PREDICTING ABUSE-PRONE PARENTAL ATTITUDES AND DISCIPLINE PRACTICES IN A NATIONALLY REPRESENTATIVE SAMPLE

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ABSTRACT

Objective: According to sociological and ecological models of abuse, typically nonabusive parents could behave abusively towards their children under certain circumstances. The purpose of this study was to examine factors that place parents at risk of abusing their children by predicting parents' use of discipline practices and attitudes that may bias parents towards abusive behaviors, which we refer to as abuse-proneness.
Method: A telephone interview was administered by the Gallup Organization to a nationally representative sample of 1,000 parents. Using a set of theoretically relevant risk factors, multiple regression was used to predict variations in parental attitudes (i.e., attitudes towards physical discipline and attitudes that devalue children) and parental discipline practices (i.e., physical discipline, nonphysical discipline, and verbal abuse).
Results: The findings confirmed the importance of examining elements of parental attitudes, history, personality characteristics, as well as religion and ideology in predicting abuse proneness. Child age also was an important predictor in all analyses except predicting parental attitudes that devalue children. The findings suggest also, however, that it may be unduly simplified to regard parents as somewhere on a continuum of nonpunitive to punitive disciplinarians. Social isolation was not a significant predictor in any of the analyses.
Conclusions: Although many important theoretical predictors of abuse proneness were confirmed, many questions arise regarding the diversity of discipline practices that parents use, and the relevance of child's age and social isolation in predicting abuse proneness. Implications for practitioners and future research are discussed. © 1998 Elsevier Science Ltd

Key Words—Parenting, Discipline, Parental attitudes, Abuse-proneness, Children.

INTRODUCTION

RESEARCH ON CHILD maltreatment has the goal of understanding the origins and consequences of abuse and neglect, and preventing it from occurring. Consequently, researchers not only study families where abuse has already taken place, but also the broader population of parents at risk for abusive behavior. Although maltreating parents are often regarded as pathologically deviant in the popular media, they reflect one anchor of a continuum of child-rearing practices on which all parents may be found. As predicted by sociological and ecological models of abuse, many currently nonabusive parents could act harmfully to offspring in circumstances, such as stress or substance abuse, that tax their coping skills and parenting capacities (Belsky, 1993; Wolfe, 1987). Thus it is important to understand not only the characteristics that distinguish abusive from nonabusive adults, but also the risk factors that put nonabusive parents at risk of harming their offspring in certain circumstances.

The research reported in this manuscript is based on data from a large, nationally-representative Gallup survey of parenting attitudes and discipline practices. Our goal was to examine how well theoretically-based risk factors predict variations in parental discipline behavior (such as hitting, slapping, threatening physical harm to children, and verbal abusiveness toward offspring) and attitudes (such as endorsing the efficacy of physical punishment, or beliefs that devalue children) that are often associated with child maltreatment and may predispose adults to abusive behavior (Gelles, 1997; Milner & Dopke, 1997; Straus, 1994). We refer to this predisposition as abuse proneness. Importantly, our goal was not only to predict variations in discipline practices and attitudes that potentially predispose adults to child maltreatment, but also to predict parenting practices (such as nonpunitive discipline) that potentially bias parents away from abusive behavior.

Risk Factors for Child Maltreatment

Efforts to understand the etiology of abuse have led researchers to examine the personal history of parents who abuse their children. For years it was postulated that a history of physical abuse in childhood would lead parents to abuse their own offspring. Although the large majority of parents with a history of abuse do not abuse their own children, such a history increases the propensity for child abuse when such parents are compared with adults who have no history of being abused as children (Kaufman & Zigler, 1987, 1993). Other aspects of personal history may also predispose a parent to child maltreatment. In light of research documenting the long-term sequelae of child sexual abuse (e.g., Briere & Runtz, 1987; Browne & Finkelhor, 1986), for example, it is reasonable to expect that such experiences could foreshadow an increased risk of abuse of offspring and, in fact, there is evidence that teenage mothers with a history of sexual abuse are more likely to abuse their children (Boyer & Fine, 1991). Adults who have a history of witnessing partner violence may also be more prone to abusing their own children because of the deleterious effects on children of witnessing partner violence (Jaffe, Wolfe, & Wilson, 1990; Pynoos & Eth, 1986; Wolak & Finkelhor, 1998), and because partner violence may be perceived as a familiar if not an accepted means of resolving disagreements (Milner & Chilamkurti, 1991).

A proneness to child maltreatment also is enhanced by an adult's difficulties with managing anger, hostility, and aggression (Daro, 1988; Milner & Dopke, 1997; National Academy of Sciences, 1993). Although many parents get angry and punish a child when the child does not deserve it, heightened problems with anger management may be reflected in frequent episodes of unjustified punitiveness, and reveal a proneness to abusive behavior, especially when parents are under stress. Indeed, depending on how the child responds when undeservedly punished, such episodes may escalate into more severe struggles between parent and child that result in harm to the child.

Ecological characteristics of the family environment may also increase proneness to child abuse.

One of the foremost risk factors is social isolation (Daro, 1988; Thompson, 1995). Single parents are more prone to abusive behavior, especially when they have several children, because of the absence of a partner to contribute income, share parenting responsibilities, and temper difficulties with offspring (Gelles, 1997). The broader social isolation of a family within the neighborhood or community also has been identified as a risk factor for child maltreatment (Thompson, 1995).

The parent's gender also may be an important predictor of child maltreatment, although in complex ways. Physical punishment of children by males tends to be harsher, and, indeed, more physical injuries result from males than females (Wolfe, 1987). Men also are more likely to be perpetrators of sexual abuse than are women (Finkelhor, 1987). However, because mothers are typically in greater contact with offspring, mothers are more often found to be responsible for physical abuse or neglect (Gelles, 1997).

