Parent-child aggression: Association with child abuse potential and parenting styles.

By: Christina M. Rodriguez

Rodriguez, C. M. (2010). Parent-child aggression: Association with child abuse potential and parenting styles. *Violence and Victims, 25(6)*, 728-741.

Abstract:

The present investigation predicted that greater use of corporal punishment as well as physical maltreatment would be associated with child abuse potential and selected parenting styles. Three independent studies were examined, two with community samples and a third with a clinical at-risk sample of parents. Parents across all studies anonymously completed the Child Abuse Potential Inventory, the Parent-Child Conflict Tactics Scale to assess physical discipline and maltreatment, as well as the Parenting Scale to measure dysfunctional parenting styles. Findings support that overall parent-child aggression, as well as physical maltreatment behaviors specifically, were associated with child abuse potential. Parent-child aggression was also related to dysfunctional parenting styles, particularly an overreactive, authoritarian parenting style. Permissive parenting was also identified as potentially associated with physical maltreatment, although the findings regarding such lax parenting styles are less clear. Intriguing findings emerged regarding the connection of psychological aggression to both child abuse potential and dysfunctional parenting style. Child abuse potential was also associated with dysfunctional parenting style, particularly harsh, overreactive approaches. Recommendations for future study with at-risk samples and additional research on permissive parenting and psychological aggression are discussed.

Keywords: parent-child aggression | child abuse | child abuse potential | parenting | parenting styles | child maltreatment | child physical abuse | disciplinary style

Article:

In 2006, over 900,000 children were substantiated victims of child abuse and neglect in the United States, and physical abuse constituted 16% of those reports (U.S. Department of Health & Human Services [DHHS], 2008). Others estimate that physical abuse may actually range from over 23% (King, Trocme, & Thatte, 2003) up to nearly 30% of all cases of child maltreatment (Jones & McCurdy, 1992). More troubling are estimates based on anonymous parent report that severe physical assault toward children is in fact 5-11 times greater than official reports (Straus,

Hamby, Finkelhor, Moore, & Runyan, 1998). Thus, physical abuse remains a critical concern even considering only those cases that rise to the exacting substantiation standards of child protective services, an agency that received an estimated 3.3 million referrals in 2006 (DHHS, 2008) while simultaneously witnessing steady declines in rates of substantiation (see King et al., 2003, for discussion).

Physical child abuse is typically defined as non-accidental injury to a child (Child Abuse Prevention, Adoption and Family Services Act of 1988), implying the resultant harm was intentional. However, physical abuse often arises when parents unintentionally escalate their administration of physical discipline (Herrenkohl, Herrenkohl, & Egolf, 1983 ; Whipple & Richey, 1997). Physical discipline has been defined as "the use of physical force with the intention of causing a child to experience pain, but not injury, for the purpose of correction or control of the child's behavior" (Straus, 2000, p. 1110). Physical discipline toward children is virtually universal in this country, with nearly 94% of American parents indicating they had employed physical discipline by the time their child was 3 or 4 (Straus & Stewart, 1999).

Distinguishing between physical abuse and physical discipline is both challenging and controversial. In a review of 8,000 substantiated cases of physical abuse, injurious and non-injurious child maltreatment were comparable with regard to child, parent, and socioeconomic characteristics (Gonzalez, Durrant, Chabot, Trocme, & Brown, 2008). Parents who are physically abusive also apply excessive, unreasonable physical discipline toward their children (Veltkamp & Miller, 1994 ; Whipple & Webster-Stratton, 1991). Parent-child aggression has been linked to negative behaviors in the recipients, whether the parental behavior is expressed as child abuse (e.g., Edwards, Holden, Felitti, & Anda, 2003 ; Runyon, Deblinger, Ryan, & Thakkar-Kolar, 2004) or corporal punishment (e.g., see Gershoff, 2002, for review). Consequently, a number of researchers recommend any form of physical parent- child aggression be conceptualized on a physical discipline-child abuse continuum (Graziano, 1994 ; Greenwald, Bank, Reid, & Knutson, 1997 ; Rodriguez & Richardson, 2007 ; Salzinger, Feldman, Hammer, & Rosario, 1991 ; Straus, 2001a, 2001b ; Whipple & Richey, 1997), with mild physical discipline at one endpoint and extreme physical abuse at the other; harsh physical discipline could thus escalate to abuse somewhere along the continuum.

Given such a conceptualization, research relying on confirmed perpetrators of physical abuse would provide insight to a valuable endpoint of the continuum but a potentially restricted component of parent-child aggression. Maltreatment may be undetected by or unreported to protective services (Sedlak & Broadhurst, 1996), and the complex process of substantiation (King et al., 2003) typically yields high false negative rates (see DeGarmo, Reid, & Knutson, 2006, for discussion). Parents identified by protective services likely represent a selective, potentially atypical, fraction of those engaging in abusive parent-child aggression. Moreover, conclusions founded solely on substantiated perpetrators are not optimal when considering approaches intended to prevent abuse. Many abused children never encounter the social services system, and in order to better prevent child abuse, studying those not identified by the system

(either low risk or at-risk) can provide a glimpse into how sub-abusive discipline can escalate to child abuse further along the continuum.

