and 5 were Faking Bad (see description of CAPI validity indices below). Consequently, a total of 140 college students ($n = 67$ females, $n = 72$ males, $n = 1$ gender unspecified) ranging in age from 18 to 20 were included in the analysis.

The predominant group sampled identified themselves as non-Hispanic White (64.5%), with the remaining participants identifying themselves as African American (9.4%), other (9.4%), Hispanic (8%), Asian (7.2%), and Native American (1.5%). The students classifying as "Other" were largely comprised of Pacific Islanders. Overall, the ethnic distribution was roughly comparable to the geographic regions sampled; comparison with regional data overall suggests the current study somewhat undersampled non-Hispanic Whites (80.9% in Salt Lake City; 76.1% in Chapel Hill; US Census Bureau, 2002) and slightly underrepresented African-Americans (11.4% in Chapel Hill; US Census Bureau, 2002). Based on self-report, the participants classified themselves into one of three socioeconomic categories: 76% described their childhood socioeconomic status (SES) to be middle class, 10% lower SES, and 14% upper SES.

With regard to family background, 46% reported that their mother and father were equal disciplinarians in their childhood, 34% that their mother was the principal disciplinarian, and 20% that their father was the principal disciplinarian. In terms of number of siblings, 8% reported no siblings, 61% 1 or 2 siblings, and 31% between 3 and 11 siblings. Participants reported their religious background as 35% affiliated with the Church of Jesus Christ of Latter Day Saints, 19% Protestant, 18% Catholic, 13% none, 6% Baptist, and 9% other. Few of these young adults (11.5%) indicated that they were currently living with someone in a committed relationship.

Measures

Childhood experience

Assessing Environments III-Form SD (AEIII-Form SD; Rausch & Knutson, 1991)

The AEIII-Form SD is a 170-item self-report measure used to assess participants' perceptions of discipline experienced during childhood. The AEIII-Form SD is a revision of the AEIII that examines the disciplinary childhood experiences of non-clinical populations (Rausch & Knutson, 1991). The current study excluded the seven demographics questions from the AEIII-Form SD and used the remaining 163-true/false questions that refer to specific childhood experiences. These 163 questions are divided into 18 scales, including a Physical Punishment scale which queries the respondents about their history of mild to severe physical discipline, comparable to the information obtained on the other measure of abuse history administered in the current study, the Parent-Child Conflict Tactics Scales. In addition, two subscales of the AEIII were the primary focus of the present study, the Perception of Discipline Scale and the Deserving of Punishment Scale. An example of a Perception of Discipline Scale question includes "I was mistreated by my parents," and an example of a Deserving of Punishment Scale question includes "I always deserved the punishment my parents chose to give me" (AEIII-Form SD; Rausch & Knutson, 1991). High scores on the Perception of Discipline Scale demonstrate participants' perspective that the discipline they received in childhood was harsh, and high scores on the Deserving of Punishment Scale reveal participants' belief that the discipline they received in childhood was justified or deserved.

As a result of minimal change in the AEIII-Form SD from the AEIII, reliability and validity will be reported for the AEIII. Internal consistency was obtained from two independent samples resulting in Kuder Richardson-20 (KR-20) coefficients primarily ranging from .65 to .79 (Berger & Knutson, 1984). Test-retest reliability over 60 days on a sample of college students provides retest reliability coefficients across scales ranging from .61 to .89, with overall test-retest reliability averaging .77. Content validity was established for the AEIII by a study demonstrating that those who had documented histories of child abuse from social services obtained higher mean scores than those who received social services but had no suspicion of abuse (Berger, Knutson, Mehm, & Perkins, 1988).

Parent-Child Conflict Tactics Scales (CTSPC; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998)

The CTSPC was utilized to assess participants' disciplinary experiences in their childhood. The instrument is an updated version of the Conflict Tactics Scales, measuring acts of physical aggression a parent may direct towards their children, regardless of injury inflicted. The measure includes four scales, Nonviolent Discipline, Psychological Aggression, Physical Assault, and Neglect, of which the Physical Assault Scale (comparable to the AEIII Physical Punishment subscale) was the primary focus in the current study. Intended for parents to indicate their use of various discipline tactics, the CTSPC was minimally adapted for the current study to ask participants to complete the questions regarding their own history of abuse. Specifically, students were asked to indicate how frequently, if ever, the event happened to them, with no particular caretaker identified.