Demographic variables associated with child maltreatment include parent education, religiosity, and ideology. Low socioeconomic status (as approximated by parent education) is a highly reliable predictor of child maltreatment because of the fewer resources available to support effective parenting, the enhanced stress experienced by disadvantaged parents, and the challenges presented by declining and often dangerous neighborhoods (Daro, 1988; National Academy of Sciences, 1993; Pelton, 1994). Religiosity and ideology may interact with each other in shaping attitudes concerning physical punishment, the nature of children, the role of parents, and other beliefs relevant to child treatment.

Finally, certain child characteristics, such as child's age and gender, also may be associated with child maltreatment. Wolfe (1987) has reported that the average age of child victims of abuse tends to be younger in comparison to all children in the United States (see also Gelles, 1997). Younger children require a great deal of monitoring by parents, and adults who are unaware of appropriate developmental expectations may misinterpret the behavior of offspring in ways that can provoke abusive behavior (e.g., regarding incapability as willful defiance). The child's gender is, like parent gender, complexly associated with proneness to abuse. Although boys and girls are equally likely to be maltreated (Wolfe, 1987), boys tend to receive more physical punishment than girls and this may put them at higher risk for maltreatment. It is important to note that identifying child factors as meaningful potential predictors of proneness to maltreatment does not portray children as responsible for their own abuse, but rather that parenting practices are influenced by child characteristics and the demands and stresses they provoke (Belsky & Vondra, 1991).

The Present Study

Using the risk factors described above in the parent's personal history (child physical abuse, child sexual abuse, witnessing partner violence), anger mismanagement, social isolation, gender, as well as demographic characteristics (education, religiosity, and ideology) and child characteristics (age and gender), we hoped to predict individual differences in abuse-relevant parent discipline practices and attitudes. In predicting disciplinary behaviors (like physical punitiveness and verbal abusiveness) and attitudes (like beliefs in physical discipline and devaluation of child) that are likely to be associated with a proneness to child maltreatment, we sought to contribute to theoretical models linking antecedent influences, parental beliefs and practices, and actual child maltreatment (Gelles, 1997; Milner & Dopke, 1997; Straus, 1994).

However, child-rearing attitudes and discipline practices do not exist independently of each other. It is not only true that attitudes influence the behavior of parents toward offspring, but parents' discipline practices also are likely to shape their child-rearing beliefs and attitudes. Consequently, in our effort to predict individual differences in abuse-related attitudes and behavior toward offspring, each of these outcome variables was used as a predictor as well. More specifically, child-related attitudes were included among the predictors of parental discipline, and specific dimensions of discipline behavior were used to predict child-related attitudes and beliefs.

In this manner, we hoped to achieve a more complete prediction of individual differences in abuse-relevant parental practices and beliefs.

METHOD

Sample

A Gallup Organization telephone survey (conducted in August and September, 1995) was constructed to ascertain current discipline practices and attitudes by parents across a broad age-range of children (birth to age 17). A nationally-representative sample of 1,000 parent participants from across the United States participated in the survey. Random digit dialing was used to contact and screen for households with children under the age of 18. Respondents were asked to participate in a survey of "people's opinions about how to raise children." A refusal rate of 19% among adults and an overall response rate of 52% accounted for the sample of 1,000 out of 2,250 potential participants initially contacted (the response rate included busy telephone numbers or never answered telephones).

Only one parent per household was interviewed. In two-parent households, one parent was randomly selected by the computer for the interview. Although spouses/partners were not also interviewed, there were two comparable forms of the interview: one for single-parent households and one for households in which there was a spouse/partner. As there are more single-parent households headed by women, 65% of the respondents were mothers/mother substitutes, 32% were fathers/father substitutes, and 2% were adults in other caretaker roles. Parent age ranged from 18 to 72, with a mean of 36.8 years. The majority (71%) of the households were coupled (married, remarried, or living together), while 20% were divorced or separated. Nearly all (94%) of the target children in the household were biological children of the target parent (as opposed to adopted, stepchild, or foster child). More than a third (34%) of the parents had a college education. Ethnicity was 82% Caucasian, 12% Black, and 4% other. Family income ranged from less than $10,000 to over $100,000, with a mean of $40,000. The parent was interviewed referencing only one child in the household. In multi-child households, a child was chosen by a computer random selection process. Children were between the ages of birth and 17, with a mean of 8.4 years, and 49% were females. In all analyses, data were weighted to reflect the latest US Census statistics with regard to children's age, gender, race, region of the country, and parent's education, with the assumption that the responses of nonsurveyed members of underrepresented groups would be similar to those who were surveyed.

Survey

A telephone survey was designed by the Gallup Organization as a public service in cooperation with Murray Straus and David Finkelhor of the Family Research Laboratory at the University of New Hampshire (Moore, Gallup, & Schussel, 1995). The survey was based on the Parent-Child Conflict Tactics Scale (PCCTS), a revised edition of the Conflict Tactics Scale (see Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The telephone interview began by asking the computer-selected respondent some preliminary demographic questions about the family, the target child (such as gender and age of the child), and the familial relationship between the respondent and the child.

During the interview, parents were asked 75 questions that covered many topics related to child management. The following describes the questions and the scales used for each question.

Attitudes toward children: Parents rated on a four-point scale from "strongly disagree" to "strongly agree" nine statements related to parental attitudes, for example "As a general rule, children should be seen and not heard." Higher values indicate greater agreement.

