

The Co-Occurrence of Spouse and Physical Child Abuse: A Review and Appraisal

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For more than 20 years, there have been periodic reports in the research literature about the co-occurrence of spouse abuse and physical child abuse. This review compiles and evaluates those reports. Forty-two studies were found that provided some data concerning co-occurrence; 31 of the studies included sufficient detail to be used in this review. The different types of studies are classified and methodological issues are discussed. The base rate of co-occurrence found in representative community samples was about 6%. In clinical samples of either battered women or physically abused children, the percentage of overlap ranged from 20% to 100%. When a conservative definition of child abuse was used, a median co-occurrence rate of 40% was found. Five models depicting the directionality of abuse in violent families are proposed and discussed in relation to the data and theories of violence. Recommendations for methodological improvements and theory-driven studies are presented.

As early as 1975, reports appeared indicating that children whose parents engaged in physical violence were also likely to be victims of physical maltreatment. Moore (1975) was one of the first to sound the alarm. She discovered that 13% of the children from 23 maritally violent families had been physically hurt or were threatened with violence. That same year, Levine (1975) also commented on the problem of co-occurring violence but found only a 2% rate of overlap between marital violence and physical child abuse. Since that time there have been periodic reports of the overlap between marital violence and physical child abuse—with overlap rates that typically are much higher than either of the rates first reported. However, to

date, there has not been a systematic analysis of these co-occurring manifestations of violence. Given the magnitude of the problem of marital violence, estimated to occur in perhaps as many as 16% of all marital households (Straus, 1991), the extent of co-occurring abuse in families is an important issue.

It is somewhat surprising that this topic, given its implications for the well-being of children, has not received more scrutiny. The likely explanation is that research into child abuse and maltreatment, which emerged in the 1960s (e.g., Kempe, Silverman, & Steele, 1962), has been largely segregated from the researchers who study spouse abuse. The latter topic began to receive systematic attention in the 1970s and 1980s (e.g., Straus, Gelles, & Steinmetz, 1980). Only during the 1990s has it become apparent that these two research areas were addressing the common phenomenon of family violence from different perspectives and that a more unified understanding of domestic violence is needed.

The issue of co-occurrence addresses questions at the heart of our understanding of the phenomenon of family violence. Questions associated with this issue include: (a) Who perpetrates violence in a family? (b) What causes one person to abuse another? (c) What is

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the temporal relation between the two forms of violence? (d) Is the violence directed to one particular child in a family or are all children equally likely to be targets? and (e) What role does each family member play in the abuse?

The question of co-occurrence is not just of academic importance but also holds practical implications for child-welfare workers and the legal system. To what extent are children in homes where marital violence has occurred at risk of being physically abused themselves? Should men who batter their wives be allowed joint custody of their children? Alternatively, should women who aggress against their husbands be awarded custody? Evidently, if risk factors associated with co-occurrence can be identified, perhaps more effective intervention and prevention programs could be developed and the maltreatment of some children avoided.

Despite the forthright-sounding nature of those questions, as one begins to delve into the specifics of the pertinent research literature, the issue rapidly becomes considerably more intricate than simply determining one common rate of co-occurrence. First, what is the nature of the sample, and where were they recruited from? What definitions or criteria were used to judge whether abuse had occurred in the marital and the parent-child relationship? Was abuse determination based on parental report, professional assessment, or a child's self-report? What period of time was considered when collecting retrospective reports of abuse? Were one specific child and one parent targeted for reports of abuse, or did reports pertain to both parents and any child in the family?

The outcome of those decisions can have a marked impact on the empirical evidence, as we make clear in the next section of this article. Our focus is limited to physical abuse only, despite the fact that a few of the studies also provide information on rates of child sexual abuse, psychological maltreatment, and neglect. However there are too few studies addressing the co-occurrence of spouse abuse with other forms of child maltreatment to determine co-occurrence rates.¹

The review of the empirical studies is followed with an appraisal of the research methodology. Although there have been other comprehensive methodological critiques in the area of family violence research (e.g., Fantuzzo & Lindquist, 1989; Widom, 1989), there are

several methodological issues specific to this research that require examination. Five possible models of the role that each family member plays in co-occurring violence are then considered in light of the empirical data and in the context of five prominent theoretical explanations for the family violence. The final section of the article provides suggestions for improving methodology and for more explicitly testing the models.

The Empirical Data

Five methods were used to locate appropriate empirical studies. An electronic literature search using *PsycINFO* was conducted for studies published from 1967 to 1996 that contained rates of co-occurring spouse and child abuse. The keywords used in the search included *spouse abuse*, *wife abuse*, *partner abuse*, *family violence*, *domestic violence*, *marital violence*, and *child abuse*. Articles obtained from this search were then used to initiate searches for ancestral references. Review articles (Fantuzzo & Lindquist, 1989; Hughes & Fantuzzo, 1994) were also consulted to locate studies that were not discovered from the computerized database search. MINCAVA, an Internet clearinghouse for sources on family violence created by the University of Minnesota School of Social Work, was also searched for relevant articles. Abstracts from a family violence conference were scanned (Fourth International Conference on Family Violence, University of New Hampshire, Durham, July 1995). Finally, a dozen family violence researchers were queried as to whether they knew of appropriate studies.

A total of 31 empirical studies were found containing sufficient information about the co-occurrence of spouse and physical child abuse to be included in this review. Twenty-four of those studies reported the co-occurrence in terms of percentages. The remaining seven studies indicated the degree of statistical association between spouse and child abuse but did not provide a percentage of co-occurrence. Eleven

¹ Six studies also assessed sexual abuse of children, five studies assessed verbal-emotional abuse, and four studies assessed neglect. Four studies did not specify what type of child abuse had occurred (Hess, Folaron, & Jefferson, 1992; Layzer, Goodson, & deLange, 1986; Magen, Conroy, Hess, Panciera, & Simon, 1995; Stagg, Wills, & Howell, 1989).

Table 1
Characteristics of Studies and Percentages of Overlap Derived From Community Samples

Study	N	Criterion		Referent period	Target relationship	Overlap (%)
		Spouse	Child			
Silvern et al. (1995)	550	CTS-A	CTS-V	Ever	P-TD	21.0
			CTS-V	Ever	P-TC	18.0
			CTS-V	Ever	P-TS	14.0
			CTS-A	Ever	P-TD	11.0
			CTS-A	Ever	P-TS	11.0
			CTS-A	Ever	P-TC	11.0
Straus et al. (1980)	1,092	CTS-V	CTS-V	Past year	P-C	6.9
Gelles & Straus (1972) ^a	334	CTS-V	CTS-V	Past year	P-C	5.7
Gelles & Straus (1988)	2,688	CTS-V	CTS-V	Ever	P-C	5.6

Note. CTS-A = Conflict Tactics Scale—Abuse Index (kicked, bit, or hit with a fist; hit with an object; beat up; threatened with gun or knife; used a gun or knife); CTS-V = Conflict Tactics Scale—Violence Index (pushed, grabbed or shoved; slapped or spanked; threw something at; plus the CTS-A items); P = parent; TD = target daughter; TC = target child; TS = target son; C = child.

^aThis study is found only in Hotelling, Straus, and Lincoln (1990).

other studies contained some information about co-occurrence but were not included because of insufficient information.²

The core studies included a variety of samples and assessment methods. Three types of focal samples were collected: community (nonclinical) samples, samples of battered women, and samples of maltreated children. Four types of assessment methods were used to determine spouse and child abuse: self-reports, agency records, hospital records, or clinical impressions based on interviews. The review of the data is organized around the three types of focal samples. For the three samples, there are corresponding tables that list each study and provide six key pieces of information. This information includes the sample size, the criterion used to determine abuse for the spouse and the child, the referent period of time during which the child abuse occurred, the target relationship focused on (e.g., father-child; mother-son), and the percentage of overlap.

