

Intergenerational Transmission of Harsh Parenting

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A social learning model was developed that portrayed four processes whereby harsh parenting might be transmitted across generations. The model was tested using a sample of 451 2-parent families, each of which included a 7th grader. Both parent self-report and adolescent-report measures were utilized for the harsh parenting construct. Analysis using structural equation modeling procedures showed that grandparents who had engaged in aggressive parenting produced present-day parents who were likely to use similar parenting practices. The effect was stronger for mothers than for fathers. In addition to a direct modeling effect, there was evidence that similarities across generations regarding the harsh discipline of male children are in part a function of socioeconomic characteristics being transmitted across generations. There was little support for the contention that parents transmit their aggressive parenting practices indirectly by influencing the personality and parenting beliefs of their children.

There is strong evidence that children exposed to harsh or abusive parenting are at risk for a number of negative developmental outcomes including delinquency, psychopathology, academic failure, difficulties with peers, and substance abuse (Hotelling, Finkelhor, Kirkpatrick, and Straus, 1988; Libbey and Bybee, 1979; Maccoby and Martin, 1983; Rohner, 1986; Simons, Conger, and Whitbeck, 1988; Wolfe, 1987). These findings have prompted research concerned with identifying the causes of such parenting practices. On the basis of the results of a variety of studies, some researchers have concluded that the most significant determinant of abusive child rearing is having experienced harsh punishment as a child (Steinmetz, 1977, 1987). This contention bridges studies focusing on the consequences of harsh parenting and those concentrating on the causes of such parenting by positing a "cycle of violence" whereby individuals who were harshly treated as youngsters grow up to use similar practices with their own children.

Although both professionals and the general public tend to assume that there is convincing evidence indicating that harsh parenting is transmitted across generations, several researchers have noted significant limitations in the data cited in support of this relationship (Burgess and Youngblade, 1988; Jayartne, 1977; Kaufman and Zigler, 1987). Research during the 1960s and early 1970s suggested a strong association between engaging in abusive parenting and having been the victim of maltreatment (Fontana, 1968; Galdston, 1965; Green, Gaines, and

Sandgrund, 1974; Kempe, Silverman, Steele, Droegmueller, and Silver, 1962; Silver, Dublin, and Lourie, 1969; Steele and Pollack, 1968). Most of these investigations, however, involved case studies or clinical populations. In addition to using non-representative samples, this work failed to use comparison groups, and in most instances the observers (or interviewers) were blind neither to the subject's abuse status nor to the hypotheses being investigated.

More recent studies, which have used comparison groups and have provided for greater objectivity in the measurement of constructs, have reported a modest relationship between a history of harsh or abusive parenting and current parenting practices (Egeland, Jacobvitz, and Papatola, 1987; Herrenkohl, Herrenkohl, and Toedter, 1983; Hunter and Kilstrom, 1979; Straus, 1983; Straus, Gelles, and Steinmetz, 1980). Although these studies represent vast improvements over the research designs used in the early research, they have continued to suffer from methodological weaknesses that allow for alternative interpretations of the findings. Perhaps the most fundamental limitations relate to inadequate controls for socioeconomic factors and to the use of self-reports from a single source to measure both the grandparent's behavior and the adult child's current child-rearing strategies.

Several studies, for example, have demonstrated a significant association between low socioeconomic status and child maltreatment (Bronfenbrenner, 1977; Garbarino, 1976; Gil, 1970; Straus et al., 1980). Given this association, there are at least two ways in which social-class influences might account for the correlation between parenting practices across generations. First, the linkages that have been reported between generations may merely represent the tendency of adult children to replicate the lower social-class status of their parents with its accompanying stressors and life-style, a life-style that may promote irritability and increase the likelihood of harsh parenting (Burgess and Youngblade, 1988). To eliminate this explanation, one needs to examine parenting practices across generations while controlling for the social class of the adult children. Second,

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growing up in a lower-class family may influence people's approach to child rearing or their child-rearing values regardless of the socioeconomic level that they are able to achieve. This possibility requires taking into account the socioeconomic status of the parents during the years that the adult child was growing up. Unfortunately, most studies testing for the intergenerational transmission of harsh or abusive parenting have failed to control for the social class of either the grandparents or their adult children.

Regarding this second issue, which has been called the *method variance problem*, measuring all study variables through reports from a single source may yield inflated associations between constructs because of the respondent's overarching dispositions or global personality traits (Watson and Clark, 1984). Such dispositions or traits may color the respondent's judgments about conceptually distinct ideas, causing the correlations among these ideas to appear as if they had "glopped" together (Bank, Dishion, Skinner, and Patterson, 1989). In the issue of intergenerational transmission of harsh parenting, it may be that aggressive individuals tend to see others, including their parents, as displaying high rates of aggressive behavior (Straus et al., 1980), thereby producing an artifactual relationship between descriptions of their own behavior and of that of their parents.

In contrast with this method variance problem, which can produce exaggerated associations between constructs, collecting data from a single source may result in attenuated associations if the respondent is asked to report socially undesirable information. In such cases, the respondent is likely to underreport the frequency of the phenomena of concern, thereby reducing the validity and variance of the measure and, consequently, the magnitude of the association that will be found between this construct and others. This problem is likely to be evident when parents are asked to self-report their use of harsh or abusive child-rearing practices. Substituting child report for parent self-report does not fully address the problem because children are also apt to underreport their parents' use of socially undesirable practices. One way to address this problem is to utilize multiple sources of data (e.g., parents and children) for the construct of concern and then to use latent variable analysis techniques (e.g., LISREL, EQS) that can correct for the unreliability of the measures (Bollen, 1989).

The present study attempts to circumvent these methodological difficulties that have limited previous studies. First, this study uses a general population sample that overcomes problems associated with case studies or clinical groups. In addition, the analysis takes into account the educational level and financial status of both the grandparent and parent generations. Third, both parents and their children serve as sources of information regarding harsh parenting. Obtaining data from the children, rather than only the parents, attenuates the method variance problem. To address more fully this issue, multiple measures would need to be used for all of the constructs included in the study. Unfortunately, this was not possible. Thus, although this study improves on most previous research by utilizing parent and child reports of harsh parenting, it is only partially successful in avoiding the method variance problem because parent self-reports are used as measures for all of the other constructs.

In addition to the goal of overcoming some of the methodological limitations of previous research, the present study is also concerned with identifying mechanisms that explain the linkage between intergenerational patterns of harsh parenting. Previous studies have largely confined their focus to the issue of whether or not intergenerational transmission occurs. Researchers have often conjectured about the manner in which this effect is produced, but these hypotheses have rarely been subjected to empirical test.

Speculations about the processes that mediate the intergenerational effect are often couched in terms of social learning theory (Burgess, 1979; Burgess and Youngblade, 1988; Gelles and Straus, 1979; Straus, 1983; Straus et al., 1980). Although researchers who use this perspective all share the premise that harsh parenting influences the next generation through processes of modeling and reinforcement, they differ regarding what it is that is learned.

The most obvious thing that someone might learn from harsh treatment as a child is that severe, coercive measures are a normal part of parenting (Straus et al., 1980). People tend to have only a superficial understanding of the routine parenting practices used in families other than their own. Hence, in the absence of competing models, they are likely to accept the practices of their parents as typical. There are two forms in which these parenting scripts might influence adult behavior. First, such socialization may simply result in a set of aggressive disciplinary behaviors that the individual uses with his or her children in a reflexive, rather unthinking fashion. On the other hand, the person may develop a set of rules or normative understandings (Bandura, 1977, 1986) concerning the desirability, or at least the necessity, of strict physical discipline as an approach to child rearing. Thus, the consequences of harsh parenting may be expressed reflexively, with little awareness of alternatives or concern with rationalization, or may be mediated by a set of parenting beliefs, a parenting philosophy of sorts, that justifies strict, physical discipline.