One popular line of research concentrates on pinpointing those beliefs and characteristics predictive of a parent's risk to physically maltreat a child (Milner, 1986, 1994), estimating the likelihood a parent will become abusive. This likelihood, termed child abuse potential, is estimated by such measures as the Child Abuse Potential Inventory (CAPI) which incorporates interpersonal and intrapersonal difficulties as well as inflexible attitudes regarding children observed in parents who physically abuse their children (Milner, 1986). Scores on the CAPI distinguish substantiated child abusers from comparison groups (Milner, Gold, & Wimberley, 1986) and predict which parents are likely to become abusive (Milner, Gold, Ayoub, & Jacewitz, 1984). CAPI scores also demonstrate an association with observed coercive parenting styles (Haskett, Scott, & Fann, 1995 ; Margolin, Gordis, Medina, & Oliver, 2003).

Although the CAPI (Milner, 1986) is widely regarded as a leading instrument to assess child abuse risk, the measure does not explicitly elicit any information regarding actual discipline practices in general or maltreatment behaviors in particular. Indeed, as noted above, the CAPI taps a range of personal issues and attitudes toward children that are characteristics of abusive parents. In contrast, epidemiological surveys have utilized such instruments as the Parent-Child Conflict Tactics Scale (CTSPC; Straus et al., 1998) to determine the frequency of actual behaviors implemented toward children during parent-child conflict. Remarkably little research has yet evaluated the association between child abuse potential and reports of actual parent-child physical aggression, either increased use of physical discipline or physically abusive behaviors. One study utilizing a modified earlier version of the Conflict Tactics Scale (Straus, 1979) determined if child abuse potential was related to a parent's personal history of maltreatment (Caliso & Milner, 1992), but one's own aggressive behavior toward a child was still not assessed. Although measures of child abuse potential should relate to parent-child physical aggression, their actual association has not been studied empirically.

Furthermore, relatively little research has evaluated the connections between parenting styles and child abuse potential or parent-child aggression. Baumrind's (1966) classic conceptualization of parenting style characterizes parental control as generally manifest in three broad styles: permissive (in which the parent exerts minimal control over the child with few demands); authoritarian (in which the parent enforces control of the child by ensuring unquestioned adherence to absolute standards); and authoritative (in which adherence to rules is a cooperative endeavor between parent and child but the parent remains firm in setting standards). Although authoritarian parenting style appears potentially beneficial in some ethnic minority groups (e.g., African American and Chinese American families; Baumrind, 1972 ; Chao, 1994), authoritative parenting is typically considered optimal whereas permissive and authoritarian parenting are generally construed as dysfunctional approaches (Baumrind, 1966, 1996).

Conceptually, authoritarian parenting would be expected to relate to child abuse risk, supported by empirical research that observational indices of authoritarian parenting are associated with child abuse potential scores (Haskett et al., 1995). Likewise, although parenting style was not measured specifically, child abuse potential was positively associated with coercive parenting approaches and negatively associated with sensitive and consistent parenting in a community sample of parents (Margolin et al., 2003). Overall, however, the pattern of associations between actual physically abusive behavior and physical discipline, child abuse potential, and different disciplinary styles has not yet been adequately clarified. Indeed, although researchers in this field are more apt to concentrate on authoritarian styles, permissive parenting styles are also considered problematic (Arnold, O'Leary, Wolff, & Acker, 1993 ; Baumrind, 1996) but the literature has not yet explored how permissive styles may relate to child abuse potential. Permissive parenting which results in minimal oversight could conceptually be consistent with neglectful parenting. Given that neglect is often identified in families who engage in physical abuse (DHHS, 2008), it is possible abuse risk relates to permissive parenting styles as well, particularly because the personal issues and attitudes captured by the CAPI may not be unique to physical abuse.

Presumably, parent-child aggression, in the form of both frequent physical discipline and physical maltreatment, would be expected to relate to increased physical child abuse potential and dysfunctional parenting styles. Therefore, the purpose of the present investigation was to evaluate whether child abuse potential, parent-child discipline and abuse, and dysfunctional parenting styles (particularly more authoritarian approaches) would be intercorrelated. Furthermore, parents engaging in parent-child aggression indicative of child maltreatment specifically were expected to demonstrate greater child abuse potential and more maladaptive disciplinary styles. Such associations would provide additional construct validity for the leading measure of abuse risk, the CAPI, as well as lending some insight into how abuse risk and parent-child aggression relate to differing parenting styles. To evaluate these hypotheses, three independent studies were examined, two with low-risk community samples of parents and a third with a clinical at-risk sample of parents of children with externalizing behavior disorders (given that children with behavior problems exhibit behaviors resulting in more frequent discipline incidents that exacerbate abuse risk; Wolfe, 1999).