The original CTS scale demonstrated adequate test-retest reliability (.70–.80; Amato, 1991 and Johnston, 1988), although no information on stability is yet available for the CTSPC. With regard to internal consistency, alpha coefficients for the CTSPC scales are .55 for Physical Assault, .60 for Psychological Aggression, .70 for Nonviolent Discipline, and .22 for the Neglect scale (Straus et al., 1998).

Abuse potential

Child Abuse Potential Inventory (CAPI; Milner, 1986)

The CAPI is a self-report questionnaire designed to assess a participant's risk of physical child abuse. The measure presents 160 statements in a forced-choice format in which the respondent must either agree or disagree. Seventy-seven of these items are variably weighted to contribute to the overall Abuse Scale which contains six factors: Distress, Rigidity, Unhappiness, Problems with Child and Self, Problems with Family, and Problems with Others. Abuse Scale scores above 166 are indicative of elevated physical abuse potential (Milner, 1986). The remaining 83 items comprise fillers, distractors, and questions used in the validity indices.

Three response distortion validity indices are obtained, including Faking Good, Faking Bad, and Random Response. A Faking-Good index is indicative of a respondent attempting to present themselves positively, particularly if they obtain an Abuse Scale score below the clinical cut-off score of 166. In the current sample, 17 participants were found to be Faking Good but were retained in the analysis because their scores would actually prove to be conservative estimates of their abuse potential. In contrast, the Faking-Bad index represents a participant's attempt to present themselves in a negative frame, typically yielding an artificially higher score; five participants with elevated Faking-Bad indices were removed from analysis. The Random Response index is an indicator that participants were not seriously attending to their responses and these scores should be completely discarded (Milner, 1986), which resulted in the removal of 11 participants.

Reliability measures report high KR-20 internal consistency coefficients throughout control groups (.92–.96) and even stronger estimates throughout abuse groups (.95–.98). Predictive validity measures of the Abuse scale report a correct identification of 92.3% of the abusers and 100% of the non-abusers, with a 96.2% overall accurate classification (Milner & Wimberly, 1980).

Physical Discipline Scenarios (adapted from Rodriguez & Sutherland, 1999)

The Physical Discipline Scenarios are a set of vignettes used to assess future discipline practices. The purpose of its inclusion in this study was to supplement the CAPI with another measure of abuse potential that more directly assessed expected discipline behavior. Each vignette depicts a parent's disciplinary method with a child 8 years or younger (Rodriguez & Sutherland, 1999). Gender bias was controlled by depicting the parent and child in the scenario as gender neutral given previous research demonstrating that the victim's and perpetrator's gender affects ratings (Herzberger & Tennen, 1985, Simons, Beaman, Conger, & Chao, 1992).

An adapted version of the Physical Discipline Scenarios measure was created in order to incorporate non-physical discipline as well as abusive discipline techniques. The 12 original scenarios were developed from actual reports to New Zealand child protective service workers and based on three varying levels of severity: Mild (poking the child, slapping the child on the hands), Moderate (spanking the child with a hand, pulling the child up by the arm), and Borderline Abusive (hitting the child with a wooden spoon, striking the child on the buttocks with a belt) (Rodriguez & Sutherland, 1999). Eight new scenarios were developed to add two levels of severity to expand the range of discipline severity, including the two endpoints on the severity continuum: Zero (involving no physical punishment, such as removal of privileges, explaining to the child wrong doing) and Abusive (choking the child, kicking the child).

Each severity level presents four scenarios that include two situations where the child is misbehaving (i.e., perceived culpable) and two situations where the child is blameless (i.e., non-culpable). Two sample scenarios are as follows:

Borderline abusive/non-culpable: A parent just finished cleaning up the house and putting away all the children's toys. The child comes home and carries some toys to play with outside, dropping a few on their way out. The parent hits the child with a wooden spoon several times, telling them not to make a mess.

Mild/culpable: A parent is watching television and the kids are bickering on a nearby sofa. Having already asked them to stop fighting, the parent turns around and smacks the children's knees, telling them to stop fighting.