It may be, however, an aggressive approach to social interaction in general, rather than a specific set of parenting behaviors or beliefs, that is transmitted across generations (Burgess and Youngblade, 1988). Patterson and his colleagues (Patterson, 1982; Patterson, DeBaryshe, and Ramsey, 1989), for example, have provided convincing evidence that a parenting style characterized by explosiveness, irritability, and threats tends to train a child in the use of aggressive behavior. Furthermore, there is evidence that children often generalize this aggressive interpersonal style from the family to interactions with peers and teachers at school (Patterson et al., 1989; Simons, Whitbeck, Conger, and Conger, 1990). Elder (Caspi and Elder, 1988; Elder, Caspi, and Downey, 1986) has reported findings suggesting that explosive personalities are transmitted across generations as a result of hostile parenting practices. Thus, taken together, the evidence suggests that harsh parenting may produce an explosive or irritable personality or interpersonal style that, in turn, increases the probability that as adults these individuals will be aggressive with their own children (as well as with almost everyone else).

Figure 1 presents a model that depicts the three processes described above. The figure indicates that the harsh parenting of one generation may directly influence the parenting of the

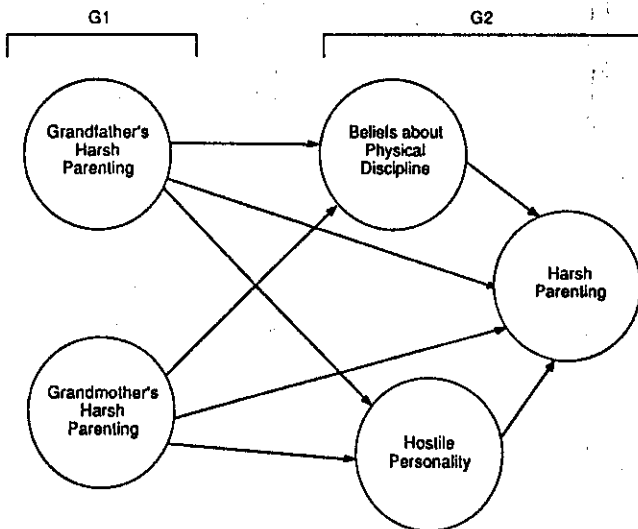


Figure 1. Model of intergenerational transmission of harsh parenting.

next generation through a simple modeling effect, or it may be transmitted indirectly through the adult child's general interpersonal style or parenting beliefs. This study provides a test of this model, with socioeconomic factors as controls.

The construct of *harsh parenting* as used in the model refers to instances of yelling, spanking, slapping, shoving, or hitting the child with an object. Hence, *harsh parenting* overlaps with but is not the same as *child maltreatment* or *abuse*. The latter terms imply a dichotomy: Either parents are abusive or they are not. In contrast, this study assumes that harsh parenting exists along a continuum. More important, studies of maltreatment and abuse often combine physically abusive parenting with emotional neglect of the child. In studying the intergenerational transmission of parenting practices, it seems wise to distinguish between the two phenomena because parental neglect or withdrawal presents the child with a very different set of role models and reinforcement contingencies than physically aggressive parenting and is hence likely to transmit a different set of behaviors. Thus, in this study harsh parenting does not include neglect, nor does it completely overlap with physical abuse. Rather, it represents a range of parenting practices from the absence of any aggressive behavior to violent assault, with acts such as yelling, threatening, and spanking existing in between.

The model was tested separately for mothers and fathers by gender of adolescent. Most studies of parenting, especially of harsh and abusive parenting, exclude fathers (Billler and Solomon, 1986; Wolfe, 1987). This omission is significant because fathers are involved in a substantial proportion of violent parenting (e.g., Straus et al., 1980) and because the causal mechanisms at work may differ by gender of parent. With regard to intergenerational transmission, it may be, for example, that men are more responsive to the harsh parenting of their fathers, whereas females are influenced more by the parenting of their mothers (Straus et al., 1980), or perhaps a particular mediating mechanism (e.g., beliefs about discipline) operates for one gender but not the other.

In addition to considering differences between mothers and fathers, it was important that the model be run separately for male and female adolescents because the causes of harsh parenting may differ by gender of child. For instance, parental personality may largely determine harsh parenting of boys, whereas parenting beliefs may be the major determinant of harsh treatment of girls.

Method

Subjects

Data for this study were collected as part of a broader project concerned with the life-course trajectories of parents and their children. A sample of 451 two-parent families was 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 the winter and spring of 1989. An additional criterion for inclusion in the study was the presence of a sibling within 4 years of age of the seventh grader. Slightly less than half of the cohort of seventh graders had families who met these criteria. Seventy-seven percent of the eligible families agreed to participate in the study. This is comparable to the response rates reported by other studies that attempt to recruit multiple family members (Capaldi and Patterson, 1987). Substantial remuneration appears to be a requisite for obtaining the participation of multiple family members in studies involving intensive assessment procedures (Capaldi and Patterson, 1987). Families in the present project each received \$250 for their effort, which translated into about \$10 per hour for each family member's time.

The families in the study lived on farms (about one third) or in small towns. All of the families were White, and annual income ranged from nothing to \$135,000, with a mean of \$29,642. Fathers' education ranged from 8 to 20 years, with a mean of 13.5 years, whereas for mothers the range was from 8 to 18 years, with a mean of 13.4 years. Fathers ranged in age from 31 to 68 years, with a median of 39.7 years; mothers' ages ranged from 29 to 53, with a median of 37.7 years. Because families of less than four were excluded from the sampling frame, the families were larger on average than what would be expected from a general population survey. Families ranged from 4 to 13 members, with an average of 4.9 members.

Procedure

Each of the four family members completed questionnaires focusing on issues such as parenting, psychological adjustment, self-concept, health, social support, and economic status. Family members completed the assortment of questionnaires during two visits made to the home by project staff and as homework assigned between the two visits. The total assessment battery required about 6 hr of each family member's time. The parents self-reported their harsh parenting practices on the first evening of data collection. They completed instruments concerning their parents' parenting practices as part of the homework questionnaires. This separation in time (usually a few days) was likely to decrease the extent to which cognitive consistency or mood operated to enhance the correlation between the parents' reports of these two phenomena.

In addition to parental self-report, the seventh graders reported how frequently each of their parents engaged in various harsh parenting practices (first-night questionnaire). Using two sources of information to measure harsh parenting reduced the method variance problem discussed above and provided for the use of structural equation estimation procedures that correct for the unreliability of measures.

Measures

First-generation harsh parenting. Mothers and fathers completed a four-item Harsh Discipline Scale for each of their parents. The items were adapted from Straus et al. (1980) and asked the respondents to indicate how their mother (or father) interacted with them when they were about the age of their seventh grader. The questions were as follows:

When you did something wrong, how often did your mom (dad) lose her temper and yell at you?

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?

Response categories ranged along a 5-point continuum, with 1 = *never*, 3 = *about half the time*, and 5 = *always*. Note that although 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). Coefficient alpha was .73 for fathers' reports for their fathers and .70 for their mothers. Alpha was .78 for mothers' reports for their fathers, .75 for their mothers.

Second-generation harsh parenting. Two measures were used as indicators of the extent to which the adult children engaged in harsh parenting. The first measure required the parents to self-report their parenting practices using the four-item Harsh Discipline Scale described above. Coefficient alpha was .54 for fathers and .58 for mothers.

The second measure involved seventh graders' ratings of their mothers' and fathers' parenting. This measure consisted of the four items from the Harsh Discipline Scale 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 item was part of a set of items concerning parent-child interaction that was not on the parent questionnaires. Analysis showed that it correlated highly with the other harsh parenting items. Coefficient alpha for this expanded harsh parenting measure was .74 for reports about fathers' parenting and .70 for reports about mothers' parenting.

The adolescent-report measure helped to reduce the method variance problem created by obtaining information on all of the constructs from the parents. Also, given the social undesirability of the harsh parenting questions, the adolescents were expected to report higher frequencies than those self-reported by the parents. Given these advantages, one alternative was to omit the data collected from the parents and to utilize the adolescent reports as the only measure of harsh parenting. Prior studies have suggested, however, that no single family member has the best or most valid perspective on family processes (Furman, Jones, Buhrmester, and Adler, 1989; Larzelere and Klein, 1987; Schwarz, Barton-Henry, and Pruzinsky, 1985). Rather, each family member presents a partially correct picture as filtered through his or her personal biases and emotions.

