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INTERGENERATIONAL TRANSMISSION OF
VIOLENT BEHAVIOR IN ADOLESCENT MALES

by

© Derek Truscott

M. A., University of Windsor, 1985

A Dissertation
Submitted to the Faculty of Graduate Studies
Through the Department of Psychology
in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy
at the
University of Windsor

Windsor, Ontario, Canada, 1989

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To my parents, Raymond and Una, and my brother, David,
for providing the experiences that have allowed me to
achieve so much.

ABSTRACT

The purpose of this study was to investigate whether violent behavior in adolescence is transmitted intergenerationally and, if so, what the mechanisms of that transmission are. From a review of published empirical research potential mechanisms were identified as parental identification, role-modelling, low self-esteem, psychotic personality traits, externalising defenses, and social difficulties. Also examined was the role of emotional overcontrol. From the review a need was identified for a research design whereby a model of the intergenerational transmission of violence can be tested. Seventy-five consecutive male admissions to a Young Offenders Unit and twenty-five male high school students were administered an intelligence test, the Minnesota Multiphasic Personality Inventory, the Culture-Free Self-Esteem Inventory, and a Structured Adolescent Interview Schedule. Violent behavior in adolescence was found to be transmitted intergenerationally when paternal violence is experienced. The mechanism of this transmission was found to be a greater use of externalising defenses and more psychotic personality traits. Paternal identification and female sex-role identification were found to suppress the intergenerational transmission of violent behavior in

adolescence. Violent behavior in adolescence was not found to be transmitted intergenerationally when maternal violence is experienced or parental violence is witnessed, nor via role-modelling or emotional overcontrol. Social difficulties and low self-esteem were hypothesized to be by-products of childhood trauma that have little explanatory power for the intergenerational transmission of violent behavior in adolescence.

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A loving thank you to Alexandra who, feet planted firmly on the ground, reminds me that it is fine to have my head in the clouds provided I don't stay there so long that

my brain is starved of oxygen.

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CHAPTER I

INTRODUCTION

"As the twig is bent so grows the tree"

The purpose of this study was to investigate whether violent behavior expressed during adolescence is transmitted intergenerationally and, if so, what the mechanisms of that transmission are.

The definition of violence used throughout this paper is the intentional infliction of physical harm upon another person who is motivated to avoid it. Aggression is used as a broader concept encompassing a spectrum of behaviors, including violent ones, directed upon resistant or challenging objects or situations (Marcovitz, 1973) which has both constructive and destructive qualities (Duncan & Hobson, 1977; Joseph, 1973). Violence is an observable fact about an individual's behavior, therefore, and should not be confused with dangerousness, which is the hypothetical potential of an individual for behaving in a violent manner (Sadoff, 1976).

Two models have been put forth to explain how violence might be transmitted from the preceding generation to the

next: social learning and traumatic impact. Social learning explanations stress the importance of modelling the violent behavior of powerful adults by their less powerful children and the instillation of norms which condone the use of violence. Traumatic impact explanations stress the importance of psychological deficits or weaknesses which are the consequences of the unhealthy effects of parental violence and which in turn predispose the child to behave violently. While these models are not necessarily mutually exclusive, they can serve as guides to help give meaning to the variety of research findings in relation to intergenerational influences on violent behavior.

Review of the Relevant Research

Although clinical lore asserts that violence experienced during childhood plays a role in the expression of violence in later life, research which directly addresses this hypothesis is sparse. In this section I review published empirical studies that have investigated whether violent people tend to have come from violent families or whether people from violent families tend to be violent. Particular emphasis will be placed on clues to the mechanisms of the transmission if it is found to exist. A study was considered to be "empirical" if an attempt was made to systematically collect data (as opposed to purely impressionistic or anecdotal personal accounts) and to quantify the variables under investigation, regardless of

methodology, type of data analysis, or statistical sophistication. This may have involved objective measures, the judgments of clinicians or observational methods. All quantitative findings specifically mentioned were statistically significant at $p < .05$ or better, unless otherwise noted. Unpublished work is not reviewed. Many studies have investigated the family background of criminal or delinquent individuals (for a review see Loeber and Southamer-Loeber, 1986 and Snyder and Patterson, 1987), but were not included in this review because they did not distinguish between violent and other types of criminal offenses.

The Families of Violent People

The empirical literature which investigates the family background of violent people will be reviewed first. These studies are summarized in Table 1.

Table 1

Studies of the Families of Violent People

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
Bandura & Walters, 1959	Probation	M=52	Ad	Yes
Berger, 1988	Review		A	Yes
Blount & Chandler, 1979	Hospital	M=30	Ad	No

table continues

Table 1 (continued)

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
Briere, 1987	University	M=191	A	Yes
Campion, Cravens & Covan, 1988	Court	M=8	A	Yes
Climent & Ervin, 1972	Hospital	M=65 F=15	A	Yes
Coleman, Weinman, & Bartholomew, 1980	Clinic	F=60 M=60	A	Yes
Duncan & Duncan, 1971	Various	F=1 M=6	Ad	Yes
Duncan, Frazier, Litin, Johnson, & Barron, 1958	Prison	M=6	A	Yes
Friedrich & Wheeler, 1982	Review		A	Yes
Gelles, 1972	Random	F=66 M=14	A	Yes
Herrenkohl, Herrenkohl, & Toedter, 1983	Welfare	F=399 M=130	A	Yes
Horne, 1981	Clinic	M=49	C	Yes
Kaufman & Zigler, 1987	Review		A	Yes
King, 1975	Court	F=1 M=8	Ad	Yes
Kratcoski, 1985	School	F=74 M=221	Ad	Yes
Kruttschnitt, Heath, & Ward, 1986	Prison	M=165	A	Yes

table continues

Table 1 (continued)

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
Lewis, Pincus, Bard, Richardson, Prichep, Feldman, & Yeager, 1988	Court	M=14	Ad	Yes
Lewis, Shanok, Grant, & Ritvo, 1983	Hospital	F=12 M=39	C	Yes
Lewis, Shanok, Pincus, & Glaser, 1979	Court	M=97	Ad	Yes
Loeber & Dishion, 1984	School	M=210	C	Yes
MacDonald, 1967	Hospital	M=60	A	Yes
Pfeffer, Plutchik, & Mizruchi, 1983	Hospital	F=16 M=87	C	Yes
Pfeffer, Zuckerman, Plutchik, & Mizruchi, 1987	School	F=30 M=71	C	Yes
Rosenbaum & O'Leary, 1981b	Clinic	F=20 M=20	A	Yes
Satten, Menninger, Rosen, & Mayman, 1960	Court	M=4	A	Yes
Sendi & Blomgren, 1975	Hospital	M=30	Ad	Yes
Smith, 1965	Court	M=8	Ad	Yes
Sorrells, 1977	Probation	F=2 M=29	Ad	Yes
Spinetta & Rigler, 1972	Review		A	Yes

table continues

Table 1 (continued)

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
Straus, 1980	Random	F=325 M=325	A	Yes
Tanay, 1969	Court	F=7 M=46	A	Yes

Note. F = female; M = male. C = child; Ad = adolescent; A = adult.

Intergenerational Hypothesis

In all but one of the thirty-two studies summarized in Table 1, the empirical literature which investigates the family background of violent people supports the intergenerational hypothesis that their families tend to have been more violent than those of nonviolent people.

Parental Identification

Eight of the studies reviewed support the involvement of low parental identification in the intergenerational transmission of violent behavior. The social learning model predicts that high parental identification will facilitate modeling effects, while the traumatic impact model predicts that low parental identification will result in a failure to internalize parental resources that modify aggressive impulses.

Bandura and Walters (1959) found that violent and

nonviolent young men did not differ in the extent to which they identified with or showed warmth for their mothers. Violent young men did, however, identify less with their fathers, show less warmth and more hostility toward their fathers and feel less guilt when they transgressed than controls. The authors conclude that failure to internalize paternal standards leads to violent behavior through disinhibition.

Satten et al. (1960), in their study of four "senseless" murderers, report that there was evidence of severe emotional deprivation in the early lives of all four men. The authors speculate that this deprivation resulted in inadequate egos that were unable to contain their aggressive urges.

Smith (1965) described all of the eight male adolescent murderers with whom he had clinical contact as having come from families in which positive and stable ego models were missing. He presents the hypothesis that the murders were the product of an underdeveloped ego which could not control outbursts of violent aggression. Similarly, Climent and Ervin (1972) found that violent individuals are more likely to have had no parental figures present during childhood or to have been left alone for long periods of time (e.g. institutionalized) by their parents.

Horne (1981) studied the influence of father absence on the violent behavior of boys. He found that when familial

violence exists, the presence of a father in the home tends to diminish the transmission of violence from the family to the [male] child.

Herrenkohl et al. (1983) demonstrated that parents who abuse their children are more likely to feel that they were emotionally rejected, as well as themselves abused, by their own parents as children. The authors point out how their findings support the model of violent behavior being transmitted intergenerationally via an inner psychological deficit in response to rejection and lack of nurturance as a child.

Kratcoski (1985) found that the highest proportion of violence against parents was found among young men and women with low family integration (not doing constructive things together), with the proportion of parentally-violent youths decreasing as family integration increased.

Kruttschnitt et al. (1986) found that a low level of family attachment was associated with violent crime only for white adult violent offenders. For nonwhites, a history of physical abuse was related to violent crime regardless of level of family attachment. The authors suggest that this racial difference may be the result of parental violence being more severe among nonwhites, and/or that family attachment is not an effective moderator of violent crime in nonwhites because their parents tend not to provide the nonviolent examples that their white counterparts tend to.

Self-Esteem

On much weaker empirical grounds, but suggested by the authors of three studies of violent adults, is the involvement of low self-esteem or poor self-concept in the intergenerational transmission of violent behavior. As with parental identification, the traumatic impact model is supported by the finding that a psychological deficit (in this case low self-esteem) is associated with violent behavior.

Gelles (1972) posits that experiencing violence in the family renders the individual more likely to be violent by producing a more vulnerable self-concept and low self-esteem. The individual is thus more sensitive to situational stressors and more likely to employ violence to resolve that stress.

Tanay (1969) suggests that when values prohibiting aggressive gratifications are reinforced violently (when parents employ physical punishment), the superego (the internal representation of parental standards) becomes cruel and punitive, rendering these individuals unable to assume a benevolent, approving attitude toward themselves that would allow them to forgive themselves for displays of aggression that would normally be considered acceptable. Eventually, aggressive impulses build-up to the point where they overwhelm the individual's ego resources and violence is expressed.

In the only study to employ standardized measures to investigate the involvement of low self-esteem in intergenerational violence, Rosenbaum and O'Leary (1981b) found that maritally-violent men were less assertive than their wives. Assertiveness can only be considered an approximation of self-esteem or self-concept, however.

Externalising Defenses

Suggested by five authors, a tendency to employ externalising defense mechanisms has been postulated as a by-product of parental violence and found to be associated with violent behavior. The existence of this tendency can be considered support for both models. In social learning terms it may reflect the individual's having learned to deal with frustrations by acting upon their environment. In traumatic impact terms it may reflect the individual's lack of psychological resources which modify aggressive impulses.

Satten et al. (1960), in their study of four murderers, describe a long-standing history of poor control over aggressive impulses as a result of extreme parental cruelty. They hypothesize that this is a product of inadequate ego-resources that would normally keep these impulses in check.

King (1975), in his study of homicidal adolescents, described all of them as educationally deprived and hostile toward school, and as relying on feeling to interpret the world. King suggests that their violent acts serve the purpose of trying to cope with a world they are ill-equipped

to understand.

Pfeffer et al. (1983) found that of the best combination of predictors of childhood violence, anxiety and depression (i.e. internalising defence mechanisms) were negatively correlated with violent behavior. Similarly, Pfeffer et al. (1987) found that violent behavior in non-clinic children is associated with a tendency to avoid relying on the internalising defenses of reaction-formation, repression and sublimation.

In the only study to date to employ standardized measures and a comparison group in an investigation of the involvement an externalising defensive style in intergenerational violence, Pfeffer et al. (1987) found that children with good impulse control were less violent than children with poor impulse control. This can be considered only one aspect of externalization, however.

Psychotic Personality Traits

Six studies point to psychotic personality traits as an important intergenerational mechanism. Once again, the traumatic impact model is supported by the existence of this finding.

Satten et al. (1960) were the first to suggest that at least some violent behavior results from an ego weakness as a result of experiencing parental cruelty which allowed periodic psychotic-like breakthroughs of intense violent impulses. This idea is echoed by Smith (1965), who

speculates that experiencing parental violence results in an underlying ego weakness which renders the individual susceptible to periodic loss of control and outbursts of violence in response to nagging or ridicule by a parent or parent figure.

Lewis et al. (1979), in their study of violent young offenders, reported that extremely violent young men tended to display more psychotic symptoms than less violent young men. Paranoid ideation, in particular, was common, leading the authors to suggest that these youths interpreted most interpersonal encounters as a time of threat in which they must protect themselves.

Lewis et al. (1983) suggest that the homicidal children they studied were rendered more vulnerable to periodic psychotic disorganization and infused with rage and frustration as a result of experiencing parental violence. They argue that this psychological state might render them more likely to displace their rage onto others and less likely to have the controls necessary to refrain from behaving in a violent manner.

Pfeffer et al. (1987) found that violent behavior in normal children is associated with the psychotic defense mechanisms of compensation, projection and displacement. They point out how their findings support the model of violence in adolescence being associated with psychiatric impairments.

