

Neglectful Behavior by Parents in the Life History of University Students in 17 Countries and Its Relation to Violence Against Dating Partners

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This article reports the prevalence of neglectful behavior by parents of university students in 17 nations (6 in Europe, 2 in North America, 2 in Latin America, 5 in Asia, Australia, and New Zealand) and tests the hypothesis that neglect is a risk factor for violence against a dating partner. The percentage at each university who experienced neglectful behavior ranged from 3.2% to 36% (median 12%), and the percentage who perpetrated violence against dating partners ranged from 15% to 45% (median 28%). Multilevel modeling found that the more neglectful behavior experienced as a child the greater the probability of assaulting and injuring a dating partner and that the link between experiencing neglect and perpetrating violence is stronger at universities in which dating violence is more prevalent. Efforts to help parents avoid neglectful behavior can make an important contribution to primary prevention of partner violence and probably also other forms of child maltreatment.

Keywords: *neglect; partner violence; aggression; measure; cross-cultural*

Neglect of children is such a serious and prevalent phenomenon that the authors of the United Nations Convention on the Rights of the Child treaty (UNICEF, 1997) singled out the right of a child to develop to the fullest as one of the four broad categories of rights to which children are entitled. One indication of the extent of neglect is that of cases known to child protective services (CPS) in the United States,

more are classified as neglect than all other types of maltreatment put together. However, as has been noted frequently, research on neglect is only a small fraction of research on child maltreatment (National Research Council, 1993). Cross-cultural comparative studies of neglect are even more rare. This article is intended to provide some of the needed cross-cultural data.

The first objective is to test the theory that most widespread effects of neglect manifest themselves when the children are adults and are in the form of psychological damage and impaired social relationships (National Research Council, 1993). A second objective is to provide preliminary information on the extent to which neglectful behavior occurs in the diverse social settings in which students at the 33 universities in 17 countries are living. A third objective is to examine the interaction of the level of violence in a given social context on the relation between neglect experienced and violence against a dating partner.

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NEGLECT AND MISTREATMENT OF DATING PARTNERS

There are grounds for believing that neglect is as detrimental or more detrimental than physical or sexual abuse. Neglect, especially of the child's emotional needs for love and support, may be the form of maltreatment with the greatest risk of serious social and psychological problems to children (Bowlby, 1982; Robbins, 1966; Spitz, 1959). Consistent with this research, the theoretical objective of this study is to test the hypothesis that neglect as a child is associated with an increased risk of violence against a dating partner as an adult. This hypothesis is based on the assumption that the socialization process of neglected children is incomplete. This approach is illustrated by the theoretical analysis and empirical research of Tremblay (2003). Tremblay's review of research on age differences in aggression shows that acts of physical aggression peak at age 2 and decline thereafter. From this, Tremblay argued that

physical aggression appears during infancy as a natural way of expressing anger and as a natural instrument to achieve goals—for example, taking an object from someone else. During their development most children learn to use alternative strategies to express anger and achieve their goals. Those who do not will become increasingly dangerous for others as they grow older, because they become physically stronger and more cognitively skilled. (pp. 182-183)

Tremblay (2003) goes on to argue that one of the factors enabling a child to learn alternative strategies is care by a responsive parent and consistent discipline. A neglected child, by definition, does not have a responsive parent or consistent discipline. One can, therefore, deduce the hypothesis that the experience of neglectful parenting will be associated with physical aggression toward others and, specifically, toward a dating partner. The results of previous empirical studies are consistent with this theory (e.g., Widom, 1989; Widom & Maxfield, 2001, who found that neglect as a child was related to crime as an adult).

The theory that neglect is associated with physical aggression as an adult is also consistent with research showing that neglected children experience learning delays, particularly with language skills (Flowers, 2000, p. 121). Depending on the type and severity of neglect, neglected children may have underdeveloped cognitive and social skills. Children whose parents do not comfort them when upset may tend to lack compassion and empathy for others. They also may not have had sufficient opportunity to handle conflict verbally. Inadequate cognitive and emotional abilities could result in a greater sense of desensitization toward the mistreatment of others, including dating

partners, and, later in life, may result in criminally violent behavior and physical and sexual abuse of their own children (Widom & Maxfield, 2001).

It is possible that the relationship between neglect and aggression is a result of the frequent co-occurrence of neglect and physical abuse. That issue was investigated by Kendall-Tackett and Eckenrode (1997), who compared children classified as neglect-only, neglect and abuse, and nonmaltreated. They found that although children who experienced both abuse and neglect had the highest rate of disciplinary problems in school, in each of five age groups, the neglect-only group had significantly more disciplinary problems than did the nonmaltreated group. A limitation of the Kendall-Tackett and Eckenrode and Widom and Maxfield (2001) studies is that they were limited to cases of neglect known to CPS. These cases do not provide information on whether neglect is related to aggressive and other antisocial and criminal behavior in the general population.