METHODS

Instruments across All Studies

The Child Abuse Potential Inventory (CAPI; Milner 1986) includes 160 statements to which respondents agree or disagree. Designed to screen for physical child abuse, the CAPI assesses rigidity and intrapersonal and interpersonal difficulties characteristic of identified physically abusive parents. Only 77 items comprise the Abuse Scale score and its six underlying factors, with the remaining statements serving as items for experimental scales or as measures of

distortion biases. The factors within the Abuse Scale include: Distress, Rigidity, Unhappiness, Problems with Child and Self, Problems with Family, and Problems with Others.

With regard to internal consistency of the Abuse Scale score, the CAPI manual reports split-half reliability ranging from.96 (for control groups) to.98 (for abuse groups) and Kuder- Richardson reliability coefficients ranging from.92 (for control groups) to.95 (for abuse groups), suggesting high internal consistency for community, at-risk, and abusive samples (Milner, 1986). Retest reliabilities range from.91 after one day to.75 after 3 months (Milner, 1986). In terms of predictive validity, studies have indicated a correct classification rate of 81.4% of confirmed child abusers and 99% of comparison parents, with an overall pattern indicating that a lower cut-off score leads to classification rates in the low-90s% range and that a higher cut-off score leads to greater false-negatives of child abusers (Milner, 1994).

The Parent-Child Conflict Tactics Scale (CTSPC; Straus et al., 1998) is a revision of an epidemiological survey of family violence, the Conflict Tactics Scale (Straus, 1979). The CTSPC contains 22 items in which a parent reports on the frequency with which they have engaged in a series of behaviors arising from parent-child conflicts (response categories as follows: 0 = this has never happened; 1 = once in the past year; 2 = twice in the past year; 3 = 3-5 times in the past year; 4 = 6-10 times in the past year; 5 = 11-20 times in the past year; 6 = more than 20 times in the past year; 7 = not in the past year, but it happened before). Responses are scored based on the frequency range reported by the parent: responses of 0, 1, and 2 correspond to scores of 0, 1, and 2, respectively; a score of 4 (the midpoint) is assigned for a parent selecting the 3-5 times category; a score of 8 is assigned to the 6-10 times category; a score of 15 is assigned for the 11-20 times category; and a score of 25 is given for the final category, 20 or more times in the past year.

Thirteen of the CTSPC items directly address varying levels of physical tactics applied toward children, comprising a subscale entitled Physical Assault (with subcategories of minor assault/corporal punishment, severe assault/physical maltreatment, and very severe assault/severe physical maltreatment). Given the subcategories, actions tapped by the Physical Assault subscale range from spanking, slapping, or pinching up to beating or burning. In addition to the Physical Assault subscale, four items of the CTSPC comprise the Non-Violent Discipline subscale (including such actions as removal of privileges and "time-out") and five items contribute to the Psychological Aggression subscale (involving such behaviors as verbal threats and yelling). Although the CTSPC Physical Assault scale was of most interest, some intriguing results emerged regarding the Psychological Aggression scales and will be reported and discussed. In addition to analyses using the three subscales, physical maltreatment in particular was isolated by computing a classification score based on parents' report of ever using any of severe assault/physical maltreatment (three items) or very severe assault/severe physical maltreatment (four items) behaviors; respondents indicating that they had engaged in any of the seven maltreatment items were categorized in a CTS Maltreatment group whereas those reporting none of these behaviors were categorized in a CTS No Maltreatment group.

Straus and colleagues (1998) report moderate internal consistency at.55 for the Physical Assault scale,.60 for the Psychological Aggression scale, and.70 for the Nonviolent Discipline scale. These moderate reliability coefficients likely reflect the diverse behaviors included in the measure as well as the very low reported frequency of many of the items (Straus et al., 1998). The authors provide supportive evidence of construct and discriminant validity, and some indication of modest correlations among subscales (Straus et al., 1998).

The Parenting Scale (Arnold et al., 1993) was utilized to identify parents' dysfunctional parenting styles. Thirty items present parents with a typical parent-child conflict situation and asks them to indicate their response to the situation along a 7-point scale, with two opposing reactions at endpoints of each scale. The Parenting Scale yields a Total score intended to indicate overall dysfunctional parenting style. Based on the original factor analysis (Arnold et al., 1993), this general dysfunctional parenting style subsumes three separate response styles: Overreactivity (representing a harsh, angry discipline style, consistent with an authoritarian parenting style), Laxness (reflecting a permissive style of parenting), and Verbosity (in which parents rely on verbal persuasion even when ineffective). However, a subsequent normative sample with 785 parents of 2- to 12-year-old children (Collett, Gimpel, Greenson, & Gunderson, 2001) indicated that a new factor analysis did not support a separate Verbosity factor. Consequently, for the purposes of the present study, the Overreactivity and Laxness subscales were targeted as the most potentially meaningful parenting styles to test the hypotheses. Scores are computed by summing across items for the scale and dividing by the number of items, with higher scores indicative of more dysfunctional parenting styles. An example of an Overreactivity item would offer a prompt, such as "When my child misbehaves" and then asks the parent to select between, "I handle it without getting upset," versus, "I get so frustrated and angry that my child can see I'm upset." An example of a Laxness item would prompt, "When I say my child can't do something" followed by the two choices, "I let my child do it anyway," versus, "I stick to what I said."