Lewis et al. (1988) found that eighty-six percent of their sample of juveniles awaiting execution for murder had experienced extreme parental violence and that ninety-two percent of these youths who had experienced parental violence were psychotic at the time of evaluation. Fifty percent of those who had experienced parental violence had suffered psychotic disorders antedating their incarceration.

Summary of Research on the Families of Violent People

A review of the empirical literature on the family background of violent people provides support for the hypothesis that the more violent behavior an individual manifests, the more likely that he or she has witnessed and/or experienced a violence in their family of origin. Potential mechanisms of this transmission are identified as low parental (possibly specifically paternal) identification, low self-esteem, an externalising defensive style, and psychotic personality traits. All of these mechanisms are congruent with the traumatic impact model, with the exception of an externalising defensive style, which can be conceptualized as supporting both the traumatic impact model and the social learning model.

The People of Violent Families

In this section the empirical literature dealing with the violent behavior of people from violent families will be reviewed. These studies are summarized in Table 2.

Table 2

Studies of the People of Violent Families

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
Agnew, 1983	Random	M=2,213	Ad	Yes
Bryan & Freed, 1982	College	F=133 M=37	A	Yes
Buikhuisen, van der Plas- Korenhoff, & Bontekoe, 1985	University	?=82	A	Yes
Carroll, 1977	Clinic	?=96	A	Yes
Elmer, 1977	Hospital	F=19 M=40	C	No
Emery & O'Leary, 1982	Clinic	F=25 M=25	C	No
Emery & O'Leary, 1984	School	F=71 M=61	C	Yes
Eron, Walder, Lefkowitz, 1971; Lefkowitz, Walder, & Eron, 1963	School	?=875	C	Yes
Forsstrom-Cohen & Rosenbaum, 1985	University	F=78 M=86	A	Yes
George & Main, 1975; Main & George, 1985	Daycare	F=8 M=12	C	Yes
Hershorn & Rosenbaum, 1985	Clinic	M=45	C	Yes
Huesmann, Eron, Lefkowitz & Walder, 1984	School	F=211 M=198	C-A	Yes

table continues

Table 2 (continued)

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
Hughes, 1988	Shelter	F=93 M=85	C	Yes
Hughes & Barad, 1983	Shelter	?=65	C	Yes
Jacobson, 1978	Clinic	?=38	C	Yes
Jacobson & Straker, 1982	?	?=51	C	No
Jaffe, Wolfe, Wilson & Zak, 1985	Shelter	F=44 M=56	C	Yes
Jaffe, Wolfe, Wilson & Zak, 1986a	Shelter	M=65	C	Yes
Jaffe, Wolfe, Wilson & Zak, 1986b	Shelter	F=57 M=69	C	Yes
Jorgenson, 1985	College	F=146 M=100	A	Yes
Kent, 1976	Welfare	?=563	C	Yes
Kinard, 1980, 1982a, 1982b	Welfare	F=16 M=44	C	Yes
Lefkowitz, Eron, Walder & Huesmann, 1977; Lefkowitz, Huesmann & Eron, 1978	School	F=216 M=211	C-Ad	Yes
McCord, 1979	"At risk"	M=201	C-A	Yes
McCord, McCord, & Howard, 1961	"At risk"	M=174 .	C	Yes

table continues

Table 2 (continued)

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
McCord, McCord, & Howard, 1963	"At risk"	M=103	C-A	Yes
Neapolitan, 1981	School	M=212	Ad	Yes
Olweus, 1980	School	M=127	Ad	Yes
Owens & Straus, 1975	Random	?=1,176	A	Yes
Porter & O'Leary, 1980	Clinic	F=27 M=37	C	Yes
Reidy, 1977	Welfare	F=19 M=39	C	No
Rosenbaum & O'Leary, 1981a	Clinic	M=92	C	No
Sears, 1961	School	F=84 M=76	C-C	Yes
Sears, Macoby, & Levin, 1957	School	F=171 M=202	C	Yes
Steinmetz, 1977	University	?=78	A	Yes
Stewart & deBlois, 1983	Clinic	M=126	C	Yes
Straker & Jacobson, 1981	?	F=8 M=30	C	No
Straus, Gelles, & Steinmetz, 1980; Kalmuss, 1984	Random	F=1,183 M=960	A	Yes
Ulbrich & Huber, 1981	Random	F=1,092 M=910	A	Yes

table continues

Table 2 (continued)

Study	Source of Sample	N	Age	Support Intergen. Hypothesis?
Wolfe, Jaffe, Wilson, & Zak, 1985	Shelter	F=100 M=98	C	Yes
Wolfe & Mosk, 1983	Welfare	F=54 M=52	C	No

Note. F = female; M = male. C = child; Ad = adolescent; A = adult; C-C, C-Ad, C-A = longitudinal. ? = not reported.

Intergenerational Hypothesis

In all but seven of the forty-seven studies summarized in Table 2, the empirical literature which investigates the behavior of people from violent families supports the intergenerational hypothesis that they tend to be more violent than people from nonviolent families.

Social Difficulties

The preponderance of studies of children, and one of adults, indicate that witnessing and experiencing parental violence tends to result in decreased social competence which is in turn associated with violent behavior. These difficulties span a number of areas of social interaction, tending not to support the social learning model but rather the traumatic impact model that predicts more generalized deficits.

Straker and Jacobson (1981) compared abused and nonabused control children on fantasy aggression and empathy and found that^b abused children are less empathic than controls, although they do not differ on fantasy aggression. Jacobson and Straker (1982) then observed abused and control children while interacting with peers. Abused children were found to be less socially interactive and adept than controls.

Bryan and Freed (1982) found that for community college students the experience of severe physical punishment was associated with reporting "more negative social interactions, such as aggression, lack of friends, and delinquency" (p. 84).

Main and George (1985) reanalyzed their 1979 data and examined the abused children's response to distress in agemates. They found that none of the abused children ever exhibited concern in response to the distress of a peer. Nonabused children responded with concern to one third of the distress events they witnessed. Abused children were more likely than controls to respond to distress with fear, anger, or physical attack, supporting their earlier interpretation that violent behavior serves to ward-off the threat that abused children feel when attention is directed toward them.

Wolfe and Mosk (1983) compared the problem behaviors of physically abused children, nonabused children from

distressed families and nonabused controls. The physically abused and nonabused-distressed children were found to be less socially competent and to exhibit more violent behavior than controls, but they did not differ from each other.

They conclude that it is the highly distressed family environment which promotes violent behavior and poor social competence in offspring, rather than physical abuse per se.

Jaffe et al. (1985) found that boys from violent homes displayed more violent behavior and less social competence than girls, and than boys from nonviolent homes. Similarly, Jaffe et al. (1986b) found that the amount of family violence reported by the mother was significantly positively correlated with the overall degree of adjustment (social competence + internalising behavior + externalising behavior) for boys, but not for girls. Boys and girls from violent families were found to display lower level of social competence. The finding of lower levels of social competence in children exposed to familial violence reported in the previous three studies was also found by Wolfe, Zak, Wilson, and Jaffe (1986) employing essentially identical methodology and populations. Jaffe et al. (1986a), again employing the same methodology, found that child witnesses to parental violence, abused children and controls did not differ in reported social competence, however.

Parental Care

Low quality of parental care as the mechanism of transmission of violent behavior from parent to offspring is suggested by two studies of children. These authors posit that this finding supports both the social learning and traumatic impact models.

Jaffe et al. (1985) found that children's adjustment to family violence is mediated by maternal functioning, with higher functioning mothers reporting fewer child behavior problems. Jaffe et al. suggest that marital violence affects child adjustment via inappropriate modelling of conflict resolution and mother's diminished effectiveness as a parent.

Wolfe et al. (1985) reported that maternal stress accounted for 19% of the variance in child behavior problems, independent of exposure to violence in the home, and was strongly related to the occurrence of violence in the home. The authors conclude that the impact on the child of witnessing wife battering is via direct observation, indirect disruption of family life, and the degree of maternal impairment.

Role-Modelling

Six studies of adults and one of children find evidence that violent behavior is transmitted via role models. These findings are clearly in support of the social learning model.

Carroll (1977), in an investigation of the mechanisms of the intergenerational transmission of marital violence, found that it is sex-linked: Males who reported a high degree of physical punishment from their fathers were more likely to report that marital violence was a problem in their present families than females who reported a high degree of physical punishment from their fathers. In fact, the amount of physical punishment by their fathers did not affect females' reporting of marital violence. Females who reported a high degree of physical punishment from their mothers were more likely to report that marital violence was a problem in their present families than males who reported a high degree of physical punishment by their mothers. Males who reported a high degree of physical punishment by their mothers were, however, more likely to report that marital violence was a problem in their present families than males who reported a low degree of physical punishment from their mothers. Where Carroll's study is lacking, however, is in not reporting or taking into account the gender of the perpetrator.

Straus et al. (1980) found that witnessing and experiencing parental violence is associated with marital violence, with Kalmuss (1984) demonstrating that the witnessing of parental marital violence is the stronger predictor of perpetrating marital violence of the two, and that there were no sex differences. Straus et al. (1980)

also found that physical punishment experienced as a teenager was predictive of use of physical punishment as a parent, and that violence tends to be intergenerationally transmitted along gender lines: Physical punishment by the father was found to be more strongly associated with abusive physical punishment as a parent for men than for women. Correspondingly, physical punishment by the mother was found to be more strongly related to abusive physical punishment as a parent for women than for men.

Ulbrich and Huber (1981), in their large study of a random American sample, found that for men all combinations of marital violence (father hitting mother, mother hitting father, both hitting one another) predicted approval of wife-hitting. For women seeing their father hitting their mother predicted strong disapproval of wife-hitting. Women seeing their mother hitting their father was only predictive of approval of wife-hitting if the wife "is always nagging and complaining." Unfortunately, women's attitudes toward their own violent behavior was not investigated. As the authors note, however, their results support the model of violence being transmitted along role-lines, and not the model of witnessing wife-battering as instilling values about women.

Stewart and deBlois (1983) argue that their finding of an absence of a father-son resemblance in antisocial and violent behavior when the father was absent from the home

supports the model of parental example influencing the level of boys' aggressive and antisocial behavior.

Jorgenson (1985), in his replication and extension of Steinmetz's (1977) study, found that children tend to use the conflict resolution strategies that they witnessed and experienced their parents use.

Parental Identification

As in the research of the families of violent people, parental identification emerges as an important factor. Eight studies, including two longitudinal, found that either a lack of parental identification or identification with a violent parent, or parent practices which discourage the internalization of parental standards, tends to facilitate the intergenerational transmission of violent behavior. These findings do not clearly support one model of intergenerational transmission over the other. Other factors in the parent-child relationship such as gender, level of violence and parental consistency appear to interact with parental identification.

Sears et al. (1957) demonstrated that for both boys and girls, maternal emotional "coldness" and permissiveness of violence are positively correlated with child violence. In a follow-up to this study, however, Sears (1961) found that only maternal permissiveness was still related to child violence, and then only for boys. Maternal emotional coldness was not related to child violence at age 12. Sears

suggests that early punishment and low permissiveness of aggression works slowly to inhibit the expression of aggression and violence through the installation of anxiety over the expression of them.

McCord et al. (1961) reported that violent behavior in a group of 9 year old boys was associated with parental rejection, lesser and inconsistent parental demands and supervision, and parental disagreement concerning methods of child rearing. These factors were also found to be additive; exposure to more of them was related to more violent behaviors.

McCord et al. (1963) found that aggressive-antisocial (violent adolescence + adult criminal record) men tended to have had experienced either high levels of parental violence or medium levels of parental violence and high levels of parental control, combined with a criminal or alcoholic father. Aggressive-socialized (violent adolescence + no adult criminal record) men tended to have had experienced moderate levels of parental violence and low levels of parental control. Nonaggressive men tended to have had experienced low levels of parental violence and high levels of parental control.

Lefkowitz, Walder, and Eron (1963) analyzed the relationship between parental punishment, internalization of parental standards and childhood violence. A greater use of parental physical punishment was found to be related to

higher levels of child violence and to lower levels of confessing. The experience of parental violence, therefore, may foster childhood violence by impeding the development of "conscience".

Eron et al. (1971) found that low identification was consistently positively correlated with childhood violence. Identification interacted with experienced violence, however; punishment of low-violence children who had close identification with their parents tended to inhibit violence, whereas punishment of high-violence children who identified only moderately with their parents tended to facilitate violence. In their ten-year follow-up, Lefkowitz et al. (1977) found that low identification with the opposite sex parent was predictive of violence at age 19, with low identification with both parents being the most potent predictor of violence at age 19 for both sexes. For young men, preference for feminine activities was found to be negatively correlated with violent behavior at age 8 and 19, and their preference for masculine activities positively correlated. For young women, violent behavior at age 8 and 19 was found to be positively correlated with masculine interests, but uncorrelated with feminine interests. The authors argue that violence is encouraged by an identification with the male (violent) sex role.

In one of only a few studies to date to explicitly investigate the mechanisms of the intergenerational

transmission of violence, Carroll (1977) found that the condition of low parental nurturance and low instrumental companionship (spending little time together doing worthwhile activities) enhances the transmission.

Olweus (1980), after interviewing a group of young men, their mothers and some of their fathers, found that maternal permissiveness of violence has the strongest influence on young men's peer-rated violent behavior, followed by maternal negative attitudes toward her son.