There are, however, studies that have addressed this issue. Crittenden and DiLalla (1988) found that when interacting with their mothers, neglected children display more anger than do physically abused children. Knutson, DeGarmo, and Reid's (2004) longitudinal study of 310 first-grade and 361 fifth-grade children used multimethod and multisource measures of neglect and child behavior and structural equation modeling to control for many potential confounds. They found that, for both age cohorts, neglect at Time 1 was significantly related to aggression and antisocial behavior at Time 2. Two studies of adolescents and adults concluded that neglect is related to antisocial and criminal behavior. Hildyard and Wolfe (2002) found that both physical abuse and neglect are associated with subsequent criminal behavior and personality disorders. A longitudinal study by Henry and Silva (1996) found that deficient or neglectful parenting was linked to adolescent antisocial behavior and crime. These studies provide a reasonable basis for expecting that scores on a scale intended to measure neglectful behavior experienced as a child (such as the Multidimensional Neglectful Behavior Scale) will be associated with an increased probability of physical aggression against others, including partners in dating or marital relationships. Finally, a study by Bevan and Higgins (2002) examined the relation of five different types of child maltreatment (physical abuse, psychological abuse, sexual abuse, neglect, and witnessing violence between parents) by a sample of 36 men and found that neglect accounted for the largest amount of variance in physical abuse of their partners.

DEFINITION AND MEASUREMENT OF NEGLECTFUL BEHAVIOR

Definition of Neglect

There is little agreement on the definition and measurement of neglect (Costin, Karger, & Stoesz, 1996; National Research Council, 1993). One of the most important points of disagreement concerns whether neglect should be defined and measured in a way that includes injury or harm to a child as compared to definition and measurement solely on the basis of the behavior of the caregiver (Straus & Kaufman Kantor, 2005). Another unresolved issue is whether the neglectful behavior must be intentional. These are difficult issues that cannot be resolved in this article. However, we can make clear the definition that guided this research. The specific definition is

neglectful behavior by a caretaker is behavior that constitutes a failure to act in ways that are presumed by the culture of a society to be necessary to meet the developmental needs of a child and which are the responsibility of a caregiver to provide. (Straus & Kaufman Kantor, 2005, p. 20)

This definition, and our operationalization of it, is focused on the behavior of the caregiver, regardless of whether the neglectful behavior is intentional and regardless of whether there is an observable harm to the child. The main theoretical basis for focusing exclusively on neglectful behavior is that the causes of neglectful behavior and the consequences for the child must be measured separately to be able to test theories about what causes parents to neglect and the consequences for the child. See Straus and Kaufman Kantor (2005) for a conceptual analysis of each element of this definition and further explanation.

Measurement of Neglectful Behavior

Most research on neglect in the United States, and probably other countries, does not measure neglectful behavior directly. Instead, neglect is identified on the basis of cases reported to CPS agencies of the U.S. states. It is widely acknowledged that the cases reported to CPS are only a small fraction of neglected children. The National Center on Child Abuse and Neglect attempted to get a more complete assessment of neglect through the National Incidence Studies of Child Abuse and Neglect (NIS; Sedlak & Broadhurst, 1996). The NIS are based on interviews with human service professionals who were asked about cases they knew, regardless of whether the case had been reported to CPS. As shown in the section reviewing rates of neglect, human service professionals identified more than twice as many cases than were

reported to CPS. Even the NIS rate is probably only a fraction of the true prevalence of neglectful behavior. The present study uses an instrument that represents still another approach to measuring neglect. It focuses on the neglectful behavior of parents as recalled by young adults. As explained in the methods section, this method, like other methods, has both advantages and limitations.

RESEARCH ON PREVALENCE OF NEGLECTFUL BEHAVIOR

Because one of the objectives of this article is to present data on the prevalence of neglectful behavior, Table 1 was constructed to provide a background for the results on prevalence. It summarizes prevalence rates from nine studies. The rates range from less than 0.5% to 61%. This huge range suggests that the various studies are measuring different phenomena or different aspects of the phenomenon.

Consistent with the previous discussion of techniques for measuring neglect, the lowest rate in Table 1 is for cases of neglect reported to CPS in the United States. This extremely low rate reflects the fact that CPS tends to receive and confirm only the most egregious cases of neglect or cases confounded with other social and psychological problems such as violence between the parents or drug abuse. The National Incidence Study (second row of Table 1), for example, found a rate more than double the rate reported by CPS. It is much higher because the human services professionals who were interviewed were asked to report all cases they knew about, not just those that were officially reported. The importance of this is not just the underestimate inherent in CPS statistics but also the fact that because CPS cases are filtered by willingness to report the case, they may not be typical of cases of neglectful behavior. A recent example we encountered was a pediatrician who diagnosed a child as "failure to thrive." Although this is a serious condition requiring reporting, the pediatrician did not report the case to CPS because she felt it was better to try to work with the mother. Had it been a so-called hopeless case, it probably would have been reported, but because it was a case that the pediatrician felt she could treat effectively does not change the fact that this child was neglected. On the other hand, the fact that "failure to thrive" is not always serious and does not always reflect neglect illustrates one of the many problems with measuring neglect.

