

A TEST OF VARIOUS PERSPECTIVES ON THE INTERGENERATIONAL TRANSMISSION OF DOMESTIC VIOLENCE*

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Past research indicates that adults who were subject to severe physical discipline as children are often violent toward their spouse and children as adults. This association is usually attributed to modeling or the learning of attitudes that legitimate hitting family members. Using four waves of data from a sample of midwestern families, this study found only limited support for these explanations. Analysis showed that the relationship between childhood exposure to harsh parenting and recurrent adult violence toward children or a spouse was mediated by the extent to which parents displayed an antisocial orientation. This pattern of findings is consistent with criminological theories that view criminal and deviant behavior of all sorts as rooted in a general antisocial orientation acquired in childhood largely as a result of ineffective parenting.

It is often contended that physically abusive parenting practices are transmitted across generations (Gelles, 1979, 1980; Steinmetz, 1987; Straus and Smith, 1990a). Consistent with this view, several studies have reported that individuals who were subjected to severe physical discipline as children are at risk for utilizing similar parenting strategies with their own offspring (Egeland et al., 1987; Herrenkohl et al., 1983; Simons et al., 1991; Straus and Smith, 1990b; Straus et al., 1980). This relationship has been shown to remain even after controlling for personality, emotional well-being, socioeconomic status, and various aspects of the parenting received as a child besides level of corporal punishment, for example, degree of parental warmth/involvement (Simons et al., 1991, 1993a).

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Based upon their review, Kaufman and Zigler (1989) estimated that harshly treated children are approximately five times more likely to engage in abusive parenting than individuals who were not victims of severe corporal punishment.

Although researchers agree that harshly disciplined children are at risk for using similar parenting practices with their own offspring, there is little agreement concerning the mechanisms that link the two phenomena. Previous studies have largely confined their focus to the issue of whether intergenerational transmission occurs, and they have devoted little attention to the theoretical processes that explain intergenerational patterns. This study provides a comparative evaluation of the adequacy of three perspectives regarding intergenerational effects. These perspectives provide contrasting ideas regarding the factors that link harsh treatment in the family of origin to violence in the family of procreation. Although all three views build upon social learning principles, the first two emphasize the phenomenon of modeling whereas the third focuses on the way parenting practices shape child behavior.

The first perspective stresses the point that children learn about the role of parent by observing the behavior of their parents. Simons et al. (1991), for example, have argued that people are apt to have only a superficial understanding of the routine parenting practices used in families other than their own and, consequently, are likely to accept the actions of their parents as typical. Thus, children exposed to harsh treatment learn that severe, coercive measures are a normal part of parenting and, as adults, are apt to enact these parenting scripts in interaction with their offspring. For purposes of this paper, we labeled this idea the *parenting role* perspective. Consistent with this view, severe treatment as a child has been found to predict harsh parenting as an adult even after controlling for personality, emotional well-being, and various demographic factors (Simons et al., 1991, 1993a).

The second perspective offers a somewhat broader view of the messages that are transmitted by harsh parenting. Exposure to severe treatment as a child is seen as providing lessons that foster spouse as well as child abuse (O'Leary, 1988; Straus and Smith, 1990, Straus et al., 1980). Straus et al., for example, have argued that harsh physical discipline teaches children that it is legitimate, indeed often necessary, to hit those you love (viz., other family members). Thus, physical discipline increases the probability that children will grow up to behave aggressively toward family members in general, and not just their offspring. For purposes of this paper, we labeled this viewpoint the *family roles* perspective. Consistent with this idea, there is evidence that childhood exposure to harsh parenting increases the probability that individuals will be violent with their spouse

as well as their children (Rosenbaum and O'Leary, 1981; Straus et al., 1980).

Finally, the criminological literature suggests a third point of view, which might be labeled the *antisocial behavior trait* perspective. Criminological research indicates that deviant acts tend to be correlated so that individuals who engage in one type of deviant behavior tend to participate in other types as well (e.g., Donovan and Jessor, 1985; Farrington, 1991; Jessor and Jessor, 1977; Osgood et al., 1988). There is also evidence that antisocial behavior is rather stable over the life course (Caspi and Moffitt, 1992; Loeber, 1982; Loeber and Le Blanc, 1990; Sampson and Laub, 1993). Although individuals who initiate delinquent behavior during mid-to-late adolescence usually discontinue involvement within a short period of time, those who manifest high levels of antisocial behavior at an early age are at risk for chronic delinquency during adulthood and continued reckless and irresponsible behavior during adulthood (Farrington, 1991; Loeber and Le Blanc, 1990; Patterson and Yoerger, 1993). Thus, antisocial behavior shows the characteristics of a behavior trait, that is, a pattern of behavior that is expressed across time and situations (Allport, 1937). Further, studies have linked a child's early involvement in antisocial behavior to ineffective monitoring and discipline by parents (Patterson et al., 1992; Sampson and Laub, 1993; Simons et al., 1994b). Together, these findings suggest that antisocial involvements represent a general behavior trait that develops, at least in part, in response to inept parenting practices. This perspective would view persistent aggression toward family members as an expression of a general antisocial orientation that has its roots in inept parenting, of which harsh discipline is a type.

Unfortunately, there has been little effort to apply this perspective to the phenomenon of domestic violence. Indeed, family researchers (Gelles and Straus, 1979; Hotaling and Straus, 1980) and criminologists (Megargee, 1982) have argued that domestic violence requires a special theory and should not be approached as a subset of general violent behavior. Albeit, as Hotaling et al., (1990) have noted, the question of whether family violence has an etiology similar to that of other forms of violent and deviant behavior is really an empirical question.

There is evidence to suggest that the two phenomena may share a common set of predisposing circumstances. Recent reviews of research on spouse batterers (Hotaling and Sugarman, 1986) and child abusers (Hotaling et al., 1990) have concluded that the demographic risk factors for these behaviors are quite similar to those for criminal violence in general. Prior studies have found that persons who were the victims of severe physical discipline as children are more apt to engage in violence toward a spouse or child than those who experienced more benign parenting (Rosenbaum and O'Leary, 1981; Straus et al., 1980), and Widom (1989) have reported

that abusive parenting increases the probability that an individual will subsequently engage in criminal violence. Finally, there are data that indicate that adolescents and adults who engage in domestic assault often have had contact with the police for a variety of criminal behaviors (Dunford et al., 1990; Hotaling et al., 1990; Sherman et al., 1991). Together, these findings suggest that domestic violence and other forms of antisocial behavior may be similar phenomena with a common etiology.

The three perspectives offer divergent accounts of the processes that link severe discipline during childhood to the use of harsh parenting practices as an adult. The parenting roles perspective points to parenting scripts, the family roles viewpoint emphasizes attitudes that legitimate the use of aggression with loved ones, and the antisocial behavior trait explanation stresses the consequences of a general antisocial orientation. This study is concerned with testing the contrasting assumptions and predictions of the three approaches.