Discipline practices: Parents indicated whether and how often they used 22 forms of discipline with their children using the following eight-point scale: 0 = never happened, 1 = not in the past year, but it happened before, 2 = once in the past year, 3 = twice in the past year, 4 = 3–5 times in the past year, 5 = 6–10 times in the past year, 6 = 11–20 times in the past year, and 7 = more than 20 times in the past year. The 8-point scale was collapsed into a 7-point scale by combining "once in the past year" and "twice in the past year" as the difference between an act happening once or twice in the past year did not seem to be meaningfully different. The discipline practices ranged from nonpunitive (explained why something was wrong, time out) to punitive (spanking, shaking) forms of discipline, encompassing verbal (swore or cursed at him/her), physical (hit with a hard object), physically abusive (hit him/her with a fist), and nonabusive practices (took away privileges). Higher values indicate greater use of this behavior for child management.

Anger mismanagement: Using the same eight-point rating scale as the discipline practices, parents indicated whether and how often they had ever punished their child when it was undeserved. This variable was recoded into the following scale: 0 = never occurred, 1 = occurred once or twice, or 2 = occurred more than twice.

History of childhood physical abuse: Four questions in the interview examined whether the adult had been hit, slapped, punched, kicked, or choked by either parent in childhood and adolescence, and how often this occurred. Based on these incidences and frequency data, scores were summed to create an overall index of childhood physical abuse with a range of scores from 0 to 14, and with higher scores indicating more frequent abusive incidents.

History of childhood sexual abuse: Two questions asked whether the parent experienced unwanted sexual contact with an adult or older child (either a family member or someone outside the family) before the age of 18. Responses to the two questions were combined and recoded into a dichotomous variable to indicate whether sexual abuse: 0 = never occurred or 1 = ever occurred.

History of witnessing partner violence: Two questions focused on whether there were occasions when the adult saw either parent hit or throw something at the other parent during adolescence. Responses for the two questions were combined and recoded to indicate whether partner violence was witnessed: 0 = never, 1 = exclusively from one parent to another, or 2 = mutually between both parents.

Demographic information: In addition to the *age and gender of the child*, parents also reported their *gender*, number of parents in the household, education, ideology, and religiosity.

Number of parents in the household was created by collapsing one-parent arrangements (i.e., living together, single, divorced, widowed, never married) and two-parent arrangements (i.e., married, remarried) into 1 = one parent or 2 = two parents. *Parents' education* was recoded into 1 = high school diploma or less, 2 = some college or vocational training, 3 = college degree, and 4 = graduate training. Parents rated their *ideology* regarding social issues on a scale from 1 = very conservative to 5 = very liberal. Finally, parents rated their *religiosity* (i.e., importance of religion) on a scale from 1 = not at all important to 5 = very important.

Summary of Variables

From the 75 interview questions, 11 variables (defined above) were selected for use in the present study based on their theoretical relevance to risk of child maltreatment. Variables included: (1) *anger mismanagement*; (2) *history of childhood physical abuse*; (3) *history of childhood sexual abuse*; (4) *history of witnessing partner violence*; (5) *child's age*; (6) *child's gender*; (7) *gender of parent*; (8) *number of parents in household*; (9) *education*; (10) *ideology*; and (11) *importance of religion*. Table 1 presents the descriptive statistics for these variables. Correlations among the 11 independent variables ranged from −.02 to .36. Five dependent variables were created based on a factor analysis of the inventory of parental attitudes and discipline practices (as described below): parents' attitudes toward physical punishment, attitudes that devalue children, parents use of

Table 1. Descriptive Statistics for the 11 Independent Variables Used in this Study

	M	SD	Mdn	Range
Anger Mismanagement	.62	.75	.00	0–2
History of Childhood Physical Abuse	2.67	3.46	1.00	0–14
History of Childhood Sexual Abuse	.50	1.05	.00	0–1
History of Witnessing Partner Violence	.32	.62	.00	0–2
Child's Gender	1.49	.50	1.00	1–2
Child's Age	8.38	5.05	8.00	0–17
Gender of Parent	1.66	.47	2.00	1–2
Number of Parents in Household	1.67	.47	2.00	1–2
Education	2.63	.99	3.00	1–4
Ideology	2.67	1.07	3.00	1–5
Importance of Religion	2.14	1.03	2.00	1–5

Note. For each variable, *N* ranged from 967–1000.

physical discipline, nonphysical discipline, and verbal abuse. We hypothesized that current discipline practices and attitudes are not independent of each other. Therefore, each of the dependent variables was used as an independent variable as well. Thus, for each regression equation, 15 variables were entered simultaneously consisting of the 11 variables listed above in addition to four of the of the five dependent variables.

RESULTS

Preliminary Analyses

The individual variables included in this study were initially checked for frequency, skewness, and kurtosis. Variables with an endorsement of less than 10% of the sample were dropped to ensure the reliability of subsequent analyses. This resulted in 10 of the 22 variables assessing discipline practices being dropped from analyses. As would be expected, these were the more severe and manifestly abusive forms of discipline. Table 2 presents the number and percentage of parents who reported *never* using each discipline practice, along with the descriptive statistics for each discipline variable. The following is a list of the dropped variables, and in parentheses is the number of parents out of 1,000 who endorsed the statement: hit him/her with a fist or kicked him/her hard (*n* = 14); grabbed him/her around the neck and choked him/her (*n* = 7); beat him/her up, that is you hit him/her over and over as hard as you could (*n* = 6); said you would send him/her away or kick him/her out of the house (*n* = 67); burned or scalded him/her on purpose (*n* = 1); hit him/her on some other part of the body besides the bottom with something like a belt, hairbrush, a stick, or some other hard object (*n* = 50); pinched him/her (*n* = 61); threatened him/her with a knife or gun (*n* = 1); threw or knocked him/her down (*n* = 8); and slapped him/her on the face, head, or ears (*n* = 64). No other variables were dropped from analyses due to low frequency.

