The Role of Depressed Mood and Anger in the Relationship Between Family Conflict and Delinquent Behavior

Inga-Dora Sigfusdottir,[1] **George Farkas,**[2] **and Eric Silver**[3]

Drawing on R. Agnew's (Foundation for a general strain theory of crime and delinquency. *Criminology* 30: 47–87, 1992) general strain theory, this paper examines whether depressed mood and anger mediate the effects of family conflict on delinquency. We examine data on 7758 students, 14–16 years old, attending the compulsory 9th and 10th grades of the Icelandic secondary school system. We use structural equation modeling to show that exposure to arguments and fights at home are positively related to both depressed mood and anger among adolescents. Anger is positively associated with delinquent behavior whereas depressed mood has no effect on delinquency.

INTRODUCTION

Numerous studies have found that family conflict is associated with negative outcomes for youth, including delinquency (Aseltine *et al*., 2000). However, little is known about why these associations exist. Common wisdom suggests that family conflict is stressful to children. But exactly how stress translates into outcomes such as delinquency is little understood. Agnew's (1992) general strain theory offers a promising framework for understanding these associations. A major type of strain, according to Agnew's general strain theory, consists of experiencing

unpleasant events or circumstances, including aversive situations at home, particularly arguments and violence. The theory proposes that adolescents are pressed into delinquency by negative emotional reactions that result from being situated in an aversive situation from which they cannot escape. This blockage frustrates the adolescent and may lead to desperate avoidance and/or anger-based delinquency (Agnew, 1985, 1992).

To date, tests of the theory have focused on anger as the most critical emotional reaction. This is because anger results when individuals blame their adversity on others. It increases the individual's level of felt injury, creates a desire for retaliation, energizes the individual for action, and lowers inhibitions. Anger, however, is not the only emotion likely to arise under stress. Adolescents unable to avoid painful or aversive circumstances may experience a range of other negative emotions, including depressed mood. Furthermore, adolescents suffering from depressed mood may attempt to minimize their anguish by engaging in delinquency (Beyers and Loeber, 2003; Kemper, 1978; Kluegel and Smith, 1986).

In this paper we test a model in which family conflict is hypothesized to be positively associated with psychological distress in the form of anger and depressed mood, and in which anger and depressed mood are hypothesized to be positively associated with delinquent behavior. Our model draws from the social stress literature

---

[1] Researcher at the Centre for Social Research and Analysis, Reykjavik, Iceland. Received PhD in sociology from Pennsylvania State University, University Park, Pennsylvania. Current interests include the social context of psychological distress, delinquency, and school achievement among adolescents.

[2] Professor in Sociology at Penn State University, University Park, Pennsylvania. Received PhD in sociology from Cornell University, New York. Current interests include behavior problems and academic performance of at-risk students. To whom correspondence should be addressed at Department of Sociology, Pennsylvania State University, 614 Oswald Tower, University Park, Pennsylvania 16802; e-mail: gfarkas@pop.psu.edu.

[3] Professor in Crime, Law and Justice and Sociology at Penn State University, University Park, Pennsylvania. Received PhD in sociology from the University of Albany, Albany, New York. Interests include the effects of social and interpersonal contexts on crime, violence, and social control.

in both mental health and criminology (Agnew, 1992; Aneshensel, 1992; Cullen, 1994; Pearlin, 1989; Silver and Teasdale, manuscript submitted for publication; Thoits, 1995). This literature focuses on the role that stressful life events and social support play in producing emotional and behavioral outcomes for individuals. Social stress researchers have consistently found that stressful life events and social support contribute to the onset and course of mental disorder (Aneshensel, 1992; Lin *et al*., 1999; Thoits, 1995; Turner and Lloyd, 1999), and a substantial body of criminological research and theory suggests that stressful life events and social support are important links in the pathways that produce delinquency (Agnew, 1992; Colvin *et al*., 2002; Cullen, 1994; Hirschi, 1969). Together, these literatures suggest that both mental health and delinquency are in part determined by the stress and support contexts within which individuals live.

Our study tests the hypothesis that depressed mood and anger mediate the relationship between aversive family circumstances and delinquency. The effects of aversive experiences on delinquency have often been described by social control theory (Hirschi, 1969), which explains delinquency in terms of an absence of significant relationships with conventional others and institutions. In this view, delinquency becomes more likely when adolescents lack attachment to parents and other significant institutions of society, when parents fail to monitor and effectively sanction deviance, and when adolescent's actual or anticipated investment in conventional society is minimal. The theory thus suggests that the absence of social bonds to significant others free the adolescent to engage in delinquency.