HYPOTHESES

CONTINUITY OF VIOLENCE

All three perspectives contend that harsh parenting is a function of some stable characteristic of the individual (*viz.*, parenting scripts, legitimating attitudes, antisocial behavior trait). Hence, all three would predict that the use of harsh parenting practices should be recurrent across time and children. Failure to find this continuity would challenge the validity of all three viewpoints. Discontinuity across time would suggest that situational factors largely explain harsh parenting, whereas discontinuity across children would suggest that characteristics of the child are of great theoretical importance.

There is little evidence regarding the extent to which aggression toward one child tends to be associated with aggression toward his or her brothers and sisters. The most widely utilized family violence data sets (*e.g.*, the National Family Violence surveys) contain information on the parenting of only one child per family, thereby precluding consideration of the extent to which harsh treatment tends to be manifested across siblings within a family. A few studies have investigated the extent to which family violence shows continuity over time. Most of the evidence regarding this issue comes from intervention experiments concerned with deterring spouse abuse (see Fagan, 1989). These studies show a modicum of persistence over time, but the generalizability of the findings is limited by the fact that the samples consist of extreme cases where the violence was reported to the police.

In addition to positing continuity in violence across time and children, the family roles and antisocial behavior trait approaches would predict

that aggression toward children is associated with aggression toward spouse. The parenting roles perspective would not assert this relationship for there is no reason to expect that scripts specific to the role of parent influence behavior in the role of marital partner. To a large degree, research on harsh parenting represents a separate research tradition from that focusing upon violence toward spouses (Finkelhor, 1983). As a consequence, there has been little consideration of the links that exist between child and spouse abuse. An exception is a paper by Hotaling et al. (1990) that reported an association between the two phenomena. Their analyses were based upon a college student survey and the 1975 and 1985 National Family Violence surveys. All three data sets consist of spouse and child abuse information obtained from a single family member, which raises the possibility of monomethod bias (Bank et al., 1989). This study attempts to replicate the finding of Hotaling et al. (1990) regarding an association between spouse and child abuse using victim reports.

DOMESTIC VIOLENCE AND OTHER TYPES OF DEVIANCE

The parenting and family roles perspectives portray family violence as distinct from other forms of violent and deviant behavior. The antisocial behavior trait perspective, on the other hand, views chronic domestic violence as part of a general antisocial orientation. Hence, it would predict a correlation between persistent family violence (i.e., continuity across time and family members) and involvement in other forms of antisocial behavior.

Some studies have reported a relationship between spousal violence and having a criminal record. However, these studies are based upon clinical samples and do not utilize a comparison group (Fagan et al., 1983; Flynn, 1977; Gayford, 1975; Stacy and Shupe, 1983; Walker, 1979). Although a few studies have found that fathers of assaulted children often have criminal records (Gil, 1970; Skinner and Castle, 1969; Smith et al., 1973), other researchers have not found this to be the case (Steele and Pollack, 1968; Straus, 1985). Rather than focusing upon criminal record, Hotaling et al. (1990) examined the relationship between domestic violence and self-reported assaults upon nonfamily members. Using data from the 1985 National Family Violence Survey, they reported that the hitting of either a spouse or child was related to the hitting of nonfamily members. However, although their study found that individuals who had engaged in domestic violence were several times more likely than nonviolent individuals to report having assaulted a nonfamily member, the vast majority of persons who admitted to some form of domestic assault did not indicate that they had hit a nonfamily member.

While this research contributes important information regarding the association between family and nonfamily assaults, it does not provide an

adequate test of the antisocial behavior trait perspective on domestic violence, for two reasons. First, the studies have limited their definition of antisocial behavior to either self-reports or arrests for assaults upon non-family members, whereas an antisocial orientation is expressed in a variety of ways and not simply in terms of aggressive behavior. Therefore, a broad array of deviant acts must be considered in order to provide an adequate assessment of the degree to which family violence is part of a general antisocial syndrome.

Second, studies often define family violence as a single act of hitting during the previous year (e.g., Hotaling et al., 1990). Although this definition is fine for some purposes, it is not adequate for testing the antisocial behavior trait perspective. Most parents hit their children at some point in the course of raising them, and many married persons have experienced an occasion when they were struck or pushed by their spouse (Straus and Gelles, 1988; Straus et al., 1980). For most families, however, these acts of violence are not very severe, occur quite infrequently, and are probably quickly forgotten. Children and marital partners exposed to recurring physical abuse are the ones most likely to display emotional and social problems. Thus, public and scientific concern is with those individuals who engage in chronic violence toward other family members. Such habitual aggression (i.e., continuity of violence across time and victims) would be considered an expression of a general antisocial syndrome. A single instance of family violence may be the product of a wide variety of factors, but persistent violence might be seen as a part of a deviant life-style.

Hence, in an effort to provide a fitting test of the antisocial behavior trait explanation, as well as the continuity in violence predicted by the parenting and family roles perspectives, this study examines the extent to which *recurrent* hitting of a spouse or child is associated with other forms of deviant behavior, such as fighting, traffic violations, lying, and gambling. To the extent that chronic domestic violence is a part of a general antisocial orientation, recurrent violence toward a spouse or child should be rather strongly related to these other forms of deviance. Further, the antisocial behavior trait perspective suggests that child and spouse abuse are related because they are each a reflection of an underlying antisocial orientation. Therefore, the association between violence toward children and toward spouse should be eliminated if one controls for the various indicators of an antisocial syndrome.

THE CONSEQUENCES OF HARSH PARENTING

Each of the three theoretical perspectives proposes a particular factor that links exposure to severe treatment during childhood to adult harsh parenting, and these differences in emphasis suggest contrasting predictions regarding the relationships that exist between childhood experiences

and adult domestic violence. First, the antisocial behavior trait viewpoint argues that childhood exposure to inept parenting, such as harsh physical discipline, fosters an antisocial orientation that, in turn, increases the probability of deviance in general, including violence toward family members. If this argument is valid, there should be no relationship between harsh treatment during childhood and persistent aggression toward either children or spouse once level of antisocial orientation is controlled. Stated differently, the impact of childhood experience upon adult family violence should be indirect through this antisocial syndrome.

In contrast, the parenting roles viewpoint asserts that harshly treated youngsters learn aggressive parenting scripts that influence their adult parenting practices. This would argue for a direct effect of childhood experience upon adult parenting even after controlling for antisocial orientation. The family roles perspective contends that harsh parenting teaches children that it is acceptable, indeed often necessary, to hit other family members. This view would suggest a relationship between childhood experience and adult aggression toward both children and spouse, even after controlling for antisocial orientation.