Consistent with this contention, cross-tabulation of each of the items on the Harsh Parenting Scale as reported by the adolescents and their parents showed that in those cases in which one party reported a high rate of aggressive parenting and the other a low rate, there was only a slight tendency for the adolescent to report the higher rate. Thus, it is not simply the case that children accurately report harsh parenting whereas their parents fail to disclose such activity. In many instances, the parent admitted to such behavior while the adolescent failed to

report it. Hence, in an effort to obtain a more valid assessment of harsh parenting, both parent self-report and adolescent-report measures were used as indicators of fathers' and mothers' harsh parenting.

Beliefs about physical discipline. The degree to which parents endorsed the use of physical force to control and correct children was measured by a three-item Commitment to Physical Discipline Scale developed for the project. Information concerning the procedures followed in developing and pretesting this scale can be found in Simons, Whitbeck, Conger, and Melby (1988, 1990). The Commitment to Physical Discipline Scale asks respondents to indicate the extent to which they subscribe to the following statements:

Parents shouldn't hit their kids when disciplining them.

There is oftentimes no substitute for a good spanking. (reverse coded)

Parents should try to use punishments involving restrictions, such as grounding, rather than physical punishments like spanking.

The response format ranged from 1 (*strongly agree*) to 5 (*strongly disagree*). Coefficient alpha was .60 for fathers and .63 for mothers.

Hostile interpersonal style. The Hostility subscale of the SCL-90-R (Derogatis, 1983) was used as a measure of the hostility construct. This instrument asks respondents to report whether during the previous week they have felt annoyed, gotten into arguments, shouted at people, experienced a temper outburst, or had the urge to harm someone or to throw things. Previous research has shown the scale to have adequate internal consistency and construct validity (Derogatis, 1983). In the present study, alpha was .74 for fathers and .66 for mothers.

Socioeconomic status. The socioeconomic status of the parents was measured by having them self-report years of completed education and family income for the previous year. Socioeconomic status for the family of origin was measured by having the parents report the grandparents' level of education and financial well-being during the period when the parents were growing up. As expected, level of education for grandmothers and grandfathers was highly correlated ($r > .5$). Hence, they were averaged to form an overall education score for grandparents.

The family-of-origin financial measure consisted of two questions. The first item asked parents to rate their family's standard of living when they were growing up compared with other families in their community. Responses could range from 1 (*far below average*) to 5 (*far above average*). The second item asked how frequently the respondent's family received public assistance such as food stamps, Aid to Families with Dependent Children, and so forth. Answers could range from 1 (*always*) to 7 (*never*). Responses to these two questions were standardized and added together to obtain a measure of financial resources for the family of origin.

Results

Table 1 presents summary information concerning the distribution of scores on the harsh parenting measures for families with a male adolescent as the target child. Table 2 presents the same information for families in which the target child was female. In addition to the means and standard deviations, the tables report the percent of respondents who rated the frequency of each item as half of the time or more (i.e., the percent of persons who checked Categories 3, 4, and 5). The tables show that the grandparent generation was reported to have engaged in much more aggressive parenting than the current generation of parents. It appears that about a third of the fathers and a fourth of the mothers were spanked or slapped on a regular

basis during their adolescence. Fathers were somewhat more likely to be hit by the grandfather, whereas mothers were equally apt to be struck by the grandfather and the grandmother. In addition to suggesting major differences between generations in the use of harsh parenting, the tables show that, with the exception of the verbal aggression item (viz., *lose temper and yell*), parents self-reported lower rates of aggressive parenting than did their adolescent children.

A comparison of Tables 1 and 2 shows that parents are more apt to use harsh discipline with sons than with daughters. The adolescent and self-report data indicate that fathers and mothers are two to three times more likely to use physical punishment with boys than with girls. Chi-square tests showed these differences to be statistically significant at the .01 level.

Tables 3 and 4 present correlation matrixes for the study variables by sex of target child. In both tables, the correlations above the diagonal are for fathers, those below the diagonal are for mothers, and those on the diagonal represent the correlation between fathers' and mothers' scores. These tables indicate moderate associations between the different measures of the harsh parenting construct. The correlations between parent self-report and adolescent report are approximately .30. This is consistent with the magnitude of association found in other studies using different family member reports of parenting practices (Schwarz et al., 1985).

Tables 3 and 4 show significant zero-order correlations between harsh parenting by grandparents and both the self- and adolescent-report measures of mothers' parenting. As one would expect, the coefficients are stronger for the self-report measures. For both male and female adolescents, harsh parenting by grandmothers shows a stronger association with mothers' parenting than does harsh parenting by grandfathers. As expected, hostile personality and commitment to physical discipline are also correlated with mothers' parenting of both sons and daughters. Furthermore, parenting practices of the grandparents are related to mothers' scores on the hostile personality variable, suggesting that the intergenerational transmission of harsh parenting for mothers may, at least in part, be mediated by personality.

Table 4 shows modest correlations between the parenting of the grandparents and fathers' harsh parenting of daughters, whereas Table 3 shows grandparenting to be associated with the self-report but not the adolescent-report measures of fathers' harsh parenting of sons. For sons and daughters, beliefs about physical discipline are related to both measures of fathers' harsh parenting, whereas hostile personality is related to the self-report but not the adolescent report of fathers' parenting. Finally, the parenting of both grandparents is related to discipline beliefs for fathers of daughters, and harsh parenting of grandfathers is associated with hostile personality for fathers of sons. The latter findings suggest that the intergenerational transmission of harsh parenting for fathers may be mediated by both personality and parenting beliefs.

Lastly, Tables 3 and 4 present information concerning the effect of the socioeconomic variables. Grandparents' level of economic well-being is negatively related to their use of harsh parenting, indicating that families who experienced economic hardship were more apt to use physical discipline. Although in some instances the correlations are rather modest, grandpar-

Table 1
Harsh Parenting Items: Female Child ($N = 236$)

| Item | Father's parents | | | Mother's parents | | | Father's parenting | | | Mother's parenting | | | | | | | | | | | | | | |
|-------------------------|------------------|-------------|-------------|------------------|-------------|-------------|--------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| | Grandfather | Grandmother | Grandmother | Grandfather | Grandmother | Grandmother | Father report | Adolescent report | Adolescent report | Mother report | Adolescent report | Adolescent report | | | | | | | | | | | | |
| | M | SD | ≥1/2 | M | SD | ≥1/2 | M | SD | ≥1/2 | M | SD | ≥1/2 | | | | | | | | | | | | |
| Lose temper and yell | 2.7 | 0.98 | 60.0% | 2.7 | 0.82 | 57.1% | 2.7 | 1.14 | 47.2% | 3.0 | 1.06 | 64.1% | 2.7 | 0.72 | 58.9% | 2.4 | 1.00 | 40.3% | 2.9 | 0.70 | 75.8% | 2.6 | 0.95 | 50.8% |
| Spank or slap | 2.3 | 0.90 | 35.1% | 2.2 | 0.86 | 33.5% | 2.0 | 1.05 | 21.4% | 2.1 | 0.99 | 27.4% | 1.5 | 0.57 | 3.0% | 1.3 | 0.62 | 5.1% | 1.5 | 0.58 | 3.4% | 1.4 | 0.60 | 3.4% |
| Hit with belt or paddle | 2.0 | 0.97 | 28.4% | 1.8 | 0.93 | 21.0% | 1.7 | 1.04 | 15.3% | 1.6 | 0.93 | 15.8% | 1.2 | 0.50 | 1.7% | 1.2 | 0.53 | 4.2% | 1.2 | 0.40 | 1.3% | 1.1 | 0.44 | 1.3% |
| Throw out of house | 1.1 | 0.43 | 1.3% | 1.1 | 0.36 | 0.9% | 1.1 | 0.45 | 0.9% | 1.2 | 0.53 | 3.4% | 1.0 | 0.19 | 0.4% | 1.1 | 0.24 | 0.4% | 1.0 | 0.20 | 0.1% | 1.1 | 0.26 | 0.8% |
| Hit, grab, shove* | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

Note. ≥1/2 includes persons who indicated Categories 3 (about half the time), 4 (almost always), or 5 (always).

* This item was completed by the seventh graders as part of a set of parent-child interaction items that were not on the parent questionnaires.