The scenarios are presented in random order to reduce the likelihood of respondents recognizing a pattern. Participants were asked to indicate how likely they were to react in a similar manner with their own children in the future on a 7-point likert scale, with (1) very likely and (7) very unlikely. Mild and Zero level scenarios were reverse scored. To generate a Total score across the twenty scenarios, subscores on each severity level (based on the four scenarios per level) were weighted for severity paralleling the 7-point rating scale: Zero scenarios were weighted 7, Mild scenarios weighted 6, Moderate Scenarios weighted 4, Borderline Abusive scenarios weighted 2, and Abusive scenarios weighted 1. Therefore, higher Total scores on Discipline Scenarios indicate *less* severe discipline plans and *decreased* abuse potential.

Procedure

This study was approved by the University of Utah Institutional Review Board. Participants completed the measures on a computer in a campus computer lab. Upon arrival, all participants were confirmed to be between the ages of 18 and 20 and not parents or expecting a child. Students completed the program in an average of 25 minutes and were paid \$5 for their participation.

Upon completing a consent form describing a study on past discipline experience and future discipline plans, students completed the demographic and background questions followed by the study instruments. Two strategies were employed to minimize social desirability responding in this study. First, computerized administration facilitated participants' confidentiality, encouraging more candid responding on the part of the student (cf, Shakeshaft, Bowman, & Sanson-Fisher, 1998). Second, the questionnaires were presented to participants in a particular order: AEIII-Form SD, CAPI, Discipline Scenarios, and CTSPC. The AEIII measure was presented first to ensure that perceptions of their own childhood would not be influenced by subsequent questions describing harsh or abusive disciplinary techniques. The CTSPC was administered last to shield the participant from considering the extreme variety of discipline alternatives, which could have affected their reported perceptions. Therefore, the CAPI was administered second given its less threatening list of abuse risk attitudes, followed by the wider range of discipline practices in the scenarios.

Statistical analysis

All analyses were conducted using the SPSS for Windows statistical program. The significance level was reduced to an alpha of .01 because of the number of comparisons. Following a preliminary analysis of demographic differences, Pearson correlations were computed among the outcome measures. Based on an examination of these results, hierarchical multiple regression analyses were conducted using the two independent variables, abuse history and attributions, and their interaction to predict abuse potential and future discipline practices.

Results

Table 1 displays means, standard deviations, score ranges, and correlations of the independent and dependent measures. Analysis of demographic differences were conducted for age, gender, SES, ethnicity, number of siblings in the family, and gender of primary disciplinarian. No significant group differences or correlations were found between the measures and demographic variables ($p > .01$), with the exception of gender and ethnic differences on the Discipline Scenarios Total scores and marginally significant ethnic differences on the CTSPC Physical Assault Scale scores. Females reported that they would use milder punishments on the Discipline Scenarios Total scores, $t(138) = 2.99, p < .01$, which supports previous findings that suggest females typically use gentler physical discipline (Herzberger and Tennen, 1985) White participants indicated they would use milder disciplines on the scenario Total scores, $t(138) = 3.03, p < .01$ and Whites reported experiencing marginally less harsh discipline on the CTSPC Physical Assault Scale, $t(138) = 2.30, p = .02$ compared to non-Whites.

Correlational analyses revealed convergent validity, supporting the internal validity of the study. The correspondence among measures of similar constructs indicated that the two assessments of abuse potential, CAPI Abuse Scale scores and Discipline Scenario Total scores were significantly negatively correlated ($r = -.32, p < .001$). Moreover, a confirmation that the CTSPC was gauging abusive history was obtained in its correlation with the AEIII Physical Punishment Scale scores ($r = .72, p < .001$).

Table 1 reports the correlations of perceptions and abuse history with the two measures of abuse potential. The AEIII Perception of Discipline Scale scores, which indicate how harshly the respondents judge their own discipline history, were only significantly correlated with the other hypothesized predictor, the CTSPC Physical Assault Scale ($r = .21, p < .01$). In contrast, the AEIII Deserving of Punishment Scale scores demonstrated significant correlations with both measures of abuse potential, the CAPI Abuse Scale scores ($r = .35, p < .001$) and the Discipline Scenarios Total scores ($r = -.32, p < .001$). Moreover, the other predictor of abuse potential, the participants' own discipline history, was significantly correlated with the two abuse potential measures (CAPI Abuse Scale, $r = .32, p < .001$; Discipline Scenarios Total, $r = -.35, p < .001$).