We have noted that the three major perspectives on the intergenerational transmission of family violence take different positions regarding (1) the association between marital violence and child abuse and (2) the relationship between family violence and other forms of deviant behavior. These contrasting predictions are summarized in Table 1. We used four waves of data from the Iowa Youth and Families Project to test these hypotheses. In an attempt to reduce problems of shared-method variance among measures (Bank et al., 1990), we based the indicators of parents' exposure to harsh parenting during childhood and their involvement in an antisocial syndrome of behavior on self-reports and observational ratings, whereas we used child and spouse reports (i.e., victim reports) as indicators of parents' violence toward family members.

METHODS AND PROCEDURES

SAMPLE

The Iowa Youth and Families Project is a panel study concerned with the life-course trajectories of parents and their adolescent children. The sample consists of 451 two-parent families recruited through the cohort of all seventh grade students, male and female, in eight counties in north-central Iowa who were enrolled in public or private schools during winter and spring, 1989. An additional criterion for inclusion in the study was the presence of a sibling within four years of age of the seventh grader. Slightly less than half of the cohort of seventh graders had families that

Table 1. Hypotheses Derived from the Three Perspectives on the Intergenerational Transmission of Domestic Violence

Perspectives	Predicted Relationships				Controlling for Antisocial Behavior Eliminates the Association Between Childhood Abuse and Adult Family Violence
	Continuity of Aggression Across Time and Children	Corr. Between Childhood Abuse and Violence Toward Spouse	Corr. Between Violence Toward Spouse and Toward Child	Corr. Between Family Violence and Antisocial Behavior	
Parenting Roles	Yes	No	No	No	No
Family Roles	Yes	Yes	Yes	No	No
Antisocial Behavior Trait	Yes	Yes	Yes	Yes	Yes

met these criteria. Seventy-eight percent of the eligible families agreed to participate in the study.

The families in the study lived on farms (about one third) or in small towns. All the families were white, and their annual income ranged from zero to \$135,000 with a mean of \$29,642. Fathers' education ranged from 8 to 20 years with a mean of 13.5 years of education; for mothers the range was from 8 to 18 years with a mean of 13.4 years. Additional information regarding the sample is available in Conger et al. (1992).

Families received \$250 annually for their participation, about \$10 per hour for each family member's time. The analyses for this paper are based upon data collected over the first four waves of the project. Retention rates were above 90% for each wave. Complete data for the measures used in this study were available for 327 mothers and 333 fathers.

PROCEDURES

The same data collection procedures were employed annually with the families and consisted of the following activities. Each family was visited twice at their home. During the first visit, each of the four family members completed a set of questionnaires focusing upon family processes, individual family member characteristics, and economic circumstances. On average, it took approximately two hours to complete the first visit. Between the first and second visits, family members completed questionnaires left with them by the first interviewer. During the second visit, which normally occurred within two weeks of the first, the family was

videotaped while engaging in several different structured interaction tasks. A description of the tasks is provided in Conger et al. (1992).

The videotapes were coded by project observers using the Iowa Family Interaction Rating scales (Melby et al., 1990). These scales focus upon the quality of behavior exchanges among family members. The project observers were staff members who had received several weeks of training on rating family interactions and specialized in coding one of the four interaction tasks. Before observing tapes, coders had to rate precoded interaction tasks independently and achieve at least 90% agreement with the standard. For purposes of assessing interobserver reliability, 12% of the tasks at wave 1 and 25% at waves 2 and 3 were randomly selected to be observed independently and rated by a second observer.

MEASURES

GRANDPARENTS' HARSH DISCIPLINE

At wave 1, husbands and wives completed a four-item Harsh Discipline scale for each of their parents. The items were adapted from the Conflict Tactics Scale (Straus, 1979; Straus et al., 1980) and asked the respondents to indicate how their mother (or father) disciplined them during adolescence. Note that while spanking or slapping may indicate discipline that is normative during early childhood, it is less typical and more indicative of harsh parenting if it continues during adolescence (Straus, 1983). The questions were as follows: When you did something wrong, how often did your mom (dad) spank or slap you? When punishing you, did your mom (dad) ever hit you with a belt, paddle, or something else? When you did something wrong, how often did your mom (dad) tell you to get out or lock you out of the house? My mom (dad) was a violent or physically abusive person. Response categories ranged along a five-point continuum with 1 = never, 3 = about half the time, and 5 = always. For mothers and fathers, responses were summed across the four items to obtain a scale score. Coefficient alpha was .73 for husband's reports for his father and .70 for his mother. Alpha was .78 and .75 for wife's reports about her father and mother, respectively. The harsh discipline of the grandfather tended to be highly correlated with the practices of the grandmother ($r \geq .45$). For husbands and wives, the two measures of their parents' use of physical discipline were treated as indicators of a latent construct Grandparent Harsh Discipline.

The use of parents' retrospective reports to assess childhood exposure to harsh parenting raised two methodological concerns. The first is the problem of shared-methods variance because parents' self-reports were also used in constructing indicators of antisocial behavior trait. To reduce this problem, we did not include data from wave 1 in constructing the

measures of antisocial behavior trait. Thus, while the indicators for grandparent harsh parenting and antisocial behavior trait were based on parents' self-reports, information regarding the behavior of the grandparents was collected at wave 1, whereas assessments of antisocial behavior were obtained at waves 2 and 3.

The second concern involves the validity of adults' retrospective reports of how they were disciplined as a child. Three lines of research might be interpreted as raising questions concerning the accuracy of such reports. First, past studies indicate that adults often make mistakes in reporting childhood experiences. This research suggests, however, that inaccuracy is most serious for the chronological order of past events. Accuracy improves dramatically when the event is relatively discrete and people are asked simply to report whether, rather than precisely when, the incident occurred (Bean et al., 1979; Brewin et al., 1993; Cannell, 1977; Paganini-Hill and Ross, 1982; Robins et al., 1985).

One might also question the accuracy of retrospective reports about abusive parenting given the controversy that has been created by reports that adults sometimes recall previously repressed memories of childhood sexual abuse during psychotherapy. Memory researchers have expressed concern that these recollections may be the product of expectations communicated by the therapist (Loftus, 1993). This phenomenon, however, would seem to have little to do with the harsh disciplinary practices that were assessed in our study. Mothers and fathers were asked about the extent to which they were subjected to corporal punishment during childhood, a phenomenon much less deviant and traumatic than sexual abuse, and there was no suggestion in the questionnaire that we expected that the respondents had experienced such forms of punishment.

Finally, the validity of retrospective reports is challenged by research findings regarding eyewitness testimony. Several studies have demonstrated that witnesses quickly forget details surrounding an event and that misleading questions or looking at photographs of persons with an appearance similar to that of the perpetrator can distort a witness's memory of an incident (Loftus, 1979; Loftus and Doyle, 1987; Wells and Loftus, 1984). Recent evidence indicates, however, that this research may have exaggerated the unreliability of witness reports. Most of the findings impugning eyewitness accounts have been derived from laboratory studies of rather trivial events. Field studies with witnesses of emotionally arousing incidents (e.g., a crime, an accident) do not find the rapid deterioration of memory with time found in studies of inconsequential events (Cutshall and Yuille, 1989; Fisher et al., 1989). Consistent with this finding, several recent studies have reported that people tend to remember accurately the

core features, although not necessarily the peripheral details, of emotionally engaging happenings. This is the conclusion of Heuer and Reisberg (1992) in their recent review of research on this topic:

We noted at the very beginning of this chapter that emotional events seem to be remembered in vivid detail; the results just cited imply that these events may be remembered in vivid and *accurate* detail, at least for details somehow attached to the event's center (p. 165) . . . What *is* remembered about emotional events is remembered fully and well . . . we believe it likely that we can trust our vivid memories of emotional events (p. 176).

