Predictors of Child Abuse Potential Among Military Parents: Comparing Mothers and Fathers

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The present study examines the predictors of child abuse potential for at-risk fathers and mothers serving as active duty Army members and their spouses. Although fathers are perpetrators of child physical abuse and neglect in a substantial portion of reported cases, what is known about factors associated with child maltreatment comes almost exclusively from studies of perpetrating mothers. Thus, the inclusion of a large sample of fathers in the present study makes a significant contribution to the extant literature. Participants were 175 fathers (93% active-duty) and 590 mothers (16% active duty) of young children enrolled in an Army-sponsored home visitation program. Regression analyses indicated that there were both common and unique predictors of child abuse potential for mothers and fathers. Common predictors included depression, parental distress, and family conflict. Low family expressiveness was predictive only for fathers, whereas marital dissatisfaction, low social support, and low family cohesion were predictive only for mothers. Possible reasons for these gender differences and the implications of these results for child maltreatment interventions are discussed.

KEY WORDS: child maltreatment; prevention; gender differences; parenting; military families.

According to national child maltreatment statistics, fathers are the primary perpetrators of child physical abuse in almost as many cases as mothers (45 and 55%, respectively) and comprise a sizeable minority of perpetrators (28%) of child neglect (U.S. Department of Health and Human Services, 1998). Despite these data, the existing knowledge base regarding predictors of child physical abuse and neglect is based almost exclusively on research with abusive mothers. A review of child maltreatment studies published between 1989 and 1994 revealed that abusive fathers comprised only 23% of all perpetrators studied and were rarely compared empirically to abusive mothers; when abusive fathers and mothers were compared, gender differences on the factors related to abusive behavior were found 67% of the time (Haskett *et al.*, 1996). The lack of adequate representation of fathers in

the child physical abuse and neglect literature has been discussed by other reviewers (e.g., Bradley & Lindsay, 1987; Langeland & Dijkstra, 1995; Martin, 1984; Phares & Compas, 1992) and calls into question the relevance of abuse theories and treatment approaches for male perpetrators.

There is evidence to suggest that the factors associated with abusive parenting may vary substantially depending on whether mothers or fathers are examined. For example, in a study comparing mother and father perpetrators of child physical abuse to nonabusing parents, Perry, Wells, and Doran (1983) found that a history of abuse, low self-esteem, anxiety, and inappropriate parenting expectations were characteristic of abusive mothers, but not abusive fathers; other correlates such as low family cohesion and high family conflict were characteristic of both abusive mothers and fathers. In a study comparing physically abusive and nonabusive parents, Whipple and Webster-Stratton (1991) found that high rates of depression, marital dissatisfaction, negative life experiences, social isolation, and self-report of child behavior problems were characteristic of abusive mothers, but not abusive fathers; abusive and nonabusive fathers were differentiated only by how

often they spanked their children. In a study examining child maltreatment within families with an alcoholic parent, Muller *et al.* (1994) found that low social support and high life stress both directly predicted child maltreatment for fathers, whereas for mothers, low social support predicted maltreatment only under conditions of high stress. Given these gender differences, it is clear that more studies are needed in which commonly accepted correlates of abusive parenting are examined separately for mothers and fathers.

The purpose of the present study was to examine the unique and common predictors of child abuse potential for mothers and fathers in a sample of active-duty Army members and their spouses. Well-standardized measures assessing a range of factors known to be associated with physical child abuse (e.g., parental depression, family conflict) were selected to determine their predictive potential for mothers and fathers. Given the paucity of research examining predictors of child abuse potential separately for mothers and fathers, analyses in the present study were done on an exploratory basis.

METHOD

Participants

Participants were 590 mothers and 175 fathers receiving services through the Army New Parent Support Program (NPSP) at 27 Army installations located in the United States, Germany, and Japan. All Army parents of young children are eligible for the program. The NPSP provides parenting education, playgroups, support groups, and home visitation to parents of children from birth through 6 years of age. These services are administered by a professional staff of nurses and social workers. In the present sample, all parents were receiving home visitation services at the time of data collection.