Data From Community Samples

Four studies were found that provided rates of co-occurring spouse and child abuse from community samples and are listed in Table 1 (in order of decreasing percentage of co-occurrence). These studies addressed the base rate question, What is the rate of overlap between the two forms of abuse that occurs in the general population? Three of the four studies were conducted by Richard Gelles and Murray

Straus, but the pertinent data were summarized in Hotelling, Straus, and Lincoln (1990).³ In that article, the authors indicated that the first systematic study concerning the issue of co-occurrence came from a student survey that was conducted in 1972 by Gelles and Straus (found only in Hotelling et al., 1990). Using an early form of the Conflict Tactics Scale (CTS), 334 freshmen undergraduates reported on their experiences with violence during the past year (i.e., their senior year in high school). It was found that 5.7% of the students reported one or more acts of violence between their parents and one or more acts of parental violence directed toward them during that year. These violent acts included a considerable range of behaviors, from mild acts of aggression, such as a push, grab, or shove, to extreme forms of violence involving use of a knife or gun.

Subsequently, Gelles and Straus (1988) conducted their two well-known representative

² The following studies provided insufficient information to include them in the review (Gayford, 1975; Hilberman & Munson, 1978; Hughes, 1982; Kincaid, 1982; Levine, 1975; Moore, 1975; Moore, Galcius, & Pettican, 1981; Roy, 1977; Smith, Berthelsen, & O'Connor, 1997; Stark & Flitcraft, 1988; Wohl & Kaufman, 1985).

³ The pertinent analyses for the two NFVS studies appeared in Hotelling et al. (1990). However, so the reader will know which study the data came from, the first NFVS sample will be referenced as Straus et al. (1980) and the second as Gelles and Straus (1988).

sample surveys called the National Family Violence Surveys (NFVS). Using telephone reports on the CTS from families with at least one minor in the house (NFVS, 1975 & 1985; Straus, Gelles, & Steinmetz, 1980; Gelles & Straus, 1988), they found very similar percentages of co-occurrence as in the their first college student study. In the first NFVS survey, using the CTS—Violence Index as the criteria for both types of abuse, 6.9% of parents reported co-occurring spouse and child abuse. The second NFVS survey, using a considerably larger sample than the first representative survey, found a somewhat lower rate of co-occurrence rate at 5.6% (Hotaling et al., 1990).

The most recent community sample study, though not a representative sample, arrived at a considerably higher base rate than any of the previous studies. Silvern et al. (1995), when using the same index of violence that Straus and his colleagues used, found that 18% of 550 undergraduate students reported that sometime in their life they had experienced physical abuse and observed a violent act between their parents. When the sample was divided by gender, women reported a higher rate (21%) than men (14%). However, when the more conservative index of child abuse was used (CTS—Abuse Index), which does not include such items as “spank/slap” or “pushed,” the percentage of co-occurrence dropped to 11%. Given that these rates included any abuse over the participants’ lifetimes, they do not seem unreasonable when compared with the NFVS studies’ co-occurrence rates of about 6% for the past year.

Silvern et al.’s (1995) study and a second study (Simons, Wu, Johnson, & Conger, 1995) provided data about the statistical association between spouse and child abuse. Chi-square tests indicated a significant association between reports of parental partner abuse and reports of physical child abuse both for women, $\chi^2(2, n = 287) = 55.5, p < .001$, and for men, $\chi^2(2, n = 263) = 10.8, p < .01$. In the second study, Simons et al. (1995) collected a community sample of 451 seventh-grade children. The children reported on whether they had been physically abused (assessed by responses to questions about being spanked, slapped, and hit) and whether their parents were physically violent toward each other. Using structural equation modeling (LISREL), the authors found

a significant bivariate association ($p < .05$) between the latent constructs of aggression toward spouse and aggression toward children. Taken together, the four studies of community samples that reported rates have indicated a co-occurrence of somewhere between 5.6% and 11%.

Data From Battered Women

The most common approach for determining rates of co-occurrence has been to collect data from battered women or, occasionally, from their children. Seventeen studies (see Table 2) provided data on the percentage of co-occurrence with information collected from women identified as having been battered. Each study reported at least one rate of overlap; however, in one case, eight rates of overlap were reported, using two different criteria for determining child abuse in reference to four different parent–child target relationships.

The most salient feature of the table is the widely divergent percentages of co-occurrence: They ranged from a high of 100% to a low of less than 10%. Across all studies (averaging different rates within a study), the median rate of co-occurrence was 41%. What accounts for such variation? The fluctuations do not appear to be accounted for by sample size, although the sample sizes ranged from 24 to 424 mothers. Instead, the three key variables appear to have been the child criteria used to indicate abuse, whether the referent period of abuse was the past year or ever, and whether the perpetrator of the abuse was the father or mother.

The most important determinant of co-occurrence rates was the criterion used to determine physical child abuse. The eight studies that used the CTS—Violence Index (past year) had an average co-occurrence rate of 72% (range = 40% to 93%). But the average co-occurrence rate in the two studies that used the more conservative CTS—Abuse Index was 51% (range = 33% to 67%). The three studies that used a global maternal report of child abuse rather than looking at specific behaviors with a questionnaire tended to find lower rates of co-occurrence, with an average overlap of 33% (range = 11% to 53%).

In addition to those 17 studies, 4 studies reported associations between spouse and child abuse. Correlations between interspousal aggres-

Table 2

Characteristics of Studies and Percentages of Overlap Derived From Samples of Battered Women

Study	N	Criterion ^a		Referent period	Target relationship	Overlap (%)
		Spouse	Child			
Kruttschnitt & Dornfeld (1992)	50	CTS-V	CTS-V	Ever	M-TC	100
			CTS-V	Past year	M-TC	74
			CTS-V _{CR}	Ever	M-TC	84
			CTS-V _{CR}	Past year	M-TC	58
Giles-Sims (1985)	27	Shelter residence	CTS-V	Past year	M-TC	93
			CTS-V	Past year	F-TC	89
			CTS-A	Past year	F-TC	63
			CTS-A	Past year	M-TC	55
Holden et al. (1998)	37	CTS-V	CTS-V	Past year	M-TC	92
Holden et al. (1998)	30	CTS-V	CTS-V	Past year	M-TC	90
Jouriles & Norwood (1995)	48	CTS-V	CTS-V _{CR}	Past year	P-TS	81
			CTS-V _{CR}	Past year	P-TD	69
Holden et al. (1998)	32	CTS-V	CTS-V	Past year	M-TC	75
O'Keefe (1995)	184	CTS-V	CTS-A	Past year	P-TC	67
			CTS-A ^b	Past year	P-TC	35
			CTS-A	Past year	B-TC	51
			CTS-A ^b	Past year	B-TC	5
			CTS-A	Past year	F-TC	34
			CTS-A ^b	Past year	F-TC	29
			CTS-A	Past year	M-TC	33
			CTS-A ^b	Past year	M-TC	6
Walker (1984)	155	Battered >2×	M's report of abuse	Ever	F-C	53
				Ever	M-C	28
Stacey & Shupe (1983)	424	Shelter residence	Slap, kick, punch, burn	Ever	P-C	45
McCloskey (1997)	190	CTS-V	CTS-A ^b	Past year	F-C	43
Bowker et al. (1988)	775	Battered >2×	Slap/hit	Ever	F-C	41
			Kick	Ever	F-C	16
			Weapon	Ever	F-C	9
			Beat up	Ever	F-C	4
Jouriles et al. (1987)	45	CTS-V	CTS-V	Past year	P-C	41
Moore & Pepler (1998)	114	Shelter residence	CTS-V	Past year	P-C	40
Suh & Abel (1990)	258	Shelter residence	M's report of abuse	Ever	F-C	40
Hughes et al. (1989)	97	CTS-V	CPS report of abuse	Past year	F-C	36
Hilton (1992)	24	Shelter residence	Threaten, hit	Ever	F-C	30
Wildin et al. (1991)	76	Shelter residence	M's report of abuse	Ever	P-C	11

Note. CTS-V = Conflict Tactics Scale—Violence Index (pushed, grabbed or shoved; slapped or spanked; threw something at; plus the CTS-A items); M = mother; C = any child in the family; TC = target child; F = father; CTS-A = Conflict Tactics Scale—Abuse Index (kicked, bit, or hit with a fist; hit with an object; beat up; threatened with gun or knife; used a gun or knife); P = either parent; TS = target son; TD = target daughter; B = both parents; CPS = Child Protective Services.