Neapolitan (1981) found that adolescents' desire to be like their mother was negatively correlated with their violent behavior. Desire to be like their father was not related to violent behavior. If the father did most of the punishing, however, physical punishment was more strongly related to violent behavior when the young man wanted to be like his father. If the mother did most of the punishing, physical punishment was less strongly related to violent behavior when the young man wanted to be like his mother. Parental support of violence was also found to be positively correlated with violent behavior. Father support of violence was more strongly related to violent behavior the more sons spent time talking with them about important matters. Mother support of violence was less strongly related to violent behavior the more time their sons spent talking to them about important matters. Identification with a violent father, therefore, is shown to promote

adolescent violence, while maternal identification is shown to discourage adolescent violence, particularly if she is the more violent parent. These findings are very interesting in that they both support and discount the social learning model of intergenerational violence, depending on the gender of the model, and particularly highlight the importance of parental identification.

Agnew (1983) found that the parental use of physical punishment to enforce inconsistent demands was positively correlated with violent delinquency. The parental use of physical punishment to enforce consistent demands was not related to violent delinquency.

Jorgenson (1985) reported that when predicting use of physical violence with siblings in a multiple regression analysis, mother-child discussion emerged as the second most significant (negatively related) after use of verbal aggression (positively related). Jorgenson presents these findings as supporting social learning theory, but offers no explanation for the negative association between mother-child discussion and violent behavior. In light of Neapolitan's (1981) findings, we can see how it supports the model of maternal identification deterring the intergenerational transmission of violence.

Buikhuisen et al. (1985) found that experiencing paternal physical violence loaded positively and highly on the factor on which committing violent crimes loaded most

highly. Also loading positively on this factor were absence of paternal love and experiencing maternal physical violence. Oddly enough, one factor emerged which represented a violent, extraverted antisocial dimension on which paternal and maternal love loaded positively. No interpretation of this finding was presented. It may represent a subgroup of violent individuals who identify with their violent parents.

Personality Organization

Some additional support is found for the involvement of low self-esteem, but the role of externalising defenses and psychotic personality traits is not clear from the empirical research on the people of violent families. What does emerge is the importance of witnessing versus experiencing parental violence. The differential impact of these two sources of potentially modelled behavior is at variance with the social learning explanation of intergenerational violence.

Jacobson (1978) found that 3 to 13 year old witnesses of parental violence tended to be more inhibited and have overall poorer personality adjustment than children whose parents were in the process of divorce but did not behave violently.

Kinard (1982b) found that the more severe the abused children's injuries were, the more likely they were to direct aggression inward on adult-child items, and to avoid

the expression of aggression overall.

Bryan and Freed (1982), in their study of community college students, found that the experience of severe physical punishment was associated with reporting higher rates of depression and anxiety, and a poorer self-concept as indicated by their reporting that they were doing less well in school than they actually were.

Buikhuisen et al. (1985) found that anxiety loaded positively and highly on the factor on which committing violent crimes loaded most highly, and on which paternal physical violence experienced also loaded positively and highly. Buikhuisen et al. suggest that child temperament and parental behavior interact such that low-anxious children confronted with violent parents act-out their distress, while anxious children direct their distress inward, resulting in personality disturbances.

In one of only a few studies to date to investigate the differential effect of witnessing versus experiencing parental violence, Jaffe et al. (1986a) found that children who had witnessed and experienced parental violence had more internalising problems (clinging to adults, complaining of loneliness, feeling unloved, unhappiness or sadness, easily jealous, and worrying) than controls. Children who had experienced violence were reported to have more externalising problems (disobedience, lying and cheating, destroying things belonging to self or others, cruelty to

others, associating with bad friends, and fighting) than children who had only witnessed parental violence, who had more externalising problems than controls.

Hughes (1988) found that children who had witnessed and experienced parental violence had more externalising problems than children who had only witnessed parental violence, but that witnesses did not differ from controls. Children who only witnessed parental violence were found to be more anxious than controls, with children who had both witnessed and experienced parental violence being the most anxious of the three groups.

Jaffe et al. (1986b) found that higher levels of parental violence are associated with a poorer overall degree of adjustment (social competence + internalising behavior + externalising behavior) for boys, but not for girls. Boys from violent families were reported to display a higher degree of both externalising and internalising behaviors. Girls from violent families were reported to display more internalising behaviors. Boys and girls were not found to be differentially sensitive to exposure to violence in the family, there being no group-by-sex interaction effect.

Summary of Research on the People of Violent Families

A review of the empirical literature on the violent behavior of people from violent families provides support for the hypothesis that the more violence an individual

witnesses and/or experiences in their family of origin, the more violently he or she will behave throughout life. Potential mechanisms of this transmission are identified as social difficulties, low parental identification, poor parenting practices, externalising (and possibly internalising) defenses, low self-esteem, and role-modelling. As with the research on the families of violent people, the majority of these mechanisms are congruent with the traumatic impact model of intergenerational violence. The exception is role-modelling, which is the cornerstone of the social learning explanation, and which does receive some support from the literature.

Discussion of the Relevant Research Findings

Conclusions drawn from the foregoing review should be tempered by the knowledge that only a handful of the available studies were designed in such a way that meaningful statements can be made about the intergenerational hypothesis. Only two of them (Carroll, 1977; Herrenkohl et al., 1983) were designed to test hypotheses concerning the mechanism of any transmission. Despite these limitations, the empirical literature does support the model of violent behavior being transmitted intergenerationally. Studies employing various methodologies, populations and dependent/independent variables are nearly unanimous: The more violence an individual witnesses and/or experiences in his or her family

of origin, the more violently he or she is likely to behave throughout life.

A possible objection to this conclusion is the argument that many of the studies reviewed here are retrospective and, therefore, sensitive to respondent bias. Particularly so if having had a violent family life is perceived as a justification for one's own violent behavior. In fact, however, related research finds that adults who were abused as children recall fewer facts about their childhoods and tend to idealize their parents (Main & Goldwyn, 1984).

Of particular interest for generating hypotheses about the mechanisms of the transmission of violent behavior are those characteristics shared by both violent people and people from violent families. This overlap, if any, may shed some light on why only some people from violent families themselves express violent behavior to a significant degree. The existence of any commonalities will not completely illuminate these mechanisms, however, because the potent factors may be masked when all the violent participants in a population (violent people with violent parents and violent people with nonviolent parents), or all the participants in a population with violent parents (violent and nonviolent people) are treated as homogeneous samples within a study.

With this caution in mind, some commonalities are present: Violent people and people from violent families

tend to experience social difficulties, have low parental identification (or possibly high identification with a violent same-sex parent), low self-esteem, poor (possibly psychotic) personality adjustment, and tend to employ externalising defenses. A model of the intergenerational transmission of violent behavior which is consistent with the empirical literature is that people from violent families are psychologically traumatized by being exposed to and experiencing parental violence. In particular, they appear to suffer a failure to incorporate the standards and values of their parents, rendering them deficient in social skills, internal resources which regulate self-esteem, internal standards of conduct (conscience), and guides for action which moderate situational influences. These deficits promote unsatisfying extra-familial relationships which, in turn, result in even lower self-esteem, a tendency to see others as the cause of their troubles, impulsiveness, and a greater likelihood of transgressing social norms. Such an individual is thus threat-sensitive and more likely to react to internal or external threats to his or her psychological equilibrium with behaviors that act upon his or her environment, and therefore with violent behavior, than the norm.

There are probably many routes to violent behavior (Cornell, Benedek & Benedek, 1987; Nettler, 1982). The finding that a violent family life is a common but neither

necessary nor sufficient precondition of violent behavior, therefore, simply reflects the fact that parental violence is only one (albeit an effective one) of many nonexclusive ways of cultivating an individual who is low in parental identification, low in self-esteem, tends to employ externalising and psychotic defenses, and tends to have social difficulties.

The next avenue of exploration which is likely to prove profitable is to examine the differences between individuals who are violent yet come from nonviolent families, who are nonviolent yet come from violent families, who are nonviolent and come from nonviolent families, and who are violent and come from violent families. Specifically, individuals from violent families are at high risk for being violent themselves. What characteristics, therefore, do individuals "at risk" for violent behavior possess who nevertheless do not display violent behavior? Conversely, do individuals who are at low risk for violent behavior (nonviolent families) yet who do display violent behavior possess characteristics different from individuals at risk and who do display violent behavior?

An additional dimension which may be of interest is emotional overcontrol. Megargee, Cook and Mendelsohn (1967) have found that Overcontrolled Hostility distinguishes between assaultive and nonassaultive criminal offenders and appears to represent a tendency to keep tight constraints on

hostile emotions until the individual "explodes" intermittently in a fit of violent behavior.

Hypothetically, it might be expected that people from violent families are emotionally undercontrolled based on their tendency to employ externalising defense mechanisms and on their lack of parental identification, and may therefore differ from violent individuals from nonviolent families. Alternately, Tanay (1969) has suggested that people who experience parental violence are emotionally overcontrolled. In either case, emotional overcontrol may provide an important clue to the mechanisms of the intergenerational transmission of violent behavior.

Hypotheses

From the review of the relevant research a need was identified for a research design whereby a model of the intergenerational transmission of violence can be tested. It was argued that what was necessary was to isolate four groups (violent people with violent parents, violent people with nonviolent parents, nonviolent people with violent parents, and nonviolent people with nonviolent parents) and compare them on standardized measures of the variables which have been identified as possible mechanisms of the intergenerational transmission of violent behavior (parental identification, role-modelling, self-esteem, externalising defenses, psychotic personality traits, social difficulties, and emotional overcontrol).

To these ends, the following hypotheses are established:

Hypothesis 1. Higher levels of violence expressed will be associated with higher levels of parental violence experienced and witnessed.

Hypothesis 2. Violence expressed will mimic violence experienced and witnessed by the same-sex parent.

Hypothesis 3. Higher levels of violence expressed will be associated with lower levels of opposite-sex parental identification and higher levels of identification with violent same-sex parents.

Hypothesis 4. Higher levels of violence expressed will be associated with a greater use of externalising defenses.

Hypothesis 5. Higher levels of violence expressed will be associated with lower levels of self-esteem.

Hypothesis 6. Higher levels of violence expressed will be associated with a greater degree of psychotic personality traits.

Hypothesis 7. Higher levels of violence expressed will be associated with higher levels of perceived social difficulties.

Hypothesis 8. Higher levels of violence expressed will be associated with a tendency toward emotional overcontrol.

Hypothesis 9. Violent people with violent parents, nonviolent people with violent parents, violent people with nonviolent parents, and nonviolent people with nonviolent

parents will differ in their levels of parental identification, externalising defenses, self-esteem, psychotic personality traits, social difficulties, and emotional overcontrol.

CHAPTER II

METHOD

The purpose of this study was to investigate whether violent behavior expressed during adolescence is transmitted intergenerationally and, if so, what the mechanisms of that transmission are. From a review of published empirical research potential mechanisms were identified as parental identification, role modelling, externalising defenses, low self-esteem, psychotic personality traits, and social difficulties. Also examined was the role of emotional overcontrol.

Subjects

Cases were drawn from two populations: (1) inpatient Young Offenders, and (2) grade 10 and 11 high school students. All subjects were male and had at least a grade six reading level as measured by the Reading subtest of the Wide Range Achievement Test - Revised, Level 2 (Jastak & Wilkinson, 1984). The high school group was obtained because a pilot study found that very few of the Young Offenders could be classified as being nonviolent with nonviolent parents. For the purpose of this study, subjects were defined as being violent if they reported hitting

someone with a fist, kicking or biting someone, hitting someone with something, or beating someone up three to five times or more in the past year, or if they reported ever threatening someone with or using a knife or a gun (Straus et al., 1980). Subjects were defined as having witnessed parental violence if they reported seeing their parent hit someone with a fist, kick, bite or hit someone with something twice or more, or beat someone up or threaten someone with a knife or a gun once or more (Straus et al., 1980). Subjects were defined as having experienced parental violence if they reported being hit with a fist, kicked or bitten twice or more, or beaten up or threatened with a knife or a gun once or more by their parents (Straus et al., 1980). An all-male sample was chosen because only nine percent of the Young Offenders encountered over the period of study were female and reliable inferences could not therefore be drawn for that population. An adolescent sample was chosen because during adolescence the individual strives to fashion a sense of psychosocial identity which will secure a place in the world that is separate from the world of his or her parents (Blos, 1962; Erikson, 1963; Kaplan, 1984). Witnessing and experiencing parental violence is likely, therefore, to have important implications for this task.

The first group was drawn from a 19-bed inpatient Young Offenders Treatment and Assessment Unit at Alberta Hospital

Edmonton, Forensic Services Unit, a 140-bed psychiatric inpatient facility. Young Offenders are referred to this unit for assessing their suitability for the treatment component of the unit and under section 13 of the Young Offenders Act for the purpose of (a) considering an application that the young person be transferred to ordinary (adult) court, (b) determining whether to direct that the young person be tried as to whether they are, by reason of insanity, unfit to stand trial, or (c) making or reviewing a disposition (sentence). By law, their length of stay is between eight and thirty days, with the mode being twenty-one days. One hundred, four admissions were encountered over an eight month period. Of these, 9 were female, 10 were illiterate, and 10 refused to cooperate with the assessment. Seventy-five cases are therefore included in this study. Eleven were being assessed for treatment and sixty-four were being assessed under section 13; one under subsection (a), two under subsection (b), and sixty-one under subsection (c). The average age of this group was 15.6 years ($sd = 1.4$) and ranged from 12 to 18 years, the average socioeconomic status score was 3.6 and ranged from 1 to 5 (Hollingshead & Redlich, 1958; see Appendix C), and the average IQ score was 100.3 ($sd = 13.7$) and ranged from 76 to 146.