The three non-U.S. studies in Table 1 all found rates much higher than those reported in the above-mentioned domestic studies. The higher rates, which range from 3% to 6%, are probably explained by the

TABLE 1: Prevalence of Neglect From Nine Studies

<i>Study</i>	<i>Sample</i>	<i>Case Source</i>	<i>Neglect Type</i>	<i>% Rate</i>
U.S. Department of Health and Human Services Administration on Children, Youth and Families (1999)	CPS and Department of Health and Human Services in the United States	Officially reported cases of victimization	Any neglect	0.6
Sedlak and Broadhurst (1996)	Human service professionals in the United States	Known cases of neglect, regardless of whether reported to CPS	Any neglect Educational Physical Emotional	1.3 0.6 0.5 0.3
Department of Families, Queensland, Australia (2002)	Queensland, Australia, birth cohort	Officially reported cases	Any neglect	3
Christensen (1996)	Health nurses in Denmark	Cases known to health and welfare	Passive neglect	4
Cawson, Wattam, Brooker, and Graham (2000)	Random sample of 18- to 24-year-old U.K. residents	Interviews with youth	Physical neglect	6
Straus, Hamby, Finkelhor, Moore, and Runyan (1998)	National random sample of parents with a child from birth through 17 at home	Interviews with parents	Any neglect	27
Duggan et al. (2004)	Families in Hawaii Healthy Start program	Interviews with parents	Any neglect	30
Paivio and Cramer (2004)	Canadian university students	Questionnaires completed by students	Emotional, males Emotional, females Physical, males Physical, females	45 16 38 15
Mazzeo and Espelage (2002)	Canadian university students	Questionnaires completed by students	Emotional Physical	61 40

NOTE: CPS = child protective services.

fact that the Australia and U.K. studies interviewed victims, who tend to report higher rates than perpetrators (caretakers) because the latter may not recall past and/or unintentional neglectful behaviors. The Denmark study includes reports from health and welfare workers. The significance of this method of data collection is that in Denmark, public health nurses visit the homes of all new parents, which means that the study refers to all parents in Denmark, not a clinical sample. Moreover, with the exception of pediatricians, these visiting nurses are likely to be more sensitive to the presence of neglectful behavior than are human service professionals in general. Nevertheless, the observations of public health nurses will inevitably underestimate neglectful behavior that does not cause a visible injury or behavior problem but still constitutes a danger to a child, such as leaving a child unsupervised or failing to meet the developmental needs of a child by failing to show warmth and affection.

The last four studies in Table 1 found rates that are up to 100 times higher than the rate of cases known to CPS in the first row. We suggest that this is because

they include types of neglectful behavior that would be unlikely to call forth clinical intervention unless they were very chronic. For example, a large portion of the 27% of neglectful behavior cases in the Straus, Hamby, Finkelhor, Moore, and Runyan (1998) study is attributable to a high percentage of respondents (19.5%) endorsing the item "Had to leave your child home alone, even when you thought some adult should be with him/her." Another contribution to the high neglectful behavior rate is that 11% of respondents indicated there was at least one occasion when they "Were not able to make sure your child got the food he/she needed." The results from these four studies indicate that there is a great deal of subclinical level maltreatment of children. But they should not be ignored because it is a well-established principle in public health epidemiology that a risk factor with a low effect size but a high prevalence rate can have a much greater adverse effect on public health than a risk factor with a much higher effect size but a low prevalence rate (Rose, 1985). For this reason, the focus of this article is on investigating the degree to

which experiencing such subclinical maltreatment is associated with violence against a dating partner.

Methodological Sources of Variation in Measuring Neglect

The fact that the last study in Table 1 has a rate of neglect that is 100 times higher than the study in the first row probably reflects differences in the following aspects of the studies: (a) source of data (i.e., whether child, parent, human service professional, or official reports); (b) chronicity of the neglectful behavior (i.e., how frequently it must occur to judge the parent as neglectful); (c) whether neglect is defined by behavior of the caretaker or visible injury to the child or both; (d) time period covered (i.e., whether during the previous year or during the life of the child); (e) number of dimensions measured (e.g., one dimension such as physical neglect versus multiple dimensions); (f) rarity of the behavior (i.e., seldom occurring versus frequently occurring neglectful acts); and (g) number of different behaviors included in each dimension. For example, an instrument that asks about 10 physically neglectful behaviors is likely to produce a higher prevalence rate than one that asks about 5 behaviors. These differences make it difficult to compare prevalence rates from one study to another and from one national setting to another. The study reported in this article, however, enables comparisons between national settings because the same procedures were used at 33 sites in 17 national settings.

METHODS

The data for this research are from the International Dating Violence study. The study is being conducted by a consortium that currently consists of researchers at 33 universities in 17 nations. The members of the consortium use a four-part questionnaire. Parts 1, 2, and 3 are the same for all 33 sites. Part 4 varies from site to site because it is reserved for measures that are of specific interest to each consortium member.