In this study, mothers and fathers were asked to recall how frequently they were physically punished by their parents during adolescence. Such events are both discrete and emotionally salient. Thus, while there is reason to doubt the validity of adult retrospective reports concerning the extent to which their parents engaged in some uneventful activity (e.g., took the child for vaccinations) or displayed some ill-defined quality (e.g., supportive, rejecting), we believe it is likely that adults can report the harsh parenting practices that are the focus of this study with a reasonable degree of accuracy.

AGGRESSION TOWARD CHILDREN

Information collected at waves 3 and 4 was used to form indicators of recurrent harsh discipline. At each wave, the target child and the sibling used a three-item scale to report the extent to which each of their parents had used punishments involving hitting, slapping, or shoving when disciplining them. The instrument consisted of the first two items from the Grandparent Harsh Discipline scale, described above, plus an item that asked the adolescent to think about times spent with his or her mother (father) during the previous month and then to report how often the interaction involved the parent hitting, pushing, grabbing, or shoving them. This additional question was part of a set of items concerning parent-child interaction. Analysis showed that it correlated highly with the two other harsh parenting items. Responses to the three questions were summed to form a scale score for fathers and mothers. For the siblings and target children, coefficient alpha was approximately .75 for reports about father's parenting and .70 for reports about mother's parenting.

AGGRESSION TOWARD SPOUSE

Data from waves 3 and 4 were used as indicators of the latent construct Aggression Toward Spouse. At each wave, husbands and wives used a single item to report on the extent to which they had been physically hit or shoved by their partner. Respondents were asked to think about times

when they had interacted with their spouse during the previous month and to report how often he or she had "hit, pushed, grabbed, or shoved you." The response format ranged from 1 (never) to 7 (always), with 4 equals "about half the time."

ANTISOCIAL BEHAVIOR TRAIT

A general antisocial orientation, like any behavior trait (Allport, 1937), consists of a behavior pattern that is exhibited across time and settings. Antisocial behavior involves actions that are deemed risky, inappropriate, shortsighted, or insensitive by the majority of people in the society (Patterson et al., 1992; Robins, 1974). Thus, individuals meeting the criteria for antisocial behavior trait demonstrate persistent involvement in a wide range of deviant behaviors. Note that the construct Antisocial Behavior Trait is not the same as the psychiatric diagnosis of antisocial personality. The diagnostic label treats deviant actions as dichotomous and requires that the behaviors meet strict diagnostic criteria in order to be classified as indicating an antisocial personality (American Psychiatric Association, 1987). In contrast, the construct Antisocial Behavior Trait represents a continuous variable. Respondents differed regarding the extent to which they manifested such an orientation, and only a small percentage of persons with extreme scores would qualify for a diagnosis of antisocial personality.

Measures collected at waves 2 and 3 were used as indicators of the latent construct Antisocial Behavior Trait. As noted earlier, excluding wave 1 data in constructing measures of this construct reduced the problem of shared methods variance with the indicators of Grandparent Harsh Discipline. The antisocial behavior trait perspective asserts that family violence is an expression of an underlying antisocial orientation. Since data from waves 3 and 4 were used to assess domestic violence, restricting the indicators of Antisocial Behavior Trait to waves 2 and 3 avoided the potential problem in causal reasoning that would be introduced if some measures of antisocial behavior trait involved behavior that had occurred after some of the aggressive acts used as indicators of family violence.

The first instrument used to assess Antisocial Behavior Trait consisted of a deviant behavior checklist which asked respondents how often (0 = never, 4 = 4 or more times) during the past 12 months they had engaged in each of five deviant acts. The acts focused upon fighting, traffic violations, lying, gambling, and having been arrested. Husbands and wives completed this checklist at waves 2 and 3. At each wave, approximately one half of the men and one fourth of the women reported that they had engaged in one or more of the items on the list. Responses to the five items were summed to obtain a deviant behavior score.

Second, an observational measure of antisocial behavior was formed

through ratings of parental behavior at waves 2 and 3 in tasks 1 and 2 of the videotaped interaction. Different coders were used for the two tasks in order to provide independent assessments of behavior. Using a scale ranging from 1 to 5, the coders rated the extent to which parents were antisocial in their interactions with other family members. Antisocial behavior was defined as being self-absorbed and demonstrating immature, self-centered behavior. Bragging, crude talk, insensitivity to others, and not accepting responsibility for one's actions are examples of behaviors rated as antisocial. For each parent, the ratings were summed across tasks and the two waves of data collection. Coefficient alpha was .88 for mothers and .90 for fathers.

Finally, at wave 3 husbands and wives completed a checklist that focused on delinquent behavior during adolescence. This instrument consisted of a list of 14 delinquent acts involving items such as fighting, robbing someone, shoplifting, destroying property, and forcing someone to have sex. Respondents were asked to indicate which of the acts they had engaged in prior to age 15, and responses were summed across items to obtain a delinquency checklist score. Coefficient alpha for this measure was .58 for husbands and .68 for wives. Unfortunately, wives showed very little variation in scores on this instrument. Although over half of the men indicated that they had engaged in at least one of the delinquent acts, this was the case for only 20% of the women. Further, while for husbands this measure showed moderate correlations with the deviant behavior checklists and the observational measures of antisocial behavior, the associations were not statistically significant for wives.

Thus, it appears that our delinquency measure is an indicator of Antisocial Behavior Trait for husbands but not wives. This is probably a function of the fact that adolescent boys and girls tend to display their antisocial behavior in different ways. While antisocial boys engage in vandalism, fistfighting, stealing, and forced sex (i.e., the items on our delinquency checklist), girls tend to express their antisocial tendencies by defying school authority, arguing with parents, and engaging in early sexual behavior. Given these gender differences, the delinquency measure was only used as an indicator of Antisocial Behavior Trait for husbands. Hence, four measures were used as indicators of the latent construct Antisocial Behavior Trait for fathers (viz., deviant behavior checklist₇₂, deviant behavior checklist₇₃, observer ratings, and delinquency checklist), whereas only three measures were used as indicators of the antisocial construct for mothers (viz., deviant behavior checklist₇₂, deviant behavior checklist₇₃, and observer ratings).

The items and scales used as indicators for the various constructs are summarized in a table in the appendix.