The second group was drawn from two grade 10-level psychology classes and two grade 10-level law classes at an

Edmonton Catholic High School. A total of 95 students were enrolled in the four classes. Sixty-one agreed to participate in the study as part of a class project and obtained parental consent. Thirty-four were female. Two of the male subject's protocols were incomplete. Twenty-five cases are therefore included in this study. The average age of this group was 16.4 years ($sd = 0.6$) and ranged from 16 to 18 years, the average socioeconomic score was 3.1 and ranged from 1 to 5, and the average IQ score was 94.2 ($sd = 9.2$) and ranged from 78 to 108. None of this group was classified as having come from violent families and four were classified as being violent. None of the average scores on the MMPI validity and clinical scales fell outside of a T-score of 45 to 70, which is within the normal range (Archèr, 1987).

A total sample of 100 subjects is therefore included in this study; 75 Young Offenders and 25 High School students.

Materials

The following measures were administered to all subjects:

1. To the Young Offender subjects: The Wechsler Adult Intelligence Scale-Revised (Wechsler, 1981), or the Wechsler Intelligence Scale for Children-Revised (Wechsler, 1974), as appropriate for their age and test experience. To the High School subjects: The Vocabulary subtest of the Multidimensional Aptitude Battery (MAB; Jackson, 1984), a

multiple-choice format test of intellectual abilities. MAB Vocabulary subtest scores correlate .75 with MAB Full Scale IQ scores and .89 with WAIS-R Vocabulary subtest scores (Jackson, 1984).

2. The Minnesota Multiphasic Personality Inventory, Form R (Hathaway & McKinley, 1951), including scoring for the three validity scales, the ten clinical scales and:

- a) Overcontrolled Hostility (O-H; Megargee, Cook, & Mendelsohn, 1967)
- b) Inhibition of Aggression (Hy₅; Harris & Lingo, 1955)
- c) Ego Strength (Es; Barron, 1953; Schill & Thomsen, 1987)
- d) Lack of Ego Mastery, Defective Inhibition (Sc_{2c}; Harris & Lingo, 1955)
- e) Denial of Social Anxiety (Hy₁; Harris & Lingo, 1955)
- f) Social Alienation (Pd_{4a} and Sc_{1a}; Harris & Lingo, 1955)
- g) Socially Retiring (Mf₆; Serkownek, 1975)
- h) Social Imperturbability (Pd₃; Harris & Lingo, 1955)
- i) Inferiority - Personal Discomfort (Si₁; Serkownek, 1975)
- j) Discomfort with Others (Si₂; Serkownek, 1975)
- k) Social Maladjustment (SOC; Wiggins, 1966)
- l) Goldberg's Psychotic Index (Giannetti, Johnson, Klinger, & Williams, 1978; Golberg, 1965, 1969)
- m) Anxiety (A; Welsch, 1956)

n) Repression (R; Welsch, 1956)

3. The Culture-Free Self-Esteem Inventory, Form A (SEI; Battle, 1981). The SEI is a self-report scale containing 60 items which measure an individual's conscious perception of self-esteem in four areas: General self, Social, Academics, and Parents. The items are divided into those which indicate low self-esteem and those which indicate high self-esteem. Also included are 10 validity or "lie" items which assess obvious attempts to "fake good". The individual checks each item either "yes" or "no". The SEI is reproduced in Appendix A.

4. A 20 minute Structured Adolescent Interview Schedule (see Appendix B) which assesses the witnessing and experiencing of parental verbal aggression and physical violence (using a modified form of the Conflict Tactics Scale of Straus, 1979), self-reported violence, parental identification, and socioeconomic status (see Appendix C). The Structured Adolescent Interview Schedule yields the following scores:

- a) Paternal Physical Violence Experienced (Questions 6 through 15)
- b) Maternal Physical Violence Experienced (Questions 20 through 29)
- c) Paternal Verbal Aggression Experienced (Questions 2 through 5)
- d) Maternal Verbal Aggression Experienced (Questions 16

through 19)

e) Paternal Physical Violence Witnessed (Questions 6 through 15)

f) Maternal Physical Violence Witnessed (Questions 20 through 29)

g) Paternal Verbal Aggression Witnessed (Questions 2 through 5)

h) Maternal Verbal Aggression Witnessed (Questions 16 through 19)

i) Adolescent Physical Violence (Questions 34 through 43)

j) Adolescent Verbal Aggression (Questions 30 through 33)

k) Paternal Identification (Question 44 + 47 - 49 - 51)

l) Maternal Identification (Question 45 + 48 - 50 - 52)

m) Total Parental Identification (Maternal + Paternal - Question 53)

n) SocioEconomic Status

No attempt was made to verify self-reported information. Although the Conflict Tactics Scale was validated on first-year university students and the questions addressing parental identification were derived from previous studies with adolescents, these self-report measures have not been assessed for validity and reliability with an adolescent sample (see Limitations of the Present Study in the last chapter).

Procedure

All Young Offenders subjects were assessed as part of the routine intake assessment of the Unit following standard guidelines as outlined in the respective test manuals. Feedback on their test results was offered to all subjects. Informed consent was obtained from all subjects for the release of their test scores for the purpose of research.

All High School subjects were assessed as a group in their Psychology or Law class over a two-day period as a class project following standard guidelines as outlined in the respective test manuals. Informed consent was obtained from the parents of all the subjects for the release of their test scores for the purpose of research. A class presentation of the general purpose and findings of the research project was presented two weeks after data collection.

Completed MMPIs and SEIs were hand-scored and converted to T-scores as prescribed by Hathaway and McKinley (1951) and Battle (1981), respectively, using adolescent norms (Battle, 1981; Dahlstrom, Welsh & Dahlstrom, 1972). Published adolescent norms are not yet available for the special scales of the MMPI (O-H, Hy₅, etc.) and therefore adult norms were used for these.

All MMPI profiles were assessed for validity by first evaluating the consistency of item endorsement via the TR (test-retest) index (Buechley & Ball, 1952) and the

Carelessness scale (Greene, 1978). If either of them exceeded a raw score of 4, the subject was asked to complete another MMPI or the case was excluded from the study. Profiles were then evaluated for accuracy of item endorsement via the F (Infrequency) scale and the number of items not endorsed. If the F scale exceeded a T-score of 120, the subject was asked to complete another MMPI or the case was excluded. If 31 or more items were not endorsed, subjects were asked to complete the items or the case was excluded.

All SEIs were assessed for validity by examining the Lie scale. If the Lie scale raw score was less than 6 (higher scores reflect more "honest" endorsement of the test items), subjects were questioned as to whether they understood the test items and asked to complete another SEI, or the case was excluded.

Seven of the Young Offender subjects were asked to complete a second, valid, MMPI and did so. One case from the Young Offenders group was excluded because his Carelessness scale and TR index scores both exceeded 4 and the subject refused to complete a second MMPI.

Statistical Analysis of the Data

All analyses were statistically adjusted for age, IQ and socioeconomic status by either entering them into the multiple regression analysis before each of the independent variables or by entering them as covariates in the analyses

of covariance.

For hypotheses 4 through 8, separate multiple regression analyses were conducted in order to examine how each of the independent variables under study were related to adolescent violence. Stepwise multiple regression analyses were then conducted in order to identify those variables which accounted for most of the variance in adolescent violence in order to reduce the number of variables for the multivariate analysis of covariance in hypothesis 9.

Hypothesis 1. To test the hypothesis that higher levels of adolescent violence are associated with higher levels of parental violence experienced and witnessed, scores on Adolescent Physical Violence and Verbal Aggression for all 100 subjects were converted to T-scores using the mean of the high school group as the normative mean and the standard deviation of the entire sample, and entered as independent variables in two multiple regression analyses, with scores on Parental Physical Violence and Verbal Aggression Experienced and Witnessed as dependent variables and age, IQ and socioeconomic status as covariates.

Hypothesis 2. To test the hypothesis that adolescent violence expressed will mimic same-sex parental violence experienced and witnessed, the results of the analyses performed to test Hypothesis 1 were examined for positive relationships between paternal and adolescent violence along

corresponding types of violence (e.g. Paternal Verbal Aggression and Adolescent Verbal Aggression).

Hypothesis 3. To test the hypothesis that higher levels of adolescent violence are associated with lower levels of opposite-sex parental identification and higher levels of identification with violent same-sex parents, scores on Maternal and Paternal Identification (High and Low) and Maternal and Paternal Physical Violence Experienced (High and Low) were entered as independent variables in two 2 x 2 multivariate analyses of covariance (MANCOVA) with Adolescent Physical Violence and Verbal Aggression entered as the dependent variables and age, IQ and socioeconomic status as covariates. Scores on Parental Identification were converted to T-scores using the mean of the high school group as the normative mean and the standard deviation of the entire sample. A T-score of 50 was used as a cut-off between high and low parental identification. Minimum cell size was set at 10. In addition, scores on Maternal and Paternal Identification (High and Low) and Maternal and Paternal Physical Violence Witnessed (High and Low) were entered as independent variables in two 2 x 2 multivariate analyses of covariance (MANCOVA) with Adolescent Physical Violence and Verbal Aggression entered as the dependent variables and age, IQ and socioeconomic status as covariates. Minimum cell size was set at 10. Finally, in order to examine if the relationship between parental

identification and adolescent violence is linear, scores on Adolescent Physical Violence and Verbal Aggression were entered as independent variables in two multiple regression analyses, with scores on Maternal and Paternal Identification as the dependent variables and age, IQ and socioeconomic status as covariates.

Hypothesis 4. To test the hypothesis that higher levels of adolescent violence are associated with a greater reliance on externalising defenses, scores on Adolescent Physical Violence for all 100 subjects were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the MMPI scales 1, 2, 4, 6, 7, 9, and A as dependent variables and age, IQ and socioeconomic status as covariates. MMPI scales 1, 2, 7, and A were included as measures of internalising defenses and MMPI scales 4, 6 and 9 were included as measures of externalising defenses (Archer, 1987; Greene, 1978).

Hypothesis 5. To test the hypothesis that higher levels of adolescent violence are associated with lower levels of self-esteem, scores on Adolescent Physical Violence for all 100 subjects were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the SEI scales General, Social, Academic, and Parents, and MMPI scale Si_1 as dependent variables, and age, IQ and socioeconomic status as covariates. MMPI scale Si_1 was also included because it

assesses feelings of inferiority (Greene, 1978).

Hypothesis 6. To test the hypothesis that higher levels of adolescent violence are associated with a greater degree of psychotic personality traits, scores on Adolescent Physical Violence for all 100 subjects were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the MMPI scales 8, Es, Sc_{2c}, and Goldberg's Psychotic Index as dependent variables, and age, IQ and socioeconomic status as covariates. All of these MMPI scales are measures of psychotic personality traits (Archer, 1987; Greene, 1978).

Hypothesis 7. To test the hypothesis that higher levels of adolescent violence are associated with higher levels of perceived social difficulties, scores on Adolescent Physical Violence for all 100 subjects were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the MMPI scales 0, Hy₁, Pd_{4a}, Sc_{1a}, Mf₆, Pd₃, Si₂, and SOC as dependent variables, and age, IQ and socioeconomic status as covariates. All of these MMPI scales are measures of perceived social difficulties (Archer, 1987; Greene, 1978).

Hypothesis 8. To test the hypothesis that higher levels of adolescent violence are associated with a tendency toward emotional overcontrol, scores on Adolescent Physical Violence for all 100 subjects were entered as independent variables in separate and stepwise multiple regression

analyses with T-scores from the MMPI scales 3, 5, O-H, and Hy₅ as dependent variables, and age, IQ and socioeconomic status as covariates. MMPI scales 3 and 5 were included as measures of emotional control (Archer, 1987; Greene, 1978) and MMPI scales O-H and Hy₅ were included as measures of overcontrolled hostility (Megargee et al., 1967; Greene, 1978).

Hypothesis 9. To test the hypothesis that violent adolescents with violent parents, nonviolent adolescents with violent parents, violent adolescents with nonviolent parents, and nonviolent adolescents with nonviolent parents differ in their levels of parental identification, externalising defenses, self-esteem, psychotic personality traits, social difficulties, and emotional overcontrol, the 100 subjects were divided into four groups based on their experience of parental violence and their own violent behavior. Minimum cell size was set at 10. Those scales which were found to be significant in the stepwise multiple regression tests of Hypotheses 4 through 8 were employed as measures of Externalising Defenses, Self-Esteem, Psychotic Traits, Social Difficulties, and Emotional Overcontrol. The four groups were then entered as independent variables in a 2 x 2 (Parental Violence x Adolescent Violence) multivariate analysis of covariance (MANCOVA) with the T-scores for Paternal Identification, Externalising Defenses, Self-Esteem, Psychotic Traits, Social Difficulties, and Emotional

Overcontrol entered as the dependent variables, and age, IQ and socioeconomic status as covariates. Post hoc analyses of significant multivariate effects were assessed by analyses of covariance (ANCOVAs).

CHAPTER III

RESULTS

The purpose of this study was to investigate whether violent behavior expressed during adolescence is transmitted intergenerationally and, if so, what the mechanisms of that transmission are. In this chapter the intergenerational hypothesis and the potential mechanisms of parental identification, rôle-modelling, externalising defenses, self-esteem, psychotic personality traits, social difficulties, and emotional overcontrol were statistically tested. All analyses were conducted using the Statistical Package for the Social Sciences (SPSS/PC+; Norusis, 1986).