Creation of Five Dependent Variables

Factor analysis of attitude variables. The descriptive statistics for the attitude variables are presented in Table 3. The nine attitude variables were subjected to a principal components analysis using a Varimax rotation. Two distinct factors emerged, accounting for approximately 44% of the variance in parents' attitudes. Eight of the nine variables loaded distinctly on one or the other factor, although one variable did not load on either factor. The first factor, accounting for 28% of the variance, was labeled *attitudes towards physical discipline* as the pattern of factor loadings endorsed by parents on this factor concerned traditional attitudes toward physical discipline (*M* =

Table 2. Descriptive Statistics for Each Discipline Variable

Discipline Items	N(%)	M	SD	Mdn	Range
	Never Happened				
Explained	55 (6)	4.84	1.68	6.00	0–6
Time Out	187 (19)	3.34	2.17	4.00	0–6
Shook Child	846 (85)	.28	.77	.00	0–6
Hit Child on Bottom With a Hard Object	705 (71)	.72	1.33	.00	0–6
Gave Child Something Else to Do	164 (16)	3.36	2.11	4.00	0–6
Shouted, Yelled at Child	133 (13)	3.70	1.98	4.00	0–6
Hit Child With Fist or Kicked	986[a] (99)	.02	.19	.00	0–4
Spanked Child on Bare Bottom With Hand	364 (36)	1.78	1.82	1.00	0–1
Grabbed Child Around Neck and Choked	993[a] (99)	.01	.08	.00	0–6
Swore, Cursed at Child	738 (74)	.79	1.51	.00	0–6
Hit Child as Hard as Could Over and Over	994[a] (99)	.01	.12	.00	0–2
Threatened to Send Child Away/Kick Out	933[a] (93)	.16	.68	.00	0–6
Burned or Scalded Child on Purpose	999[a] (100)	.001	.03	.00	0–1
Threatened to Spank or Hit Child	381 (38)	2.20	2.18	2.00	0–6
Hit Child With a Hard Object	950[a] (95)	.13	.63	.00	0–6
Slapped Child on Hand, Arm, or Leg	487 (49)	1.40	1.75	1.00	0–6
Grounded/Removed Privileges	215 (22)	3.10	2.07	3.00	0–6
Pinched Child	939[a] (94)	.15	.71	.00	0–6
Threatened Child With a Knife or Gun	999[a] (100)	.001	.03	.00	0–6
Threw or Knocked Child Down	992[a] (99)	.01	.16	.00	0–4
Called Child Dumb or Lazy	822 (82)	.52	1.24	.00	0–6
Slapped Child on Face, Head, or Ears	936[a] (94)	.13	.58	.00	0–6

Note. N = 1000 per variable. Items in the table are listed in the order in which they appear in the survey.
[a] Variable with less than 10% endorsement by participants, therefore the variable was dropped from further analysis.

7.59, *SD* = 1.93, *range* 1–12). For example, parents endorsed the proverb "Parents who spare the rod will spoil the child." The second factor, accounting for 16% of the variance, was labeled *attitudes that devalue children* as the pattern of factor loadings endorsed by parents on this factor concerned attitudes towards children (*M* = 9.38, *SD* = 2.04, *range* 5–15). For example, parents agreed with the statement "As a general rule, children should be seen and not heard." Table 4 presents the factor loadings for each factor. Based on the factor loadings, two composite variables were created (*r* (999) = .18, *p* < .001) and used in regression analyses as both dependent and independent variables.

Factor analysis of discipline variables. Because variables with less than 10% endorsement by participants were dropped from analyses (see Table 2), the remaining 12 discipline items were

Table 3. Descriptive Statistics for Parents' Attitudes Towards Children

Attitude	M	SD	Mdn	Range
Sometimes Necessary to Discipline With a Hard Spanking	2.46	.87	3.00	1–4
Children Should be Rewarded for Especially Good Behavior	3.31	.61	2.00	1–4
Important for Boys to Have a Few Fistfights While Growing Up	2.05	.64	2.00	1–4
Children Should be Seen and Not Heard	1.74	.66	2.00	1–4
Children Should Never Hit Each Other During an Argument	2.96	.75	2.00	1–4
It is OK for Parents to Slap Their Teenage Children Who Talk Back	1.96	.70	2.00	1–4
Too Much Praise Will Go to Childrens' Heads	1.95	.81	2.00	1–4
Parents Who Spare the Rod Will Spoil the Child	2.42	.79	2.00	1–4
Most Parents Don't Discipline Their Children Often Enough	2.98	.64	3.00	1–4

Note. N = 1000 per variable.