RESULTS

At wave 3, 24% of the target children and 21% of their siblings reported that they had been hit, pushed, grabbed, or shoved during the preceding month. The percentages were slightly lower at wave 4 (16% for targets and 19% for siblings). This small decline is undoubtedly related to the fact that spanking with a hand or object becomes a less appropriate form of punishment as children enter mid-to-late adolescence. Twelve percent of the husbands at wave 3 and 10% at wave 4 reported that they had been hit, grabbed, or shoved by their wife during the prior month, whereas 8% of the wives at wave 3 and 7% at wave 4 indicated that they had been hit, grabbed, or shoved by their husband during the preceding month. This pattern is consistent with other studies that have found that wives are somewhat more likely than husbands to hit their spouse (Straus and Gelles, 1988). However, although studies indicate that wives hit husbands at least as often as husbands hit wives, husbands, given their size and strength, are much more apt to inflict injury (Straus et al., 1980; Stets and Straus, 1990).

The percentages reported are conservative estimates of the extent of family violence because the spouse items and one of the three child items (viz., "hit, push, grab or shove") focus only upon events that occurred during the month prior to completing the questionnaire. Some individuals who occasionally engaged in domestic violence may not have done so during the month prior to data collection. The instruments are most apt to identify as violent those persons who are rather persistent in their aggressive behavior toward family members.

Each of the three theories predicts that physical aggression toward a child or spouse will be recurrent across time. Table 2 shows the percentage of mothers and fathers reported to have engaged in violence toward the target child, sibling, or their spouse at either wave 3 or 4, or at both waves. The table shows that 131 (41%) of the target children indicated at either wave 3 or 4 that they had been hit by their mother, whereas 60 (19%) reported this to be the case at both waves. Thus, there was continuity of hitting for 31% of the target children who reported that they had been struck by their mother (60 out of 191 children). The percentage of target children reporting continuity of hitting by fathers was 30% (53 of 177 children). The amount of recurrence was somewhat lower for siblings. The percentages were 23% for hitting by mothers and 26% for hitting by fathers. These lower percentages probably reflect the fact that some of the older siblings were seniors in high school at wave 4, and parents may be reluctant to use corporal punishment with adolescents who are bigger and stronger than themselves.

Table 2 shows that 72 husbands reported that they had been hit by their

Table 2. Number and Percentage of Parents Who Were Violent Across Waves

Violence	Violent in Both Waves	Violent in One Wave	No Violence in Any Wave
Mother's			
Toward Target	18.8% (60)	40.9% (131)	40.3% (129)
Toward Sibling	11.3% (36)	38.8% (124)	49.9% (160)
Toward Spouse	5.0% (16)	17.5% (56)	77.5% (248)
Father's			
Toward Target	16.3% (53)	38.2% (124)	45.5% (148)
Toward Sibling	11.7% (38)	32.6% (106)	55.7% (181)
Toward Spouse	3.4% (11)	11.1% (36)	85.5% (278)

NOTE: Number in parentheses indicates number of mothers or fathers.

wife. Sixteen of these individuals (22%) indicated that they had been hit at both waves 3 and 4. Forty-seven women reported that they had been hit by their husband, and 11 (23%) of these women indicated that they had been hit at both waves. Thus, the data in Table 2 suggest a modest degree of continuity for family violence. Aggression was recurrent in a little over 20% of the cases for marital violence, and somewhere between 25% and 30% for violence toward children.

The percentages reported in Table 2 involve dichotomies where the parent either did or did not engage in a violent act toward a particular family member. This is not a very strong test of the continuity of violence across time as it does not take into account the level of violence perpetrated. This is important because it is parents or spouses who engage in high levels of violence who are most apt to persist in the behavior across time. A better test for continuity of violence over time is provided by correlations presented in Table 3. The table shows, for example, that there is a .57 correlation between the target child's reports of violence by the father at wave 3 and wave 4. The coefficient is of similar magnitude ($r = .49$) for sibling reports of aggression by father. A comparable pattern of continuity holds for mother's harsh discipline of both the target child and the

sibling. The correlations are .61 and .33 for targets and siblings, respectively. The correlation between husband's violence toward the wife at waves 3 and 4 is .56, while for wife's violence toward the husband the association is .50. Thus, the table provides rather strong support for the idea that family violence tends to be persistent across time.

Table 3. Pearson Correlations for Family Violence Across Waves

	Toward Target Child		Toward Sibling		Toward Spouse	
	Wave 3	Wave 4	Wave 3	Wave 4	Wave 3	Wave 4
Wave 3	.59*	.57*	.69*	.49*	.42*	.56*
Wave 4	.61*	.66*	.33*	.55*	.50*	.36*

NOTE: For each 2 x 2 cell, the coefficients above the diagonal are for fathers, those below the diagonal are for mothers, and coefficients on the diagonal are correlations between mother and father scores.

* $p = .05$.

Table 4 provides modest support for the premise of the three frameworks regarding continuity of violence across children in a family. The correlations between mother's physical aggression toward the target child and her aggression toward the sibling is .16 for wave 3 and .18 for wave 4. The corresponding correlations for fathers are .29 and .24.

Table 4. Pearson Correlations Between Child Reports of Victimization and Between Child and Spouse Reports of Victimization, by Wave

	Mother's Violence		Father's Violence	
	Target Child and Sibling	Children and Spouse	Target Child and Sibling	Children and Spouse
Wave 3	.16*	.08	.29*	.16*
Wave 4	.18*	.10	.24*	.13*

* $p = .05$.

In addition to an association between children, the family violence and antisocial trait perspectives suggest that aggression toward children will be related to violence toward a spouse. To test for this relationship, we summed target child and sibling reports of violence by their mother or father to form summary indicators of violence toward children for each wave. Coefficient alphas for these new measures were between .70 and .80

for reports about mothers and about fathers. Table 4 shows the association between this summary measure and reports of violence toward spouse. For fathers, there are significant, though modest, correlations between aggression toward children and toward spouse at waves 3 and 4. The correlations are .16 and .13. For mothers the correlations only approach significance at the .10 level.

These correlations undoubtedly underestimate the degree of association between the two phenomena because the correlation for a given year is dependent upon the two types of violence having occurred during the same month. A less conservative test involves testing the association between violence toward children across years with violence toward spouse across years. To conduct this test, child reports collected at waves 3 and 4 were used as indicators to form the latent constructs Mother's Aggression Toward Children and Father's Aggression Toward Children. Similarly, spouse reports from waves 3 and 4 were employed as indicators of Husband's Aggression Toward Spouse and Wife's Aggression Toward Spouse. Log transformations were used in place of raw scores for the child and marital aggression measures in order to correct for skewed distributions. LISREL VII was used to calculate the correlations between the latent constructs. As shown in Table 5, the association was .28 for father's violence and .16 for mother's violence. Both coefficients are statistically significant. These findings provide weak support for the prediction of a relationship between aggression toward children and toward spouse.