Internal consistency reported by the test authors for the Total score is moderately high at.84, with Laxness and Overreactivity at.83 and.82, respectively (Arnold et al., 1993), which are comparable to those reported in the more recent normative study (Collett et al., 2001). Over a 2-week period, test-retest reliability was relatively high for the Total, Laxness, and Overreactivity scores, at.84,.83, and.82, respectively (Arnold et al., 1993). In addition, scores were significantly related to clinical observations of parent-child interactions (Arnold et al., 1993).

Study 1

Participants. In the first study, 327 parents of children younger than 12 responded to an online parenting study. The mean age of these parents was 30.48 years (standard deviation [SD] = 6.22 years), with the majority of respondents female (84%), married (91%), with an average of 1.89 children (SD = 1.1). Respondents identified themselves as Caucasian (84.7%), African American (5.2%), Hispanic (4.0%), Asian (3.7%), American Indian/ Alaskan Native (1.2%), or Other

(1.2%). The mean annual family income was $54,299, with a median of $45,000 that likely more accurately represents the sample because of some outliers. Participants reported on their highest educational attainment: 1.5% not high school graduates, 18.7% high school graduates, nearly 30% with some college or vocational degree, 37% college degree, and 12.8% graduate school.

Procedures. Study procedures were approved by the university institutional review board. Selected World Wide Websites devoted to parenting (e.g., www.ibaby.com, www. parentsoup.com, www.parenting.com) were targeted for an online parenting study. Links to a webpage for the parenting study were advertised on bulletin boards at these sites. Interested parents linked to the study website, which first presented them with an online consent form. Participants were then presented with a series of measures, including the CAPI, Parenting Scale, and CTSPC, which they could complete anonymously. Upon completion of this 60-minunte study, respondents received a gift certificate code for $5 redeemable toward the purchase of an item sold online. Each participant's data was independently screened for accuracy and consistency in responding, with any questionable or incomplete files purged from the data set. For example, any respondent who obtained an elevated score on any of the three CAPI response bias indices was purged from the dataset (n = 38). Any files judged remotely questionable (uniform responding on any measure; n = 24) or largely incomplete (n = 8) were also removed from the data set, yielding 327 verified participants eligible for analyses with complete data on these three measures.

Study 2

Participants. Participants in this second community sample were 115 parents of children between ages 7 and 12; mothers (n = 86) and fathers (n = 29) were recruited for a larger parenting study conducted in a session in their home. The mean age of parents was 37.62 years (SD = 7.91 years), and the majority of parents in this sample (83.5%) reported they were living with a partner, with an average of three children. Based on self-identification, 92.2% described themselves as Caucasian, 6.1% as Hispanic, approximately 1% as Native American, and about 1% as "Other." The mean annual family income was $50,067 per year, with a median of $45,000. Nearly all participants (93.9%) reported graduating from high school, with 7.8% no education past high school; 46.1% reported they attended voca tional school or some college, 28.6% obtained a college degree, and 11.3% reported a graduate school degree.

Procedures. The study protocol was approved by the university institutional review board and the local school district. Parents in this second study were recruited from their child's school from notices/consent forms sent home about a study on factors affecting parenting and discipline. Interested parents returned a contact information sheet from which a 90-minute session was scheduled in their home for them to complete the larger study on a laptop computer. By using a computer, the participants were able to enter their responses to the questions anonymously and efficiently. Part of this study included the CAPI, the Parenting Scale, and the CTSPC, which

were extracted for the present analyses. Parents received $10 as compensation for their time involved participating in this larger study.

Study 3

Participants. A clinical sample of parents constituted the third sample, with participants from a parenting study focusing on mothers of 7- to 12-year-old children with diagnosed externalizing behavior problems. In this study, 74 mothers participated, with a mean age of 40.65 years (SD = 10.53 years). Of these parents, 71.6% reported they were currently living with a partner, and they had an average of three children in the home. Based on self-report, the majority of the sample was Caucasian (82.4%), with 12.2% of Hispanic origin, 2.7% American Indian/ Alaskan Native, 1.4% African American, and 1.4% Asian. The mean annual family income was $41,016, with a median of $35,000. Most of the sample had graduated from high school (83.6%); 22% had no education beyond high school, 43.2% obtained vocational training or some college, 12.2% attained a college degree, and 5.4% attained a graduate degree.