Table 4. Factor Loadings for the Two Factors to Emerge from the Nine Attitude Variables

Attitude Item	Attitudes Towards Physical Discipline	Attitudes That Devalue Children
Sometimes Necessary to Discipline With a Hard Spanking	**.768**	.118
Parents Who Spare the Rod Will Spoil the Child	**.768**	.140
Most Parents Don't Discipline Their Children Often Enough	**.635**	−.066
Children Should Be Rewarded for Especially Good Behavior	.271	**−.609**
Important for Boys to Have a Few Fistfights While Growing Up	.248	**.571**
Children Should be Seen and Not Heard	.254	**.620**
Children Should Never Hit Each Other During an Argument	.149	**−.486**
Too Much Praise Will Go to Children's Heads	.220	**.595**
It is OK for Parents to Slap Their Teenage Children Who Talk Back	.412	.456

Note. $N = 1000$ per variable. Factor loadings in bold under each heading indicate that those were the items used to create that variable.

entered into a principle components analysis using Varimax rotation. Three factors emerged, accounting for 54% of the variance in parental discipline. The first factor accounted for 32% of the variance in parental discipline. This factor was labeled *nonphysical discipline* ($M = 14.50$, $SD = 5.76$, *range* 0–24) as these items involved discipline such as "time out" and explaining to a child why something is wrong. The second factor accounted for 12% of the variance in parental discipline. This factor was labeled *physical discipline* ($M = 6.09$, $SD = 5.25$, *range* 0–24) as these items included such practices as spanking, hitting, threatening to spank, and slapping. The third factor accounted for 10% of the variance in parental discipline. The third factor was labeled *verbal abuse* ($M = 1.31$, $SD = 2.25$, *range* 0–12) as these items involved parents calling the child dumb or swearing at the child. Two of the 12 variables did not load on any factor. The factor loadings for the three factors are presented in Table 5. Based on the factor loadings, three composite variables were created and used in regressions as both dependent and independent variables. Correlations among these three variables ranged from .19 to .45.

Multiple Regression Analyses

The zero-order correlations of the independent with the dependent variables are presented in Table 6. In an attempt to predict parents' attitudes and use of discipline, five separate regressions were conducted using the 11 independent variables and the five dependent variables created from

Table 5. Factor Loadings for the Three Factors to Emerge from Parents' Use of Discipline Practices

Discipline Item	Nonphysical Discipline	Physical Discipline	Verbal Abuse
Explained	**.759**	.086	.018
Time Out	**.766**	.269	.048
Grounded/Removed Privileges	**.728**	−.016	.310
Gave Child Something Else to Do	**.476**	.226	−.205
Hit Child on Bottom With Hard Object	.065	**.511**	.132
Spanked Child on Bare Bottom With Hand	.337	**.723**	−.076
Threatened to Spank or Hit Child	.328	**.648**	.201
Slapped Child on Hand, Arm, or Leg	.116	**.800**	−.029
Called Child Dumb or Lazy	.060	−.027	**.791**
Swore, Cursed	.098	.172	**.716**
Shook Child	−.049	.418	.362
Shouted, Yelled at Child	.581	.327	.422

Note. $N = 1000$ per variable. Factor loadings in bold under each heading indicate that those were the items used to create that variable.

Table 6. Zero-Order Correlations of the 5 Dependent Variables with the 11 Independent Variables

	Dependent Variables				
Independent Variables	Attitudes Towards Physical Discipline	Attitudes That Devalue Children	Physical Discipline	Nonphysical Discipline	Verbal Abuse
Anger Mismanagement	.06*	.01	.23***	.27***	.27***
History of Physical Abuse	.05*	−.02	.12***	.09**	.16***
History of Sexual Abuse	−.05	−.12***	.13***	.13***	.13***
History of Witnessing Partner Violence	−.01	−.03	.12***	.03	.11***
Child's Gender	.02	−.02	−.07*	−.08**	.01
Child's Age	.09**	.06*	−.26***	−.02	.26***
Gender of Parent	−.02	−.06*	.13***	.09**	−.01
Number of Parents	.02	−.02	−.09**	−.05*	−.04
Education	−.06*	−.24***	−.10***	.03	−.001
Ideology	−.23***	−.09**	−.08**	.05	.03
Importance of Religion	−.19***	.05*	−.04	−.01	.08**

Note. $* p < .05$; $**p < .01$; $***p < .001$.

the principle components analyses: parents' attitudes towards physical punishment, parents' attitudes that devalue children, parents' use of nonphysical discipline, parents' use of physical discipline, and parental verbal abuse. For each regression predicting a particular dependent variable, the remaining four dependent variables were also included in the set of predictor variables. For each of the five regressions, all 15 variables were entered simultaneously into each regression to determine the R^2. To determine the unique contribution of each variable, those variables which produced a significant T-value were subsequently submitted to a hierarchical regression, entering variables in descending order based on the magnitude of the beta weight, from which multiple correlation values were derived. Results of the regression equations are presented with variables in descending order based on the magnitude of the beta after the initial analysis. Note that the magnitude of the betas may change after forced entry, and thus may not appear to be in descending order in the results. Each table displaying the significant predictors for each regression equation (Table 7, Table 8, Table 9, Table 10, and Table 11) present the multiple R, adjusted R^2, and standardized betas.

Predicting parents' attitudes toward physical discipline. Fifteen variables were entered simultaneously into a regression to predict parents' attitudes towards physical discipline. When all 15 variables were entered into the regression, the equation accounted for 21% of the adjusted variance in attitudes towards physical discipline, $F(15, 984) = 18.59$, $p < .0001$. The results of this regression equation are presented in Table 7. Six nonredundant significant variables predicted attitudes towards physical discipline: parents' use of physical discipline, child's age, ideology,

Table 7. Significant Predictors of Parents' Attitudes Towards Physical Discipline

	Multiple R	Adjusted R^2	Beta[a,b]
Physical Discipline	.30	.09	.30
Child's Age	.35	.12	.18
Ideology	.41	.16	−.21
Importance of Religion	.43	.18	−.14
Attitudes That Devalue Children	.45	.20	.14
Nonphysical Discipline	.46	.20	−.09

Note. [a] For all betas, $p < .01$.
[b] *df* range from 1, 998 to 6, 993, in ascending order.