Table 2
Harsh Parenting Items: Male Child (N = 215)

| Item | Father's parents | | | Mother's parents | | | Father's parenting | | | Mother's parenting | | | | | | | | | | | | | | |
|-------------------------|------------------|------|-------------|------------------|------|-------------|--------------------|------|-------------------|--------------------|------|-------------------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| | Grandfather | | Grandmother | Grandfather | | Grandmother | Father report | | Adolescent report | Mother report | | Adolescent report | | | | | | | | | | | | |
| | M | SD | ≥1/2 | M | SD | ≥1/2 | M | SD | ≥1/2 | M | SD | ≥1/2 | | | | | | | | | | | | |
| Lose temper and yell | 2.8 | 0.95 | 57.9% | 2.6 | 0.88 | 53.5% | 2.6 | 1.2 | 50.7% | 2.8 | 0.99 | 59.3% | 2.8 | 1.08 | 46.5% | 3.0 | 0.74 | 76.7% | 2.8 | 1.04 | 55.3% | | | |
| Spank or slap | 2.5 | 0.92 | 40.7% | 2.3 | 0.81 | 32.4% | 2.0 | 1.05 | 25.1% | 2.1 | 0.94 | 24.8% | 1.7 | 0.62 | 7.4% | 1.6 | 0.84 | 14.4% | 1.6 | 0.62 | 5.1% | 1.6 | 0.82 | 12.1% |
| Hit with belt or paddle | 2.2 | 1.08 | 31.6% | 2.0 | 0.95 | 23.9% | 1.7 | 1.03 | 17.9% | 1.6 | 0.88 | 15.9% | 1.4 | 0.67 | 5.6% | 1.4 | 0.69 | 8.4% | 1.2 | 0.42 | 0.5% | 1.3 | 0.61 | 5.1% |
| Throw out of house | 1.2 | 0.42 | 2.4% | 1.1 | 0.35 | 0.9% | 1.1 | 0.48 | 3.4% | 1.1 | 0.46 | 1.4% | 1.1 | 0.32 | 0.5% | 1.1 | 0.45 | 1.4% | 1.1 | 0.32 | 0.9% | 1.1 | 0.42 | 1.9% |
| Hit, grab, shove* | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

Note. ≥1/2 includes persons who indicated categories 3 (about half the time), 4 (almost always), or 5 (always).
* This item was completed by the seventh graders as part of a set of parent-child interaction items that were not on the parent questionnaires.

Table 3
Correlation Matrix for Study Variables: Female Child

| Measure | Grandfather harsh parent | | | Grandmother harsh parent | | | Harsh parent self-report | | | Harsh parent adolescent report | | | Hostile personality | | | Discipline beliefs | | | Education | | | Income | | | Grandparents' education | | | Grandparents' economic well-being | | |
|-----------------------------------|--------------------------|----|------|--------------------------|----|------|--------------------------|----|------|--------------------------------|----|------|---------------------|----|------|--------------------|----|------|-----------|----|------|--------|----|------|-------------------------|----|------|-----------------------------------|----|------|
| | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 | r | SD | ≥1/2 |
| Grandfather harsh parent | .03 | | | .53** | | | .13* | | | .04 | | | .25** | | | -.12* | | | .02 | | | -.07 | | | -.22** | | | | | |
| Grandmother harsh parent | .49** | | | .06 | | | .11 | | | .04 | | | .26** | | | -.15* | | | .02 | | | -.03 | | | -.15* | | | | | |
| Harsh parent self-report | .16** | | | .26** | | | .28** | | | .30** | | | .31** | | | -.11* | | | -.05 | | | .02 | | | .02 | | | | | |
| Harsh parent adolescent report | .13** | | | .16** | | | .27** | | | .10 | | | .17** | | | -.06 | | | .03 | | | .03 | | | .03 | | | | | |
| Hostile personality | .18** | | | .18** | | | .37** | | | -.02 | | | .11* | | | .06 | | | -.02 | | | .01 | | | .01 | | | | | |
| Discipline beliefs | .11* | | | .07 | | | .24** | | | .07 | | | .20** | | | -.08 | | | -.04 | | | .04 | | | .04 | | | | | |
| Education | -.06 | | | -.07 | | | -.02 | | | .14 | | | -.06 | | | .18** | | | .23** | | | .21** | | | .21** | | | | | |
| Income | -.13** | | | .02 | | | .03 | | | -.10 | | | -.02 | | | .11* | | | 1.00 | | | .13* | | | .13* | | | | | |
| Grandparents' education | -.06 | | | -.04 | | | -.04 | | | -.05 | | | -.03 | | | .03 | | | .13* | | | .24** | | | .24** | | | | | |
| Grandparents' economic well-being | -.10 | | | -.13* | | | .06 | | | -.03 | | | .13* | | | .08 | | | .13* | | | .15** | | | .15** | | | | | |

Note. Coefficients above the diagonal are correlations between variables for fathers; coefficients below the diagonal are correlations between variables for mothers; and coefficients along the diagonal (in boldface) represent correlations between father and mother scores.
* p ≤ .05. ** p ≤ .01.

Table 4
Correlation Matrix for Study Variables: Male Child

| Measure | Grandfather harsh parent | Grandmother harsh parent | Harsh parent self-report | Harsh parent adolescent report | Hostile personality | Discipline beliefs | Education | Income | Grandparents' education | Grandparents' economic well-being |
|-----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------------|---------------------|--------------------|-----------|--------|-------------------------|-----------------------------------|
| Grandfather harsh parent | .03 | .43** | .19** | .05 | .22** | .09 | -.02 | -.16* | -.05 | -.16** |
| Grandmother harsh parent | .52** | .07 | .25** | .02 | .07 | .07 | -.20** | -.10 | -.08 | -.07 |
| Harsh parent self-report | .26** | .31** | .22** | .26** | .17** | .26** | -.13* | -.14* | -.10 | -.05 |
| Harsh parent adolescent report | .13* | .21** | .35** | .57** | .04 | .18** | -.18** | -.12* | -.11 | -.09 |
| Hostile personality | .20** | .16* | .30** | .33** | .03 | .05 | -.01 | -.10 | -.13* | -.05 |
| Discipline beliefs | .12* | .10 | .37** | .19** | .08 | .26** | .08 | -.04 | .01 | -.13* |
| Education | -.16** | -.07 | -.25** | -.13* | -.10 | -.14** | .53* | .29* | .38* | .15** |
| Income | -.18** | -.07 | -.23** | -.08 | -.20** | -.18** | .42* | 1.00* | .15* | .15* |
| Grandparents' education | -.14* | -.09 | -.16 | -.05 | -.05 | -.05 | .40** | .18** | .17** | .28** |
| Grandparents' economic well-being | -.37** | -.32** | -.02 | -.01 | .01 | -.08 | .15* | .08 | .18** | .18** |

Note. Coefficients above the diagonal are correlations between variables for fathers; coefficients below the diagonal are correlations between variables for mothers; and coefficients along the diagonal (in boldface) represent correlations between father and mother scores.

* $p \leq .05$. ** $p \leq .01$.

ents' economic well-being and education are associated with the income and educational achievement of their adult children. However, neither grandparents' level of economic well-being nor education is related to their adult child's parenting beliefs, personality, or parenting practices. Hence, to the extent that socioeconomic characteristics of the family of origin influence the parenting of adult children, the effect must be indirect through the grandparents' impact on their adult child's socioeconomic position. Given these findings, the socioeconomic constructs for the family of origin were not included in the multivariate analysis in an effort to keep the path models as simple as possible.

Concerning measures of the adult children's socioeconomic characteristics, Tables 3 and 4 show that for both parents education is negatively correlated with harsh parenting of sons but not daughters. Similarly, although the correlations are small, income is negatively related to harsh parenting of sons for both mothers and fathers. These findings are consistent with the hypothesis that, at least regarding the harsh parenting of male children, it is components of social class, rather than specific parenting practices, that are transmitted from one generation to another. Hence, education and income of the adult children were included in the multivariate analysis presented below.

Figures 2 to 5 present the results of path analyses using the LISREL VI statistical program (Joreskog and Sorbom, 1986). This program is based on maximum-likelihood statistical theory and, in contrast to ordinary least-squares procedures, allows for multiple indicators of constructs, adjusts parameter estimates for the unreliability of measurement when multiple indicators are used, permits correlated residuals, and provides a test of the extent to which over-identified models fit the data (Joreskog and Sorbom, 1986; Long, 1983). Analysis began with the fully recursive model and was reduced over several iterations as paths not significant at the .05 level were deleted from the structural equations one at a time.