Procedures. Study procedures were approved by the university institutional review board. Mothers were recruited from flyers distributed to mental health agencies and school psychologists working with children with behavior problems. Participants for this parenting study had to be a mother of a child age 5-12 who was receiving mental health services for a diagnosed externalizing behavior problem. Interested parents meeting these criteria were scheduled for a 2-hour session in their home for a larger parenting and discipline study of at-risk children. Parent responses were entered anonymously onto a laptop computer, with the series of questionnaires including the CAPI, the Parenting Scale, and the CTSPC. Mothers received $20 for participating in this larger study.

RESULTS

Preliminary Analyses: Comparison to Previous Norms and Correlations

All statistical analyses were conducted using the SPSS for Windows 15.0 statistical package. Means and standard deviations for the three measures for all three studies appear in Table 1. The obtained sample CAPI Abuse Scale means in Studies 1 and 2 were comparable to the normative sample mean of 91.0 reported in the manual (Milner, 1986), with 14.5% of sample 1 and 15.2% of sample 2 obtaining scores above the clinical cut-off. In contrast, the sample of parents raising children with behavior problems in Study 3, considered an at-risk sample, obtained scores on the CAPI Abuse Scale significantly higher than the normative mean ($t(73) = 5.16$, $p \leq .001$). Although definitive normative means are not reported by the test authors for the Parenting Scale scores (Arnold et al., 1993), the obtained scores for the community samples in Studies 1 and 2 are comparable to those reported in the normative study (individual means per school grade are reported, ranging from 2.77 to 2.94; Collett et al., 2001). In contrast, Parenting Scale scores for Study 3 were comparable to those reported by the test authors for a clinical sample of mothers raising behavior problem children (M = 3.1; Arnold et al., 1993). For the CTSPC, the

epidemiological results present mean scores on the Physical Assault, Psychological Aggression, and Non-Violent Discipline scales only for those who had engaged in at least one of the behaviors in the past month (Straus et al., 1998). Consequently, those means would be considerably higher than those obtained in the present investigation's three studies. For comparison purposes, however, the epidemiological means were 46.0 for Non-Violent Discipline, 21.7 for Psychological Aggression, and 13.4 for Physical Assault (Straus et al., 1998).

Although not part of the research questions for this paper, the correlations between the Parenting Scale Overreactivity and Laxness Scales ranged from r =.33 and.38 (both p <.001) for the two community samples of Studies 1 and 2, consistent with other community samples (r =.36; Prinzie, Onghena, & Hellinckx, 2007); for the Study 3 at-risk sample, the association between the two Parenting Scale scores was r =.62 (p <.001); although generally not reported, one study that included parents raising hard to manage toddlers reported a correlation of r =.58 (Slep & O'Leary, 1997). With regard to correlations within the CTSPC, Physical Assault scores correlated with the Non-Violent Discipline scores ranging from r =.08 to.26 and with the Psychological Aggression scores from r =.27 (p <.05; Study 3) to.62 (p <.001; Study 2); the Non-Violent Discipline scores were correlated with the Psychological Aggression scores ranging from r =.21 (p =.07) to.37 (p < .001). Correlations between the scales of CTSPC have not been traditionally reported and are greatly impacted by sampling characteristics.

Correlational Analyses

Correlations among the measures were examined (see Table 1). Given the number of correlations of interest, a more conservative significance level of.01 per study was adopted for these analyses.

CAPI and Parenting Scale Correlations. An examination of the pattern of these relationships indicates that across the three samples, CAPI Abuse Scale scores were significantly positively correlated with Parenting Scale scores (Overreactivity and Laxness). However, the CAPI Abuse Scale scores appear to be more strongly correlated with Overreactivity than with Laxness scores, with the exception of the third study sample. Indeed, for Study 1, the CAPI Abuse Scale correlation with Overreactivity was significantly stronger (T 2 = 6.62, p <.001) than the CAPI correlation with Laxness (based on Steiger's [1980] recommendations regarding Williams' formula for comparing dependent correlations). Similarly, for Study 2, the difference between the CAPI Abuse Scale-Overreactivity and CAPI Abuse Scale-Laxness correlations were also significantly different (T 2 = 2.74, p <.01). Only the third sample of at-risk parents demonstrated an association between CAPI Abuse Scale and Laxness (r =.49) virtually equivalent to the CAPI Abuse Scale association with Overreactivity (r =.50).

CAPI and CTSPC Correlations. With respect to the association between the CAPI and the CTSPC scales, across all three studies, abuse potential was not significantly correlated with reported CTSPC Non-Violent Discipline tactics. Interestingly, the overall pattern of associations

suggests the CAPI Abuse Scale scores were related to reported use of Psychological Aggression virtually comparable to the use of Physical Assault actions.

CTSPC and Parenting Scale Correlations. Turning to the associations between the Parenting Scale and the CTSPC, Parenting Scale scores were not significantly related to the CTSPC Non-Violent Discipline items. However, for the at-risk sample of Study 3, more use of permissive parenting approaches was marginally associated with lower use of CTSPC Non-Violent discipline tactics (marginal given the reduced significance level). Across all three studies, Parenting Scale Overreactivity scores were significantly associated with the general parent-child aggression assessed by the CTSPC Physical Assault scale. Furthermore, across studies the Parenting Scale Overreactivity scores were also significantly associated with the CTSPC Psychological Aggression, in all cases of higher magnitude than with the Physical Assault scale. The Parenting Scale Laxness scores were not significantly correlated with either the CTSPC Physical Assault or Psychological Aggression scales across all three studies (although for the at-risk sample of Study 3, Laxness was marginally associated with greater frequency of physical assault behaviors).