Sample

The data were obtained from students at the 33 sites listed in Table 2 using procedures reviewed by and approved by boards or administrators responsible for protection of human subjects at each of these universities. The purpose of the study and the right to not participate were explained orally and in printed form at the beginning of each session. Participants were told that the questionnaire asked about the attitudes, beliefs, and experiences they might have had

and that the questionnaire included questions on sensitive issues, including sexual relationships. They were assured of anonymity and confidentiality. A debriefing form was given to each participant as he or she left. The form explained the study in more detail and provided names and telephone numbers of area mental health services and community resources such as services for battered women. Although 9,069 students completed the questionnaire, the *N*s for the analyses in this article are much lower because, to be included, the student needed to be in a current or recent dating relationship and because, as in other surveys, not everyone answered every question. Indeed, to respect the privacy and the voluntary nature of participation, the instructions emphasized that respondents were free to omit any question they did not wish to answer. The *N*s for specific analyses are given in the tables.

The completed questionnaires were scanned for aberrant response patterns such as marking the identical answer category for an entire series of questions or an implausibly high frequency of rare events such as 25 instances of attacking a partner with a knife or gun. Questionnaires with an aberrant response pattern were removed from the sample. This was typically about 5% of the questionnaires. Some of the characteristics of the cases used for this article are presented below, and other characteristics are in another article (Straus & International Dating Violence Research Consortium, 2004).

Measure of Neglectful Behavior

Neglectful behavior was measured by the short form of the Adult-Recall version of the Multidimensional Neglectful Behavior Scale (Straus, Kinard, & Williams, 1995). This version of the scale asks adolescents or adults if their parents engaged in each of a list of neglectful behaviors. Consequently, it does not depend on the case coming to the attention of a human service professional or on a neglectful parent being willing to disclose his or her behavior. The data were gathered in a way that respondents could feel was completely anonymous. The indicators of neglectful behavior in the Multidimensional Neglectful Behavior Scale are not restricted to instances in which a harmful effect on the child was observable at the time of assessment. Because most neglected children do not manifest an observable harm, this results in a more complete assessment of neglectful behavior. Another reason the Multidimensional Neglectful Behavior Scale is likely to result in a high prevalence rate is because it measures neglectful behavior regardless of the intent of the caregiver. Finally, there is likely to be a more complete identification of neglectful behavior than with measures that focus on

TABLE 2: Prevalence of Neglectful Behavior by Site and Gender (Sites in Rank Order)

University Site	% Three or More Neglectful Behaviors		
	Total	Male	Female
KOREA-PUSAN	36.4	28.1	41.2
CHINA-HONGKONG	28.6	25.3	30.8
CANADA-LONDON	21.4	22.7	20.3
SGP-SINGAPORE	19.4	23.0	17.7
CANADA-TORONTO	16.7	<u>15.2</u>	17.6
USA-MISSISSIP	16.4	17.9	16.3
GERMANH-FREIBURG	15.4	11.1	18.6
USA-LOUISIAN	15.4	17.6	13.9
MEXICO-JUAREZ	15.0	21.3	13.5
USA-TEXAS-NON MEX	15.0	24.3	9.5
ISRAEL-EMEKZYRL	13.8	17.4	12.9
USA-TEXAS-NAGADCDCHE	13.6	10.1	15.5
BRASIL-SAO PAULO	13.4	19.1	<u>10.4</u>
USA-TEXAS-MEX AMERICAN	13.2	20.2	10.5
USA-CINCINNATTE	12.8	17.5	7.7
CANADA-WINNIPEG	12.7	19.0	11.8
AUSTRALIA-ADELAIDE	<u>12.2</u>	9.6	12.8
CANADA-HAMILTON	12.0	11.9	12.0
BELGIUM-FLEMISH	11.5	16.7	9.9
PORTUGAL-BRAGA	11.0	12.2	9.1
USA-INDIANA	11.0	14.6	9.4
USA-UTAH	11.0	16.7	7.6
INDIA-PUNE	10.5	11.5	9.8
USA-WASHIN DC	10.5	21.4	8.6
GREAT BRITTAN-SCOTLAND	10.4	7.7	10.9
NETHERLANDS-AMSTRDAM	10.3	12.2	9.6
CANADA-MONTREAL	10.0	12.3	9.4
NEW ZEALAND-CHRISTCH	9.0	10.0	8.7
SWITZERLAND-FRENCH	8.7	13.7	6.2
SWITZERLAND-GERMAN	8.5	6.3	9.5
USA-NEW HAMPSHIRE 2	6.7	12.8	4.7
USA-PENNSLVNA	5.1	6.2	4.8
USA-NEW HAMPSHIRE 1	3.2	5.2	2.4

NOTE: Underlined and bold indicates median university.

only physical neglect or some other single aspect of neglect because, as indicated by "Multidimensional" in the test name, the Multidimensional Neglectful Behavior Scale obtains information on four dimensions of neglectful behavior.

A limitation of the measurement of neglectful behavior is that because measures of many constructs had to be included in the International Dating Violence Study, only eight items could be allocated to measuring neglectful behavior. This was the eight-item short form of the Multidimensional Neglectful Behavior Scale that is included in the Personal and Relationships Profile (Straus, Hamby, Boney-McCoy, & Sugarman, 1999; Straus & Mouradian, 1999). The short form is a much less comprehensive measure than the 20-item Multidimensional Neglectful Behav-

ior Scale. It includes only two items to measure each of the four dimensions of neglectful behavior (cognitive, supervisory, emotional, and physical). The items and the dimensions they are intended to measure are shown in Table 3. These dimensions and the items to measure each dimension were selected on the basis of a review of measures of neglect followed by factor analysis and item analysis to select the final items (see Straus et al., 1995).