^aAll CTS reports are from mothers unless from children, as indicated by subscript CR (child report). ^bWithout "hit with object" item.

sion and parents' aggression toward children ranged from a high of $r(43) = .56, p < .001$ (Jouriles, Barling, & O'Leary, 1987), to a low of $r(183) = .28, p < .01$, between marital violence and fathers' violence toward children (O'Keefe, 1994). Jouriles and LeCompte (1991) reported a correlation of $r(38) = .32, p < .05$, between husbands' aggression toward wives and fathers'

aggression toward their sons. Interestingly, they found the identical correlation when associating husbands' aggression toward wives and mothers' aggression toward boys. The fourth study found that the probability of escalated abuse occurring in homes where the mothers are also battered (.42) was substantially higher than in control-group families (.20; McCloskey, 1997).

Table 3

Characteristics of Studies and Percentages of Overlap Derived From Samples of Child Abuse Victims

Study	N	Criterion		Referent period	Target relationship	Overlap (%)
		Spouse	Child			
McKibben et al. (1989)	32	Medical evidence	Medical evidence	Ever	P-TC	59
Carlson (1991)	101	Verbal	Mother's report	Ever	P-TC	50
Sternberg et al. (1993)	110	Social worker	Social worker	Past 6 months	P-TC	26

Note. P = parent; TC = target child.

Data Derived From Reports of Child Abuse

The final sources of information about the extent of overlap come from three studies that were based on physical child abuse cases (see Table 3). The first of these studies to be published, which also found the largest co-occurrence rate, was conducted by McKibben, De Vos, and Newberger (1989). Using hospital records of 32 cases of physical child abuse, the authors determined that 59% of the children's mothers had also been abused by the same men. In a larger study including 101 adolescents who were in residential treatment and reported being victims of physical abuse, 50% of the youths disclosed that they were exposed to interparent abuse at home (Carlson, 1991). The third study in this category, and the only one not conducted in the United States, was published by Sternberg et al. (1993). They began with a sample of 110 Israeli two-parent families who had been reported to a social service agency in Israel for child abuse. Using social workers' determinations of abuse in the family during the preceding 6 months, they calculated the co-occurrence rate to be 26%.

Two other studies provided information about the association between the two forms of abuse. Salzinger, Feldman, Hammer, and Rosario (1992) recruited a sample of 106 abused children from the New York State Child Abuse Register between the ages of 8 and 12 years along with a comparison sample. Using path analysis, they found a significant relation between marital violence and physical child abuse ($\beta = .20$, $p < .01$). The second study used a multimethod assessment approach to determine whether reports of marital violence were significantly associated with reports of physical child abuse. Adolescents' self-reports, $r(158) = .27$, $p < .01$, case files, $r(158) = .30$,

$p < .01$, and social workers' reports, $r(158) = .38$, $p < .01$, all indicated that the two forms of violence were significantly likely to co-occur (McGee, Wolfe, Yuen, Wilson, & Carnahan, 1995).

Discussion of the Empirical Studies

The 31 empirical studies reviewed above provide overwhelming evidence that children who live in maritally violent homes are at risk for being physically abused. Using a variety of samples and approaches, the studies have provided data strongly in agreement that there is considerable co-occurrence of domestic violence and physical child abuse. Sixteen of the twenty studies (80%) using samples of either battered women or abused children found co-occurrence rates of 40% or more. However, it should be kept in mind that those rates vastly overestimate the extent of co-occurrence that occurs in the community. On the basis of the two relatively large-scale representative samples that used a liberal definition of physical child abuse, we conclude that about 6% of children in the United States are likely to be physically maltreated in any given year in families in which there is marital violence.

Despite the predominance of evidence that the rate of co-occurrence is a high one, the widely fluctuating rates of co-occurrence across studies is disturbing. Some studies have indicated that virtually all of the children in maritally violent homes are physically abused, in contrast to other studies that have found that the rate may be under 30%. To some extent, those extreme differences, as well as many of the apparent fluctuations, can be accounted for by methodological reasons. Indeed, methodological inconsistencies across studies represented the largest impediment to arriving at an accurate

estimate of the overlap. The five major methodological issues are the sample source, the criteria used to determine physical abuse, the source of the report, the referent period, and who the individuals are in the target relationship.

Sample Source

The greatest disparity in rates came from those studies that contained representative community samples, in contrast to samples stratified on the basis of whether some form of family violence had occurred. It is not surprising that the rate of overlap may be seven times more common in families characterized by family violence compared with nonviolent families. Within the noncommunity samples, higher rates were found for some of the battered women samples than for the child abuse samples. This difference could be a reflection of the fact that the women who seek refuge in shelters tend to be severely economically disadvantaged and perhaps may be fleeing men who are more violent or antisocial than other batterers—the very men who may be more inclined to physically abuse a child. Indeed, one commonly cited reason for mothers to enter a shelter is to protect their children from abusive partners (Hilton, 1992).

In addition, there are alternative explanations for the high rates of co-occurrence in clinical samples of battered women and abused children, highlighting the need for comparison groups. Child maltreatment also occurs in families in which there is no evidence of marital violence (e.g., Wolfe, 1987). As Widom (1989) pointed out, “convenience or opportunity” (p. 5) samples can differ from nonclinical samples on other family variables associated with family violence (e.g., poverty, unemployment, substance abuse, and other indices of family dysfunction) and therefore may confound the results. For example, families with low socioeconomic status (SES) tend to be overrepresented in child protective agency caseloads (Kilpatrick & Lockhart, 1991; Widom, 1989) and in shelters. These confounds represent serious impediments to generalizing the incidence and prevalence rates of violence or the frequency and strength of risk factors from these clinical samples to the general population (Gelles, 1990).

The lack of comparison data of child abuse rates from families with nonviolent couples is an especially important issue. In evaluating whether

there is an elevated rate of child abuse in families with maritally violent couples, one needs to know about the rate of child abuse in couples who are similar in all ways except that they do not abuse each other. Of the studies drawn from the shelter women reviewed earlier, only five included comparison groups. However, in two of those studies the battered women and the comparison group differed on several background characteristics, including maternal age and health, marital status, and annual income (Kruttschnitt & Dornfeld, 1992; Moore & Pepler, 1998). McCloskey (1997) compared rates of child abuse between a group of 190 battered women and a nonviolent comparison group of 173 women. The rate of child abuse in the battered women's group was indeed considerably higher (43%) than the rate of child abuse in the comparison group (18%). This result provides some evidence that estimates based on battered women samples may provide an inflated view of the extent of co-occurrence in the general population.

Another type of sampling problem is the insufficient number of community samples to provide a sound estimate of the rate of overlap in the general population. The only two estimates that include representative samples of the U.S. population are the two NFVS studies (Gelles & Straus, 1988; Straus et al., 1980); both have various methodological limitations (e.g., self-report data, reports from a single source, no families with children under 3 years of age) that warrant caution. Evidently, more base-rate studies of families from different background characteristics (e.g., SES, racial/ethnic groups) are needed. For that matter, the lack of well-established base rates for the different manifestations of family violence (i.e., marital violence, physical child abuse) make it difficult to interpret the results of incidence and prevalence in clinical samples (Gelles, 1990; Widom, 1989).

Definitions of Physical Child Abuse

After sample selection, the next most fundamental methodological issue concerns how violence and abuse were defined and operationalized. In these studies, all of the variation in criteria lies in the determination of child abuse rather than spouse abuse. Very few of the studies shared common definitions or criteria for determining physical child abuse. A total of 15

different definitions were used to assess whether child abuse had occurred. Seven studies used a global determination of whether the child had been physically abused, in contrast to reports of the occurrence of specific violent acts. The studies that assessed specific violent acts generally relied on one of two types of subscales (the Violence or Abuse Index) from the CTS (Straus, 1979) to determine child abuse.

The impact of different criteria of child abuse can be most clearly seen when two competing definitions are used within a particular study. Giles-Sims (1985) reported that co-occurrence rates averaged 91% when using the CTS—Violence Index but dropped to 59% when the criteria for child abuse was the CTS—Abuse Index. O’Keefe (1995) used an even more stringent criteria to make a similar point. She reported co-occurrence rates with the CTS—Abuse Index and also with the Abuse Index without the “hit with object” item (which could be interpreted by a parent as “normal” corporal punishment when using a paddle, switch, spoon, or some other object for discipline). Use of the CTS—Abuse Index resulted in an average of 46% co-occurrence (range = 33% to 67%), but when the “hit with object” item was removed, the percentage of overlap dropped to 19% (range = 5% to 35%).