Table 8.   Significant Predictors of Parents' Attitudes that Devalue Children

	Multiple R	Adjusted R^2	Beta[a,b]
Education	.24	.06	−.24
Attitudes Towards Physical Discipline	.29	.08	.16
Nonphysical Discipline	.31	.09	−.12
Physical Discipline	.32	.10	.07
History of Childhood Sexual Abuse	.33	.10	−.09
Importance of Religion	.34	.11	.07

Note. [a] For all betas, $p < .025$, with the exception of parent's use of physical discipline, $p < .07$.
[b] *df* range from 1, 998 to 6, 993, in ascending order.

importance of religion, attitudes that devalue children, and parents' use of nonphysical discipline. That is, parents who use physical discipline with their children were more likely to have positive attitudes towards the use of physical discipline; the older the child, the more likely the parents were to have positive attitudes towards physical discipline; the more conservative parents were in their ideology, the more likely they were to have positive attitudes towards the use of physical discipline; the less important religion was to parents, the more likely they were to have positive attitudes towards physical discipline; parents who have attitudes that devalue children were more likely to have positive attitudes towards physical discipline; and finally, parents who use less nonphysical discipline with their children were more likely to have favorable attitudes towards physical punishment.

Predicting parents' attitudes that devalue children. When all 15 variables were entered into the regression to predict attitudes that devalue children, the equation accounted for 12% of the adjusted

Table 9.   Significant Predictors of Parents' Use of Physical Discipline

	Multiple R	Adjusted R^2	Beta[a,b]
Nonphysical Discipline	.45	.20	.45
Child's Age	.52	.27	−.26
Attitudes Towards Physical Discipline	.60	.36	.31
Verbal Abuse	.63	.39	.19
Anger Mismanagement	.64	.40	.10
Gender of Parent	.64	.41	.09
History of Witnessing Partner Violence	.65	.42	.09
Education	.65	.42	−.08
Attitudes that Devalue Children	.66	.43	.06

Note. [a] For all betas, $p < .025$.
[b] *df* range from 1, 998 to 9, 990, in ascending order.

Table 10.   Significant Predictors of Parents' Use of Nonphysical Discipline

	Multiple R	Adjusted R^2	Beta[a,b]
Physical Discipline	.45	.20	.45
Anger Mismanagement	.48	.23	.17
Attitudes that Devalue Children	.50	.25	−.15
Child's Age	.51	.26	.10
Attitudes Towards Physical Discipline	.52	.27	−.09

Note. [a] For all betas, $p < .01$.
[b] *df* range from 1, 998 to 5, 994, in ascending order.

Table 11. Significant Predictors of Parental Verbal Abuse

	Multiple R	Adjusted R^2	Beta[a,b]
Child's Age	.26	.07	.26
Physical Discipline	.38	.14	.29
Anger Mismanagement	.42	.17	.18
Importance of Religion	.43	.18	.11
History of Childhood Physical Abuse	.45	.20	.13
History of Childhood Sexual Abuse	.46	.20	.07
Gender of Parent	.46	.21	−.06

Note. [a] For all betas, $p < .05$.
[b] df range from 1, 998 to 7, 992, in ascending order.

variance in attitudes that devalue children, $F(15, 984) = 10.11$, $p < .0001$. Table 8 presents the results of this regression equation. Six nonredundant significant variables predicted attitudes towards physical discipline: education, attitudes towards physical discipline, parents' use of nonphysical discipline, parents' use of physical discipline, history of childhood sexual abuse, and importance of religion. That is, the less education a parent had the more likely the parent was have attitudes that devalue children; parents with more favorable attitudes towards physical discipline were more likely to have attitudes that devalue children; parents who use less nonphysical discipline were more likely to have attitudes that devalue children; parents who use physical discipline with their children were more likely to have attitudes that devalue children; parents without a childhood history of sexual abuse were more likely to have attitudes that devalue children; and finally, parents for whom religion was important were more likely to have attitudes that devalue children.

Predicting parents' use of physical discipline. When all 15 variables were entered into the regression, the equation accounted for 43% of the adjusted variance in parents' use of physical discipline, $F(15, 984) = 51.06$, $p < .0001$. Results for this regression equation are presented in Table 9. A total of nine nonredundant significant variables predicted parents' use of physical discipline: parent's use of nonphysical discipline, child age, attitudes towards physical discipline, verbal abuse, anger mismanagement, gender of parent, history of witnessing partner violence, education, and attitudes that devalue children. That is, parents who used nonphysical discipline were more likely to use physical discipline with their children; the younger the child, the more likely parents were to use physical discipline; parents who had positive attitudes towards physical discipline were more likely to use physical discipline with their children; parents who were verbally abusive towards their children were more likely to use physical discipline with their children; parents who had difficulty with anger management were more likely to use physical discipline with their children; females were more likely than males to use physical discipline with their children; parents with a history of witnessing partner violence were more likely to use physical discipline with their children; parents with a lower level of education were more likely to use physical discipline; and finally, parents who had attitudes that devalue children were more likely to use physical discipline with their children.

Predicting parents' use of nonphysical discipline. When all 15 variables were entered into a regression equation simultaneously, they accounted for 27% of the adjusted variance in parents' use of nonphysical discipline, $F(15, 984) = 25.44$, $p < .0001$. Results for this regression equation are presented in Table 10. Five nonredundent significant variables predict parents' use of nonphysical discipline: parents' use of physical discipline, anger mismanagement, attitudes that devalue children, child age, and attitudes towards physical punishment. That is, parents who used physical

discipline were more likely to use nonphysical discipline; the more parents had difficulty with anger management the more likely they were to use nonphysical discipline; parents whose attitudes did not tend to devalue children were more likely to use nonphysical discipline with their children; the older the child, the more likely parents were to use nonphysical discipline; parents who had less favorable attitudes towards physical punishment were more likely to use nonphysical discipline with their children.