Table 5 also shows a significant bivariate association between the latent constructs Grandparent Harsh Discipline and Aggression Toward Children, a relationship assumed by all three theoretical frameworks. The coefficient is .25 for mothers and .28 for fathers. In addition to this association, the family violence perspective also predicts an association between Grandparent Harsh Discipline and Aggression Toward Spouse. The table provides mixed support for this hypothesis—there is a significant association for fathers, but the coefficient for mothers does not approach significance. Finally, for both spouses, Antisocial Behavior Trait is related to Aggression Toward Children, Aggression Toward Spouse, and Grandparent Harsh Discipline, a pattern of associations expected by the antisocial behavior trait perspective.

Figures 1 and 2 present the results of using structural equation modeling (LISREL VII) to examine the extent to which Antisocial Behavior Trait serves to mediate the effect of Grandparent Harsh Discipline on the two family violence constructs. The families in the sample were largely working class and therefore represented a restricted range on socioeconomic status. Analysis showed that neither family income nor parents' level of education was related to Antisocial Behavior Trait, Aggression Toward Children, or Aggression Toward Spouse. Hence, in an effort to save

Table 5. Bivariate Correlations Between Latent Constructs

	1	2	3	4
1. Antisocial Behavior Trait	1.00	.36*	.38*	.62*
2. Aggression Toward Children	.54*	1.00	.28*	.28*
3. Aggression Toward Spouse	.60*	.16*	1.00	.16*
4. Grandparent Harsh Discipline	.47*	.25*	.06	1.00

NOTE: Coefficients above the diagonal are for fathers, those below the diagonal are for mothers.

* $p = .05$.

degrees of freedom, these variables were not included in the structural equation modeling. Also, the models were originally run separately by sex of child and the results were virtually identical whether the target child was male or female. Therefore, in order to increase the sample size for the analyses, the models reported are based on the total sample. For fathers and mothers, the residuals for two of the indicators of Antisocial Behavior Trait were allowed to correlate—the deviant behavior checklist assessed at wave 2 and wave 3. The modification indices indicated that no other residuals needed to be correlated.

Although the Goodness-of-Fit Index (GFI) indicates that the models provide an adequate fit of the data, the X^2 for the father's model has a p value of less than .05. However, a significant X^2 for a complex model that involves estimating several parameters with a sample of several hundred does not necessarily indicate that the model provides a poor fit of the data (Bollen, 1989; Bollen and Long, 1992). Hoelter (1983) has developed the Critical N (CN) statistic and argues that it should be greater than 200 if the model fits the data. Carmines and McIver (1981) proposed that researchers examine the ratio of X^2 to degrees of freedom and indicated that this figure should be less than three. The models presented in Figures 1 and 2 meet these criteria.

The pattern of findings is almost identical for husbands and wives. Consonant with the social deviance perspective, Grandparent Harsh Discipline is related to Antisocial Behavior Trait ($\beta = .622$ for husbands and $.372$ for wives), which in turn, shows significant associations with Aggression Toward Children ($\beta = .386$ for fathers and $.518$ for mothers) and Aggression Toward Spouse ($\beta = .335$ for husbands and $.492$ for wives). Neither model depicts a path from Grandparent Harsh Discipline to Aggression Toward Children or Aggression Toward Spouse. Our analyses began with the fully recursive models. Albeit, for both fathers and mothers, the paths from Grandparent Harsh Discipline to the two family violence constructs