Maltreatment Classification Group Differences

Parents were classified into maltreatment groups based on their responses to only the maltreatment items on the CTSPC. Differences between these two groups for each study appear in Table 2. For Study 1, 6.1% of the sample endorsed at least one item of maltreatment. Those parents classified into the Maltreatment Group obtained significantly higher CAPI Abuse Scale scores and Parenting Scale scores than those who reported no instances of administering physical maltreatment toward their children. For Study 2, 20% of the parents in this community sample were classified into the Maltreatment Group. Those parents indicating they had engaged in any physical maltreatment obtained higher CAPI Abuse Scale scores and higher Parenting Scale Overreactivity scores than those who did not report such tactics. The obtained difference between the two groups was in the expected direction for the Parenting Scale Laxness scores, but was only marginally significant ($p = .067$). In Study 3, 17.6% of parents were classified into the Maltreatment Group. Again, the Maltreatment group differed from the No Maltreatment Group on the CAPI Abuse Scale and the Parenting Scale Overreactivity scores but not on the Laxness scores.

DISCUSSION

The current investigation included three independent studies to evaluate the connections among child abuse potential, physical discipline and child abuse, and dysfunctional parenting style. Two studies involved lower risk community samples whereas the third study involved an at-risk group of parents. Overall, the results suggest a pattern of associations whereby parent-child physical aggression in various forms is associated with both dysfunctional parenting style (particularly more authoritarian approaches) and child abuse potential.

Across all studies, reported physically aggressive behavior in general, inclusive of corporal punishment, was significantly associated with increased child abuse potential. Furthermore, parents who reported they had engaged in behavior that would be considered physical maltreatment obtained significantly higher CAPI scores than those who did not report ever using any of those tactics. These findings lend support to the construct validity of the CAPI and are consistent with findings regarding the ability of the CAPI to distinguish physically abusive parents and predict future abuse (Milner, 1994). Consequently, child abuse potential appears associated with the actual reported use of corporal punishment in addition to physical maltreatment behaviors specifically.

Similarly, as hypothesized, results from all three studies suggest that overall parent- child aggression is related to dysfunctional, overreactive, authoritarian parenting. Similar results were obtained in the comparison of those parents who had engaged in some type of physical maltreatment behavior versus those who had not. In contrast, parent-child aggression in general was not significantly correlated with permissive parenting approaches in any of the samples. However, an examination of group differences for those parents who specifically engaged in maltreatment behaviors indicated that lax parenting was indeed more frequently reported in the first community sample but only marginally in the second community sample. Given that permissive parenting is considered problematic (Baumrind, 1966, 1996), notably with respect to behavior problems (Arnold et al., 1993), it is intriguing to find the marginal correlation of permissive parenting style to general parent-child aggression observed only in the at-risk sample of parents raising children with behavior problems. The reduced power in this last sample may complicate identifying significance. However, it may be this finding reflects that parents raising children with behavior problems are inconsistent, vacillating between permissive and overreactive discipline strategies (as evidenced by their strong correlation in that sample). Overall, this pattern does suggest that greater inquiry into the link between permissive parenting practices and parent-child aggression may be warranted, especially in at-risk samples.

Interestingly, although not the main focus of this investigation, across all three samples, greater child abuse potential was also significantly associated with parents' use of psychological aggression although not with the use of non-violent discipline. This connection of the CAPI (which targets physical abuse risk) to psychological aggression likely underscores the intersection between instances of physical maltreatment and psychological maltreatment (e.g., Claussen & Crittenden, 1991). Yet it is also notable that dysfunctional parenting style scores (namely Overreactivity) were more strongly related to psychological aggression than with parent-child physical aggression. Given that earlier studies have linked parental verbal aggression to psychosocial problems in children (e.g., Vissing, Straus, Gelles, & Harrop, 1991), further study of psychological aggression may prove insightful to understanding the correlates of emotional maltreatment (see Glaser, 2002, for review of emotional abuse). Potentially, an authoritarian parenting style may involve psychological aggression tactics that precede and escalate into physical discipline encounters. An interesting avenue for future research could

pursue investigating such a progression, although the design of such a study would be admittedly challenging.