Figure 2 shows the results for mothers' harsh parenting of sons, whereas Figure 3 presents the results for mothers' harsh parenting of daughters. All path coefficients are standardized and significant at the .05 level. The figures provide evidence for intergenerational transmission through direct modeling in that grandmothers' parenting, although not the parenting of grandfathers, is rather strongly associated with harsh parenting by mothers. Believing in physical discipline and having a hostile personality also predict harsh parenting by these women; however, neither grandfathers' nor grandmothers' parenting predict parenting beliefs, and there is only a very small association between grandfathers' harsh parenting and mothers' personality. Thus, there is little support for the contention that grandparents transmit harsh parenting to their adult daughters indirectly by influencing their parenting beliefs or personality.

Concerning the socioeconomic measures, the results differ by gender of child. Figure 2 shows that when the target child is a boy, mothers' education is negatively related to harsh parenting, whereas family income displays a small indirect effect through its negative association with parenting beliefs and hostile personality. In contrast, Figure 3 indicates that when the target child is female, family income has no effect, whereas mothers' education shows a small indirect effect through hostile personality. Thus, overall, Figures 2 and 3 offer little support for the

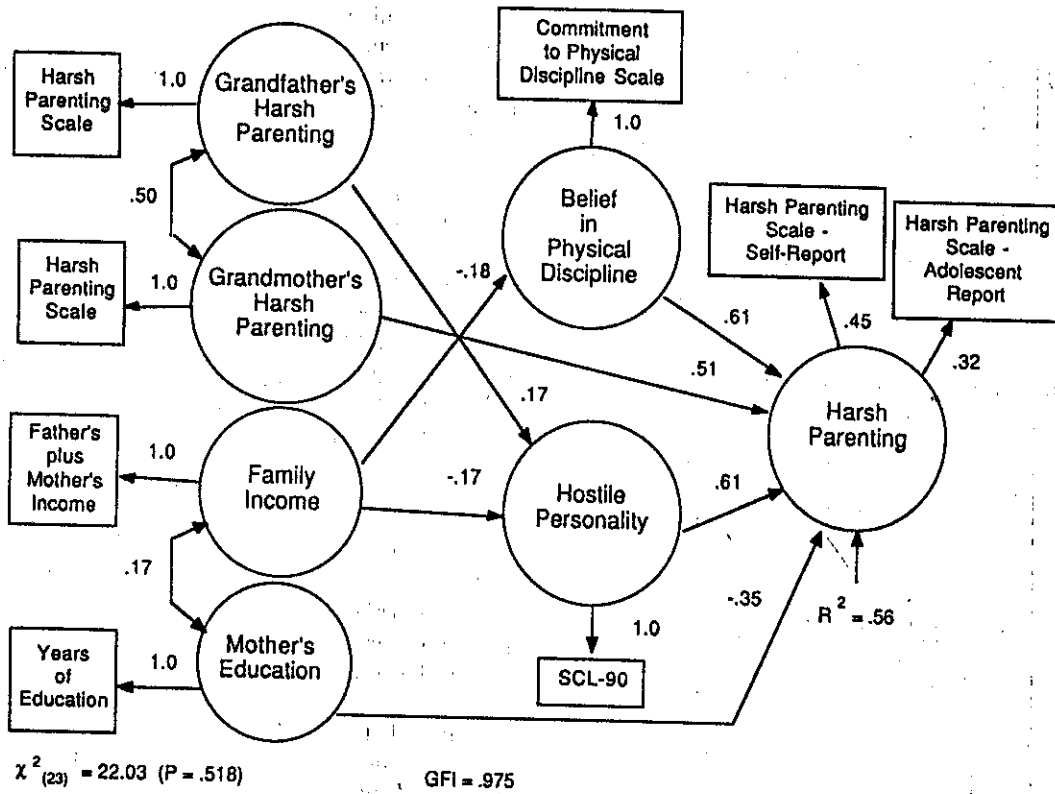


Figure 2. Intergenerational transmission of mother's harsh parenting of male adolescent. (All path coefficients significant at the .05 level. GFI = goodness-of-fit index.)

hypothesis that the correlation of parenting practices across generations is a function of the transmission of social class characteristics.

Chi-square and the goodness-of-fit index (GFI) suggest that the models for mothers' harsh parenting fit the data well. For daughters, belief in physical discipline, hostile personality, and grandmothers' harsh parenting account for 52% of the variance in harsh parenting. For sons, these three variables plus education explain 56% of the variance in harsh parenting.

Figure 4 presents the findings for fathers' harsh parenting of sons. As was the case for mothers, grandmothers', but not grandfathers', severe discipline is related to harsh parenting by their adult son. Also, as was the case for mothers, fathers' harsh parenting of sons is positively related to hostile personality and belief in physical discipline and negatively associated with education. Together, these variables account for 32% of the variance in fathers' harsh parenting. As was found for mothers, grandfathers' harsh parenting shows a small association with fathers' hostile personality. Chi-square and the GFI indicate that the model fits the data well.

As is shown in Figure 5, the results are somewhat different for daughters. Severe parenting by the grandparents continues to directly effect the adult son's harsh parenting, but the effect is now a function of the parenting practices of the grandfather rather than of the grandmother. Hostile personality and belief in physical discipline continue to show a positive association with harsh parenting, although severe discipline by either grandparent is now related to belief in physical discipline.

There is no evidence that socioeconomic factors either directly or indirectly affect fathers' harsh parenting of daughters. Together, belief in physical discipline, hostile personality, and grandfathers' physical discipline account for 31% of the variance in fathers' harsh parenting of daughters. Chi-square and the GFI suggest that the model fits the data well.

Summarizing the results of the path analyses, we see that severe discipline by grandmothers is associated with mothers' harsh parenting of sons and daughters and with fathers' harsh parenting of sons. Belief in physical discipline and having a hostile personality are related to harsh parenting by both mothers and fathers, regardless of gender of child. Furthermore, low education is associated with harsh parenting of sons by both mothers and fathers. In some cases, severe discipline by either grandfathers or grandmothers is related to the personality or the parenting beliefs of their adult children, but the findings are inconsistent and the coefficients small.

Discussion

Prior research on the intergenerational transmission of aggressive parenting has often failed to consider the influence of social class and has often relied only on parents' self-reports of their parenting practices. The present study included socioeconomic measures for the parents and their family of origin and used both parent-report and child-report measures of harsh parenting. Consistent with the findings of prior studies, there was only a modest correlation between parent and adolescent