The NPSP received referrals for services from a variety of sources, including hospitals and Army and civilian social service agencies (59%); in addition, many parents (41%) were self-referred. In some cases of substantiated child maltreatment, enrollment in the program was required by the Case Review Committee as part of the service member's treatment plan. In the present study, 16% of families had a case of child maltreatment substantiated by a local child protection agency or a military Case Review Committee prior to their participation in the study. In addition, 26% of mothers and 22% of fathers were considered to be at high risk for child maltreatment because their scores exceeded the conservative cutoff for risk (i.e., scores greater than 215) on the Child Abuse Potential Inventory (CAPI; Milner, 1986). The high rates of substantiated child maltreatment and risk for maltreatment in

the present sample are a result of referral biases inherent in the NPSP; families with substantiated maltreatment or perceived risk for maltreatment are more likely to be referred for or mandated to participate in NPSP services, and have top priority for receiving services over low-risk families when there are waitlists. Although the sample is not representative of all military families with young children, participants reflect a diverse range of characteristics that make the sample appropriate for the examination of differences between mothers' and fathers' child abuse potential.

To be eligible for NPSP services, at least one parent was required to be an active duty service member in the Army. In this sample, the active duty family member was usually the father (93% of cases), although a portion of mothers (16%) were also on active duty status. Forty-seven percent of participating families lived in on-post Army housing; the remainder lived in off-post civilian housing. The highest educational level obtained by mothers and fathers, respectively, was as follows: less than a high school degree, 11% versus 1%; high school diploma, 44% versus 52%; some college, 33% versus 35%; and college graduate or higher, 12% versus 12%. The vast majority of fathers (96%) were employed, whereas the majority of mothers (71%) were not employed outside the home. The average age of participants was 24.4 years (SD = 5.20) for mothers and 26.4 years for fathers (SD = 5.55).

As is common with samples of military families, the majority of parents that participated in the research were married (88% of mothers and 92% of fathers), although a portion (4% of mothers and 4% of fathers) were divorced or separated. A small number of mothers and fathers were single parents who had never been married (6 and 1%, respectively) or were living with a partner as though married (2 and 3%, respectively). Fifty-four percent of households had only one child, 29% had two children, and 16% had three or more children. The average age of the child targeted for NPSP services was 28 months. Ninety-seven percent of mothers and 82% of fathers were biological parents of the targeted child. The sample was racially diverse. Of mothers, 59% were Caucasian, 18% were African American, 15% were of Spanish or Hispanic descent, and 8% were of other races (e.g., Native American, Asian American). Similarly, of fathers, 61% were Caucasian, 18% were African American, 15% were of Spanish or Hispanic descent, and 6% were of other races.

Procedure

Upon referral, home visitors contacted families to determine their willingness to participate in NPSP services and to arrange for a first home visit. At the first meeting, home visitors explained that a voluntary

component of the program was participation in a research project designed to understand the needs of Army parents of young children. Parents were assured that their decision to participate in the research component would in no way affect their receipt of NPSP services and that all information gathered for the research would be kept confidential. For two-parent families, mothers and fathers were asked independently of one another to participate. Each parent in the sample who agreed to participate signed a separate informed consent agreement.

Consenting parents then were given a booklet of self-report measures in one of the first three sessions, and were asked to complete the booklet before the next home visit. Parents were instructed to complete the booklet independently, and to seal it in an envelope provided by the home visitor. The only identifying information on the booklet was a unique family identification number and an indication of which parent (i.e., mother or father) completed the booklet. Home visitors then retrieved the sealed packets from the home within one week and mailed them to a centralized research center, where data were processed. For those cases in which literacy or English-language fluency might have prevented a parent from completing the booklets independently, home visitors or trained research assistants orally administered the booklet to the parent in a private interview session. In these cases, the interviewers read items aloud while participants marked responses in a separate booklet. Participants then placed their completed booklets in envelopes and sealed them. Both procedures (i.e., self and oral administration) required approximately one hour to complete. Regardless of the procedure used, local staff did not have access to participant responses. Nonidentifying family demographic information obtained by home visitors from parent interviews during the first three home visits was sent to the research center under separate cover.

Measures

Six self-report measures commonly used in child maltreatment research were chosen in order to identify differences on child abuse potential between mothers and fathers. Means and standard deviations for each of the measures is listed for each parent in Table I. Measures were administered in the order listed below.

Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977)

The CES-D was used to measure depression. This measure requires participants to report how many times each of 20 depressive symptoms had occurred in the pre-

Table I. Means and Standard Deviations for Self-Report Measures

Measure	Parent		
	Mothers	Fathers	*F*
CES-D			
M	18.91	15.24	12.78**
SD	12.24	11.43	
CAPI			
M	149.27	136.84	1.81
SD	108.28	103.96	
FES: cohesion			
M	6.59	6.64	0.05
SD	2.36	2.18	
FES: conflict			
M	2.72	2.83	0.34
SD	2.35	2.28	
FES: control			
M	4.04	4.12	0.30
SD	1.67	1.59	
FES: expressiveness			
M	6.06	6.15	0.33
SD	1.91	1.86	
FES: organization			
M	5.13	4.82	2.44
SD	2.28	2.43	
PSI-SF total stress			
M	79.72	79.46	0.02
SD	20.84	22.20	
RDAS			
M	46.64	48.31	2.97
SD	11.66	9.80	
SSQ-6–network number			
M	3.09	2.52	13.76**
SD	1.82	1.74	
SSQ-6–satisfaction			
M	4.84	5.11	8.76**
SD	1.13	0.85	

Note. CES-D: Center for Epidemiological Studies Depression Scale; CAPI: Child Abuse Potential Inventory; FES: Family Environment Scale; PSI-SF: Parenting Stress Inventory, Short Form; RDAS: Revised Dyadic Adjustment Scale; and SSQ-6: Social Support Questionnaire, 6 item version. $N = 590$ for mothers and 175 for fathers.
*$p < .05$. **$p < .01$.

vious week. The CES-D has a high degree of internal consistency, construct validity, and concurrent validity when compared to clinical diagnostic criteria as well as to other self-report scales of depression (Radloff, 1977). A score of 16 has consistently been used as a cutoff for clinically significant levels of depression. In the present study, 56% of mothers and 37% of fathers had scores of 16 or higher.

Child Abuse Potential Inventory (CAPI), Abuse Subscale (Milner, 1986)

The CAPI Abuse Subscale is a 77-item self-report screening instrument designed to assess the degree to

which parents endorse personality traits, beliefs, and attitudes toward parenting that are similar to those of parents convicted of physical child abuse. The abuse scale assesses parental functioning in six domains: distress, rigidity, unhappiness, problems with self or child, problems with family, and problems with others. The CAPI Abuse Scale has been shown in research studies to effectively differentiate between parents substantiated for physical child abuse and nonabusing parents with an average classification accuracy rate of 89% (Milner, 1986). It should be noted that the abuse subscale has not been shown to be effective in differentiating neglectful parents from nonneglectful parents. In addition, abuse subscale scores have also been shown to be associated with other parental factors known to be correlated with abuse, such as parental history of childhood abuse, life stress, and depression. Scores on the CAPI abuse scale range from 0 to 486; Milner (1986) recommends a cutoff score of 215 as a conservative estimate for identifying parents with abusive characteristics, although a cutoff score of 166 also has been shown to be an effective predictor. As noted earlier, 26% of mothers and 22% of fathers exceeded the conservative cutoff, and 40% of mothers and 29% of fathers exceeded the more liberal cutoff.

Family Environment Scale, Real Form
(FES-R; Moos & Moos, 1994)

The FES-R is a self-report questionnaire designed to assess family members' perceptions of their family functioning in 10 domains. For the purposes of this evaluation, the following domains were assessed: cohesion, conflict, control, expressiveness, and organization. FES-R subscale scores have been shown to effectively differentiate families identified as distressed (such as those seeking family therapy, involved with the juvenile court, or having children in need of foster care) from nondistressed families.

Revised Dyadic Adjustment Scale
(RDAS; Busby et al., 1995)

The RDAS measures how happy people in relationships are with their romantic partners. The instrument has been found to reliably differentiate distressed (i.e., those seeking psychotherapy for marital problems) from nondistressed couples (i.e., couples not presenting for treatment); higher scores indicate better marital adjustment. In a normative study, nondistressed couples had an average score of 52.3 while distressed couples averaged 41.6 on the instrument.

Parenting Stress Index, Short Form
(PSI-SF; Abidin, 1990)

The PSI-SF is a 36 item questionnaire designed to assess the degree of stress parents experience regarding their parenting. Several areas of parenting satisfaction are assessed, including overall parental distress, whether parents perceive their child to be difficult, and the quality of parents' interactions with their child. Although there have been no validation studies using the short form, the PSI-SF total score correlates .94 with the full length version of the instrument; the total score on this full length version has been shown to be related to both child (e.g., behavior problems, physical disabilities) and parent (e.g., depression, strained marital relations) difficulties. The PSI-SF total score yields an overall index of a parent's degree of stress surrounding parenting; research has identified a score of 90 or above to be clinically significant, indicating a need for professional assistance. In the present sample, 32% of mothers and 30% of fathers had total scores higher than 90.