Because the AEIII Perception of Discipline Scale was not correlated with the independent variables of abuse potential, regression analyses were performed only using the AEIII Deserving of Punishment Scale, which captures the construct of self-blame more closely. Two hierarchical multiple regression analyses were performed separately for the two measures of abuse risk, CAPI Abuse Scale and Discipline Scenarios Total scores. Regressions were conducted to determine the ability of the two predictors, perceived deservedness and abuse history, as well as their interaction, to predict the measure of future abuse risk.

Table 1
Means, standard deviations, ranges, and correlations for the AEIII, CAPI, Discipline Scenarios, and CTSPC

	<i>M (SD)</i>	Range	AEIII Deserving <i>r</i>	AEIII Perception <i>r</i>	CAPI Abuse <i>r</i>	Discipline Scenarios <i>r</i>	CTSPC Nonviolent <i>r</i>	CTSPC Psychological <i>r</i>	CTSPC Neglect <i>r</i>
AEIII Deserving of Punishment	1.25 (.90)	0–4					-.04	.24*	.26*
AEIII Perception of Discipline	5.81 (1.60)	2–11	.18 ^a				.07	.27**	.19 ^a
CAPI Abuse Scale	133.64 (88.71)	14–427	.35**		.10		-.10	.43**	.47**
Physical Discipline Scenarios	460.97 (67.59)	133–543	-.32**	-.04	-.32**		.26*	-.12	-.28**
CTSPC Physical Assault	38.90 (41.85)	0–231	.14	.21*	.32**	-.35	.23*	.72**	.54**

^a This relationship was found to be only marginally significant because the significance level was dropped to .01.

* $p \leq .01$.

** $p \leq .001$.

Table 2
Final multiple regression analysis predicting CAPI Abuse Scale scores

	<i>B</i>	β	sr^2 ^a
AEIII Deserving of Discipline Scale	30.69	.311	.123*
CTSPC Physical Assault Scale	.59	.278	.076*
Intercept = 72.32; $R = .45, F(2, 137) = 17.05^*, R^2 = .20$ (adj $R^2 = .19$)			

^a Incremental change in R^2 .

* $p \leq .001$.

Table 3

Final multiple regression analysis predicting Physical Discipline Scenarios Total scores

	<i>B</i>	β	sr^2 ^a
AEIII Deserving of Discipline Scale	-20.84	-.277	.103*
CTSPC Physical Assault Scale	-.49	-.304	.091*
Intercept = 506.14; $R = .44$, $F(2, 137) = 16.47^*$, $R^2 = .19$ (adj $R^2 = .18$)			

^a Incremental change in R^2 .* $p \leq .001$.

Table 2 depicts the final equation obtained predicting CAPI Abuse Scale scores, and Table 3 reports the final multiple regression results on the Discipline Scenario Total scores.

For the CAPI Abuse Scale, the initial regression step entering AEIII Deserving of Punishment scores first, resulted in $R = .35$, $F(1, 138) = 19.43$, $p < .001$. With the CTSPC Physical Assault Scale score entered second, $R = .45$, $F(2, 137) = 17.05$, $p < .001$. Inclusion of the hypothesized interaction effect of these two variables resulted in $R = .45$, $F(3, 136) = 11.30$, $p < .001$. Examination of the contributions to the overall regression equation revealed that the interaction effect did not significantly explain unique variance in CAPI Abuse Scale scores ($sr^2 = .001$). Therefore, the most parsimonious equation predicting CAPI Abuse Scale involved the main effects of the AEIII Deserving of Punishment Scale and the CTSPC Physical Assault Scale scores. Thus, contrary to the hypothesized prediction that higher self-blame would increase abuse potential in those with more abusive backgrounds but *not* in those with lower abuse history, perceived deservedness increased abuse potential despite their abuse history.

Similar results were obtained in regression analyses predicting planned discipline practices, the Discipline Scenarios Total scores. The first step including the AEIII Deserving Punishment Scale scores resulted in $R = .32$, $F(1, 138) = 15.88$, $p < .001$. The second step included the participant's abuse history with CTSPC Physical Assault Scale scores, $R = .44$, $F(2, 137) = 16.47$, $p < .001$. In the final step, with the hypothesized interaction effect, $R = .45$, $F(3, 136) = 11.61$, $p < .001$, again the interaction effect did not significantly explain unique variance in the Physical Discipline Scenario Total score ($sr^2 = .012$). Thus the best multiple regression equation predicting Discipline Scenario Total scores simply includes the AEIII Deserving of Punishment Scale and the CTSPC Physical Assault Scale scores.