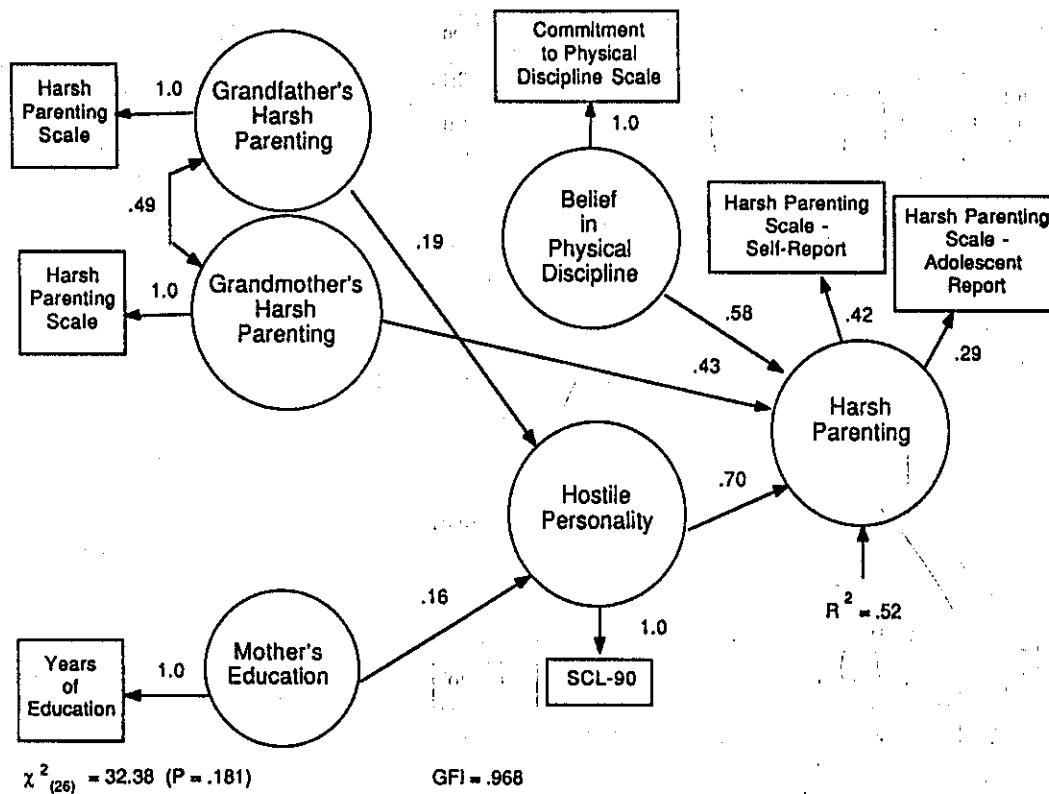


Figure 3. Intergenerational transmission of mother's harsh parenting of female adolescent. (All path coefficients significant at the .05 level. GFI = goodness-of-fit index.)

reports. Although the adolescents tended to report higher rates of aggressive parenting than their parents, it did not appear to be a simple matter of the parents' being unwilling to disclose such socially undesirable behavior whereas their children would do so. If this were the case, the self-report measure should have been omitted and the adolescent-report measure used as a single measure of the parenting construct. Analysis showed, however, that when one of the parties reported a high and the other a low frequency of harsh parenting, the parents reported the higher rate in approximately one third of the cases. Thus, it seems likely that both parents and children are sensitive to the social desirability of harsh parenting items.

Besides the confounding influence of social desirability, correlations between parent and child reports of parenting practices are likely to be reduced given discrepancies in definitions regarding what counts as a slap, a shove, and so on. This suggests that a measure that combines parent and child reports is likely to be a more valid indicator of disciplinary practices than a measure that relies on a single source for information.

In addition to these methodological considerations, this study was concerned with testing various hypotheses concerning the manner in which harsh parenting is transmitted across generations. Four avenues of transmission were identified. First, persons exposed to high rates of aggressive discipline may develop a parenting philosophy that favors strict, physical discipline as an approach to child rearing. Second, harsh parenting may foster hostile personalities that lead to aggressive behavior toward others, including the person's own children. Third,

rather than promoting parenting beliefs favoring physical discipline or creating an aggressive interpersonal style, harsh parenting might result in the person learning a set of aggressive disciplinary behaviors that are used in a reflexive, rather unthinking way. Finally, several studies have reported that physical discipline and child maltreatment are more common in the lower social classes. Hence, it may be that harsh discipline is passed from one generation to the next because adult children tend to inherit the social class of their parents with its accompanying stressors and life-style.

These various explanations were not seen as mutually exclusive. Rather, each was expected to receive some degree of corroboration. Consistent with this expectation, the zero-order correlations between constructs were consonant with all four processes of transmission, and multivariate analysis offered at least weak support for each, with the exception of the social class hypothesis.

Concerning the explanations in turn, parents who believed in the legitimacy of strict, physical discipline were more apt to engage in harsh parenting. Similarly, having a hostile personality was associated with the utilization of harsh parenting practices for both mothers and fathers but was particularly strong for mothers. These relationships held regardless of gender of child. Furthermore, parents who as children received severe discipline from their father were more apt to believe in physical discipline, whereas fathers of adolescent boys who had experienced such discipline by either parent were more likely to evidence a hostile personality. Although significant, these coeffi-

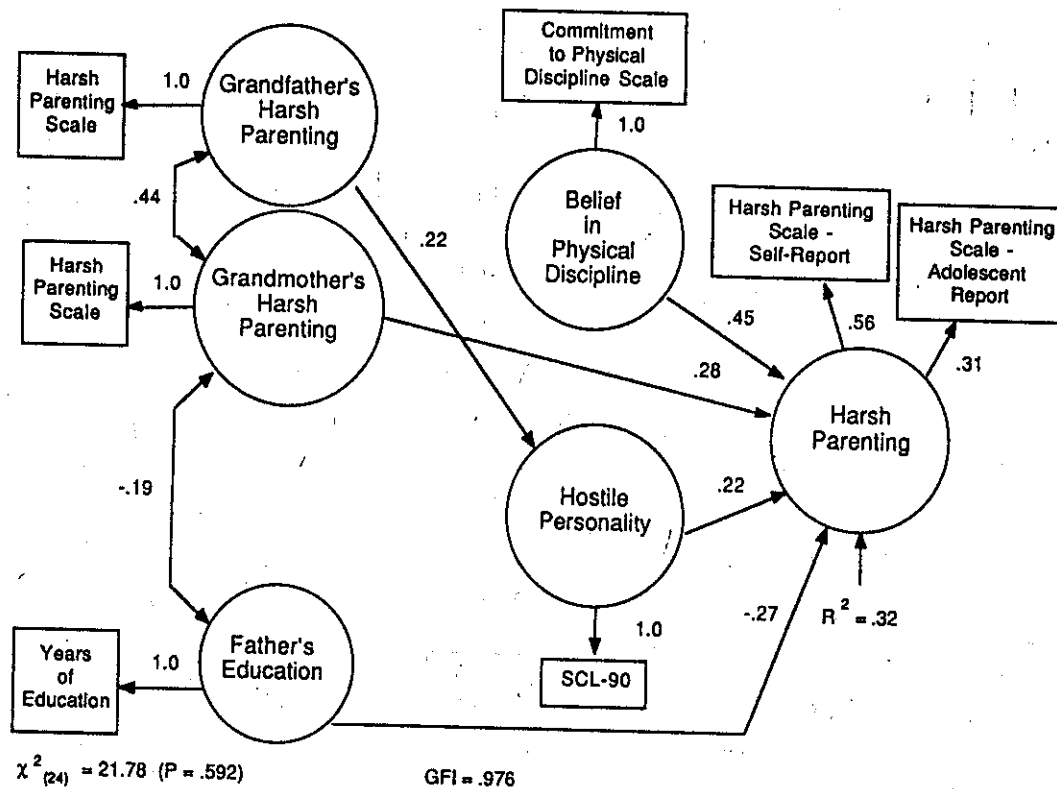


Figure 4. Intergenerational transmission of father's harsh parenting of male adolescent. (All path coefficients significant at the .05 level. GFI = goodness-of-fit index.)

relationships between harsh parenting by the grandparents and the personalities and parenting beliefs of the adult children were small and explained little variance. Thus, the findings provided only weak support for the contention that harsh parenting either shapes a personality or teaches a parenting philosophy that, in turn, fosters the use of aggressive parenting practices.

As for the socioeconomic variables, family-of-origin variables were not related to the parenting, the personality, or the parenting beliefs of either mothers or fathers. Unfortunately, the measure of income utilized for the grandparents (viz., past economic strain) was somewhat crude, so that the absence of any relationship between family-of-origin income and parenting by adult children may be a function of the inadequacy of the income measure. The current income of the adult children also showed no association with their parenting, their personality, or their parenting beliefs, except for fathers of adolescent males. However, the latter coefficient was small, and, given its absence in the other models, it might well be a result of sampling error.

For both mothers and fathers, level of education was negatively related to harsh parenting of adolescent males. Thus, it appears that parents of low education, more so than highly educated persons, tend to utilize harsh discipline in raising boys. This relationship does not hold for girls. Apparently, parents of all educational levels perceive that physical punishment is generally an unnecessary or undesirable method for parenting girls. Level of education for both mothers and fathers was associated with education and economic hardship in the family of origin. Hence, the pattern of findings suggests that similar-

ities across generations regarding the harsh discipline of male children is, at least in part, a function of socioeconomic characteristics transmitted across generations.