Social Support Questionnaire, 6 Item Version
(SSQ6; Sarason, Sarason, Shearin, & Pierce, 1987)

The SSQ6 measures the size (i.e., number of people) of the respondent's social support network and how satisfied the respondent is with that network. Respondents list the names of people on whom they can count to support them in six different domains (e.g., to feel more relaxed, to console them when upset). Then respondents rate how satisfied they are with the support they receive in that domain using a Likert scale of 1 "very dissatisfied") to 6 ("very satisfied"). Developers of the SSQ6 have found the correlation between network number and satisfaction to be low ($r = .34$; Sarason *et al.*, 1987), suggesting distinct components of social support. Although the SSQ6 has not been normed on new parents or active duty personnel, norms for a sample of university undergraduates suggest that well-functioning young adults have an average social network size of 4.25 and an average satisfaction level of 5.38 (Sarason *et al.*, 1987).

RESULTS

One-way analyses of variance (ANOVAs) were conducted to determine mean differences between mothers and fathers on initial level of functioning. As can be seen in Table I, mothers were significantly more depressed than fathers on average, based on CES-D scores. In addition, mothers averaged significantly larger, but significantly

Table II. Predictors of Mothers' and Father's Child Abuse Potential

Variables	Mothers ($n = 589$)		Fathers ($n = 174$)	
	ΔR^2	β	ΔR^2	β
Step 1: demographic characteristics	.03**		.03*	
Parent age		−.04		−.06
Parent education		−.17		−.18*
Race		−.05		.06
Step 2: psychological functioning	.74**		.70**	
CES-D		.57**		.55**
FES cohesion		−.09**		−.10
FES conflict		.08*		.14*
FES control		.02		.06
FES expressiveness		.00		−.10*
FES organization		−.01		.02
PSI-SF total stress		.14**		.15**
RDAS		−.10**		−.04
SSQ-6–network number		−.03		.00
SSQ-6–satisfaction		−.05*		.03

Note. Education (1 = less than high school, 2 = high school diploma, 3 = some college, 4 = college degree or higher) and race (1 = native American, 2 = African–American, 3 = Asian–American, 4 = White, 5 = nonwhite/nonHispanic, 6 = Hispanic) were treated as categorical variables in these hierarchical regression analyses. CES-D: Center for Epidemiological Studies Depression Scale; FES: Family Environment Scale; PSI-SF: Parent Stress Inventory, Short Form; RDAS: Revised Dyadic Adjustment Scale; SSQ-6: Social Support Questionnaire, 6-item version.
*$p < .05$. **$p < .01$.

less satisfying, social networks than did fathers (see Table I).

Two sets of regression analyses were conducted in which the effects of psychological functioning (assessed on self-report measures) on the CAPI Abuse Scale were evaluated after controlling for the effects of key demographic characteristics (i.e., parent age, education level, and race). Specifically, the three PSI subscale scores, the five FES subscale scores, the RDAS total score, the CES-D total score, and the SSQ Network Number and Satisfaction scores were entered into separate regression equations for mothers and fathers, in an attempt to predict parents' scores on the CAPI (see Table II).

For mothers, the overall model was statistically significant ($R^2 = .74$, $F(13, 589) = 130.19$, $p < .0001$). Six measures were significantly related to child abuse potential: depression, as measured by the CES-D ($t = 20.23$, $p < .0001$); parental stress, as measured by the PSI-SF ($t = 5.44$, $p < .0001$); family conflict ($t = 2.44$, $p < .02$) and family cohesion ($t = -2.57$, $p < .01$), as measured by the FES; marital adjustment, as measured by the RDAS ($t = -3.06$, $p < .01$); and satisfaction with social support, as measured by the SSQ6 ($t = -2.18$, $p < .05$). For fathers, the overall regression equation was also statistically significant ($R^2 = .70$, $F(13, 174) = 32.48$, $p < .0001$). Four measures were significantly related to

child abuse potential: CES-D depression ($t = 10.33$, $p < .0001$); parental stress ($t = 2.76$, $p < .01$); family conflict ($t = 2.28$, $p < .05$); and family expressiveness, as measured by the FES ($t = -1.99$, $p < .05$). Thus, depression, parental stress, and family conflict predicted child abuse potential for both mothers and fathers, whereas poor marital adjustment, low satisfaction with social support, and low family cohesion were predictive of abuse potential only for mothers and low family expressiveness was predictive only for fathers.