Interestingly, of the studies that focused on battered women, only one study used professional reports (Child Protective Services) as the basis for abuse determination. In that study, Hughes, Parkinson, and Vargo (1989) found an overlap rate of 36%. The remaining three studies computed rates of co-occurrence based on one or more specific behaviors. As Bowker, Arvitell, and McFerron (1988) found, the rate varied dramatically depending on the severity of the abusive act. “Slapping” a child was reported by mothers to occur in 41% of the father–child relationships, but “beating up” was reported in only 4% of those relationships.

Another source of confusion was whether prevalence or incidence rates were reported. In half of the studies, prevalence rates (“ever” or over lifetime) were reported in contrast to reporting on the incidence rates—child abuse occurring during the past year. In one study, separate data were collected for both time frames. Kruttschnitt and Dornfeld (1992) found that all 50 mothers acknowledged that at some point in their children’s lives each of the

children had been abused (using the criteria of the CTS—Violence Index). In contrast, when only abuse during the past year was considered, the overlap dropped to 74%. Parallel percentages were found in that study for children’s reports of being the recipient of violence (84% and 58%, respectively).

Of the studies that tested the occurrence of child abuse through medical evidence, social worker impressions, shelter residence, or mothers’ reports of child abuse, the rate of co-occurrence was between 30% and 53%, with a mean rate of 36%. When criteria were based on the CTS, the rate was higher. Some of the highest rates of overlap came from reports of children of battered women—but these reports included the item “spank/slap.” Lower rates were found in studies that used verbal reports from battered women and other self-report methods (e.g., vignettes, unstandardized questionnaires, interviews). This suggests that the CTS and its operationalization of abuse either is a sensitive instrument for assessing domestic violence or it inflates the true rate of abuse. For example, using the CTS—Violence Index (which includes “spanking/slapping” and “push, grab, or shove”) to determine abuse status, as was done in nine of the studies, may well overinflate the extent of overlap, given the widespread use of spanking in our society (e.g., Straus, 1994). Including these items in the criteria may provide an overestimate of what behavior is considered by most people to constitute abuse. These rates of co-occurrence ($M = 72\%$) are consistently higher than rates that were derived from the more conservative Abuse Index of the CTS ($M = 51\%$), which does not include “pushed, grabbed or shoved”; “slapped or spanked”; and “threw something at.”

Several investigators created more stringent criteria for child abuse by removing items that reflected “physical coercion,” which are still accepted as legitimate forms of punishment for children and are not legally abusive. Using the same sample of 185 children of battered women that was used in the 1995 study, O’Keefe (1994) reported that when rates of child abuse for each type of violence are specified, these four items have the highest rates. For example, 59% of children of battered women were “pushed, grabbed or shoved,” 58% were “slapped/ spanked,” 40% were “hit with object,” and 34%

had something thrown at them. However, when examining the occurrence of the remaining physical violence items on the CTS, excluding those four items, the highest rate was only 23%. Further evidence for this comes from two other studies that did not use the CTS but used specific acts of violence as criteria for physical abuse (Bowker et al., 1988; Stacey & Shupe, 1983). When the item "slaps" was included in the criterion for physical abuse, the rate of co-occurrence was considerably higher than when other items were used as criteria. Similarly, two studies modified the CTS—Abuse Index by removing "hit with object." The resulting co-occurrence rates were then considerably lower than when using the unmodified index (see Table 2).

With these definitional issues in mind, we recalculated the rates of co-occurrence. When we use a definition of child abuse that most closely parallels the criteria used to determine the occurrence of child abuse by social service agencies, a different rate emerges. On the basis of nine studies (six from battered women samples and three from child abuse victim samples) that provide a stringent definition of child abuse (e.g., CTS—Abuse Index without "hit with object"), and using only one co-occurrence rate per study, we determine a median co-occurrence rate of 40% ($M = 38\%$, range = 11% to 59%).

Source of Report

Ninety percent of the studies reviewed used only one informant for reporting the occurrence of spouse and child abuse. Reports from a single source probably have only limited accuracy; there is no converging information to assess the reliability or validity of the reports (see Jouriles, Mehta, McDonald, & Francis, 1997; Sternberg, Lamb, & Dawud-Noursi, 1998). It should be kept in mind that reports are susceptible to differential interpretation of the questions and terms, inaccurate recall of information, and conscious or unconscious distortion (e.g., Gelles, 1990). In all but three of the clinical studies, battered women were the sole source of reports of both spouse and child abuse. In these cases, the possibility of either under- or overreporting cannot be ruled out. A battered woman may underreport abuse for several reasons: fear of the batterer, desire to protect the batterer from looking bad, or concern about what is socially

acceptable (O'Leary & Arias, 1988). In addition, some mothers may worry (with some justification) that reporting child abuse—even on an anonymous survey—may initiate some action by the local protective services. Alternatively, it is possible that battered women may intentionally or unintentionally vilify an ex-partner by exaggerating the extent of his abusive behavior.

Only two of the studies in the corpus of review used children of battered women to provide CTS reports of their own victimization. Kruttschnitt and Dornfeld (1992) found on the basis of the CTS Violence Index, that 58% of children reported being abused by their mothers. Even higher rates were reported by Jouriles and Norwood (1995). Eighty-five percent of the boys and 60% of the girls reported levels of parent toward child aggression that were indicative of physical abuse, as assessed by the same subscale that includes "spank/slap."

We did locate three other studies that examined the variability of abuse reports across different sources as they relate to the co-occurrence issue. Petchers (1995) compared battered women's reports of child abuse with both county records of allegations and verifications of child abuse. She found only a 51% agreement between mothers' reports and county allegation records and 40% agreement between mothers' self-reports and substantiated findings of abuse. This is not to say the mothers were necessarily inaccurate: They are privy to information and events that social workers may not have access to. However, this study highlights the discrepancy between sources of information. In a study comparing different sources of reports, Sternberg et al. (1998) cross-validated assessments from social workers with data from semistructured parent and child interviews. They found that only 7 of 38 families were in perfect agreement about the occurrence of parental child abuse between mothers, fathers, and children. In addition, only 17 out of 38 families were in perfect agreement about the occurrence of spouse abuse between mothers, fathers, and children. In the third study, McGee et al. (1995) compared three sources of reports of abuse: social workers, file researchers, and the victimized adolescent children. They found significant discrepancies in reports regarding the occurrence of physical abuse and family violence. In judgments about the occurrence of

physical abuse, adolescents reported more (84%) than did both file researchers (69%) and social workers (73%). However, in judgments about the occurrence of family violence, adolescents reported less (53%) than did file researchers (61%) and social workers (61%).

Evidently, there is no single ideal source for reports of abuse. For example, the physical exam records to determine child abuse in the study by McKibben et al. (1989) are problematic for a different reason. Records from social service agencies or hospitals do not necessarily reflect the "true" incidence rates of abuse any more than do self-reports. Such indices of abuse are more time-limited (i.e., limited by duration of bruise or injury), and only a small fraction of abused children will be seen by medical personnel or social service workers. As Straus and Gelles (Hotaling et al., 1990) pointed out, rates of maltreatment based on clinical samples are often not representative of the base rate.

Given the problems associated with any single source of informant, the best solution appears to be the use of multiple sources. Of the studies in this review, only four used multiple family members as informants (Kruttschnitt & Dornfeld, 1992; Jouriles & Norwood, 1995; McCloskey, 1997; Sternberg et al., 1998). In an earlier report using the same data, McCloskey, Figueredo, and Koss (1995) found that mother and child reports of both spouse and child abuse were significantly correlated (although the correlation was not reported). Nevertheless, as Kruttschnitt and Dornfeld (1992) found, characteristics of the reporters and the context need to be kept in mind. They determined that the children had greatly underreported maternal aggression or violence that was directed toward them in the past year. Approximately 20% fewer children than mothers reported maternal acts of aggression or violence toward them in the past year. A more recent analysis by McCloskey (1997) indicated that parent-child agreement may also be influenced by the nature of the home environment. She reported that mother and child reports about the occurrence of physical punishment agreed in 67% of the cases, but when the children were subjected to severe physical abuse from the father, the children and fathers agreed in only 21% of the cases. Until we have a better understanding of the sources of variability in reports, violence reports that rely on only one source are problematic.