As for the direct-modeling explanation of intergenerational transmission, the findings indicated a relationship between grandparenting practices and the adult child's harsh parenting even after we controlled for the other avenues of transmission. Mothers' harsh parenting of sons and daughters and fathers' harsh parenting of sons were related to the parenting practices of the grandmother, whereas fathers' harsh parenting of daughters was associated with the parenting practices of the grandfather. Thus, the results suggest that the impact of aggressive parenting is not limited to the indirect effects produced through parenting beliefs, personality, or socioeconomic characteristics. The direct relationship between harsh parenting by the grandparents and the harsh parenting of their adult children is consistent with the argument that repeated exposure to aggressive parenting provides individuals with a model of the parent role that they use with their own children in a reflexive way, with little awareness of alternatives or concern with rationalization.

Of course, this direct association may also signify that some important mediating mechanisms have been left out of the model. For example, dimensions of personality such as neuroticism or parenting beliefs involving such things as the nature of children may be important mediating factors. Another possibility is that marital aggression serves to mediate the intergenerational effect. Perhaps individuals who have experienced

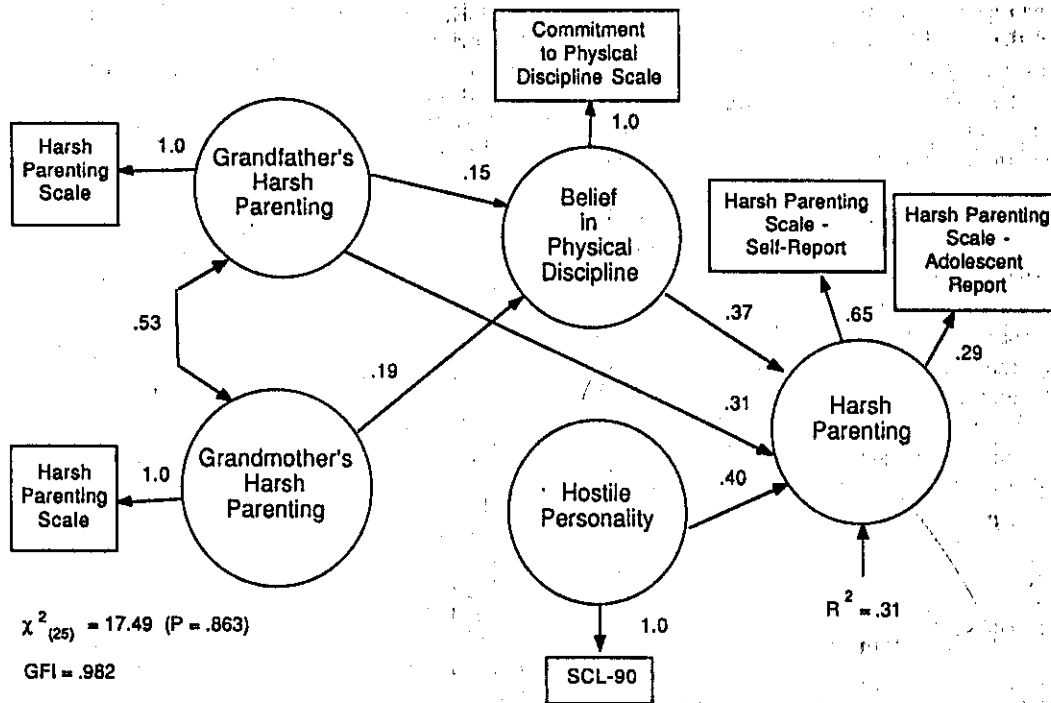


Figure 5. Intergenerational transmission of father's harsh parenting of female adolescent. (All path coefficients significant at the .05 level. GFI = goodness-of-fit index.)

abusive parenting grow up to marry aggressive spouses and then to displace the hurt and frustration produced by their partner's abusive behavior onto their children. Because women tend to be the victims of the more extreme forms of spouse abuse, this explanation might account for the finding that the direct effect of harsh parenting was stronger for mothers than for fathers. Thus, the most that can be said is that controlling for the most frequently cited avenues of transmission—hostile personality and beliefs about physical discipline—does not completely account for the association of harsh parenting practices across generations. This finding also supports the hypothesis that aggressive parenting furnishes children with a script for the parent role that they enact with their own children.

Although the results provide general support for a modeling explanation, the findings include some interesting gender differences. Severe discipline by the grandmother, but not by the grandfather, was associated with mothers' harsh parenting regardless of the child's gender and with fathers' harsh parenting of sons. Although they did not perform their analysis separately by gender of parent or target child, Herrenkohl et al. (1983) also found that abusive parenting was strongly related to having been abused by mothers but was not associated with abuse by fathers. The finding that individuals acquire their parenting scripts from their mothers rather than from their fathers is not surprising because fathers have, until recently, tended to have little involvement in parenting. Hence, most of what children observed regarding parenting was derived from the mother.

This does not explain, however, the finding that harsh parenting by the grandfather, but not by the grandmother, is related to fathers' harsh parenting of daughters. This result could be attributed to random error, but the coefficient is strong and the p

value low. One possibility is that fathers tend to leave the parenting of adolescent females to mothers. Thus, with the advent of adolescence, a father's interaction with his daughter may be determined more by his ideas regarding relationships with women than by specific understandings about parenting. Furthermore, boys are likely to acquire scripts regarding the treatment of women from their fathers rather than their mothers.

Although this study does not include a measure of how the grandfathers interacted with their wives, or with women in general, prior research has established that men who are aggressive with children are also often aggressive with their wives (Straus, 1983; Straus et al., 1980). Hence, the association between the grandfathers' harsh parenting of their sons and their sons' harsh parenting of daughters may actually represent a relationship between the grandfathers' aggression toward women and their adult sons' aggression toward their teenage daughters. Unfortunately, the variables available in the data set used for this study do not allow for a test of this hypothesis.

Another gender difference exists regarding the strength of the direct effect between the parenting of the two generations. The association is very strong for mothers, whereas for fathers it is modest. This may be a function of living in a culture in which mothers are seen as the primary parent, with the father cast in more of a supporting role (Ehrensaft, 1983; LaRossa, 1986; Parke, 1981). As a result, girls, more so than boys, might be expected to engage in anticipatory socialization regarding the role of parent and to pay attention to the models of parenting to which they are exposed.

In recent years, there has been much debate concerning whether the prevalence of abusive parenting is increasing or decreasing. Although official statistics evidence a greater num-

ber of cases being reported every year, general population surveys suggest that the incidence of aggressive parenting may be diminishing (Straus and Gelles, 1988; Straus et al., 1980). Consistent with the latter finding, results of the present study indicate that harsh parenting has declined considerably over the course of a generation. Although abusive parenting certainly continues to be a significant problem in contemporary society, the adults in the present study reported having been slapped, hit with an object, and so on much more often by their parents than did their seventh-grade children.

Finally, a comment should be made concerning the generalizability of the findings given the largely rural sample. Although rural households may differ from their urban counterparts with regard to the distribution of some variables, there is little reason to expect dissimilarities in terms of relationships between study constructs. For example, rural families may engage in more physical discipline than do urban families, but the impact of aggressive parenting on a child's beliefs and personality development are likely to be the same regardless of setting.