Additionally, as anticipated, greater child abuse potential was also significantly associated with dysfunctional disciplinary style across the studies. For the two community samples, this association largely reflected the strength of an overreactive, authoritarian discipline style, consistent with prior research (e.g., Haskett et al., 1995 ; Margolin et al., 2003). However, for the third at-risk clinical sample, child abuse potential was also strongly associated with a lax discipline approach. As noted earlier regarding the findings on parent-child aggression, perhaps for at-risk samples both authoritarian and permissive dysfunctional parenting styles are associated with abuse risk. The nature of some of the personal problems and attitudes captured by the CAPI items could readily be associated with more neglectful parenting, which is consistent with the under-involved, permissive approach tapped by the Parenting Scale Laxness scale. Future studies should consider whether other at-risk parents demonstrate a similar pattern of abuse risk relating to harsh as well as permissive discipline styles.

A number of limitations to the present study should be acknowledged. Although the current investigation drew from three separate samples of parents in order to minimize the limitations of a single given study, all three are limited by their reliance on parental self-report. All of the studies obtained information from parents anonymously but parents' responses may still be susceptible to underreporting. Therefore, some of these findings may actually reflect conservative estimates of physical discipline use, maltreatment, and abuse risk. Optimally, a study that involves child abuse potential, discipline style, and parent- child aggression could be supplemented by observations of parent-child behavior (e.g., see Haskett et al., 1995 study of abuse potential and observations), although self-report for such constructs is typical because of the inherent difficulty of observing such behaviors. Furthermore, data were gathered from a single source (the parent), which may amplify observed associations. Nonetheless, meaningful distinctions were detected among different parenting styles and aggression types using three measures with no item overlap.

In addition, the nature of the individuals who participated across studies should also be considered given that, despite compensation for participation, the samples involved parents who were willing to participate in a research study. Again, this issue may have led to more conservative estimates of the variables of interest. Yet a considerable minority of the first two community samples obtained clinically elevated CAPI scores, suggesting that abuse risk is apparent even among populations not identified as at-risk (e.g., as compared to Sample 3). Moreover, greater ethnic diversity in the sample distribution should be a goal in future research, and the online sample of the first study appears relatively better educated than either of the two subsequent studies. Although the third sample included at-risk parents, a more thorough investigation with other potential secondary prevention groups would be useful. Indeed, a research design with at-risk samples, accompanied by a group of parents who have been

substantiated for abuse, could provide a comparison of how such issues may differ across different risk groups.

Overall, in order to advance prevention efforts, future research should continue to investigate how different parenting styles may relate to physical abuse risk and parent-child aggression. Progressive approaches to prevention could identify which parenting strategies could be modified that may in turn decrease the incidence of not only abusive parent-child aggression but perhaps aggressive tactics more broadly, including psychological aggression. Identification of the salient parenting attitudes and behaviors linked to varying levels and manifestations of parent-child aggression may help clarify how best to intervene on the continuum of behaviors that emerge during parent-child conflicts.

References

Arnold, D. S., O'Leary, S. G., Wolff, L. S., & Acker, M. M. (1993). The Parenting Scale: A measure of dysfunctional parenting in discipline situations. Psychological Assessment, 2, 137-144.

Baumrind, D. (1966). Effects of authoritative parental control on child behavior. Child Development, 37, 887-907.

Baumrind, D. (1996). The discipline controversy revisited. Family Relations, 45, 405-414.

Baumrind, D. (1972). An exploratory study of socialization effects on black children: Some Black- White comparisons. Child Development, 43, 261-267.

Caliso, J. A., & Milner, J. S. (1992). Childhood history of abuse and child abuse screening. Child Abuse & Neglect, 16, 647-659.

Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. Child Development, 65, 1111-1119.

Claussen, A., & Crittenden, P. (1991). Physical and psychological maltreatment: Relations among types of maltreatment. Child Abuse & Neglect, 15, 5-18.

Collett, B. R., Gimpel, G. A., Greenson, J. N., & Gunderson, T. L. (2001). Assessment of discipline styles among parents of preschool through school-age children. Journal of Psychopathology and Behavioral Assessment, 23, 163-170.

DeGarmo, D. S., Reid, J. B., & Knutson, J. F. (2006). Direct laboratory observations and analog measures in research definitions of child maltreatment. In M. Feerick, J. F. Knutson, P. Trickett, & S. Flanzier (Eds.), Child abuse and neglect: Definitions, classifications, and a framework for research (pp. 293-328). Baltimore : Brooks.

Edwards, V. J., Holden, G. W., Felitti, V. J., & Anda, R. F. (2003). Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: Results from the adverse childhood experiences study. American Journal of Psychiatry, 160, 1453-1460.

Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. Psychological Bulletin, 128, 539-579.

Gonzalez, M., Durrant, J. E., Chabot, M., Trocme, N., & Brown, J. (2008). What predicts injury from physical punishment? A test of the typologies of violence hypothesis. Child Abuse & Neglect, 21, 752-765.

Glaser, D. (2002). Emotional abuse and neglect (psychological maltreatment): A conceptual framework . Child Abuse & Neglect, 26, 697-714.

Graziano, A. M. (1994). Why we should study subabusive violence against children. Journal of Interpersonal Violence, 9, 412-419.

Greenwald, R. L., Bank, L., Reid, J. B., & Knutson, J. F. (1997). A discipline-mediated model of excessively punitive parenting. Aggressive Behavior, 23, 259-280.