Finally, because the Discipline Scenario assessment was recently developed and modified for this study, a brief evaluation of the measure will be discussed. As was determined in the earlier version (Rodriguez & Sutherland, 1999), participants were more likely to indicate they would be harsher with children considered culpable than those considered not culpable in the scenarios, $t(139) = 8.84$, $p < .001$. Additionally, as would be expected, respondents reported that they would use the discipline practices progressively less often corresponding to increasing severity level (Zero $M = 10.96$, $SD = 4.4$; Mild $M = 19.08$, $SD = 4.7$; Moderate $M = 20.85$, $SD = 4.9$; Borderline $M = 24.81$, $SD = 4.15$; Abusive $M = 26.25$, $SD = 3.3$). And as previously indicated, the Discipline Scenarios Total scores were significantly correlated with the other measure of future risk to abuse their children, the CAPI Abuse Scale score.

Discussion

The current study evaluated how attributions of discipline and a history of childhood abuse contribute to a young adult's potential to perpetrate child physical abuse in the future. Although the hypothesized interaction effect between attributions and discipline history was not observed, both variables independently contributed to predicting the two measures of abuse risk in a sample of 140 college students.

Two scales of the Assessing Environments III-Form SD were selected for the current investigation, the Perception of Discipline and the Deserving of Punishment Scales. The Perception of Discipline Scale requests respondents' judgments of the harshness of their upbringing and the Deserving of Punishment Scale asks participants to indicate whether they feel they deserved the discipline they received as children. The Perception of Discipline Scale scores were significantly correlated only with the participants' reported history of discipline on the Parent-Child Conflict Tactics Physical Assault Scale. Although this relationship was not strong, students reporting more frequent harsh discipline as children also tended to consider their discipline as harsh. This perception of harshness as measured by the AEIII was not significantly related with either of the measures of future likelihood to abuse their own children, the Child Abuse Potential Inventory Abuse Scale or the Physical Discipline Scenarios Total scores. The results thus suggest that merely considering one's own discipline as harsh does not necessarily elevate abuse potential.

In contrast, scores on the AEIII Deserving of Punishment scale were significantly correlated with both measures of future abuse risk. The more a participant considered themselves to deserve the discipline they received, the more likely they were to report attitudes consistent with physical abuse (CAPI) and to indicate they would implement harsher, more abusive discipline with their own children (Physical Discipline Scenarios). Participants also were more likely to indicate on the scenarios that they would respond harshly when they consider their child intentionally misbehaving, as has been previously demonstrated (Rodriguez & Sutherland, 1999). The present results bolster previous research that has implicated the role of attributions of self-blame on attitudes about discipline (e.g., Kelder et al., 1991; Rausch & Knutson, 1991), but the current study also indicates that these attributions of deservedness directly relate to young adults' increased risk of engaging in abusive behavior towards future children.

Additionally, participants' report of their childhood history of physical discipline and abuse on the CTSPC was significantly correlated with both abuse risk measures. Students who indicated that they had experienced harsh and abusive discipline as children were more likely to have increased CAPI scores and more likely to report that they would practice harsher discipline with their own children. These results support the large body of historical literature on the cycle of violence (e.g., Silver et al., 1969).

The AEIII Perception of Discipline Scale was not correlated with abuse potential; therefore, only the AEIII Deserving Punishment Scale was included in the multiple regression analyses. Two regressions were performed to predict independently both Discipline Scenario Total scores and CAPI Abuse Scale scores. Both analyses revealed no significant interaction effect between deservedness and abuse history. However, both of the final regression equations confirmed that the AEIII Deserving of Punishment scores followed by the CTSPC Physical Assault Scale scores explained significant variance in child abuse attitudes and future discipline practices. Therefore, the analyses indicate that abuse risk for these students was greatest for those who considered themselves to have deserved their discipline in addition to having experienced harsher disciplines.

Some additional findings and procedures support the validity of the current study. First, removal of any questionable protocols was accomplished by eliminating from the analysis any participants who were either faking bad or randomly responding on the CAPI. Second, the two independent measures, abuse attitudes and future discipline practices, demonstrated convergence based on their significant correlation with each other. Third, the CTSPC Physical Assault Scale was highly correlated with the AEIII Physical Punishment Scale, indicating both measures were likely representing their underlying constructs accurately. Finally, the fact that both regression analyses yielded similar results for the two measures of abuse potential independently strengthens the conclusion that participants' attribution that they deserved their discipline as well as their abuse history predict young adults' likelihood of future abuse.