Figure 1
Model for Fathers

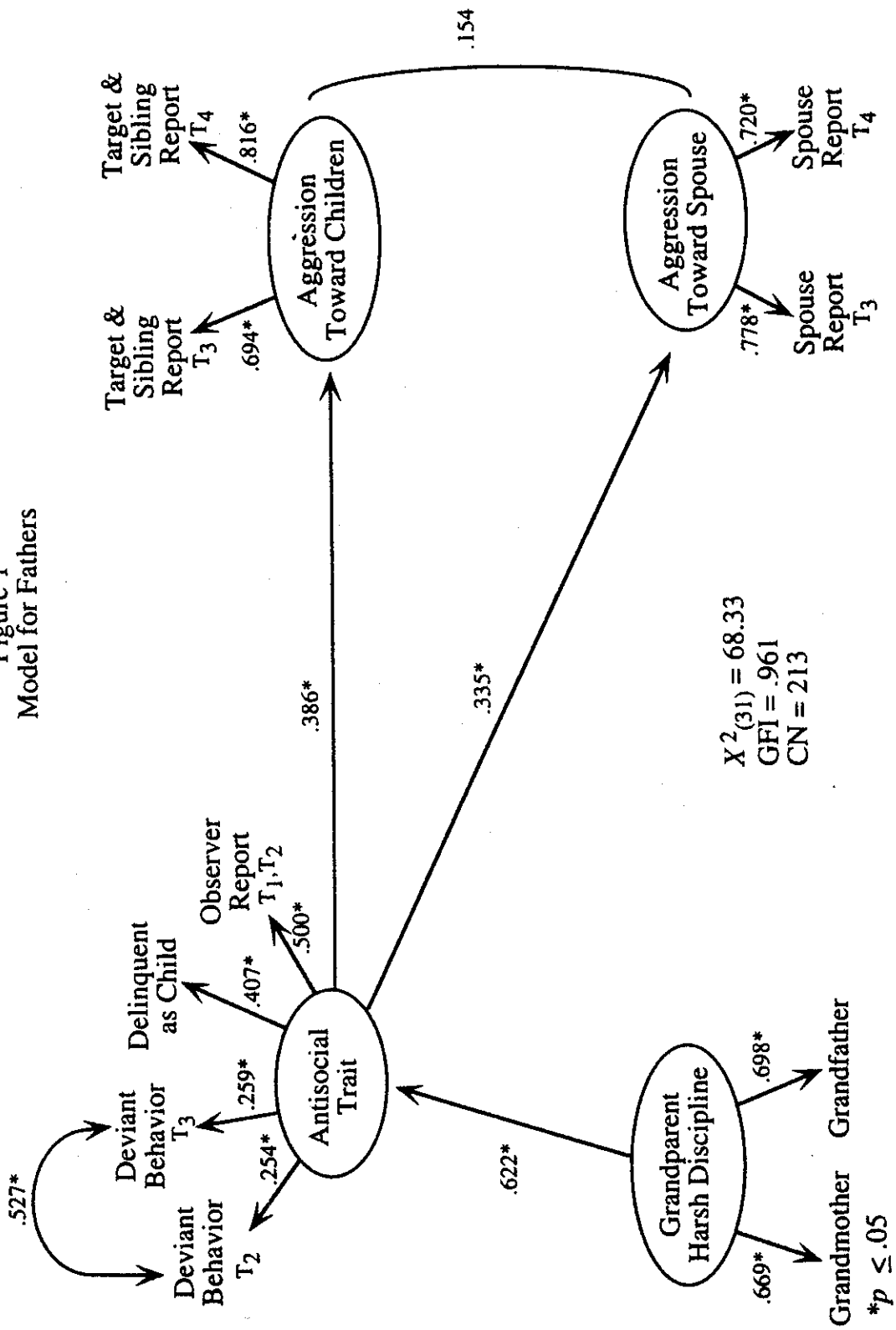
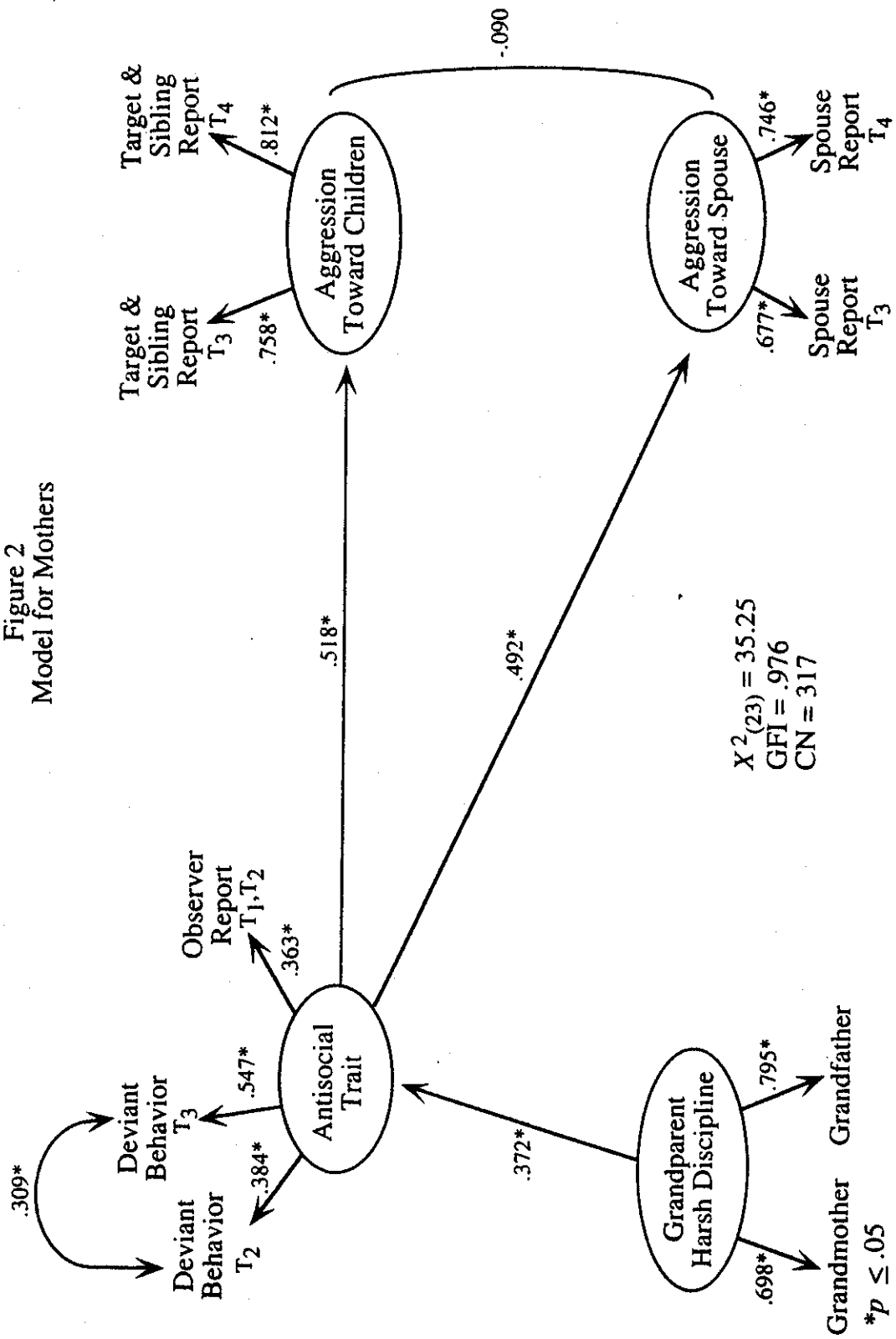


Figure 2
Model for Mothers



did not approach significance. In an effort to identify the most parsimonious models, the analyses were performed again with these paths deleted. The reduced model resulted in a change in X^2 of .94 for fathers and 4.19 for mothers. With two degrees of freedom, neither of these statistics approaches statistical significance. Further, deleting these paths did not influence the magnitude nor the level of significance of the remaining paths. This suggests that the impact of Grandparent Harsh Discipline on family violence is indirect through Antisocial Behavior Trait.

Overall, the findings support the antisocial behavior trait perspective over the other two theories. The results provide at least a moderate degree of corroboration for each of the five relationships identified in Table 1. As that table shows, the antisocial behavior trait perspective is the only one of the three theoretical frameworks that posits all five of these associations. We found a correlation between harsh treatment during childhood and adult violence toward a spouse, as well as a correlation between marital violence and aggression toward children. These findings are contrary to the parenting role perspective. We also found an association between family violence and other antisocial behaviors, and our structural equation modeling indicated that controlling for antisocial behavior trait eliminates the relationship between harsh treatment during childhood and adult family violence. These results contradict both the parenting and family roles frameworks. The antisocial behavior trait perspective, on the other hand, would predict each of these findings.

DISCUSSION

Most studies concerned with the etiology of family aggression have utilized the perpetrator as a source of information regarding all constructs included in the analysis. This approach to measurement is problematic because perpetrators, particularly males (Stets and Straus, 1990), are apt to underreport significantly their violence, and when associations are found between their aggressive behavior and other variables it may largely reflect shared-method variance (Bank et al., 1990). In an attempt to reduce this difficulty, we used self-report data and observational ratings in constructing measures of the explanatory variables and victim reports as indicators for the family violence constructs. This eliminated the problem of shared-method variance between the measures of the explanatory and criterion constructs, although this confound remained for the relationships between the explanatory variables.

Our research also differed from most previous studies because the focus was upon recurrent violence rather than aggression during a single year. Children and marital partners exposed to persistent physical abuse are the

ones who are likely to display emotional and social problems, and the factors that predict chronic family violence are likely to differ from those that account for infrequent acts of aggression. Unfortunately, the annual measures employed to construct the measures of recurrent family violence only asked about physical aggression during the month prior to the interviewer's visit. This approach would fail to identify as violent families in which aggression occurred during the preceding year but not during the month prior to data collection. Fortunately, such an approach to measurement was most apt to identify as violent those persons who are persistent in their aggression throughout the year, the perpetrators of concern in this analysis. Albeit, the underidentification built into the violence measures undoubtedly served to reduce the autocorrelations for the measures of aggression toward child and spouse, as well as the correlations between these constructs.