Hypothesis 1: Intergenerational Violence

To test the first hypothesis, that higher levels of adolescent violence are associated with higher levels of parental violence experienced and witnessed, scores on Adolescent Physical Violence and Verbal Aggression were entered as independent variables in two multiple regression analyses with scores on Parental Physical Violence and Verbal Aggression Experienced and Witnessed as dependent variables. The mean raw violence score for mothers was 22.33 (sd = 20.30, range 0 to 82) and for fathers was 30.36

($sd = 22.89$, range 0 to 91). Results of these analyses are summarized in Table 3.

Table 3

Multiple Regression Coefficients of Adolescent Violence on Parental Violence

<u>Violence Experienced</u>	<u>Adolescent Violence</u>	
	<u>Verbal</u>	<u>Physical</u>
Paternal Verbal	.47**	.34*
Paternal Physical	.20	.33*
Maternal Verbal	-.06	.20
Maternal Physical	.37	.23
<u>Violence Witnessed</u>		
Paternal Verbal	.04	-.02
Paternal Physical	-.40*	-.21
Maternal Verbal	.08	-.29
Maternal Physical	-.01	-.07

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

In support of the first hypothesis, Adolescent Verbal Aggression was found to be positively associated with Paternal Verbal Aggression Experienced, and Adolescent Physical Violence was found to be positively associated with

Paternal Verbal Aggression Experienced and Paternal Physical Violence Experienced.

Adolescent Physical Violence and Verbal Aggression were not found to be positively associated with Paternal or Maternal Physical Violence or Verbal Aggression Witnessed. Indeed, Adolescent Verbal Aggression was found to be negatively associated with Paternal Physical Violence Witnessed.

Hypothesis 2: Intergenerational Role-Modelling of Violence

To test the second hypothesis, that adolescent violence expressed will mimic same-sex parental violence experienced and witnessed, the results of the analyses performed to test Hypothesis 1 were examined for positive relationships between paternal and adolescent violence along corresponding types of violence (e.g. Paternal Verbal Aggression and Adolescent Verbal Aggression). Results of these analyses were summarized in Table 3.

In disconfirmation of the second hypothesis, Adolescent Physical Violence was found to be positively associated with Paternal Verbal Aggression Experienced and unrelated to Paternal Physical Violence Witnessed, and Adolescent Verbal Aggression was found to be unrelated to Paternal Verbal Aggression Witnessed.

Adolescent Verbal Aggression was found to be positively associated with Paternal Verbal Aggression Experienced, Adolescent Physical Aggression was found to be positively

associated with Paternal Physical Violence Experienced, and Adolescent Verbal Aggression and Physical Violence were found to be unrelated to Maternal Physical Violence or Verbal Aggression Experienced or Witnessed.

Hypothesis 3: Adolescent Violence and Parental Identification

To test the third hypothesis, that higher levels of adolescent violence are associated with lower levels of opposite-sex parental identification and higher levels of identification with violent same-sex parents, scores on Maternal and Paternal Identification (High and Low), and Maternal and Paternal Violence Experienced (High and Low), were entered as independent variables in two 2 x 2 multivariate analyses of covariance (MANCOVA) with Adolescent Physical Violence and Verbal Aggression entered as the dependent variables. Cell sizes are displayed in Appendix D, Tables D-1 and D-2.

With the use of Wilks' criterion, the combined DVs were significantly related to paternal physical violence experienced, $F(6, 87) = 6.51, p < .002$, but not to paternal identification, $F(6, 87) = 2.79, p > .05$, or to their interaction, $F(6, 87) = 1.94, p > .05$. The results reflect a weak association between the combined DVs and the main effect of paternal physical violence experienced, $\eta^2 = .13$. Results of this analysis are summarized in Table 4.

Table 4

Multivariate Analysis of Covariance of Adolescent Violence
on Paternal Violence Experienced and Paternal Identification

Effect	Dependent Variable	Univariate F
Paternal Violence Experienced	Verbal Aggression	5.18*
	Physical Violence	13.12**
Paternal Identification	Verbal Aggression	5.61*
	Physical Violence	1.49
Interaction	Verbal Aggression	.01
	Physical Violence	2.76

*p < .05   **p < .01

With the use of Wilks' criterion, the combined DVs were not significantly related to maternal physical violence experienced, $F(6, 87) = 0.84$, $p > .05$, to maternal identification, $F(6, 87) = 0.84$, $p > .05$, or to their interaction, $F(6, 87) = 1.68$, $p > .05$.

In addition, scores on Maternal and Paternal Identification (High and Low), and Maternal and Paternal Violence Witnessed (High and Low), were entered as independent variables in two 2 x 2 multivariate analyses of covariance (MANCOVA) with Adolescent Physical Violence and Verbal Aggression entered as the dependent variables. Cell sizes are displayed in Appendix D, Tables D-3 and D-4.

With the use of Wilks' criterion, the combined DVs were

not significantly related to paternal violence witnessed, $F(6, 87) = 0.02, p > .05$, to paternal identification, $F(6, 87) = 1.47, p > .05$, or to their interaction, $F(6, 87) = 2.30, p > .05$. The combined DVs were not significantly related to maternal violence witnessed, $F(6, 87) = 0.93, p > .05$, to maternal identification, $F(6, 87) = 0.33, p > .05$, or to their interaction, $F(6, 87) = 1.59, p > .05$.

Finally, in order to examine if the relationship between parental identification and adolescent violence is linear, scores on Adolescent Physical Violence and Verbal Aggression were entered as independent variables in two multiple regression analyses, with scores on Maternal and Paternal Identification as the dependent variables. The results of these analyses are summarized in Table 5.

Table 5

Multiple Regression Coefficients of Adolescent Violence on Parental Identification

	<u>Adolescent Violence</u>	
	<u>Verbal</u>	<u>Physical</u>
Paternal Identification	-.34**	-.27*
Maternal Identification	-.00	-.02

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

In disconfirmation of the third hypothesis, Adolescent Physical Violence and Verbal Aggression did not interact with high and low levels of Paternal Violence Experienced and Paternal Identification, Adolescent Physical Violence and Verbal Aggression did not distinguish between high and low levels of Maternal Identification and no association was found between Maternal Identification and Adolescent Physical Violence or Verbal Aggression.

Adolescent Violence was found to be negatively associated with Paternal Identification. The intercorrelations of the four items that comprise the measure of Paternal Identification are presented in Appendix E.

Paternal Identification will therefore be used in the statistical tests of the ninth hypothesis.

Hypothesis 4: Adolescent Violence and Externalising Defenses

To test the fourth hypothesis, that higher levels of adolescent violence are associated with a greater reliance on externalising defenses, scores on Adolescent Physical Violence were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the MMPI scales 1, 2, 4, 6, 7, 9, and A as dependent variables. Results of these analyses are presented in Table 6.

Table 6

Multiple Regression Coefficients of Measures of
Externalising and Internalising Defenses on Adolescent
Violence

<u>MMPI Scale</u>	<u>Adolescent Violence</u>	
	<u>Separate Regression</u>	<u>Stepwise Regression</u>
1	.27**	-.01
2	.34**	-.05
4	.50**	.26*
6	.50**	.32**
7	.42**	.07
9	.29**	.07
A	.27**	-.02

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

In support of the fourth hypothesis, Adolescent Violence was found to be positively associated with MMPI scales 4, 6 and 9.

Adolescent Physical Violence was also found to be positively associated with MMPI scales 1, 2, 7, and A.

Stepwise regression analysis identifies MMPI scales 4 and 6 as accounting for most of the variance in the relationship between these measures of externalising and internalising defenses and Adolescent Physical Violence.

These two scales will therefore be summed and averaged and used as a measure of Externalising Defenses in the statistical tests of the ninth hypothesis.

Hypothesis 5: Adolescent Violence and Self-Esteem

To test the fifth hypothesis, that higher levels of adolescent violence are associated with lower levels of self-esteem, scores on Adolescent Physical Violence were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the SEI scales General, Social, Academic, and Parents, and MMPI scale Si₁ as dependent variables. Results of these analyses are presented in Table 7.

Table 7

Multiple Regression Coefficients of Measures of Self-Esteem on Adolescent Violence

<u>Scale</u>	<u>Adolescent Violence</u>	
	<u>Separate Regression</u>	<u>Stepwise Regression</u>
SEI General	-.35**	-.13
SEI Social	.07	.14
SEI Academic	-.14	-.05
SEI Parents	-.49**	-.49**
MMPI Si ₁	.14	-.05

**p < .01

In support of the fifth hypothesis, Adolescent Violence was found to be negatively associated with SEI scales Parents and General.

Adolescent Physical Violence was not found to be associated with SEI scales Social or Academic, or with MMPI scale Si₁.

Stepwise regression analysis identifies SEI scale Parents as accounting for most of the variance in the relationship between these measures of self-esteem and Adolescent Physical Violence. Given that SEI scale Parents asks the respondent to report on his relationship with his parents (see Appendix A) and that experiencing paternal violence has already been found to be positively associated with adolescent violence, the negative association between SEI scale Parents and adolescent violence may simply reflect that adolescents who are physically assaulted by their parents perceive the relationship as a negative one. As SEI scale General was also found to be negatively associated with adolescent violence and as it is not confounded by the parental relationship, it will be used as a measure of Self-Esteem in the statistical tests of the ninth hypothesis.

Hypothesis 6: Adolescent Violence and Psychotic Personality Traits

To test the sixth hypothesis, that higher levels of adolescent violence are associated with a greater degree of

psychotic personality traits, scores on Adolescent Physical Violence were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the MMPI scales 8, Es, Sc_{2c}, and Goldberg's Psychotic Index as dependent variables. Results of these analyses are presented in Table 8.

Table 8

Multiple Regression Coefficients of Measures of Psychotic Personality Traits on Adolescent Violence

<u>MMPI Scale</u>	<u>Adolescent Violence</u>	
	<u>Separate Regression</u>	<u>Stepwise Regression</u>
8	.53**	.53**
Es	-.31**	.16
Sc _{2c}	.33**	-.20
Psychotic Index	.29**	.14

**p < .01

In support of the sixth hypothesis, Adolescent Violence was found to be positively associated with MMPI scales 8, Sc_{2c} and the Psychotic Index, and negatively associated with Es.

Stepwise regression analysis identifies MMPI scale 8 as

accounting for most of the variance in the relationship between these measures of psychotic personality traits and Adolescent Physical Violence. This scale will therefore be used as a measure of Psychotic Traits in the statistical tests of the ninth hypothesis.

Hypothesis 7: Adolescent Violence and Social Difficulties

To test the seventh hypothesis, that higher levels of adolescent violence are associated with higher levels of perceived social difficulties, scores on Adolescent Physical Violence were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the MMPI scales 0, Hy₁, Pd_{4a}, Sc_{1a}, Mf₆, Pd₃, Si₂, and SOC as dependent variables. Results of these analyses are presented in Table 9.

Table 9

Multiple Regression Coefficients of Measures of Perceived
Social Difficulties on Adolescent Violence

<u>MMPI Scale</u>	<u>Adolescent Violence</u>	
	<u>Separate Regression</u>	<u>Stepwise Regression</u>
0	.12	-.17
Hy ₁	-.02	.14
Pd _{4a}	.42**	.23
Sc _{1a}	.43**	.43**
Mf ₆	-.05	-.07
Pd ₃	.00	.15
Si ₂	.12	-.11
SOC	.01	-.20

**p < .01

In support of the seventh hypothesis, Adolescent Violence was found to be positively associated with MMPI scales Sc_{1a} and Pd_{4a}.

Adolescent Violence was not found to be associated with MMPI scales 0, Hy₁, Mf₆, Pd₃, Si₂, and SOC.

Stepwise regression analysis identifies MMPI scale Sc_{1a} as accounting for most of the variance in the relationship between these measures of perceived social difficulties and Adolescent Violence. This scale will therefore be used as a

measure of Social Difficulties in the statistical tests of the ninth hypothesis.

Hypothesis 8: Adolescent Violence and Emotional Overcontrol

To test the eighth hypothesis, that higher levels of adolescent violence are associated with a tendency toward emotional overcontrol, scores on Adolescent Physical Violence were entered as independent variables in separate and stepwise multiple regression analyses with T-scores from the MMPI scales 3, 5, O-H, and Hy₅ as dependent variables. Results of these analyses are presented in Table 10.

Table 10

Multiple Regression Coefficients of Measures of Emotional Overcontrol on Adolescent Violence

<u>MMPI Scale</u>	<u>Adolescent Violence</u>	
	<u>Separate Regression</u>	<u>Stepwise Regression</u>
3	.25**	.38**
5	-.10	-.21*
O-H	-.12	-.09
Hy ₅	-.18	-.21*

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

In support of the eighth hypothesis, Adolescent Violence was found to be positively associated with MMPI

scale 3.

Adolescent Violence was found to be unassociated with MMPI scales 5, O-H and Hy₅.

In stepwise regression analysis, however, MMPI scales 3, 5 and Hy₅ are identified as accounting for most of the variance in the relationship between these measures of emotional overcontrol and Adolescent Violence. Scales 5 and Hy₅ will therefore be summed and averaged and used as a measure of Emotional Overcontrol in the statistical tests of the ninth hypothesis.