References

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
- Bank, L., Dishion, T., Skinner, M., and Patterson, G. R. (1989). Method variance in structural equation modeling: Living with "GLOP." In G. R. Patterson (Ed.), *Aggression and depression in family interactions* (pp. 247-280). Hillsdale, NJ: Erlbaum.
- Billler, H. B., and Solomon, R. S. (1986). *Child maltreatment and paternal deprivation: A manifesto for research, prevention, and treatment*. Lexington, MA: Lexington.
- Bollen, K. (1989). *Structural equations with latent variables*. New York: Wiley.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 52, 513-531.
- Burgess, R. L. (1979). Child abuse: A social interactional analysis. In B. B. Lahey and A. E. Kazdin (Eds.), *Advances in clinical child psychology* (pp. 142-174). New York: Plenum Press.
- Burgess, R. L., and Youngblade, L. M. (1988). Social incompetence and the intergenerational transmission of abusive parental practices. In G. T. Hotaling, D. Finkelhor, J. T. Kirkpatrick, and M. A. Straus (Eds.), *Family abuse and its consequences: New directions in research* (pp. 38-60). Newbury Park, CA: Sage.
- Capaldi, D., and Patterson, G. R. (1987). An approach to the problem of recruitment and retention rates for longitudinal research. *Behavior Assessment*, 9, 169-177.
- Caspi, A., and Elder, G. H., Jr. (1988). Emergent family patterns: The intergenerational construction of problem behavior and relationships. In R. A. Hinde and J. Stevenson-Hinde (Eds.), *Relationships within families: Mutual influences* (pp. 218-240). New York: Oxford University Press.
- Derogatis, L. R. (1983). *SCL-90-R administration, scoring, and procedures manual—II*. Towson, MD: Clinical Psychometric Research.
- Egeland, B., Jacobvitz, D., and Papatola, K. (1987). Intergenerational continuity of abuse. In R. J. Gelles and J. B. Lancaster (Eds.), *Child abuse and neglect: Biosocial dimensions* (pp. 255-276). NY: Aldine de Gruyter.
- Ehrensaft, D. (1983). When women and men mother. In J. Trebilcock (Ed.), *Mothering: Essays in feminist theory* (pp. 41-61). Totowa, NJ: Rowan and Allanheld.
- Elder, G. H., Jr., Caspi, A., and Downey, G. (1986). Problem behavior and family relationships: Life-course and intergenerational themes. In A. M. Sorensen, F. E. Weinert, and L. R. Sherrod (Eds.), *Human development and the life course: Multidisciplinary perspectives* (pp. 293-342). Hillsdale, NJ: Erlbaum.
- Fontana, V. (1968). Further reflections on maltreatment of children. *New York State Journal of Medicine*, 68, 2214-2215.
- Furman, W., Jones, L., Buhrmester, D., and Adler, T. (1989). Children's, parents', and observers' perspectives on sibling relationships. In P. Goldring Zurkow (Ed.), *Sibling interaction across cultures: Theoretical and methodological issues* (pp. 165-183). New York: Springer-Verlag.
- Galdston, J. (1965). Observations on children who have been physically abused and their parents. *American Journal of Psychiatry*, 122, 440-443.
- Garbarino, J. (1976). A preliminary study of some ecological correlates of child abuse: The impact of socioeconomic stress on mothers. *Child Development*, 51, 238-241.
- Gelles, R. J., and Straus, M. A. (1979). Determinants of violence in the family: Toward a theoretical integration. In W. R. Burr, F. I. Nye, and I. L. Reiss (Eds.), *Contemporary theories about the family* (pp. 549-581). NY: Free Press.
- Gil, D. G. (1970). *Violence against children: Physical child abuse in the United States*. Cambridge, MA: Harvard University Press.
- Green, A., Gaines, R., and Sandgrund, A. (1974). Child abuse: Pathological syndrome of family interaction. *American Journal of Psychiatry*, 131, 882-886.
- Herrenkohl, E. C., Herrenkohl, R. C., and Toedter, L. J. (1983). Perspectives on the intergenerational transmission of abuse. In D. Finkelhor, R. J. Gelles, G. T. Hotaling, and M. A. Straus (Eds.), *The dark side of families: Current family violence research* (pp. 305-316). Beverly Hills, CA: Sage.
- Hotaling, G. T., Finkelhor, D., Kirkpatrick, J. T., and Straus, M. A. (Eds.). (1988). *Family abuse and its consequences: New directions in research*. Newbury Park, CA: Sage.
- Hunter, R., and Kilstrom, N. (1979). Breaking the cycle in abusive families. *American Journal of Psychiatry*, 136, 1320-1322.
- Jayartne, S. (1977). Child abusers as parents and children: A review. *Social Work*, 22, 5-7.
- Joreskog, K. G., and Sorbom, D. (1986). *LISREL VI: Analysis of linear structural relationships by maximum likelihood, instrumental variables, and least squares*. Uppsala, Sweden: University of Uppsala.
- Kaufman, J., and Zigler, E. (1987). Do abused children become abusive parents? *American Journal of Orthopsychiatry*, 57, 186-192.
- Kempe, C. H., Silverman, F. N., Steele, B. R., Droegmueller, N., and Silver, H. K. (1962). The battered child syndrome. *JAMA: The Journal of the American Medical Association*, 181, 17-24.
- LaRossa, R. (1986). *Becoming a parent*. Newbury Park, CA: Sage.
- Larzelere, R. E., and Klein, D. M. (1987). Methodology. In M. B. Sussman and S. K. Steinmetz (Eds.), *Handbook of marriage and the family* (pp. 125-155). New York: Plenum Press.
- Libbey, P., and Bybee, R. (1979). The physical abuse of adolescents. *Journal of Social Issues*, 35, 101-126.
- Long, J. S. (1983). *Covariance structure models: An introduction to LISREL*. Beverly Hills, CA: Sage.
- Maccoby, E., and Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. Mussen (Ed.), *Handbook of child psychology* (pp. 1-101). New York: Wiley.
- Parke, R. (1981). *Fathers*. Cambridge, MA: Harvard University Press.
- Patterson, G. R. (1982). *A social learning approach: Vol. 3: Coercive family process*. Eugene, OR: Castalia.

- Patterson, G. R., DeBaryshe, B. D., and Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist*, 44, 329-335.
- Rohner, R. P. (1986). *The warmth dimension: Foundations of parental acceptance-rejection theory*. Newbury Park, CA: Sage.
- Schwarz, J. C., Barton-Henry, M. L., and Pruzinsky, T. (1985). Assessing child-rearing behaviors: A comparison of ratings made by mother, father, child, and sibling on the CRPBI. *Child Development*, 56, 462-479.
- Silver, L., Dublin, C., and Lourie, R. (1969). Does violence breed violence: Contributions from a study of the child abuse syndrome. *American Journal of Psychiatry*, 126, 404-407.
- Simons, R. L., Conger, R. D., and Whitbeck, L. B. (1988). A multistage social learning model of the influences of family and peers upon adolescent substance use. *Journal of Drug Issues*, 18, 293-316.
- Simons, R. L., Whitbeck, L. B., Conger, R. D., and Conger, K. J. (1990). *Parenting factors, social skills, and value commitments as precursors to school failure, involvement with deviant peers and delinquent behavior*. Unpublished manuscript.
- Simons, R. L., Whitbeck, L. B., Conger, R. D., and Melby, J. N. (1988). *Differences between husbands and wives in the impact of conceptions of parenting*. Unpublished manuscript, Iowa State University, Department of Sociology, Ames.
- Simons, R. L., Whitbeck, L. B., Conger, R. D., and Melby, J. N. (1990). Husband and wife differences in determinants of parenting: A social learning/exchange model of parental behavior. *Journal of Marriage and the Family*, 52, 375-419.
- Steele, B., and Pollack, C. (1968). A psychiatric study of parents who abuse infants and small children. In R. Helfer and C. Kempe (Eds.), *The battered child syndrome* (pp. 103-148). Chicago: University of Chicago Press.
- Steinmetz, S. K. (1977). *The cycle of violence: Assertive, aggressive, and abusive family interaction*. New York: Praeger.
- Steinmetz, S. K. (1987). Family violence. In M. B. Sussman and S. K. Steinmetz (Eds.), *Handbook of marriage and the family* (pp. 725-765). New York: Plenum Press.
- Straus, M. A. (1983). Ordinary violence, child abuse, and wife-beating: What do they have in common? In D. Finkelhor, R. J. Gelles, G. T. Hotaling, and M. A. Straus (Eds.), *The dark side of families: Current family violence research* (pp. 213-234). Beverly Hills, CA: Sage.
- Straus, M. A., and Gelles, R. J. (1988). How violent are American families? Estimates from the National Family Violence Resurvey and other studies. In G. T. Hotaling, J. T. Finkelhor, D. Kirkpatrick, and M. A. Straus (Eds.), *Family abuse and its consequences: New directions in research* (pp. 14-37). Newbury Park, CA: Sage.
- Straus, M. A., Gelles, R. J., and Steinmetz, S. K. (1980). *Behind closed doors: Violence in the American family*. Beverly Hills, CA: Sage.
- Watson, D., and Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, 96, 465-490.
- Wolfe, D. A. (1987). *Child abuse: Implications for child development and psychopathology*. Newbury Park, CA: Sage.

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