Response categories and dichotomization. Because the short form of the Multidimensional Neglectful Behavior Scale was administered as part of the Personal and Relationships Profile (Straus et al., 1999), the response categories used for all 22 of the scales in this instrument were used. These asked the respondents to indicate how much they agreed with each of the eight neglectful behaviors using the following categories: 1 (*strongly disagree*), 2 (*disagree*), 3 (*agree*), or 4 (*strongly agree*). Students who chose 3 or 4 were classified as having experienced the neglectful behavior.

Reliability of the Multidimensional Neglectful Behavior Scale. The alpha coefficient of internal consistency reliability, using the students as the cases, was .72. For the macrolevel version of the data, using the 33 sites as the cases, the alpha was .75. Taking into account that the short form of the Multidimensional Neglectful Behavior Scale has only eight items, these can be considered to be high coefficients of reliability.

Cutting point for neglectful behavior. One of the most ambiguous aspects of defining and measuring neglect concerns how pervasive the neglectful behavior must be for a parent to be classified as neglectful. This is in contrast to sexual abuse for which there is almost complete consensus that a parent who has sex with a child once is a sexually abusing parent. For neglectful behavior, however, if only a single instance of one type of neglectful behavior occurs, there is a tendency to label that as a neglectful event but not to label the parent as neglecting unless there is observable injury. Our procedure reflected this practice by classifying students as having experienced neglectful behavior only if they reported three or more of the neglectful behaviors measured by the Multidimensional Neglectful Behavior Scale. In addition, Table 4 provides data on the prevalence rates for other cut points.

Measures of Violence Against a Dating Partner

The revised Conflict Tactics Scales (CTS2). Physical assault and injury were measured by the CTS2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The CTS has been used in more than 300 published articles during the past 25 years and has demonstrated reliability and validity (Archer, 1999; Straus, 1990). The

TABLE 3: Percentage of Students Who Experienced Each Neglectful Behavior

Dimension	Neglectful Behavior		Students (N = 7,179)		Sites (N = 33)	
			Minimum	Maximum	Minimum	Maximum
Cognitive	My parents helped me with homework if I needed help.	RX	29	10	73	
Emotional	My parents did not comfort me when I was upset.		17	6	41	
Emotional	My parents helped me when I had problems.	R	15	8	28	
Supervise	My parents made sure I went to school.	RX	15	1	85	
Cognitive	My parents did not help me to do my best.		12	5	19	
Physical	My parents gave me enough clothes to keep me warm.	R	8	4	20	
Physical	My parents did not keep me clean		5	1	13	
Supervise	My parents did not care if I got into trouble in school		5	2	19	

NOTE: R indicates a reverse scored item. X indicates that the item has been replaced in the revised version of the scale in Straus, 2005.

TABLE 4: Multidimensional Neglectful Behavior Scale Scores by Gender

Scale Score	Total (N = 7,875)	Males (N = 2,325)	Females (N = 5,550)
0	46.7	40.3	49.4
1	26.5	27.8	26.0
2	12.9	15.2	11.9
3	7.2	8.8	6.6
4	4.0	4.7	3.7
5	1.7	2.0	1.5
6	0.7	1.0	0.6
7	0.2	0.1	0.3
8	0.0	—	0.0

NOTE: The scale scores indicate the number of neglectful behaviors reported. Scale scores were higher for males than females, $\chi^2(8, N = 7,875) = 67.86, p < .001$.

alpha coefficients of reliability for male and female students at each site in the present study are available (Straus, 2004). This article uses the CTS scales for perpetration of physical assault and physical injury and also the subscales to identify students who severely assaulted or severely injured a partner.

Examples of the items measuring minor physical assault include pushed or shoved, grabbed, slapped, and threw something at partner; whereas examples of severe assault include punched or hit, kicked, and choked. Examples of items measuring minor injury include feeling physical pain the day after a fight with partner and bruised or sprained from a fight with partner, whereas examples of severe injury include broken bone from fight with partner and needed to see doctor because of fight with partner.

The CTS frequency of occurrence response categories were dichotomized to create a prevalence score where 1 indicates that the student had perpetrated one or more of the acts in the scale. The

macrolevel data is the percentage of students at each university with a score of 1 (i.e., the percentage who physically attacked or injured a dating partner in the past year).

There are separate subscales for minor and severe assault and minor and severe injury and for the combination of these acts, which will be referred to as the overall or total assault or injury scale. However, because most of the violent acts were in the minor violence category, the minor and total scales overlap to a great extent, which led to results that parallel each other. To avoid this redundancy, we report only the total and severe violence scales.

Measures of Respondent Characteristics

Gender. For the macrolevel analyses, the variable is the percentage of female students at each university. About two out of three students in the sample were female (69%). The predominance of females occurred because most of the classes in which the questionnaire was administered were courses in psychology and sociology.