Hypothesis 9: Intergenerational Mechanisms of Violence Transmission

To test the ninth hypothesis, that violent adolescents with violent parents, nonviolent adolescents with violent parents, violent adolescents with nonviolent parents, and nonviolent adolescents with nonviolent parents differ in their levels of parental identification, externalising defenses, self-esteem, psychotic personality traits, social difficulties, and emotional overcontrol, subjects were divided into four groups based on their experience of paternal violence and their own violent behavior. Cell sizes are displayed in Appendix D, Table D-5. The four groups were then entered as independent variables in a 2 x 2 (Paternal Violence x Adolescent Violence) multivariate analysis of covariance (MANCOVA) with the T-scores for the measures of Paternal Identification, Externalising Defenses,

Self-Esteem, Psychotic Traits, Social Difficulties, and Emotional Overcontrol, as derived from the stepwise multiple regression analysis tests of Hypotheses 4 through 8, entered as the dependent variables. Scores on Paternal Identification were converted to T-scores using the mean of the high school group as the normative mean and the standard deviation of the entire sample.

With the use of Wilks' criterion, the combined DVs were significantly related to paternal violence experienced, $F(6, 87) = 3.30, p < .006$, and to adolescent violence expressed, $F(6, 87) = 4.81, p < .0001$, but not to their interaction, $F(6, 87) = 1.04, p > .05$. The results reflect a moderate association between the combined DVs and the main effect of adolescent violence, $\eta^2 = .25$, and a smaller association between the combined DVs and paternal violence experienced, $\eta^2 = .18$. Results of this analysis are summarized in Table 11.

Table 11

Multivariate Analysis of Covariance of Measures of Potential
Intergenerational Mechanisms on Adolescent Violence and
Paternal Violence Experienced

Effect	Dependent Variable	Univariate F
Paternal Violence Experienced	Paternal Identification	4.20*
	Externalising Defenses	17.89**
	Self-Esteem	9.67**
	Psychotic Traits	14.62**
	Social Difficulties	6.71*
	Emotional Overcontrol	1.62
Adolescent Violence	Paternal Identification	8.55**
	Externalising Defenses	15.62**
	Self-Esteem	3.52
	Psychotic Traits	14.53**
	Social Difficulties	5.68*
	Emotional Overcontrol	3.77*
Paternal Violence by Adolescent Violence Interaction	Paternal Identification	0.02
	Externalising Defenses	0.16
	Self-Esteem	0.12
	Psychotic Traits	0.37
	Social Difficulties	0.00
	Emotional Overcontrol	4.74*

*p < .05   **p < .01

Adjusted cell means are displayed in Table 12.

Table 12

Potential Intergenerational Mechanism T-Scores on Adolescent
Violence and Paternal Violence Experienced

<u>Potential Mechanism</u>	<u>Paternal Violence Experienced</u>			
	<u>Low</u>		<u>High</u>	
	<u>Adolescent Violence</u>		<u>Adolescent Violence</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
Paternal Identification	47.9	42.1	43.6	38.4
Externalising Defenses	53.3	62.8	63.8	71.6
Self-Esteem	52.5	47.4	44.3	40.8
Psychotic Traits	52.1	60.5	60.9	72.6
Social Difficulties	62.5	69.6	70.5	77.6
Emotional Overcontrol	53.0	53.4	58.7	52.0

✓ A further analysis was done to compare the mean T-scores of each of the potential mechanisms for each group by performing a series of ANCOVAs. Results of these analyses are summarized in Table 13.

Table 13

Analysis of Covariance Comparison of Groups on Potential
Intergenerational Mechanisms

<u>Potential Mechanism</u>	<u>Groups Compared</u>					
	<u>1,2 F</u>	<u>1,3 F</u>	<u>1,4 F</u>	<u>2,3 F</u>	<u>2,4 F</u>	<u>3,4 F</u>
Paternal Identification	3.1	1.8	13.2*	0.1	2.1	4.3*
Externalising Defenses	6.6*	9.9*	53.7*	0.0	6.5*	7.0*
Self-Esteem	2.7	6.5*	18.6*	0.6	3.3	1.1
Psychotic Traits	4.1*	6.8*	41.0*	0.1	9.0*	11.1*
Social Difficulties	1.9	4.4*	17.8*	0.1	3.5	3.2
Emotional Overcontrol	0.4	4.0*	0.0	2.2	0.2	8.5*

Note. Groups are:

- 1 Nonviolent fathers, nonviolent adolescents
- 2 Nonviolent fathers, violent adolescents
- 3 Violent fathers, nonviolent adolescents
- 4 Violent fathers, violent adolescents

*p < .05

In support of the ninth hypothesis, the measures of Paternal Identification, Externalising Defenses, Self-Esteem, Psychotic Traits, and Social Difficulties

distinguished between adolescents who were high or low on Paternal Violence Experienced, the measures of Paternal Identification, Externalising Defenses, Psychotic Traits, and Social Difficulties distinguished between adolescents who were high or low on Violence expressed, and the measure of Emotional Overcontrol interacted with high and low levels of Paternal Violence Experienced and Adolescent Violence.

The measure of Self-Esteem did not distinguish between adolescents who were high or low on Violence expressed.

Adolescents who have experienced paternal violence are high on Externalising Defenses and Psychotic Traits. Correspondingly, violent adolescents are high on Externalising Defenses and Psychotic Traits. Nonviolent adolescents who have experienced paternal violence are high in Emotional Overcontrol and Paternal Identification.

CHAPTER IV
DISCUSSION

The purpose of this study was to investigate whether violent behavior expressed during adolescence is transmitted intergenerationally and, if so, what the mechanisms of that transmission are. Results from statistical tests of nine hypotheses support the intergenerational hypothesis in the case of experiencing paternal violence and support the importance of the mechanisms of paternal identification, externalising defenses, psychotic personality traits, and sex-role identification, but not role-modelling, social difficulties, self-esteem, or emotional overcontrol.

Intergenerational Violence

The first hypothesis, that higher levels of adolescent violence are associated with higher levels of parental violence experienced and witnessed, is partially supported. Higher levels of adolescent violence were found to be associated with experiencing paternal violence. Maternal violence was not found to be positively associated with adolescent violence, nor was witnessing parental violence.

That the experience of maternal violence is not associated with adolescent violence is difficult to

reconcile with our present models. It may be that because the mothers of the male adolescents in this study were less violent than the fathers, as are women in general (Eagly & Steffen, 1986), mothers present few opportunities to transmit violence intergenerationally.

That previous studies have identified parental violence witnessed as being associated with adolescent violence is likely due to their not controlling for the differential impact of witnessing versus experiencing parental violence. Parents who are violent with each other tend to be violent toward their offspring (Gayford, 1975). Thus the effect of witnessing parental violence may be confounded by the effects of experiencing it.

These present findings highlight paternal violence experienced as the key relationship in the intergenerational transmission of violent behavior in adolescence. The social learning explanation posits that this is due to role-modelling.

Intergenerational Role-Modelling of Violence

The second hypothesis, that adolescent violence will mimic same-sex parental violence witnessed and experienced, is not supported. Although adolescent violence was found to be related to paternal violence and not to maternal violence, it is the experience of paternal violence that was found to be important, not a general exposure to it. Adolescent physical violence was found to be positively

associated with paternal physical violence (experienced and paternal verbal aggression experienced, but not to paternal physical violence or verbal aggression witnessed).

These findings tend to support a model of intergenerational transmission of violent behavior in adolescence in which experiencing paternal violence psychologically traumatizes the offspring, and it is this trauma which in turn is associated with adolescent violence. Indeed, when violence experienced is statistically held constant, witnessing paternal violence is found to be negatively associated with adolescent violence. It may be that when offspring passively witness the impact of violence on others, they are reluctant to actively inflict similar suffering (Miller & Eisenberg, 1988). Some authors (Pynoos & Eth, 1986) have argued that witnessing parental violence places children at risk of developing anxiety, depressive, phobic, and post-traumatic stress disorders. That is, internalising, non-violent behaviors; a position consistent with the present findings.

The importance of sex-roles remains, however, in that the violence of the male adolescents in this study is related to their experience of violence at the hands of their fathers, but not their mothers. Perhaps the trauma occurs as a result of their being frustrated in their attempts to identify with their same-sex parent.

Adolescent Violence and Parental Identification

The third hypothesis, that higher levels of adolescent violence are associated with lower levels of opposite-sex parental identification and with higher¹ levels of identification with violent same-sex parents, is not supported. In the present all male sample, it was the adolescent who did not identify with his¹ father who was more violent.

The operationalization of identification in the present study is a cognitive-behavioral one whereby the adolescent wants to be like his parents, spends time talking with them, does not lie to them, and obeys them (Eron, 1987). Based on psychoanalytic conceptualizations of the process of identification, however, this represents the final stages (Brenner, 1972). A. Freud (1966) posits that "identification with the aggressor" is a developmentally early stage in the process of parental identification that involves an internalization of parental criticism of their behavior. Until such time as the child's sense of self is strong enough to endure this self-criticism and the accompanying sense of guilt, anticipated punishment is transformed into an active assault on the outside world. Thus, it may be that these adolescents who have experienced physical violence at the hands of their fathers have a

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¹In this section "he" is used because the present study is composed entirely of males.

particularly difficult time internalising this paternal criticism and therefore have not reached the stage of identification assessed by the present measures. Perhaps maternal identification is not found to be related to adolescent violence because, as described above, mothers are not as violent as fathers and the adolescents are not therefore presented with the necessity of "identifying with the aggressor" in the case of their mothers.

Violent adolescents may be, according to this formulation, still at the stage of externalising (paternally) prohibited impulses and experiencing feelings of intolerance of others.

Adolescent Violence and Externalising Defenses

The fourth hypothesis, that higher levels of adolescent violence are associated with a greater use of externalising defenses, is supported. MMPI scales 4 (Psychopathic Deviate) and 6 (Paranoia) were identified as making significant contributions to variance in adolescent violence. Marks, Seeman and Haller's (1974) actuarial description of the 4-6/6-4 code type characterizes violent adolescents as tending to be "defiant, disobedient, tense, restless, and negativistic" (p. 211) and tending to "blame others for their difficulties" (p. 212). That is, unacceptable impulses and conflicts are acted-out in their interpersonal relationships and attributed to others. In addition, the 4-6/6-4 code type does not employ

internalising defenses in that they "are not particularly fearful, have no difficulty in getting to sleep, have no physical complaints, and are rarely tired or feel weak, tense, or nervous" (ibid, p. 212).

An unexpected finding is that the MMPI scales which measure internalising defenses, 1 (Hypochondriasis), 2 (Depression), 7 (Psychasthenia), and A (Anxiety), were found to be positively associated with adolescent violence when considered in isolation of externalising defenses. This is consistent with the formulation that psychological distress/symptoms are, in general, associated with higher levels of adolescent violence and provides support for the model of violence in adolescence occurring as a result of failing to successfully negotiate the developmental tasks of adolescence (Brandt & Zlotnick, 1988). This finding may also explain some of the contradictory findings in the research literature; if only one or two indices of distress or symptomatology are employed, they are likely to be found to be associated with adolescent violence.

Erikson, Sroufe and Egeland (1985) found that children who exhibited an anxious/avoidant pattern of attachment in infancy were hostile, socially isolated and/or psychotically disconnected in preschool. It may be that in adolescence remnants of these anxious/avoidant (i.e. internalising) defenses coexist with externalising defenses as the task of internalising parental standards is undertaken (see previous

section). Horowitz, (1981) describes a state of mind called "self-righteous rage" in which the individual becomes intensely, vengefully hostile as an exaggerated response to an insult. The rage is described as self-righteous because the individual's self-esteem is so low, due to harsh internalized parental standards which form an "internal critic", that he cannot tolerate insults as threats to his self-esteem. Instead, he draws self-esteem from siding with his harsh "critic", externalising his own prohibited impulses onto his insulator, and demeaning him/her. This conceptualization is very similar to that presented by A. Freud (1966) as discussed above. Where Horowitz extends our understanding of the present findings, and the research literature, is in his observation that if the individual goes too far in his expressed rage, social disapproval is likely to ensue. This disapproval can cause a cognitive shift whereby the internal critic pities the insulator as a victim and despises the individual for his violence. This cognitive shift deprives the individual of the self-esteem he was deriving and can result in an emotional shift to "shame-rage-anxiety". Thus it appears to be that externalising defenses are most directly linked to violent behavior, but that internalising symptoms are also present as a psychological consequence of the expression of violent behavior.

The present findings not only demonstrate that

externalising defenses predominate in the relationship between adolescent violence and internalising versus externalising defenses, but also point to the importance of low self-esteem.

Adolescent Violence and Self-Esteem

The fifth hypothesis, that higher levels of adolescent violence are associated with lower levels of self-esteem, is supported. SEI scales General and Parents were found to be negatively associated with adolescent violence. The General self-esteem scale assesses how the adolescent feels about himself overall (e.g. "I am happy most of the time"). The Parental self-esteem scale assesses how the adolescent feels about himself in relation to his parents (e.g. "My parents dislike me because I am not good enough").

That parental self-esteem should be negatively associated with adolescent violence is not surprising given the relationship between adolescent violence and parental violence as already discussed. It does, however, draw our attention once again to the significance of parents in the emotional life of adolescents. The most important task in adolescence is thought by many writers to be fashioning a sense of psychosocial identity in relation to their parents (Blos, 1962; Erikson, 1963; Kaplan, 1984).

That general self-esteem is negatively associated with adolescent violence does support the formulation that low self-esteem is a factor in the matrix of psychological

difficulties that are associated with the intergenerational transmission of violent behavior in adolescence.