Haskett, M. E., Scott, S. S., & Fann, K. D. (1995). Child abuse potential inventory and parenting behavior: Relationships with high-risk correlates. Child Abuse & Neglect, 19, 1483-1495.

Herrenkohl, R. C., Herrenkohl, E. C., & Egolf, B. P. (1983). Circumstances surrounding the occurrence of child maltreatment. Journal of Consulting and Clinical Psychology, 51, 424-431.

Jones, E. D., & McCurdy, K. (1992). The links between types of maltreatment and demographic characteristics of children. Child Abuse & Neglect, 16, 201-215.

King, G., Trocme, N., & Thatte, N. (2003). Substantiation as a multiplier process: The results of a NIS-3 Analysis. Child Maltreatment, 8, 173-182.

Margolin, G., Gordis, E. B., Medina, A. M., & Oliver, P. H. (2003). The co-occurrence of husband-towife aggression, family-of-origin aggression, and child abuse potential in a community sample. Journal of Interpersonal Violence, 18, 413-440.

Milner, J. S. (1986). The Child Abuse Potential Inventory: Manual (2nd ed.). Webster, NC: Psyctec.

Milner, J. S. (1994). Assessing physical child abuse risk: The Child Abuse Potential Inventory. Clinical Psychology Review, 14, 547-583.

Milner, J. S., Gold, R. G., Ayoub, C., & Jacewitz, M. M. (1984). Predictive validity of the Child Abuse Potential Inventory. Journal of Consulting and Clinical Psychology, 52, 879-884.

Milner, J. S., Gold, R. G., & Wimberley, R. C. (1986). Prediction and explanation of child abuse: Cross-validation of the Child Abuse Potential Inventory. Journal of Consulting and Clinical Psychology, 54, 865-866.

Prinzie, P., Onghena, P., & Hellinckx, W. (2007). Reexamining the Parenting Scale: Reliability, factor structure, and concurrent validity of a scale for assessing the discipline practices of mothers and fathers of elementary-school-aged children. European Journal of Psychological Assessment, 23, 24-31.

Rodriguez, C. M., & Richardson, M. J. (2007). Stress and anger as contextual factors and pre-existing cognitive schemas: Predicting parental child maltreatment risk. Child Maltreatment, 12, 325-337.

Runyon, M. K., Deblinger, E., Ryan, E. E., & Thakkar-Kolar, R. (2004). An overview of child physical abuse: Developing an integrated parent-child cognitive-behavioral treatment approach. Trauma, Violence, & Abuse, 5, 65-85.

Salzinger, S., Feldman, R. S., Hammer, M., & Rosario, M. (1991). Risk for physical child abuse and the personal consequence for its victims. Criminal Justice and Behavior, 18, 64-81.

Sedlak, A. J., & Broadhurst, D. D. (l996). Third national incidence study of child abuse and neglect: Final report. Washington, DC : U.S. Dept of Health and Human Services.

Slep, A. M., & O'Leary, S. G. (1997). Pre-emptive parenting: Relations with discipline style and child behavior. Poster presented at the annual conference of the Association for the Advancement of Behavior Therapy, Miami, FL.

Steiger, J. H. (1980). Tests for comparing elements of a correlation matrix. Psychological Bulletin, 87, 245-251.

Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics Scales. Journal of Marriage and Family, 41, 75-88.

Straus, M. A. (2000). Corporal punishment and primary prevention of physical abuse. Child Abuse & Neglect, 24, 1109-1114.

Straus, M. A. (2001a). Beating the devil out of them: Corporal punishment in American families and its effects on children. New Brunswick, NJ: Transaction.

Straus, M. A. (2001b). New evidence for the benefits of never spanking. Society, 38, 52-60.

Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. Child Abuse & Neglect, 22, 249-270.

Straus, M. A., & Stewart, J. H. (1999). Corporal punishment by American parents: National data on prevalence, chronicity, severity, and duration, in relation to child and family characteristics. Clinical Child and Family Psychology Review, 2, 55-70.

United States Department of Health and Human Services. (2008). Child Maltreatment 2006. Washington, DC: Government Printing Office.

Veltkamp, L. J., & Miller, T. J. (1994). Clinical handbook of child abuse and neglect. Madison, CT : International Universities Press.

Vissing, Y. M., Straus, M. A., Gelles, R. J., & Harrop, J. W. (1991). Verbal aggression by parents and psychosocial problems of children. Child Abuse & Neglect, 15, 223-238.

Whipple, E. E., & Richey, C. A. (1997). Crossing the line from physical discipline to child abuse: How much is too much? Child Abuse & Neglect, 5, 431-444.

Whipple, E. E., & Webster-Stratton, C. (1991). The role of parental stress in physically abusive families. Child Abuse and Neglect, 15, 279-291.

Wolfe, D. A. (1999). Child abuse: Implications for child development and psychopathology. Thousand Oaks, CA: Sage.