Social desirability scale. Research that uses self-reported data needs to take into account the tendency of respondents to minimize socially undesirable behavior. In this study, the procedure was to use the social desirability scale of the Personal and Relationships Profile (Straus et al., 1999; Straus & Mouradian, 1999). This is a 13-item scale adapted from the Reynolds short form of the widely used Marlow-Crowne social desirability scale (Reynolds, 1982). The scale items are behaviors and emotions that are slightly undesirable but true of almost everyone, such as "I sometimes try to get even rather than forgive and forget" and "There have been occasions when I took advantage of someone." The more of these items the respondent denies, the more likely a respondent is to avoid admitting the undesirable behaviors that are

the focus of this study, such as having been neglected or assaulting or injuring a partner. The theoretical range of the social desirability scale is from 13 to 52. For this sample, the scores ranged from 15 to 52, with a mean of 33.9 and an *SD* of 4.8. The site-to-site differences were not large, but because they are almost statistically significant, it was decided to control for score on the social desirability scale. For the macrolevel analysis, the aggregate data consists of the mean social desirability scale score for the students at each site.

Age. The students ranged in age from 18 to 40. It is well established that the younger a couple the more likely there is to be violence in the relationship (Stets & Straus, 1989). Because the sites varied significantly in age, this variable was controlled in the analysis of site-to-site differences in violence against a partner. The mean age of the students at each site was used as the indicator of age for the macrolevel analyses.

Relationship length. Although almost 3% of the students had been in the relationship they described in the questionnaire a month or less, many more (23%) had been together for more than 1 year but less than 2. Thus, the median number of months was 8.5 and the mean almost 14. Because the longer a couple is together, the greater the opportunity for violence to occur, it is important to control for the length of the relationship. In the macrolevel analysis, this variable consists of the mean number of months together at each university.

Analysis to Test the Hypothesized Links Between Neglect and Partner Violence

We used multilevel modeling (Bryk & Raudenbush, 1992) to test the hypothesis that the more neglectful behavior the greater the probability of perpetrating violence against a dating partner and to determine whether this hypothesized relationship operates through both individual-level and social-context-level processes. Perpetration of violence, rather than being a victim of violence by a dating partner, was used as the dependent variable because the theory tested is about perpetration of aggressive and antisocial behavior on the part of persons who have experienced neglect.

1. The more neglectful behavior the students in this study experienced as a child, the more likely they were to engage in violence against a dating partner. The theoretical basis for this hypothesis was presented in a previous section.
2. In social contexts where neglect is prevalent, there is a closer link between experiencing neglect and violence against a dating partner than in social contexts where fewer children have been neglected. The theo-

retical basis for hypothesizing that individual-level neglect interacts with social-context-level neglect is that a society in which many children experience neglect will tend to be a society that tends to be less caring and more calloused than societies where the needs of children are more fully met.

3. In social contexts where violence against a dating partner is more prevalent, there is a closer link between experiencing neglect and violence against a dating partner than in social contexts where violence against a dating partner is less prevalent. The basis for hypothesizing this interaction of neglect experienced with the level of assault and injury is that a society in which violence is frequent will impose fewer constraints on individual violence and, by example, may even encourage it.

These hypotheses were tested using multilevel modeling (Bryk & Raudenbush, 1992) and, specifically, the HLM6 program (Raudenbush, Bryk, Cheong, & Congdon, 2004) to estimate the models. Two multilevel models were estimated: one for assault as the dependent variable and one for injury as the dependent variable. The theoretically important independent variable in each model was the score on the Multidimensional Neglectful Behavior Scale. In addition, the equations included the following control variables: gender and age of the student, length of the relationship, and score on the social desirability scale. The interaction of level 1 neglect with level 2 neglect, assault perpetration, and injury perpetration were included in each model. The level 2 predictor (university-level neglect) was centered so that the individual-level neglect intercept reflects the estimated effect of an individual's total neglect score on the individual's odds of inflicting injury or assault on a partner at a site where the overall prevalence of neglect was averaged while controlling for the individual's age, relationship length, SES, and social desirability scale score.

RESULTS

The Prevalence of Neglectful Behavior

Specific neglectful behaviors. Table 3 gives the percentage of the sample who agreed or strongly agreed that they had experienced each of the eight neglectful behaviors in the scale. The most frequent neglectful behavior was "not helping with homework," which was reported by 29% of the students. The column labeled "Sites" shows large variation between sites. The percentage of parents in the 33 sites who did not help with homework ranged from 10% to 73%. Although the reliability analysis showed that this item was correlated with the overall Multidimensional Neglectful

Behavior Scale score, we suspect that the percentages may be as high as they are because helping with homework may not be regarded as legitimate by some parents and may not be possible for other parents, especially parents with little education.

The least frequently occurring of the eight neglectful behaviors was not caring if the child got into trouble in school. Although this was reported by 5% of the students in the overall sample, it was less than half of that (2%) at the lowest site and almost three times as many (19%) at the highest site.

Neglectful behavior scale scores. Table 4 gives the frequency distribution of scores on the Multidimensional Neglectful Behavior Scale. Using the criterion of three or more of the eight neglectful behaviors, 13.8% of the students were classified as having experienced neglectful behavior. The rate for male students (16.6%) was 31% higher than the rate for females (12.7%), a significant difference, $\chi^2(8, N = 7,875) = 67.86, p < .001$.