Referent Period

A fourth issue concerns the length of time included in the reports of child abuse. All but one of the studies used one of two different referent periods when reporting on the occurrence of abuse. Eleven studies assessed the occurrence of spouse and child abuse over the lifetime, commonly referred to as "prevalence" rate, in contrast to 10 studies that used the "past year" as the time period, considered an "incidence" rate. The use of different time periods in conjunction with the varying criteria for physical child abuse makes rate comparisons across studies very difficult. One study addressed this question by collecting information for both lifetime and past year rates (Kruttschnitt & Dornfeld, 1992). Past year rates of co-occurring abuse, using the CTS—Violence Index, were found to be 74% on the basis of mothers' reports and 58% when using children's reports. Not surprisingly, lifetime rates of co-occurrence were considerably higher, 100% according to mothers' reports and 84% according to children's reports.

Further evidence that the use of lifetime referent periods results in higher rates comes from a comparison of studies focusing on community samples (Table 1). Silvern et al. (1995) used a lifetime referent period to assess co-occurrence and found higher rates (18%) than the NFVS rates found by Hotaling et al. (1990), who used past year rates (5.6% and 6.9%). However, Silvern et al.'s (1995) study also differed from the NFVS studies in several other ways, because it used a nonrepresentative sample and it consisted of retrospective reports of individuals' own experiences with abuse.

Abusive Relationship

The fifth methodological issue concerns which parent-child relationships in the family the co-occurrence rates are based on. Some studies took a broad band approach and simply examined whether any abuse had occurred between either parent and any child in the family, in contrast to other studies that specified whether it was the mother or father interacting with a target son or daughter. In the 17 studies focusing on samples of battered women, several possible different abusive relationship patterns were assessed. Seven of the 17 studies assessed for physical abuse of one target child only,

whereas the other 10 studies allowed for physical abuse of any child in the family. The degree to which that methodological decision resulted in differing rates is difficult to determine. However, 2 studies used similar criteria for physical child abuse, but differed only in whether they assessed for physical abuse to one target child or to any child in the family. McCloskey (1997) found a co-occurrence rate of 43% for fathers abusing children. This rate was higher than the 29% co-occurrence rate reported by O'Keefe (1995), who assessed for fathers' abuse of a target child (i.e., abuse of one child). This comparison indicates that if a particular child is identified as the potential target of abuse, then there will be a lower rate of co-occurrence.

The second major difference in the pattern of abuse relationships was whether the perpetrating parent was identified. Mothers' toward child abuse rates were assessed in 7 of the 17 studies, fathers' toward child abuse rates were assessed in 8 studies, and 3 of the studies did not specify the gender of the parent. However, the analysis comparing father and mother behavior is confounded by reporter. In all cases, mothers reported the information. In addition, it is difficult to conclude that the difference in rates is a result of the two different patterns of abuse that were assessed due to the covariation of other variables (e.g., criteria, referent period). That having been said, the 3 studies that did differentiate mothers and fathers arrived at similar results. Giles-Sims (1985) found that when the CTS—Violence Index was used, the co-occurrence rates were slightly higher for mother toward child than father toward child abuse. However, when the CTS—Abuse Index was used, the co-occurrence rates for fathers were higher than for mothers. A similar pattern was found by O'Keefe (1995), who found that when the CTS—Violence Index was the criteria, co-occurrence rates for fathers and mothers were similar. But when using the CTS—Abuse Index minus the "hit with object" item, fathers' child abuse (29%) was considerably higher than mothers' child abuse (6%). The third study, based on maternal interviews, found that the co-occurrence rate of fathers' child abuse was higher (53%) than mothers' child abuse (28%; Walker, 1984). These studies indicate that fathers and mothers may use a similar amount of less severe forms of abuse (e.g., similar rates of

corporal punishment), but fathers may tend to use more severe levels of child abuse than mothers.

Only one study made the further differentiation of husbands' violence toward wives and wives' violence toward husbands when reporting rates for both mothers' and fathers' child abuse. Hotaling et al. (1990) found that when either spouse assaulted the other, the rate of mothers' child abuse (29%) was higher than the rate of fathers' child abuse (16–19%). However, in cases in which there was mutual assault, the rate of fathers' child abuse (41%) was somewhat higher than the rate of mothers' child abuse (36%). One additional point about the gender-of-parent issue needs to be made. It should be remembered that in most cases, mothers are the primary caregivers and thus have a much greater opportunity to exhibit abusive behavior. If the rate of co-occurrence across mothers and fathers was corrected for the amount of time spent with the children, it is likely the rates would be very different.

The methodological inconsistencies and limitations identified above are at least partially at fault for the inconsistencies found across studies concerning the extent of overlapping abuse. But another fundamental problem is that none of the studies reviewed above have been theory driven in their approach to the co-occurrence issue. For that matter, there has been a noticeable lack of discussion of the underlying theoretical models of co-occurrence or even of the dynamics involved in the violent relationships.

Models of Co-Occurring Abuse

To provide a conceptual framework for understanding the possible relations among family members living in a household where violence is present, we propose five contrasting models of the directionality of abusive relationships within these families. These models can be divided into unidirectional and bidirectional models. For the sake of simplicity and clarity, we consider only families with one child.

Unidirectional Models

The simplest model of co-occurrence, which we label the *single perpetrator* model, depicts one parent as the sole source of the violence, with both the spouse and child as passive recipients of the abuse (see Figure 1). This






Model	Empirical Support
Single perpetrator	
 <pre> graph TD H --> W H --> C </pre>	Hilton (1992) Bowker et al. (1988) Suh & Abel (1990) McCloskey (1997)
Sequential perpetrator	
 <pre> graph TD H --> W W --> C </pre>	Kruttschnitt & Dornfeld (1992)
Dual perpetrator	
 <pre> graph TD H --> W W --> C H --> C </pre>	Walker (1984) Jouriles & LeCompte (1991)
Marital violence	
 <pre> graph TD H <--> W H --> C W --> C </pre>	Simons et al. (1995) Moore & Pepler (1998)
Family dysfunction	
 <pre> graph TD H <--> W H --> C W --> C C <--> W </pre>	Gelles & Straus (1988) Jouriles & Norwood (1995) O'Keefe (1994)

Figure 1. Models of co-occurring spouse and physical child abuse. H = husband; W = wife; C = child.

model perhaps represents the stereotypical notion of family violence. It is the model that best captures the dynamics involved when an antisocial man terrifies and physically maltreats both his wife and child. There is no temporal priority in which individual is victimized first, although it is likely the perpetrator has already abused his partner before he begins abusing his child. Although either parent could be the perpetrator, the evidence implicates men as being the major aggressors in the family, as well as being more likely to be abusive and cause physical injuries. Wives may perpetrate violence against men but often those actions are in self-defense or are retaliatory actions in response to male aggression (Jacobsen, Gottman,

Waltz, Rushe, & Holtzworth-Munroe, 1994; Saunders, 1988). With that finding in mind and to aid in clarifying discussion of the relationships, we assume that the man is the primary perpetrator in the family. However, we recognize that in some cases women could be the sole perpetrators of co-occurring family violence.

The second unidirectional model implicates the victim of marital abuse as the perpetrator of the child maltreatment. This we call the *sequential perpetrator* model. Such a model reflects the case in which a battered mother might respond to her victimization by physically abusing her child(ren). Under this model, the child is not directly at risk from the perpetrator of the spousal violence. Instead, the child is the

recipient of either intentional or unintended aggression from the victimized spouse. Research into the marital conflict has identified at least three mechanisms that may be operating here. First, negative marital interactions may "spillover" into the parent-child interactions. Second, mothers may learn first hand that aggression in relationships is an effective way to control someone. The third mechanism could be a stress-related one: Battered women who are living in stressful conditions may be more prone to use punitive or harsh child-rearing practices (Holden, Stein, Ritchie, Harris, & Jouriles, 1998). A fourth possible mechanism is through coercion: A father might force his wife to punish the child in an abusive manner. In this model, the two key pieces of information are whether the abusive husband refrains from abusing his child and whether the wife uses violence against her child but not her husband.