Of some interest is the finding that Academic self-esteem was not found to be associated with adolescent violence. Hirschi (1969) posited that delinquency may arise from negative school experiences which prompt a rebellious attitude toward authority (for a review see Hirschi & Hindelang, 1977 and Rutter & Giller, 1983). The present findings do not support this model, albeit in the case of adolescent violence, admittedly only one aspect of delinquency.

Self psychologists of the school of Heinz Kohut place particular emphasis on the role of general self-esteem in the expression of violent behavior. Rage is expressed when a situation is experienced as a "narcissistic injury", a blow to the individual's self-esteem, and he attempts to repair it by projecting his unacceptable impulses onto others (Kohut, 1972, 1984; McCarthy, 1978; see also previous section). Thus, individuals with low self-esteem are predisposed toward violent behavior.

Self psychologists also conceptualize deficits in the regulation of self-esteem as resulting in difficulty distinguishing between internal and external reality (Baker & Baker, 1987) which may lead to psychotic symptoms.

Adolescent Violence and Psychotic Personality Traits

The sixth hypothesis, that higher levels of adolescent violence are associated with a greater degree of psychotic personality traits, is supported. MMPI scale 8 (Schizophrenia) was identified as accounting for a significant degree of variance in adolescent violence. Adolescents who are high scorers on MMPI scale 8 are characterized as "alienated, confused, delusional, often displaying psychotic features, socially isolated, withdrawn, shy, and apathetic" Archer, 1987, p.106). They are not, however, necessarily schizophrenic (Archer, 1987; McFall, Moore, Kivlahan, & Capestany, 1988).

This finding is entirely consistent with the research literature and with the model of adolescent violence in which the adolescent has difficulty harnessing his violent impulses in accordance with the demands of reality (Aichhorn, 1925/1971; Friedlander, 1947, 1949). Also implicated is the involvement of social difficulties that are a hallmark of psychotic functioning (APA, 1987).

Adolescent Violence and Social Difficulties

The seventh hypothesis, that higher levels of adolescent violence are associated with higher levels of perceived social difficulties, is supported. MMPI scales Pd_{4a} (Social Alienation) and Sc_{1a} (Social Alienation) were found to be positively associated with adolescent violence. Greene's (1980) description of high scorers on these scales

characterizes violent adolescents as feeling "isolated from other people; they lack feelings of belongingness" (p. 87) and feeling "a lack of rapport with other people; they withdraw from meaningful relationships with others" (p. 103).

Also of interest are those measures of social difficulties which were not found to be associated with adolescent violence. Again turning to Greene (1980) we find that adolescent violence is not related to social introversion - extroversion (scales 0, Hy₁ and Mf₆), denial of social anxiety or dependency needs (scale Pd₃) or whether they enjoy being with other people (scales Si₁ and SOC).

It is certainly not difficult to understand that someone who behaves violently has social difficulties. This approaches a tautology. The present findings are consistent with the formulation that violent adolescents act-out their difficulties in their interpersonal relationships. More than this, however, the violent adolescent does not avoid or seek-out social interaction more than the nonviolent adolescent, but he fails to derive feelings of satisfaction or belongingness from these interactions. Potentially, healthy relationships in adolescence could repair damages sustained in their relationship with their parents. This may happen in some instances (Bergin and Lambert, 1978; Kashani, Rosenberg, Beck, Reid, & Battle, 1987). For others, further unsatisfying relationships outside of the

family may serve only to entrench their predispositions to violent behavior (Parker & Asher, 1987).

Adolescent Violence and Emotional Overcontrol

The eighth hypothesis, that higher levels of adolescent violence are associated with a tendency toward emotional overcontrol, is not supported. Overcontrolled Hostility was not found to be associated with adolescent violence. MMPI scale 3 (Hysteria) was found to be positively associated with adolescent violence. This scale has been found to be associated with emotional overcontrol (Graham, 1987; p. 115) and therefore this finding does offer some support, but two other scales, 5 (Masculinity - Femininity) and Hy₅ (Inhibition of Aggression) were found to be negatively associated with adolescent violence. MMPI scale 5 has also been found to be associated with emotional control (ibid, p. 115), in contradiction with the present finding in relation to MMPI scale 3. MMPI scale Hy₅ is characterized as assessing denial of hostile and aggressive impulses (Graham, 1987, p. 128). The relationship of MMPI scales 5 and Hy₅ to adolescent violence supports the formulation of emotional undercontrol being positively associated with adolescent violence. Given that MMPI scale 3 is composed of two content areas, somatic complaints and social adjustment (Greene, 1980, p. 81), and that it tends to be associated with exhibitionism, extroversion and superficiality (ibid, p. 81), the present findings tentatively support the

formulation of adolescent violence being associated with emotional undercontrol. In general, however, adolescents tend to endorse a greater number of pathological symptoms than adults, suggestive of serious psychopathology and deviant experiences, greater impulsivity and rebelliousness, and a greater sense of social isolation and alienation (Archer, 1987). Given this general tendency, it may be that during adolescence the psychological inhibitions necessary to produce the constellation of overcontrolled hostility are not present.

Alternately, or perhaps additionally, the negative relationship between MMPI scales 5 and Hy5 and violence may reflect the negative relationship between female sex-role identification and violence (Lefkowitz et al., 1977). Male adolescents who have a greater identification with the female sex-role (MMPI scale 5) also tend to devalue the expression of violence (MMPI scale Hy5) and therefore would not maintain a congruent self-concept if they expressed violent behavior (Eron, 1980). Anecdotally, I observed during the course of interviewing the 100 subjects in the present study that many of the more violent subjects would respond derisively when asked if they had kicked or bitten someone in the past year (question 39, Appendix B) that "I don't bite". That is, they would tell me that certain forms of violent behavior are acceptable to them while others are not and, indeed, are even threatening to their self-concept

("biting is for girls"). Only inasmuch as female sex-role identification can be considered an index of emotional overcontrol (cf. Lerner, 1980), therefore, can the present findings be interpreted as supporting the combination of these two scales as measuring emotional overcontrol. A more tenable interpretation is that adolescent violence is negatively associated with female sex-role identification.

Intergenerational Mechanisms of Violence Transmission

The ninth hypothesis, that violent adolescents with violent parents, nonviolent adolescents with violent parents, violent adolescents with nonviolent parents, and nonviolent adolescents with nonviolent parents differ in their levels of parental identification, externalising defenses, self-esteem, psychotic personality traits, social difficulties, and emotional overcontrol, is partially supported.

Violent adolescents who have experienced paternal violence employ externalising defenses to a greater degree and have more psychotic personality traits than the other three groups. Nonviolent adolescents who have experienced paternal violence and violent adolescents who have not experienced paternal violence are next highest on these measures, and nonviolent adolescents who have not experienced paternal violence employ externalising defenses to the least degree and have the fewest psychotic personality traits. Of particular note here is that

nonviolent adolescents who have experienced parental violence are functioning as poorly psychologically as assessed by these measures as violent adolescents who have not experienced parental violence. This finding reinforces the idea that experiencing parental violence is psychologically traumatizing, but does not explain how violent adolescents can employ externalising defenses to a lesser degree and have fewer psychotic personality traits than adolescents who have experienced paternal violence but are nonviolent. Nonviolent adolescents who experience parental violence may have these psychological problems and still not behave violently if they possess traits which discourage the expression of violence. That is, these factors may facilitate the expression of violence, while other factors may inhibit its expression.

Nonviolent adolescents who have experienced paternal violence are found to be more "emotionally overcontrolled" and to be more identified with their fathers than violent adolescents who have experienced paternal violence. As discussed above, however, the interpretation of this former measure is not clear-cut. A more accurate interpretation is probably "female sex-role identification". Given that nonviolent adolescents who have experienced paternal violence are high on these measures, they may represent "protective factors" (Garmezy, 1983) that inhibit the expression of violence. Indeed, Eron (1980) argues that if

we want to reduce the expression of violence in our society, we should raise our boys as we do girls. He argues, based on evidence from years of longitudinal research, that girls are taught to inhibit their aggressive impulses and to employ alternate means of conflict resolution. In the present sample, the adolescents who have experienced paternal violence may be predisposed to resolve their conflicts in a violent manner due to their externalising tendencies and psychotic traits, but those who are nonviolent may have a more flexible social role and thus have more alternatives to violent behavior and be more inclined to inhibit their aggressive urges. Some characteristic of their relationship with their parents, which was not tapped by the measures used in the present study, may have facilitated the internalization of a greater variety of parental attributes, both masculine and feminine, in the nonviolent adolescents who have experienced paternal violence. As the existing literature demonstrates (Jaffe et al., 1985; Olweus, 1980; Wolfe et al., 1985), more than simply paternal violence is important in determining child adjustment.

Adolescents who have experienced paternal violence, regardless of their own violent behavior, have more social difficulties and lower self-esteem than do nonviolent adolescents who have not. This finding highlights the importance of identifying these four groups. It appears to

be the case that the relationship between social difficulties, self-esteem and adolescent violence is not a direct one. Experiencing paternal violence tends to be associated with adolescent violence and with social difficulties and low self-esteem. Given that so many of the violent adolescents have experienced paternal violence, social difficulties and low self-esteem do show-up in this group. Social difficulties and low self-esteem have been hypothesized as predisposing factors in a number of adolescent behavior problems, however (e.g. sex offenders: Davis & Leitenberg, 1987; runaways: Janus, McCormick, Burgess, & Hartman, 1987), and therefore have little predictive or explanatory power. The present findings and those of other studies of "high risk" groups (e.g. sexually abused children: Browne & Finkelhor, 1986; children of alcoholic parents: West & Prinz, 1987) suggest that social difficulties and low self-esteem are sequelae of childhood trauma that do not necessarily lead to a particular deviant outcome.

A conceptualization of the intergenerational transmission of violent behavior in adolescence that is consistent with the findings of this study is that the experience of paternal violence psychologically traumatizes the individual in such a way that tends to promote the use of externalising defenses and the adoption of a more psychotic personality style. These personality traits, in

turn, are associated with more violent behavior in adolescence. If aspects of the parent-child relationship facilitate high paternal identification and female sex-role identification, the intergenerational transmission of violent behavior in adolescence will tend to be suppressed by virtue of the individual having a more flexible social role which allows more behavioral options when faced with situations that they perceive as threatening.

Limitations of the Present Study

The generalizability of the present findings is limited to some extent by a mono-operational bias involved in the collection of the data in that the adolescent was responsible for reporting both on his own violent behavior as well as that of his parents. This bias was accepted because limiting subjects to only those for whom verification of their parent's behavior was available would have introduced a different source of bias by severely limiting the sample size. A fair degree of confidence can be placed upon the present findings because of the degree of replication of the findings of previous research and their agreement with the traumatic impact model. Confidence would be enhanced by replicating the present findings with parental self-report or observation.

Another limitation is a lack of validation and standardization information for the self-report data. Although the use of standardized personality questionnaires

is a substantial improvement over previous studies, the reliability and validity of the Conflict Tactics Scale in an adolescent sample and of the measures of parental identification has not been fully determined. This should be undertaken in future research.

Treatment Implications

An important implication for treatment of the present findings is that violent adolescents and adolescents who have experienced parental violence have a number of psychological difficulties in common which could be addressed in psychotherapy. Treatment programs which focus on externalising defense mechanisms and psychotic personality traits would be relevant to a large proportion of young offenders who undergo court-mandated treatment. In group psychotherapy it may prove to be particularly beneficial to include nonviolent adolescents who have experienced parental violence in the same group with violent adolescents because they have many features in common with these adolescents but also possess alternatives to violent behavior which they could share with the group.

Most treatment programs for delinquent adolescents include some component that addresses low self-esteem (Brandt & Zlotnick, 1988). The present findings do not support the uniform application of self-esteem counselling for this group. Rather, self-esteem counselling should occur in the context of addressing the victimization that so

many young offenders have experienced (Loeber and Southamer-Loeber, 1986), not in the context of reducing their violent behavior.

When the violent behavior of male young offenders is the primary treatment focus, their relationship with their fathers and their internalization of paternal standards of conduct should be at the forefront of therapy. Transference and countertransference issues are likely to dominate in the therapeutic relationship. In order to promote a successful course of therapy the therapist will have to be alert to the violent adolescent's attempts to place the therapist in the role of the punitive father and/or the ideal father that he never had. The therapist will have to work to avoid standing in opposition to this manifestation of the adolescent's resistance and may have to be more self-disclosing than he/she might be with adults in order to discourage these impediments to therapy (McHolland, 1985). These transference complications must not be side-stepped, however, as they represent a core aspect of the adolescent's violent behavior.

Suggestions for Further Research

The present study substantially replicates and confirms the findings of previous research on violent adolescents and the intergenerational transmission of violent behavior. The finding that paternal identification and female sex-role identification tend to inhibit the intergenerational

transmission in males deserves further study, however. In the present study the adolescent's relationship with his mother had no effect on violent behavior as assessed by the measures employed. It seems very unlikely that this is indeed the case. Further exploration of the process and nature of parental identification, both paternal and maternal, is likely to prove fruitful.

The relationship between the experience of paternal violence, adolescent violence and response to psychotherapy is another area ripe for exploration. It is likely that the four groups identified in the present study will respond differentially to psychotherapy, and to psychotherapy of different types (Kazdin, 1987).