Site-to-site differences in neglectful behavior. We turn now to the question of cross-cultural differences in neglectful behavior. Table 2 presents the 33 sites in rank order of the percentage of students who reported having experienced a high level of neglectful behaviors (three or more of the eight behaviors). Table 2 also shows that, at the median university in this study, 12.2% students reported this level of neglectful behavior. Even at the university with the lowest rate, more than 3% of the students experienced this level of neglectful behavior.

Gender differences. Comparison of the underlined numbers in the male and female columns of Table 2 shows that the median percentage of students who reported three or more neglectful behaviors was 46% higher for males than for females (15.2 versus 10.4). Both Tables 2 and 4 show substantially higher rates of neglectful behavior experienced by male students. Table 2 also shows that there are many exceptions.

Neglect and Mistreatment of Dating Partners

Table 5 presents the results from estimating multi-level models for assault and injury of a dating partner. The level 1 independent variable of theoretical interest is neglectful behavior experienced by the individual students in the study. The level 2 independent variables are the mean levels of neglect, assault, and injury at each of the 33 university sites.

Individual-level effects. The odds ratios of 1.11 and 1.21 in the row of Table 5 for Neglect show that, as hypothesized, each increase of 1 point on the scale measuring neglectful behavior experienced is associated

TABLE 5: Multilevel Regression of Assault and Injury on Neglect and Four Control Variables

<i>Independent Variable</i>	<i>Odds Ratio</i>	
	<i>Assault</i>	<i>Injury</i>
Individual-level effects		
Neglect	1.11**	1.21**
Sex of student = female	1.29**	0.99
Age of student	0.87*	0.92**
Relationship length	1.20**	1.07**
Social desirability	0.91**	0.95**
Interactions of individual-level neglect with university level		
Neglect	1.02	0.92*
Assault	1.01**	1.02**
Injury	1.03**	1.07**

* $p < .05$. ** $p < .01$.

with an 11% increase in the probability of assaulting a dating partner and a 21% increase in the probability of injuring a dating partner. Moreover, these relationships are after controlling for the effects of the other variables in the individual effects section of Table 5. Because the control variables have either substantive or methodological interest, each will be briefly described.

The row for Sex of student shows that female students have a 1.2 times greater probability of physically assaulting a partner than do male students. This is consistent with many studies that show that for the general population, women assault their partners at about the same rate as men, but for young couples, the rate of assault by women is higher than the rate of assaults on partners by men (Archer, 2000; Straus, 2004). On the other hand, there are also many studies showing that the rate of injuries inflicted by women is lower than the rate for men. For this reason, we expected the odds ratio for injury would be less than 1.00. Although the odds ratio in Table 5 for sex of the student is, as predicted, less than 1.00, it is not statistically significant.

The row for age of student shows that each increase of 1 year in the age of the student is associated with a 13% reduction in the probability of assaulting a dating partner and an 8% decrease in the probability that those assaults which resulted in an injury.

For length of the dating relationship, Table 5 shows that the longer the relationship has been ongoing, the greater the probability of there having been an assault in the past year and the greater the probability of the assault resulting in an injury.

The row for social desirability shows that each increase of 1 point on the social desirability scale is associated with a 9% decrease in the probability of

assaulting and a 5% decrease in the probability of injuring a dating partner. These results show that the social desirability scale operated as expected and illustrate the importance of controlling for this variable.

Interaction of individual-level neglect with university context. The hypotheses driving the multilevel analysis were that the link between experiencing neglectful behavior by parents using violence against a dating partner is stronger in social contexts with a high average rate of neglect or high average level of violence against dating partners compared to universities with low average levels of neglect, assault, and injury rates.

The row for Neglect in the interactions panel of Table 5 shows that the odds ratio for the hypothesized interaction of individual neglect with the average rate of neglect for the university (1.02) was not significant for assault. The odds ratio for the interaction of individual neglect with the average rate of neglect (0.92) is significant for injury but in the opposite direction to that hypothesized. Thus, we found no support for the first of the three hypothesized interactions of individual-level neglect with university-level neglect. However, the rows for the interaction of university level assault and injury both show significant affects that are consistent with Hypothesis 3. Figure 1 plots the of assault possibility for the interaction of individual-level neglect with university-level assault. It shows that in social contexts where assault is rare (25th percentile), individual-level neglect is not associated with an increased probability of assault. However, in university contexts with a high level of assault, the more neglect a student experienced, the higher the probability that he or she will have physically assaulted a dating partner in the previous 12 months. The plots for the other three interaction effects (not shown) follow a similar pattern, but the slopes are not as steep or as linear.

DISCUSSION

This study measured neglectful behavior experienced as a child by 6,900 students at 33 universities in 17 countries and found that half of the students experienced at least one of the eight neglectful behaviors as children, and about 12% experienced a pervasive pattern of neglect as indicated by three or more of the eight neglectful behaviors measured. The rate of neglectful behavior experienced by male students tended to be higher than by female students.