The third unidirectional model is dubbed the *dual perpetrator* model. Here, the father is abusive to the mother and to the child. But in addition, the mother also aggresses against the child. Each of the mechanisms that may account for the child maltreatment in the *single perpetrator* or *sequential perpetrator* model could be at work here. Another possible mechanism could be that the mother engages in harsh parenting to preempt the father's even harsher punishments (see Holden & Ritchie, 1991). The central tenets that differentiate this model from the other four are that the wife does not engage in marital violence, the child does not aggress toward the parents, but both parents abuse the child.

Bidirectional Models

An alternative set of models of family violence adopts a systemic orientation and highlights bidirectional dysfunctional family patterns in which the child and victimized partner are not merely passive recipients of abuse but rather are part of a system of pathological, reciprocal patterns that contribute to the emergence of violent behavior (Hughes & Fantuzzo, 1994; Stacey, Hazelwood, & Shupe, 1994). Thus, a bidirectional model of co-occurring spouse and child abuse would include both child and parent risk factors as contributors to the occurrence of interparental and parent-child violence (see Figure 1).

We differentiate two types of bidirectional models. The first reflects a pathological marital

relationship, whereby there is mutual combat between the partners. We label this the *marital violence* model. Here it is not possible to single out one partner or the other as the perpetrator of the marital abuse. Either one or both parents may abuse the child. The two distinguishing features of this model are the reciprocal marital abuse that serves to maintain violence in the relationship and the absence of child actions that would elicit or provoke parental aggression.

The alternative and most complete bidirectional model adds a reciprocal relationship between the child's behavior and one or both parents. In contrast to each of the preceding models, in this model the children are not passive recipients of abuse but rather active participants. Although they do not seek out abuse per se, they may well elicit violence through frequent misbehavior, noncompliance, defiant disobedience, and externalizing problems and in this way contribute to their own abuse (Ammerman, 1991). This *family dysfunction* model depicts a system of interactions in which the maritally violent parents and externalizing children engage in coercive interactions that eventually escalate into physical violence (e.g., Jaffe, Wolfe, & Wilson, 1990). In this model, a key determinant is the extent of child behavior problems or aggression the child directs toward the parent. According to this model, marital aggression is a risk factor in the development of externalizing behavior in children, and externalizing behavior is a risk factor in the development of parents' aggression toward children.

Which is the correct model of the relation between spouse and child abuse? It could well be the case that all of the models are accurate, depending on the particular family. For example, the *single perpetrator* model may well hold for some antisocial fathers who are married to women who have the personal and social resources so that they do not maltreat their children. In other families in which the wives exhibit higher levels of stress and lack the coping resources, the *sequential perpetrator* or *dual perpetrator* model may be more accurate. Still, in other families in which the wives are more combative and the children are manifesting behavioral reactions to the marital conflict and violence, one or both of the bidirectional models may be most accurate. Alternatively, over time one family could progress through

two or more of the models. Next, we examine the empirical data with regard to each of the five models.

Empirical Support for the Models

Unfortunately, the empirical studies conducted to date have not explicitly contrasted, let alone formally tested, the competing models. Therefore, limited information is available with which to evaluate the models. The most glaring problem is the failure to separate the mother's participation in the child abuse from the father's; this is a problem in all but three of the studies. Even those three studies are methodologically limited because they rely on the mother's reports of her and her partner's behavior. Despite the restricted information available with which to evaluate the models, some support can be found for each of the models.

Four of the studies provide some empirical support for the *single perpetrator* model (see Figure 1) by implicating maritally violent fathers as the child abuser. Data from Hilton (1992), Bowker et al. (1988), and Suh and Abel (1990) have provided co-occurrence rates of both fathers' abuse of wives and fathers' of children but do not report any other abusive relationships. One other study provided some statistical support for the *single perpetrator* model. McCloskey (1997) found that the predicted probability of escalated child abuse by fathers occurring in homes where the mothers are also battered (.42) is substantially higher than in families with nonviolent couples (.20).

Only one study has provided support for the *sequential perpetrator* model. The study by Kruttschnitt and Dornfeld (1992) indicated that in cases where mothers are abused by their husbands, they are also more likely to physically abuse their children. However, the authors do not report rates of child abuse by fathers.

Evidence for the *dual perpetrator* model can be found in the studies by Walker (1984) and Jouriles and LeCompte (1991). In both of these studies, the authors reported rates of husbands' abuse of wives and then rates of abuse of mother toward child and father toward child. But they did not indicate rates of wives' abuse of husbands. Consequently these two studies, at face value, support the unidirectional dual perpetrator model.

A central tenet of the unidirectional models is

that there is only one perpetrator committing the marital abuse. Only four of the studies reviewed here report bidirectional marital violence, that is, husband-toward-wife and wife-toward-husband data (Gelles & Straus, 1988; O'Keefe, 1994; Simons et al., 1995; Straus et al., 1980). All four studies found evidence of some wives' violence toward husbands as well as husbands' violence toward wives, which gives support to a bidirectional model of family violence. The *marital violence* model assumes there is joint husband and wife abuse, and one or both of them would report physically abusing the child. Two studies provide some support for this model. Moore and Pepler (1998) provided rates of aggression between all family members except for child toward parent. As reported in the review above, Simons et al. (1995) found that aggression between spouses was associated with parental aggression toward children.

The fifth model, the *family dysfunction* model, has the defining characteristic of reciprocal parent-child coercive interactions that escalate into physical abuse. Indirect evidence for this model comes from O'Keefe (1994) and Jouriles and Norwood (1995) who reported significant, positive relations between externalizing behavior problems and parent-child aggression in maritally violent families. O'Keefe (1994) found that the relation between amount of marital violence witnessed and reciprocal mother-child aggression were both significantly related to externalizing behavior scores, adjusted (adj.) $R^2 = .065$, $p < .01$, and adj. $R^2 = .183$, $p < .001$, respectively. Jouriles and Norwood (1995) discovered significant correlations between mother-child, $r(46) = .59$, $p < .01$, and father-child, $r(46) = .54$, $p < .01$, aggression and externalizing behavior problems for boys; and between mother-child, $r(46) = .45$, $p < .01$, and father-child, $r(46) = .42$, $p < .01$, aggression and externalizing behavior problems for girls. The only study that directly examined the path of children's aggression toward parents came from the NFVS 1985 survey. Results showed a significant interaction effect of child abuse and spouse abuse on the rate of child violence toward parents, $F(2, 168) = 23.79$, $p < .001$ (Hotelling et al., 1990). Stated differently, the rate of child's violence toward parents was 18 times higher in families with co-occurring spouse and child abuse (5.5%) than in nonviolent families (0.1%).

It may well be that the *family dysfunction* model is more complicated than what has been presented above. At least three studies have indicated that the extent of coercive home interactions interacts with child gender. Two of the studies determined that boys were more at risk for paternal violence. Jouriles and LeCompte (1991) discovered that husbands' marital violence correlated positively with parents' aggression toward their sons, as reported in an earlier section, but not toward their daughters. Interestingly, when maternal violence toward children was examined, O'Keefe (1994) reported exactly the opposite finding: Mother-toward-child aggression was significantly related to externalizing behavior problems in girls but not in boys. Subsequently, Jouriles and Norwood (1995) argued that boys are more likely to be recipients of violence at least in part because they exhibit more externalizing problems than girls.

At this point in time, empirical evidence can be found to support each of the five models. However, some of the studies are supportive of particular models only by omission: They failed to assess abuse in other relationships. We suspect that when more empirical evidence is collected, there will be increasing evidence that a majority of violent families will fall into the *family dysfunction* model.