Past research has reported that persons who experience severe physical discipline as children are apt to be violent with their own offspring (Egeland, et al., 1987; Herrenkohl et al., 1983; Simons et al., 1991; Straus et al., 1980). Consistent with this finding, we found an association between parents' reports of having been harshly disciplined when young and their children's reports of being the brunt of persistent corporal punishment. Analysis showed that this relationship was largely mediated by the extent to which the parents displayed an antisocial orientation. Harsh treatment as a child was associated with a general antisocial orientation, which in turn, predicted chronic aggression toward one's children. Further, parents' with this antisocial behavior trait were likely to engage in violence toward their spouse. Physical aggression toward the marital partner was related to violence toward children but this relationship was eliminated when the effect of antisocial behavior trait was controlled, suggesting that the two phenomena are correlated because each is a reflection of an underlying antisocial orientation. This pattern of findings is consistent with criminological theories that view persistent aggression toward family members as an expression of a general antisocial syndrome that has its roots in inept parenting (e.g., Gottfredson and Hirschi, 1990; Patterson et al., 1992).

Confidence in this finding is weakened by the fact that retrospective accounts were used to assess husbands' and wives' childhood exposure to harsh parenting. Certainly, there is much evidence that people's memories are fallible and that retrospective reports should be viewed with some skepticism. On the other hand, there is evidence that individuals tend to remember salient events, events that produce a rather strong emotional response, with a reasonable degree of accuracy, even with the passage of many years (Cutshall and Yuille, 1989; Fisher et al., 1989; Heuer and Reisber, 1992). This being the case, there is reason to believe that the

adults in our study were able to recall the level of corporal punishment that they received as an adolescent with at least a modicum of precision.

We have no way, of course, of verifying the truth of these retrospective reports. However, virtually all of the evidence for the intergenerational transmission of domestic violence is based on an association between people's memories of having been hit by their parents and their admissions of having recently engaged in aggression toward a spouse or child. Thus, at a minimum our data indicate that the association that several studies have reported between retrospective reports of childhood abuse and adult domestic violence is reduced to insignificance when one controls for involvement in other forms of antisocial behavior.

The domestic violence literature often portrays perpetrators as having few distinguishing characteristics (Pagelow, 1984). They are depicted as ordinary citizens in all respects except for their abusive behavior. This view may well be accurate for individuals who only occasionally engage in family violence. Situational factors such as economic pressure, emotional distress, and marital conflict have been linked to aggression toward children and spouse (Conger et al., 1984; Simons et al., 1993b; Straus and Smith, 1990a), and one might posit that infrequent outbursts of violence toward family members are best explained by such aversive circumstances. Nevertheless, results from this study suggest that individuals who engage in recurring family violence are often distinctive in that they participate in other forms of deviant behavior as well. The results indicated a relationship between persistent domestic violence, whether hitting of a spouse or child, and involvement in other antisocial actions.

It is important that this finding be interpreted with proper caution. The association between domestic violence and other types of deviance, although rather high by social science standards, did not approach unity. Therefore, while the results suggest a clear tendency for individuals who engage in family violence to participate in other forms of antisocial behavior as well, it is also the case that there will be exceptions to this tendency. Certainly, the fact that an individual does not have a history of involvement in antisocial behavior should never be used as a reason for failing to investigate seriously accusations of child or spouse battering.

The finding of an association between family violence and other forms of deviant behavior is consistent with recent reviews of research on spouse batterers (Hotaling and Sugarman, 1986) and child abusers (Hotaling et al., 1990) that have concluded that the demographic risk factors for these behaviors are quite similar to those for criminal violence in general. It is also consonant with the finding that adolescents and adults who engage in domestic assault often have had contact with the police for a variety of criminal behaviors (Dunford et al., 1990; Hotaling et al., 1990; Sherman et al., 1991). These studies have concentrated on male perpetrators, the

group that represents the gravest threat to family members given the degree of injury that they often inflict upon their victims (Stets and Straus, 1990). Findings from this study suggest that a general antisocial orientation tends to be characteristic of women, as well as men, who engage in persistent family violence.

Such generalizations are limited to some degree by the nature of the sample used in the study. The sample consisted largely of families living in small towns. Such a sample is apt to contain fewer highly violent families than would be the case with a more urban sample. Further, both biological parents were present in all of the study families. This sampling criterion might also be expected to eliminate more highly violent families. Families, in which, for example, the marriage had dissolved because of the abusive behavior of one of the spouses would not be represented in the sample. However, as noted earlier, studies of very violent perpetrators (e.g., men arrested for domestic violence, the husbands of women living in shelters) show that they tend to have criminal records (Dunford et al., 1990; Fagan et al., 1983; Flynn, 1977; Gayford, 1975; Sherman et al., 1991; Stacy and Shupe, 1983; Walker, 1979). This suggests that even stronger support for the antisocial behavior trait perspective might have been obtained if more extremely violent families had been included.

The finding that the relationship between childhood exposure to harsh parenting and adult family violence is mediated by development of a general antisocial orientation implies the pertinence of social deviance theories in explaining domestic assault. Although such theories may have little relevance to infrequent family violence, the results of this study suggest their utility in understanding recurrent abusive behavior. Social deviance theories that link adult antisocial behavior to childhood socialization identify ineffective discipline in general (e.g., few rules, inadequate monitoring, inconsistent discipline), rather than abusive discipline per se, as the parenting factor that promotes deviant behavior (Gottfredson and Hirschi, 1990; Hirschi, 1969; Patterson et al., 1992; Sampson and Laub, 1993). Harsh, explosive punishment is highly correlated with these other dimensions of inept parenting (Patterson, 1982; Simons et al., 1994a), and might be viewed as simply a component or indicator of a more general ineffectual approach to discipline and control. Further, parental involvement in an antisocial life-style has been linked to ineffective discipline (Capaldi and Patterson, 1991; Patterson and Dishion, 1988; Sampson and Laub, 1993). This suggests an alternative perspective on the intergenerational transmission of persistent family violence. It may be a general antisocial orientation, rather than simply lessons regarding aggression toward family members, that is being transmitted across generations.

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Appendix. Summary of Constructs and Measures

Study Construct	Measures	Respondent	Focal Person
1. Grandparent Harsh Parenting	Harsh Discipline Scale (wave 1) Sum of 4 Items	Father and Mother	Grandfather and Grandmother
2. Aggression Toward Children	Harsh Discipline Scale (waves 3, 4) Sum of 3 Items	Target Child and Sibling	Father and Mother
3. Aggression Toward Spouse	Single Item (waves 3, 4)	Father and Mother	Spouse
4. Antisocial Behavior Trait	Deviant Behavior Checklist (waves 2, 3) Sum of 5 Items	Father and Mother	Self
	Observer Ratings (waves 1, 2) Sum of 6 Items	Trained Coder	Father and Mother
	Childhood Delinquency Checklist (wave 3) Sum of 14 Items	Father	Self