Predicting parental verbal abuse. When all 15 variables were entered into the regression, the equation accounted for 21% of the adjusted variance in parental verbal abuse, $F(15, 984) = 18.36$, $p < .0001$. Table 11 presents the results from the regression equation. Seven nonredundant significant variables predicted parental verbal abuse: child age, parents' use of physical discipline, anger mismanagement, importance of religion, history of childhood physical abuse, history of childhood sexual abuse, and gender of parent. That is, the older the child, the more likely parents were to verbally abuse their child; parents who used physical discipline with their children were more likely to verbally abuse their children; parents who had difficulty managing their anger were more likely to verbally abuse their children; the more important religion was to parents the more likely parents were to verbally abuse their children; parents with a history of childhood physical abuse were more likely to verbally abuse their children; parents with a history of childhood sexual abuse were more likely to verbally abuse their children; and finally, males were more likely than females to verbally abuse their children.

DISCUSSION

According to sociological and ecological models of parenting, even typically nonabusive parents may become abusive under certain circumstances (Belsky, 1993; Wolfe, 1987). Therefore it is important to identify risk factors that place parents at risk of harming their children, which we refer to as abuse proneness. In the present study, a theoretically derived set of variables was used to predict parents' attitudes and discipline practices that may place parents at risk for abusing their offspring or that may bias parents away from abusive behaviors. The results indicate that there are many risk factors in family life that contribute to parental abuse proneness.

Many of the results of this study are consistent with the expectations derived from prior research. We found that parental attitudes are important in predicting abuse proneness. Parents with positive attitudes toward physical discipline and parents with attitudes that devalue children were more likely to use physical discipline with their children. In contrast, parents using nonphysical discipline were less likely to have attitudes that devalue children and less likely to have attitudes that endorse the use of physical discipline.

We also found that a parent's history is important in predicting abuse proneness. Parents using physical discipline were more likely to have a history of witnessing partner violence. Parents using verbal abuse were more likely to have a history of childhood physical abuse and childhood sexual abuse.

Consistent with previous research, self-control also is important in predicting abuse proneness (Daro, 1988; Milner & Dopke, 1997; National Academy of Sciences, 1993). Interestingly, parents using of any form of discipline (physical discipline, verbal abuse, or nonphysical discipline) were more likely to discipline their children undeservedly (anger mismanagement). The explanation for this may be that angrily disciplining children undeservedly may manifest in a number of alternative ways. A parent who unjustly disciplines the child may react by spanking or hitting a child (physical discipline), sending the child to time-out (nonphysical

discipline), or calling the child dumb (verbally abusive). Thus, it may be that this reaction, although relatively low in frequency, is experienced by all parents at one time or another, although how this reaction actually manifests will differ among parents and possibly across contexts.

As expected, religion and ideology also are important in predicting abuse proneness, although in complex ways. Parents with attitudes that endorse physical discipline were more conservative ideologically although they were less likely to report that religion was important to them. Conversely, parents with attitudes that devalue children, as well as parents using verbal abuse, were more likely to report that religion was important to them. Lower levels of parental education also have an impact on abuse proneness by predicting attitudes that devalue children and parental use of physical discipline.

Although the above findings confirm risk factors that have been identified in the literature, there were several findings that were quite surprising. To date, much of the research has characterized parents as predominately using one form of discipline over another (such as describing parents as power-assertive or inductive). However, our findings suggest that parents should instead be characterized as using multiple, alternative forms of discipline practices. It appears that many parents use nonpunitive and punitive disciplinary methods together in child management rather than choosing one or the other as a preferred strategy, and that harsh discipline methods can co-occur with reasoning and gentler approaches. Although these results are intriguing, it may be that the important variability in parents is not only the kind of discipline they use, but also whether they tend to be involved disciplinary agents at all (using multiple alternating strategies), or instead more distant and/or disinterested (using little discipline of any kind). Further exploration of the constellations that exist among various parent disciplinary methods, and their relevance to abuse-proneness, is certainly warranted.

Child age was a predominant factor in explaining both parental attitudes and discipline practices. Indeed, child age was a significant predictor in four of the five regression analyses. Parents with younger children were less likely to have positive attitudes towards physical discipline. Interestingly, parents with younger children were more likely to actually use physical discipline, suggesting some dissonance between attitudes and practice on the part of parents about the use of physical discipline. It may be that younger children require a greater amount of close, continuous monitoring, and interventions by parents are more likely to be physical (rather than reasoned), which can increase the chances of abuse (Gelles, 1997; Wolfe, 1987), although parents may simultaneously experience some psychological apprehension about using power-assertion with young children. In contrast, parents with older children were more likely to use nonphysical discipline (e.g., explaining), but also to verbally abuse their children (e.g., swearing at the child). This seems to indicate that parental discipline techniques change to keep pace with the development of their children. While we found age was a predictor of parental attitudes and discipline practices, there is a need for a broader under-standing of how a child's age and developmental characteristics mediate parental child-rearing attitudes and child-management practices. This is a particularly important point given that the child age variable used in this study concerned the age of the child selected by the computer as the target child for the interview. Because many parents had more than one child, however, child age may have complex relations to parent attitudes and discipline practices when multiple children are in the household.