On the other hand, there were several limitations to the current study. The nature of the sample has some drawbacks. Although we aimed to obtain an ethnically and geographically diverse sample by including three separate campuses at two distinct geographic locations, the current study likely does not match some of the

characteristics of the US young adult population in general (e.g., the larger than expected representation of those from the Latter Day Saints faith). A gender balanced sample was obtained representing individuals enrolled in a wide variety of courses rather than predominantly female introductory psychology students as is often recruited (e.g., Kelder et al., 1991 and Muller et al., 1993). Yet college students as a whole, even with our community college sample, likely do not represent the full spectrum of 18 to 20-year-old young adults, given that not all young adults pursue higher education. Replication of the current study with a broad non-clinical sample of young adults who are not attending college would be needed to determine the applicability of these findings for prevention programs.

The present study also selected this age group because of its implications for prevention and its ability to minimize retrospective reporting biases. Nonetheless, participants were still being asked in this study to recall their abuse history. This retrospective bias may not be as much of an issue for attributions of deservedness given that one's adult attributions about discipline received as a child are those that would potentially influence their discipline decisions in the present. However, students were asked to predict their discipline practices in the future, which results in what might be considered a prospective reporting bias.

With regard to the assessment techniques, other limitations exist. Although the new Physical Discipline Scenarios were significantly correlated with the other measure of abuse risk, the standardized CAPI, further revisions and evaluation of its psychometric properties are warranted. For instance, an expert review of the validity of the new scenarios constructed for the current study by social services would be recommended, in addition to a psychometric analysis. Interestingly, the Discipline Scenarios were correlated with not only physical assault items on the CTSPC but also items pertaining to nonviolent discipline, both of which are included in the scenarios. Thus, further development of these non-violent scenarios may prove useful.

In addition, we chose to retain the Faking Good CAPI profiles because such retention would involve more conservative representations of the students' attitudes; however, these students may have also been presenting themselves favorably on the other measures in the study protocol, and thus further work needs to continue to control issues of social desirability to clarify the magnitude of the role of attributions.

Most importantly in terms of instrument limitations, the current study relied on the AEIII Deserving of Punishment Scale to assess the construct of attributions of self-blame. Unfortunately, few measures are available that specifically address adults' attributions of their experience of physical discipline. Given the current findings highlighting the probable significance of one's belief of deserving punishment on abuse potential, future researchers should consider evaluating whether abuse risk is elevated with a more comprehensive, detailed measure of self-blame attributions.

Given some of the directions proposed by the information processing model for physical abuse (Milner, 1993), the current findings suggest that responsibility attributions account for a modest portion of the variance in potentially abusive behavior. Future efforts to uncover nuances of attributions would be an intriguing avenue for research, particularly as some researchers have astutely pointed out that blaming others (e.g., external responsibility attribution) does not preclude blaming oneself as well (Fincham, 2002). Thus, the process whereby responsibility attributions influence future discipline choices may be more complex than a simple dichotomy of self/other blame. Moreover, research needs to continue to contrast traditional conceptualizations of attributional style in general (e.g., Abramson, Metalsky, & Alloy, 1989) versus attributions specific to abuse situations (Fincham, 2002; Valle & Silovsky, 2002).

The present study has advanced the comprehension of the possible processes that could be occurring for those who do *not* report an abusive childhood but then later engage in harsh or abusive discipline with their children. Regardless of abuse history, those who consider themselves more responsible for their discipline appear at increased risk to abuse. If young adults are indeed more likely to abuse when they hold children responsible for the discipline actions performed by parents, then therapeutic interventions and prevention programs could

incorporate modification of such attributions in their services. In intervention approaches, social welfare and mental health professionals working with abuse victims could consider addressing the attributions of blame about their physical abuse, as these may translate into beliefs that impact their own cognitions about discipline in the future. Abusive parents' propensity to blame the child in parent-child conflict could also be altered. Finally, with respect to primary and secondary prevention, educational and community efforts could work to shape the beliefs of adolescents and young adults, emphasizing that children cannot be held responsible for their parents' discipline choices, which could influence these young people's use of harsh or abusive discipline later.

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