The Models in Light of Current Abuse Theories

Five theoretical approaches used to explain family violence are particularly relevant for accounting for these models of co-occurrence. Social cognitive, developmental-ecological, antisocial personality, behavior genetics, and family systems theories can each account for two or more of the models and provide competing explanations for the co-occurrence. Although there are many other theories associated with family violence, the five we have selected are representative of contemporary theory into family violence and highlight the contrasting perspectives on the explanation and causes of co-occurring violence.

Social Cognitive Theory

Social cognitive theory (e.g., Bandura, 1977, 1989), with its emphasis on observational learning and associated cognitive processes, such as feelings of self-efficacy, can be applied

to all five of the models. From this perspective, the etiology of the violence in the single perpetrator model could be explained by regarding the perpetrator's behavior as stemming from early experiences in his family of origin. Two mechanisms have been discussed in the literature: modeling and legitimizing violence (e.g., Ammerman, 1990; Hughes & Fantuzzo, 1994; Simons, Johnson, Beaman, & Conger, 1991; Simons et al., 1995). The perpetrator may engage in modeling the abuse that he observed in his parents' marital relationship and modeling the harsh parenting that he experienced as a child. The legitimizing mechanism consists of the perpetrator's learning one or more of the following lessons: (a) those who love you are also those who hit you, (b) those you love are people you can hit, (c) seeing and experiencing violence in your home establishes the moral rightness of hitting those you love, and (d) if there are no other means of getting your way, dealing with stress, or expressing yourself, then violence is permissible (Straus et al., 1980).

Social cognitive theory can also be applied as the mechanism by which victimized spouses proceed to maltreat their children in the two other unidirectional models. In both the *sequential* and *dual perpetrator* models, this perspective indicates that mothers learn to be physically aggressive toward their children through modeling the violence that they experience. In addition, in the dual perpetrator model, the mothers model the harsh parenting they observe to be used by their partner.

Social cognitive theory can also be invoked to account for the two bidirectional models. In the *marital violence* model, modeling and reciprocity govern the quality of interactions as both spouses engage in mutual combat. In addition, the apparent success achieved through marital violence reinforces the perceived efficacy of using aggression on children. Similarly, in the *family dysfunction* model, the presence of marital and parental violence toward children legitimizes the use of aggression for the child and provides a model for resolving conflict in the family.

Developmental-Ecological Theory

A second theoretical perspective is the developmental-ecological theory that is intended to integrate contextual risk factors (i.e., stressors), and protective factors (e.g., Belsky,

1993; Bronfenbrenner, 1989; Wolfe, 1987). Most generally, this theoretical orientation recognizes the impact of the "culture of violence" that many observers believe permeates American culture (e.g., Straus, 1994). For the single perpetrator model, the stressors from the broader context (such as unemployment or low income, transience, or living in a violent neighborhood) and the lack of protective factors (such as a supportive social network or community resources) contribute to the likelihood of violence by the father. According to this perspective, when the level of external stress is high, perpetrators react by maltreating their partners and children. However, this theory would explain the mothers' ability to refrain from using violent behavior through access to adequate protective factors (e.g., personality, social support) that buffer the impact of the stressors.

In the *sequential perpetrator* model, stressors from the immediate interactional context, such as the experience of being battered, disrupt mothers' parenting, which then result in coercive family patterns. In the last unidirectional model of the dual perpetrator, the developmental-ecological theory would interpret the parents' physical abuse of children as a response to the contextual stress. In this case, the father could be responding to one type of stress while the mother is reacting to another.

The two bidirectional models better capture the spirit of the developmental-ecological theory because they reflect differing levels of reciprocity. According to this perspective, in the *marital violence* model, both parents respond to the shared stress by engaging in mutual combat and one or both adults then abusing the child. The *family dysfunction* model goes a step further by recognizing that the child is also reacting to the stress and aggression directed toward him or her by exhibiting behavior problems or engaging in aggression toward the parents. This is similar to what Wolfe (1987) called the "Stage III" level in his transitional model of child abuse.

Antisocial Personality and Human Behavioral Genetics

The antisocial behavior trait perspective, as articulated by Simons et al. (1995), regards family aggression as a reflection of a general antisocial trait. That orientation toward people is manifested as a consistent pattern of behavioral

interactions that occurs across different situations and relationships. Neither wife nor child would be spared from the antisocial behavior. Consequently, the overlap between wife and child abuse should be very high if the perpetrator has an antisocial personality disorder. Indeed, there is some evidence from personality studies of wife batterers that antisocial behavior is a frequent personality diagnosis of batterers (e.g., Holtzworth-Munroe & Stuart, 1994). Although the cause of this antisocial behavioral disorder is not agreed on, within this perspective there is some evidence that harsh parenting and other negative child-rearing behaviors may have contributed to the disorder (Patterson, 1986; Simons et al., 1995).

Although the theory supports a different cause of antisocial behavior, human behavioral genetics represents a similar orientation when it comes to accounting for the five models of co-occurrence. This approach posits co-occurring spouse and child abuse is a result of a genetic vulnerability to violence that is genetically transmitted from family of origin to the perpetrator. Indeed, twin and adoption studies indicate that there is a genetic component to adult antisocial behavior (Cloninger & Gottesman, 1987). Similarly, Frick and Jackson (1993) argued that evidence from twin and adoption studies on child antisocial behavior indicate a strong likelihood of genetic transmission.

For the purposes of explicating competing theoretical accounts of the models, we have coupled these two perspectives. This was done for two reasons. First, both views provide similar explanations for the models that they speak to. Second, at least some researchers believe that these two approaches reflect the same view, with the difference being that the human behavioral genetics orientation makes the assumption of a genetic component to the antisocial behavior. In all likelihood, both environmental and genetic effects are involved in the development of antisocial behavior. Having an antisocial parent, being exposed to spouse abuse, and modeling violence are all factors that have been associated with antisocial behavior in children (Fantuzzo & Lindquist, 1989; Hughes & Fantuzzo, 1994; Jouriles & Norwood, 1995).

An antisocial trait orientation can account for three of the five models. It is best suited for the *single perpetrator* model. Here, the antisocial

individual abuses both his partner and child, but they do not retaliate or aggress toward each other. The trait approach also readily accounts for the marital violence model, where both parents are antisocial. Perhaps united through the process of assortative mating, as suggested by Simons et al. (1991), they both are likely to abuse the child. Similarly, in the *family dysfunction* model, not only are both parents antisocial, but through genetic transmission, the child too carries an antisocial personality trait. Thus, all three family members engage in violence toward each other.

In the child clinical literature, the predisposition to antisocial behavior has been described as a third variable by Frick and Jackson (1993). According to this perspective, child externalizing behavior is a result of antisocial parents' facilitating family dysfunction (e.g., marital violence and harsh parenting) and an expression of the genetic transmission to the child of an antisocial behavior trait. This perspective then gives support to the *family dysfunction* model because it highlights the role that the child plays in the development of parent-to-child abuse.

Family Systems Theory

The family systems perspective, as articulated by Minuchin (1974, 1985) and others, mandates that each member of the family play a fundamental role in the system of interactions. Thus, from this perspective, the three unidirectional models are incomplete. But principles of family systems theory can help to explain the two bidirectional models. According to Minuchin (1974), families characterized by marital conflict or other dysfunctions form patterns called "rigid triads" between a parent and the child. In the *marital violence* model, the family systems perspective would best explain the patterns of abuse with the concept of "detouring." Either the mother or the father (or both) who are involved in mutually abusive marital relations then detour or redirect some of that conflict onto the child. Consequently, the focus of the family conflict is temporarily shifted from interparental aggression to parent-child aggression.

The fifth model, *family dysfunction*, is the only complete one according to the family systems viewpoint because it recognizes that each family member plays a role in the violence. Children may take a direct role in eliciting

violence by engaging in noncompliant, disobedient, or aggressive behavior. Alternatively, each parent may take turns seeking a coalition with the child. These coalitions can then lead to conflict with the other parent. The resulting "triangulation" of the child can temporarily diffuse marital violence but may be a source of reciprocal parent-child aggression.

These five theoretical perspectives highlight different etiologies, relationships, and aspects of the five models. Given the atheoretical nature of most of the research conducted on the topic to date, it should come as no surprise that the applicability of the different theories to each of the models cannot be evaluated. But evidently evaluating the accuracy of the models and the validity of the competing theoretical frameworks represents our key proposal for future research.