Our understanding of the present findings would be greatly enhanced by replicating this methodology with a female sample. Unfortunately, this is very difficult to do because so few young women are identified as young offenders. I have been collecting female data and after one year have only eight subjects. Nonetheless, this avenue is worthy of exploration.

Summary

Violent behavior in adolescence was found to be transmitted intergenerationally when paternal violence is experienced. The mechanism of this transmission was found to be a greater use of externalising defenses and more psychotic personality traits. Paternal identification and

female sex-role identification were found to suppress the intergenerational transmission of violent behavior in adolescence. Violent behavior in adolescence was not found to be transmitted intergenerationally when maternal violence is experienced or parental violence is witnessed, nor via role-modelling or emotional overcontrol. Social difficulties and low self-esteem were hypothesized to be by-products of childhood victimization that have little explanatory power for the intergenerational transmission of violent behavior in adolescence.

APPENDIX A
CULTURE-FREE SELF-ESTEEM INVENTORY

Directions: "Please mark each statement in the following way: If the statement describes how you usually feel, make a check mark in the 'yes' column. If the statement does not describe how you usually feel, make a check mark in the 'no' column. Please check only one column (either 'yes' or 'no') for each of the 60 statements. This is not a test, and there are no 'right' or 'wrong' answers."

Form A includes 60 items and the following subscales:

General Self-Esteem Items

1. I spend a lot of time daydreaming. N
3. I like to spend most of my time alone. N
7. I wish I were younger. N
11. I am happy most of the time. Y
13. I have very little trust in myself. N
15. I like being a boy / I like being a girl. Y
18. I usually fail when I try to do important things. N
20. I often feel ashamed of myself. N
22. I usually can take care of myself. Y

- 24. I find it hard to make up my mind and stick to it. N
- 27. I often feel that I am no good at all. N
- 30. Most boys and girls are better than I am. N
- 33. Children pick on me very often. N
- 36. I would change many things about me if I could. N
- 38. I am as happy as most boys and girls. Y
- 41. I worry a lot. N
- 43. When I have something to say, I usually say it. Y
- 45. I am as nice looking as most boys and girls. Y
- 47. I know myself very well. Y
- 49. People can depend on me to keep my promises. Y

Social Self-Esteem Items

- 2. Boys and girls like to play with me. Y
- 8. I have only a few friends. N
- 14. Most boys and girls play games better than I do. N
- 21. Boys and girls usually choose me to be the leader. Y
- 28. I have many friends about my own age. Y
- 34. I like to play with children younger than I am. N
- 39. I can do things as well as other boys and girls. Y
- 46. Other boys and girls are mean to me. N
- 52. I need more friends. N
- 57. Most boys and girls are stronger than I am. N

Academic Self-Esteem Items

- 4. I am satisfied with my school work. Y

9. I usually quit when my school work is too hard. N
16. I am doing as well in school as I would like to. Y
23. I am a failure at school. N
29. Most boys and girls are smarter than I am. N
35. I like to be called on by my teacher to answer questions. Y
40. I often feel like quitting school. N
48. I am doing the best school work that I can. Y
54. My teacher feels that I am not good enough. N
58. I am proud of my school work. Y

Parental Self-Esteem Items

5. I have lots of fun with my mother. Y
10. I have lots of fun with my father. Y
17. I have lots of fun with both of my parents. Y
25. My parents make me feel that I am not good enough. N
31. My parents dislike me because I am not good enough. N
37. There are many time when I would like to run away from home. N
42. My parents understand how I feel. Y
50. My parents think I am a failure. N
55. My parents love me. Y
59. I often get upset at home. N

Lie Items

6. My parents never get angry at me. N

12. I am never shy. N
19. I have never taken anything that did not belong to
me. N
26. I never get angry. N
32. I like everyone I know. N
44. I never worry about anything. N
51. I always tell the truth. N
53. I always know what to say to people. N
56. I never do anything wrong. N
60. I am never unhappy. N

APPENDIX B
STRUCTURED ADOLESCENT INTERVIEW SCHEDULE

A. PRESENTING INFORMATION

NAME: _____ D.O.B.: ____/____/____
month/ day /year

AGE: _____ GENDER: M/F

INTERVIEW DATE: ____/____/____
month/ day /year

INTERVIEWER: _____

PRESENT CHARGES: (With brief description) _____

PREVIOUS CONVICTIONS: (With brief description)

B. FAMILY

1. Have you lived your entire life with your natural parents?   yes/no
If not, why not?

[Note: Ask about deaths, divorce, separations (#), Children's Aid apprehensions, remarriages, primary caregiver(s), running away and reasons for, etc., and age at which each event occurred]

Occupation of breadwinner: _____

Education of breadwinner: _____

C. READ: "I'm going to read you a list of things that you might have seen your father, or man who has taken care of you, do to someone in your family, a friend, or just anyone, or that he might have done to you. Tell me for each one how many times you've ever seen him do it and how many times he has ever done it to you."

C. FATHER'S BEHAVIOR

2. Insulted or swore at someone/you

Witnessed: 0 1 2 3-5 6-10 11-20 20+

Experienced: 0 1 2 3-5 6-10 11-20 20+

3. Sulked and/or refused to talk

Witnessed: 0 1 2 3-5 6-10 11-20 20+

Experienced: 0 1 2 3-5 6-10 11-20 20+

4. Stomped out of the room or house

Witnessed: 0 1 2 3-5 6-10 11-20 20+

Experienced: 0 1 2 3-5 6-10 11-20 20+

5. Threatened to hit or threatened to throw something at someone/you

Witnessed: 0 1 2 3-5 6-10 11-20 20+

Experienced: 0 1 2 3-5 6-10 11-20 20+

6. Threw something at someone/you

Witnessed: 0 1 2 3-5 6-10 11-20 20+

Experienced: 0 1 2 3-5 6-10 11-20 20+

7. Shoved or pushed someone/you

Witnessed: 0 1 2 3-5 6-10 11-20 20+

Experienced: 0 1 2 3-5 6-10 11-20 20+

8. Slapped someone/you

Witnessed: 0 1 2 3-5 6-10 11-20 20+

Experienced: 0 1 2 3-5 6-10 11-20 20+

9. Pulled hair

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

10. Hit with a fist

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

11. Kicked or bit

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

12. Hit with something

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

13. Hit repeatedly (beat up)

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

14. Threatened with a knife or gun

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

15. Used a knife or gun

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

D. READ: "Now I'm going to read you a list of things that you might have seen your mother, or woman who has taken care of you, do to someone in your family, a friend or just anyone, or that she might have done to you. Tell me for each one how many times you've ever seen her do it and how many times she has ever done it to you."

D. MOTHER'S BEHAVIOR

16. Insulted or swore at someone/you

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

17. Sulked and/or refused to talk

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

18. Stomped out of the room or house

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

19. Threatened to hit or threatened to throw something at someone/you

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

20. Threw something at someone/you

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

21. Shoved or pushed someone/you

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

22. Slapped someone/you

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

23. Pulled hair

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

24. Hit with a fist

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

25. Kicked or bit

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

26. Hit with something

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

27. Hit repeatedly (beat up)

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

28. Threatened with a knife or gun

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

29. Used a knife or gun

Witnessed:	0	1	2	3-5	6-10	11-20	20+

Experienced:	0	1	2	3-5	6-10	11-20	20+

E. READ: "Now I'm going to read you a list of some of the things that you might have done. I would like you to tell me for each one how many times you did it in the past year."

E. YOUR BEHAVIOR IN THE PAST YEAR

30. Insulted or swore

0 1 2 3-5 6-10 11-20 20+

31. Sulked and/or refused to talk

0 1 2 3-5 6-10 11-20 20+

32. Stomped out of the room or house

0 1 2 3-5 6-10 11-20 20+

33. Threatened to hit or threatened to throw something at someone

0 1 2 3-5 6-10 11-20 20+

34. Threw something at someone

0 1 2 3-5 6-10 11-20 20+

35. Shoved or pushed someone

0 1 2 3-5 6-10 11-20 20+

36. Slapped someone

0 1 2 3-5 6-10 11-20 20+

37. Pulled hair

0 1 2 3-5 6-10 11-20 20+

38. Hit with a fist

0 1 2 3-5 6-10 11-20 20+

39. Kicked or bit

0 1 2 3-5 6-10 11-20 20+

40. Hit with something

0	1	2	3-5	6-10	11-20	20+

41. Hit repeatedly (beat up)

0	1	2	3-5	6-10	11-20	20+

42. Threatened with a knife or gun

0	1	2	3-5	6-10	11-20	20+

43. Used a knife or gun

0	1	2	3-5	6-10	11-20	20+

F. YOU AND YOUR PARENTS

44. Do you want to be like your father?

not at all 1 2 3 4 5 6 7 very much

45. Do you want to be like your mother?

not at all 1 2 3 4 5 6 7 very much

46. Is there someone else you want to be like? yes/no

If yes, who? _____

47. How much time do you spend each week talking to your father about things that are important to you?

> 7 hours	2-6 hours	1 hour	< 1 hour
4	3	2	1

48. How much time do you spend each week talking to your mother about things that are important to you?

> 7 hours	2-6 hours	1 hour	< 1 hour
4	3	2	1

49. How many times have you lied to your father in the past year?

0 1 2 3-5 6-10 11-20 20+ Ever

50. How many times have you lied to your mother in the past year?

0 1 2 3-5 6-10 11-20 20+ Ever

51. How many times have you disobeyed your father in the past year?

0 1 2 3-5 6-10 11-20 20+ Ever

52. How many times have you disobeyed your mother in the past year?

0 1 2 3-5 6-10 11-20 20+ Ever

53. How many times have you run away from home overnight?

0 1 2 3-5 6-10 11-20 20+

APPENDIX C

INDEX OF SOCIOECONOMIC STATUS

(Adapted from Hollingshead & Redlich, 1958)

The primary breadwinner of each participant's family is given two scores based on the following criteria:

Occupation

1. Executives, proprietors of large businesses and major professionals.
2. Managers, proprietors of medium-sized businesses and lesser professionals.
3. Administrative personnel of large businesses, owners of small independent businesses and semiprofessionals.
4. Clerical and sales workers and technicians.
5. Skilled workers.
6. Semiskilled workers.
7. Unskilled workers and never employed.

Education

1. Graduate professional training.
2. College or University degree.

3. Partial University or College training.
4. High school graduate.
5. Partial high school training.
6. Junior high school graduate.
7. Less than seven years of schooling.

Estimation of Socioeconomic Status

Each score is then weighted, and the weighted scores are added, as follows:

$$(\text{Occupation score} \times 5) + (\text{Education score} \times 9)$$

The final score is then used to determine socioeconomic status using the following index:

SES	Range of Scores
I	14 - 23
II	24 - 38
III	39 - 60
IV	61 - 83
V	84 - 98

APPENDIX D
CELL SIZES FOR MULTIVARIATE ANALYSES

Table D-1

Cell Sizes for Multivariate Analysis of Covariance of
Adolescent Violence on Paternal Violence Experienced and
Paternal Identification by Group

<u>Paternal Violence Experienced</u>	<u>Paternal Identification</u>			
	<u>Low</u>		<u>High</u>	
	<u>YO</u>	<u>HS</u>	<u>YO</u>	<u>HS</u>
Low	17	5	16	20
High	30	0	12	0

Note. YO = Young Offender group; HS = High School group

Table D-2

Cell Sizes for Multivariate Analysis of Covariance of Adolescent Violence on Maternal Violence Experienced and Maternal Identification by Group

<u>Maternal Violence Experienced</u>	<u>Maternal Identification</u>			
	<u>Low</u>		<u>High</u>	
	<u>YO</u>	<u>HS</u>	<u>YO</u>	<u>HS</u>
Low	13	7	26	18
High	26	0	10	0

Note. YO = Young Offender group; HS = High School group

Table D-3

Cell Sizes for Multivariate Analysis of Covariance of Adolescent Violence on Paternal Violence Witnessed and Paternal Identification by Group

<u>Paternal Violence Witnessed</u>	<u>Paternal Identification</u>			
	<u>Low</u>		<u>High</u>	
	<u>YO</u>	<u>HS</u>	<u>YO</u>	<u>HS</u>
Low	21	3	19	17
High	26	2	9	3

Note. YO = Young Offender group; HS = High School group

Table D-4

Cell Sizes for Multivariate Analysis of Covariance of
Adolescent Violence on Maternal Violence Witnessed and
Maternal Identification by Group

<u>Maternal Violence Witnessed</u>	<u>Maternal Identification</u>			
	<u>Low</u>		<u>High</u>	
	<u>YO</u>	<u>HS</u>	<u>YO</u>	<u>HS</u>
Low	20	6	25	17
High	19	1	11	1

Note. YO = Young Offender group; HS = High School group

Table D-5

Cell Sizes for Multivariate Analysis of Covariance of
Measures of Potential Intergenerational Mechanisms on
Adolescent Violence and Paternal Violence Experienced by
Group

<u>Paternal Violence Experienced</u>	<u>Adolescent Violence</u>			
	<u>Low</u>		<u>High</u>	
	<u>YO</u>	<u>HS</u>	<u>YO</u>	<u>HS</u>
Low	10	21	17	4
High	14	0	34	0

Note. YO = Young Offender group; HS = High School group

APPENDIX E

INTERCORRELATIONS OF PATERNAL IDENTIFICATION ITEMS

<u>Question #</u>	<u>44</u>	<u>47</u>	<u>49</u>
47	.49*		
49	-.22	-.18	
51	-.22	-.14	.72*

*p < .001

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