There were tremendous university-to-university differences in the prevalence of neglectful behavior. Using students who experienced three or more neglectful behaviors as a criterion, the rates ranged

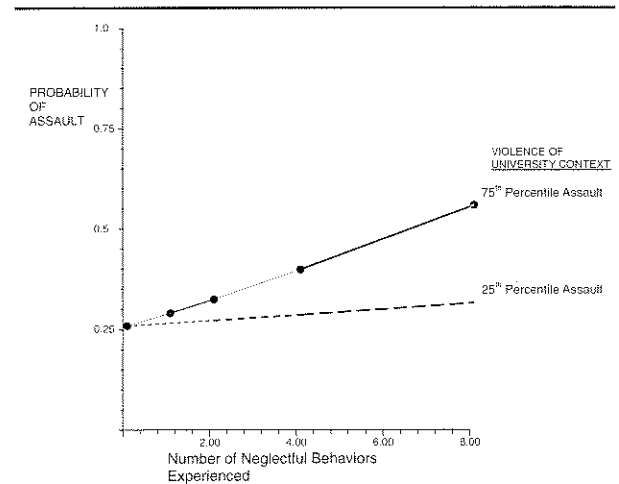


FIGURE 1: Interaction of Neglect History With Assault Prevalence: Relative Slopes Associated With Increasing Neglect at Universities With Low and High Partner Assault Rates

from a low of 3% to a high of 36%. Even the figure of 3% for the university with the lowest rate is high.

Tests of the theory that neglect is a risk factor for antisocial and violent behavior found that the more neglectful behavior the students experienced as a child, the more likely they were to physically assault a dating partner. The results of multilevel modeling using the 33 sites as the units of study found important social context effects. The increased probability of violence against a dating partner was found to apply primarily in social contexts with a high level of violence. We suggest that this occurs because in social contexts where violence is rare there may be stronger mechanisms for preventing violence, and this, at least partly, makes up for the socialization deficits associated with experiencing neglectful behavior as a child. On the other hand, social contexts where violence is more prevalent may impose fewer constraints on individual violence and, by example, may even encourage violence.

The results on the relationship of neglectful behavior to violence against a dating partner are consistent with the developmental sequence posited by Tremblay (2003). His research and other studies show that, on average, children start life with a tendency to use aggression to express anger, to remove noxious conditions, or to achieve goals such as possession of a toy. His research shows that care by a responsive parent and consistent discipline are needed for the child to learn nonaggressive alternatives. The results reported in this article that show that the more neglectful behavior experienced the higher the rate of violence against a dating partner probably reflect

the fact that the Multidimensional Neglectful Behavior Scale used for this study includes indicators of absence of parental responsiveness to the emotional need and absence of consistent discipline, both of which are necessary for children to learn nonaggressive methods of achieving goals and managing their relationships with other persons.

Limitations and Needed Research

There are a number of important limitations that must be kept in mind. The sample is a nonrandom convenience sample. The measure of neglectful behavior has a number of limitations. It is very brief and therefore omits many important neglectful behaviors. The data is retrospective and therefore depends on the ability of young adults to correctly recall neglectful behavior. Moreover, if neglect is more prevalent among preschool children than older children, much neglectful behavior is missed by this instrument because very few can recall specific behaviors by parents when they were that young. The cutting point of three or more of neglectful behaviors is arbitrary. There is as yet only limited evidence of the validity of the Multidimensional Neglectful Behavior Scale across cultures (Straus, in press). Consequently, the site-to-site differences may reflect measurement error rather than real differences in neglectful behavior.

Assuming, however, that the large differences between sites in neglectful behavior are, at least in part, real differences in neglectful behavior leaves unanswered the question of why the rate of neglectful behavior is so much higher at some sites. Many of the possible explanations are open to empirical research. A simple but important example is the number of children per family. This varies from society to society. A large number of children can influence the probability of neglectful behavior because the attention of parents must be divided among several children. Another important issue is the perception of students who experienced neglectful behavior. To what extent did students who reported neglectful behavior by their parents perceive it as neglect? Individual and culturally defined differences in the perception of having been neglected could be a moderator variable that might help explain variation in the link between having experienced neglectful behavior and violence against a dating partner.

Conclusions

Although there are important limitations to this study and many unanswered questions, the results suggest that neglectful behavior by parents is a more pervasive problem than is usually realized. The results

show high rates of neglectful behavior in both developed and underdeveloped countries and among a privileged sector of those countries. This study has also shown that neglectful behavior is associated with a type of harmful effect that was predicted on theoretical grounds even though it has not been previously investigated—physical violence toward a dating partner.

There are increasing efforts in many countries aimed at primary prevention of child abuse and prevention of violence against partners in dating, cohabiting, and marital relationships. It is already known that this requires changing such traditional characteristics of society and of families as male dominance in society and the family (Straus, 1994) and the violent socialization of children that goes under euphemisms such as spanking and smacking (Straus, 2001). If the results of this study are interpreted as indicating that experiencing neglectful behavior, even at the subclinical level probably measured by this study, is associated with an increased probability of violence in partner relationships, helping parents avoid neglectful behavior, even relatively minor types of neglectful behavior, could make a further contribution to the primary prevention of all types of family violence, including violence against partners and other forms of child maltreatment.

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