Recommendations for Future Research

The clearest conclusion from this review is that there is an inadequate database with which to evaluate the extent of co-occurrence. Future studies need to make substantial methodological improvements and ask conceptually driven questions if there is to be a better understanding of the etiology, correlates, and magnitude of co-occurrence. Toward that end, two types of recommendations are offered.

Methodological Improvements

Although collecting naturalistic observational data about family violence is not feasible, much can be done to enhance the quality of the data resulting from self-reports. Indeed, as this review has demonstrated, dramatic differences in the co-occurrence incidence rates can result from different reporters, subscales, or the way the question is worded (e.g., Kruttschnitt & Dornfeld, 1992; McGee et al., 1995; Petchers, 1995; Sternberg et al., 1998).

With regard to suggestions for researchers in this area, our recommendations begin with sampling. To date, most of the information about co-occurrence comes from battered women's shelters. As indicated above, such samples are not representative, nor do they control for alternative explanations. Representative community samples and nonclinical samples where family violence has occurred but the women have not gone to a shelter are most needed.

Studies that examine socioeconomic as well as racial-ethnic group differences should also be a priority.

The second suggestion concerns the source of the reports. Future studies should seek to use multiple informants or different sources of abuse information whenever possible (e.g., Sternberg et al., 1998). Within a family, reports from different family members should be collected. Specifically, reports from children and fathers are needed. Only 3 out of the 31 studies reviewed in this article sampled fathers (Gelles & Straus, 1988; Simons et al., 1995; Straus et al., 1980), and only two studies included children's reports (Jouriles & Norwood, 1995; Kruttschnitt & Dornfeld, 1992). Although there may be significant self-report problems with violent fathers, such as denial or minimization (e.g., Edleson & Brygger, 1986), collecting data from fathers is needed. Efforts should also be made to cross-verify reports of abuse by obtaining corresponding information from social service agencies, medical records, intake reports, police reports, and reports from other family members.

Arriving at conclusions based on this data set was severely handicapped as a result of competing and sometimes unspecified or idiosyncratic determinations of physical child abuse. As we mentioned above, 15 different definitions of child abuse were found in the 31 studies. Future studies should adopt similar assessment tools and indices of abuse to control for method variance and to draw conclusions based on sample source differences. Among the many parent report criteria that have been used to indicate abuse, we favor the CTS—Abuse Index without the "hit with object" item as a conservative indication that physical child abuse has occurred (McCloskey, 1997; O'Keefe, 1995). But the assessment instruments should not be restricted to only the CTS (or its successor the CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1995) because that would restrict the type of information learned.

As this review has indicated, perhaps the most obvious need is for more complete information. Many studies did not specify the gender of the perpetrator (e.g., father or mother), an omission that results in an inability to evaluate the accuracy of the competing models. Evidently, both mothers' and fathers' aggression toward children should be differentiated and reported

separately. Similarly, information about wives' aggression toward husbands, along with husbands' aggression toward wives, should be collected as a standard practice. By the same token, children's aggression toward mothers and fathers also needs to be reported. In addition, we recommend that the gender of the child victim needs to be taken into account, information that has only rarely been reported. Another type of data that needs to be collected and systematically analyzed is the biological relationship of the perpetrator to the victim. In her review of several studies that identified the batterers' relationships to the children, Sternberg (1997) found mixed results regarding the issue of the batterer's relationship to the child as a risk factor for abuse. Only six of the studies reviewed here differentiated the males' biological relationship to the children. But five of those studies simply reported the percentages of biological and nonparent males in their sample. Only the study by Jouriles and Norwood (1995) examined this variable as it related to the level of violence in the family. They found that the biological relation of the male batterer to the children was not associated with levels of battering or parent-child aggression. Other potentially important information include the circumstances surrounding the violent incidents, the age of the child, and the type of perpetrator (antisocial, family-only violence, etc.; Holtzworth-Munroe & Stuart, 1994).

Finally, our most costly suggestion concerns use of prospective designs. Longitudinal studies are the only way to accurately assess the temporal sequence of the development and spread of violence within a family.

Theoretical Improvements

The greatest need is to test the different models of co-occurrence. This requires studies to systematically evaluate and differentiate the unidirectional from bidirectional models, the roles of the mothers and fathers in both marital abuse and child abuse, and the role of the children's externalizing behavior problems. In addition, differentiating the competing theoretical explanations for the different models is also needed.

One way to start acquiring such data would be to collect reports of child abuse incidents and the relation of those incidents to the marital violence. Such phenomenological data do not

exist with regard to the question of co-occurrence. Virtually every study reviewed in this article ignored the context in which the violence occurred. Contextual factors, such as timing, setting, and nature of the conflict, are needed to inform future research because they could begin to address etiological issues of the role of stress or personality pathology. Although it appears likely that marital abuse precedes child abuse, family systems theory implies it could also be otherwise.

Toward the goal of developing a theoretical model or models of co-occurring spouse and child abuse, such efforts will need to include child and parent risk factors, child and parent protective factors, and the role of the intergenerational transmission of violence. Theorized mechanisms of transmission, such as modeling, coercive family processes, and genetic transmission, need to be tested directly. Laboratory studies of family interactions can provide a basis for learning more about these mechanisms and integrating them into a comprehensive model of co-occurring spouse and child abuse (e.g., Cummings & Davies, 1994; Laumakis, Margolin, & John, 1998). Detailed models of family processes, such as O'Leary and Vivian's (1990) model of marital discord and Patterson's (1986) model of parent-child coercion, could be integrated into the model. Genetic and environmental influences in the development of antisocial behavior may also need to be included.

Family violence researchers also need to integrate knowledge and theory from parenting, social learning, and behavior-genetics approaches to develop a more sophisticated model of co-occurring family violence. In a review of studies on the intergenerational transmission of child abuse, Kaufman and Zigler (1989) argued that it is important to explore the effect of multiple risk factors, including harsh parenting, antisocial personality, as well as violence in the family of origin. In addition, recent theoretical models of violence in the family have combined social learning, parenting, and behavior-genetics approaches (Belsky, 1993; Frick & Jackson, 1993).

Several of the recent investigations reviewed in this article provide preliminary support for the bidirectional *family dysfunction* model of co-occurring spouse and child abuse (Hughes et al., 1989; Jouriles & Norwood, 1995; O'Keefe, 1994). Longitudinal studies are needed to

determine the temporal order of the risk factors in this model. More specifically, does marital violence lead to externalizing behavior in children, which in turn leads to parent-child abuse? Studies that test the hypothesized mechanisms of the model are also needed to determine how marital violence contributes to the development of externalizing behavior in children. Do children develop externalizing behavior through social learning, genetic transmission, stress, or a combination of these mechanisms? Research has already begun to test the mechanisms of how externalizing behavior in children leads to parent-child aggression. For example, Patterson (1986) has provided support for the hypothesized mechanism of coercion in the development of reciprocal parent-child aggression with externalizing children.

The *family dysfunction* model does not provide an explanation for how reciprocal parent-child aggression develops in families with children who do not have externalizing behavior problems. Researchers also need to develop theoretical models of family dysfunction that focus on these types of families.

Conclusion

This review has served to consolidate the observation that marital abuse and child abuse are likely to co-occur. On the basis of an extremely limited database, we infer that the rate of co-occurrence across the United States population is approximately 6%. Within a stratified sample of violent homes, using a conservative criteria for child abuse, we conclude that the co-occurrence rate appears to be about 40%. But these estimates vary considerably on the basis of such variables as samples, criteria of child abuse, and source of report. Recognizing the strength of the association between spouse and physical child abuse has important implications for clinical practice, legal considerations, and psychological theory on family violence. Given the considerable overlap between spouse abuse and child abuse, it is clear that domestic violence agencies and the child welfare system need to collaborate to provide a more integrative treatment for the family (e.g., McKay, 1994; Saunders, 1994). In light of this review, in cases of marital separation and divorce, great care must be taken by the legal system when making determinations about child custody or visitation practices.

Finally, for psychological theory, a better comprehension of the links between spouse abuse and child abuse is imperative if we are to understand and combat the etiology and perpetuation of violence in families.

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