LIMITATIONS OF THE PRESENT STUDY

This study has several limitations. First, although this sample included a sizeable number of parents with substantiated cases of child physical abuse or neglect (16%), predictions of abusive behavior were made on the basis of CAPI scores rather than incidents of actual child maltreatment. A prospective design in which parent risk factors were used to predict future abusive behavior would have provided a more rigorous examination of the predictors of abusiveness among mothers and fathers. However, because of confidentiality considerations raised by the Army, it was not possible to obtain prospective child abuse information in the present study.

A second limitation is that fewer fathers than mothers participated in the study, most likely because the majority of fathers enrolled in the New Parent Support Program (NPSP) were employed as active-duty military personnel. It is possible that fathers who declined to participate were less available for research because of their job demands; alternatively, active-duty fathers may have had concerns that their responses to research items would be discovered by the Army command. Although fewer fathers participated, there are no known systematic differences between fathers who consented to the research component of NPSP and those who did not. In addition, power analyses (i.e., statistical tests that determine the probability of finding an effect given the sample size and number of predictors examined) suggested that the number of fathers in the present sample was sufficient to detect an effect of moderate size.

DISCUSSION

Despite these limitations, this study provides further evidence for differences between mothers and fathers in the prediction of child abuse potential. For example, low family expressiveness predicted child abuse potential for fathers but not for mothers. Low family expressiveness has been found to be characteristic of families with traditional and rigid parental sex roles in which the father is viewed as the dominant authority in the family (Moos & Moos, 1994). It is possible that for this sample of predominantly active-duty military fathers, low family expressiveness is a marker for traditional values in which rigid and controlling attitudes towards children, such as those measured by the CAPI, are tolerated.

Poor marital adjustment, dissatisfaction with social support networks, and low family cohesion predicted child abuse potential for mothers but not for fathers. Although marital dissatisfaction and poor social support have been associated with child maltreatment in numerous studies examining mothers (e.g., Bishop & Leadbeater, 1999; DePanfilis, 1996; Lacharite *et al.*, 1996; Whipple & Webster-Stratton, 1991), only one published study (Coohey, 2000) has found evidence that social support factors are relevant in explaining fathers' child abuse potential. There are several possible reasons for this gender difference. First, it is quite possible that women value social support more than men, and thus are more adversely affected in their role functioning (e.g., in the role of parent) when social/spousal support is not available (Beutel & Marini, 1995; Kunkel & Burleson, 1999; Vaux, 1985; Walsh & Jackson, 1995). Alternatively, it is possible that dissatisfaction with social and spousal support

leads to poorer role functioning for both men and women (Umberson *et al.*, 1996), but because women traditionally are the primary caregivers of children, their roles as mothers are more adversely affected by low support than are men's roles as fathers. A third possible explanation involves the relationship between life events and social support; several studies of child maltreatment have found that for mothers, high levels of social support buffer the effects of adverse life events on negative parenting practices (Kotch *et al.*, 1997; Muller *et al.*, 1994). It may be that in the present sample, mothers were more adversely affected by the stresses facing military families (e.g., deployment, relocation) than were fathers, and consequently were more susceptible to the effects of low social support. Additional research that examines the role of life events, social support, and marital satisfaction in the prediction of father's child maltreatment is needed to clarify these apparent gender differences.

For both mothers and fathers, depression, stress surrounding parenting, and family conflict predicted child abuse potential. Although family conflict has been identified as a common predictor of abusiveness for both mothers and fathers in previous research (Perry *et al.*, 1983), depression has been linked to mothers', but not fathers', abusive behavior (Whipple & Webster-Stratton, 1991). The findings from the present study suggest that depression is an equally important risk factor for both mothers and fathers. Clearly, interventions which address depression for both parents should be an important component of services for at-risk families.

The findings of the present study contribute to the mounting evidence that there are unique and common predictors of child abuse among mothers and fathers. Given this evidence, and the underrepresentation of fathers in child maltreatment studies in general, research which more closely examines mother-father differences in the risk for child maltreatment is sorely needed. In addition to examining aspects of current parental and family functioning, future research also should explore the role that parent historical factors (e.g., history of physical abuse, history of neglect) play in predicting mothers' and fathers' abuse potential.

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