We had expected that social isolation would predict abuse-proneness. The fact that it did not may be due to how social isolation was indexed in this study (i.e., number of parents in the household). It may be that single-parenthood (the majority of which are female-head-of-households) is only problematic in conjunction with poverty. The methodology employed in this study (telephone interviews) necessarily excluded families without telephones who are more likely to be low-income. The single parents in this sample may have had adequate resources since the mean income

for this sample was middle-income. Consistent with Thompson (1995), these findings raise new questions about the meaning, and relevance, of social isolation as a predictor of abusive behavior.

Implications for Intervention

These findings confirm the importance of examining elements of parental attitudes, history, and personality characteristics in estimating abuse proneness. However, these findings also suggest that it may be unduly simplified to regard parents as somewhere on a continuum of nonpunitive to punitive discipline practices. In reality, parents may enlist both kinds of strategies in tackling the problems of child management. Also important when estimating abuse proneness is the child's age, which may be an important mediator of these associations. It is also important for practitioners to recognize that social isolation may not be as significant a predictor of abuse proneness as has been commonly believed.

It is important to note that although our theoretically consistent results are based on a large, nationally representative sample, there were relatively few parents who engaged in highly abusive behavior. Although this may raise some questions regarding the reliability of the results, the anonymous telephone methodology likely enhanced participant honesty. Indeed, all survey data necessarily relies on the honesty of participants. Nonetheless, these data will need to be replicated, in part to validate the reliability of the measures. Even with these caveats, using a nationally-representative Gallup survey of parental attitudes and discipline practices, many important theoretical predictors of abuse proneness were confirmed. However, the findings also raise questions about the diversity of discipline practices that parents use, and the relevance of social isolation and child's age.

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RÉSUMÉ

Objectif: En s'appuyant sur des modèles sociologiques et écologiques de la maltraitance, on peut prétendre que des parents typiquement non maltraitants pourraient maltraiter leurs enfants dans certaines circonstances. Le but de cette étude a été d'examiner les facteurs de risque de la maltraitance analysant chez les parents l'utilisation de pratiques disciplinaires et de certaines attitudes qui peuvent les prédisposer à avoir des comportements abusifs, ce que nous désignerons sou le nom de propension à la maltraitance.

Méthode: Un interrogatoire téléphonique a été efectué par l'organisation GALLUP dans un échantillon nationallement représentatif de 1000 parents. Utilisant une série de facteurs de risque théoriquement valables, la régression multiple a été utilisée pour prédire des variations d'attitudes parentales (e.a. attidutes envers la discipline physique et attitudes dévalorisantes à l'égard des enfants et les pratiques disciplinaire des parents, e.a. discipline phyisque, discipline non-phyisque et maltraaitance orale.

Résultats: Les données ont confirmé l'importance de l'examen d'éléments concernant les attitudes parentales, l'histoire, les caractéristiques de la personnalité, la religion et l'idéologie dans la prédiction d'une propension à la maltraitance. L'âge de l'enfant était aussi un prédicteur important dans toutes les analyses sauf en ce qui concerne la prédiction d'attitudes parentales qui dévalorisent les enfants. Les données suggèrent cependant qu'il serait trop simpliste de considérer les parents comme faisant partie d'un continuum allant des partisans d'une discipline forte et punitive aux partisans d'une discipline plus faible et non punitive. L'isolement social n'était pas un prédicteur significatif dans aucune analyse.

Conclusions: Bien que la majorité des prédicteurs théoriques de la propension à la maltraitance aient été confirmés, des questions surgissent concernant la diversité des pratiques disciplinaires utilisées par les parents et l'impact de l'âge de l'enfant et de l'isolement social dans la prédicition de la propension à la maltraitance. Les implications pour les cliniciens et la recherche future sont discutées.

RESUMEN

Objetivo: De acuerdo con los modelos sociológicos y ecológicos del maltrato infantil, unos padres típicamente no maltratantes pueden llegar a comportarse de manera maltratadora con sus hijos bajo ciertas circunstancias. El propósito de esta investigación fue examinar los factores que colocan a los padres en riesgo de maltratar a sus hijos. Se trató de predecir la utilización por parte de los padres de actitudes y prácticas disciplinarias que pueden llevar a los padres hacia las conductas maltratantes. A estas actitudes y prácticas se les denominó "disponibilidad hacia el maltrato."

Método: Se llevó a cabo una entrevista telefónica por parte de la empresa Gallup a una muestra representativa de 1000 padres. A partir de un bloque de factores de riesgo teóricamente relevantes, se llevó a cabo un análisis de regresión múltiple para predecir las variaciones en las actitudes parentales (p.e., actitudes hacia la disciplina física y actitudes que infravaloran a los niños/as) y en las conductas disciplinarias parentales (p.e., disciplina física, disciplina no-física y maltrato verbal).

Resultados: Los resultados confirman la importancia de examinar elementos de las actitudes parentales, de la historia personal, y de las características de personalidad, así como de la religión y de la ideología para predecir la disponibilidad hacia el maltrato. La edad del niño/a fue también un importante predictor en todos los análisis excepto para predecir las actitudes de los padres que infravaloran a los niños/as. Sin embargo, los resultados sugieren también que puede ser excesivamente simplista entender que los padres se encuentran en algún lugar del continuo entre la disciplina no punitiva y punitiva. El aislamiento social no fue un predictor significativo en ninguno de los análisis.

Conclusiones: A pesar de que muchos de los predictores teóricamente relevantes de la disponibilidad hacia el maltrato fueron confirmados, ssurgen muchas preguntas en relación con la diversidad de las prácticas disciplinarias que utilizan los padres, y con la relevancia de la edad del niño/a y el aislamiento social en la predicción de la disponibilidad hacia el maltrato infantil. Se discuten las implicaciones para los profesionales y para investigaciones futuras.