The literature furthermore emphasizes social support as an important precondition for the provision of effective social controls. Cullen (1994, p. 538) argues that "the more support a family provides, the less likely it is that a person will engage in crime." According to Cullen (1994), socially supportive relationships foster social control by functioning as a stock of social capital (Coleman, 1988) that the individual must protect to retain. Delinquent acts may increase the risk of losing valued support. Thus, adolescents who are attached to their parents are likely to experience a greater degree of social control over their behavior than those who are not involved in such relationships (Cullen, 1994; Hirschi, 1969). Conversely, individuals with weak attachment bonds are expected to experience fewer social controls over their behavior, thereby enabling them to engage in delinquency. Because parental support/control may ameliorate the effects of family conflict on negative emotions and delinquency, we control this variable in our analysis.

PRIOR RESEARCH

Family Conflict as a Source of Anger and Depressed Mood

Prior research shows that aversive experiences have negative psychological consequences for children and adolescents (Goodyer, 1990; Wan-Ning *et al*., 2000). For example, significant risks are associated with bereavement (Stillion and Wass, 1984; Turner and Lloyd, 1995), divorce of parents (Amato, 1993; Amato and Sobolewski, 2001; Emery and Forehand, 1994) and family conflict, i.e., arguments and physical violence in the home (Amato and Sobolewski, 2001; Henning *et al*., 1997; Horwitz and Widom, 2001; Jekielek, 1998). Research also shows that a focus on isolated life events is not the most appropriate way of viewing most stressors (Rutter and Sandberg, 1992). Thus, the psychological strain associated with divorce may stem both from the family interaction patterns preceding and following the breakup and from the breakup itself (Cherlin *et al*., 1991; Hanson, 1999; Kendler *et al*., 1992; Kuh and MacLean, 1990). Longitudinal studies have indicated that negative psychological consequences are often evident before the divorce, with the main risk stemming from parental conflict, rather than the event of divorce itself (Amato and Keith, 1991). Studies have also shown that divorce does not necessarily bring parental conflict to an end. Follow-up studies have indicated that, all too often, conflict persists, and the extent to which children are caught up in this conflict is an important factor in determining the degree of negative emotional reactions (Amato and Rezac, 1993; Buchanan *et al*., 1991). In this paper we focus on family conflict as a source of strain for adolescents. By family conflict we mean severe arguments and domestic violence at home.

General strain theory and prior research within that paradigm emphasize anger as the most important emotional reaction to family conflict. However, the theory suggests that family conflict may also produce other negative emotions, such as depressed mood (Agnew, 1992). Prior research has confirmed this relationship between stressful events and depressed mood (for a review, see Compas *et al*., 1994). Being exposed to neighborhood violence (Gorman-Smith and Tolan, 1998; Margolin and Gordis, 2000, pp. 458–459; Schwab-Stone *et al*., 1995) and experiencing violence in intimate adolescent relationships (Hagan and Foster, 2001) has also been shown to result in depressed mood among adolescents.

Compas and Hammen (1994) note that in every study in which symptoms of other disorders have been measured, stressful events have been related to these other

symptoms as well as to depressive symptoms. Thus, conflict between adults has been shown to invoke fear in children, along with anger, aggression, and depressed mood (Amato *et al.*, 1995; Cummings, 1987; Cummings *et al.*, 1981). This aspect of strain as a cause of multiple emotional reactions is a basic premise of social stress theory. Empirical studies have demonstrated an association between exposure to stress and a wide array of physical and psychological disorders (Aneshensel, 1992; Lin *et al.*, 1999; Thoits, 1995; Turner and Lloyd, 1999). Aneshensel *et al.* (1991) conclude that contrary to the standard "medical illness" model that considered the outcomes of stress on separate emotions, we now know that stress is a generalized force in mental and physical health, which requires that we simultaneously consider multiple health outcomes if we are to properly understand the role of strain. Hence, stressful events and processes operate as nonspecific risk factors for a variety of symptoms and disorders, including both anger and depressed mood.

Thus we argue that adolescents experiencing conflict at home may become withdrawn, self-involved and sad, as well as angry. We hypothesize that family conflict is a source of generalized strain that is positively related to the emotional reactions of depressed mood and anger.

Hypothesis 1. Being exposed to conflict within the family, in the form of arguments and violence, is positively related to feelings of anger and depressed mood among adolescents.

Anger, Depressed Mood, and Delinquency

Prior studies have provided support for general strain theory (Agnew and White, 1992; Aseltine *et al.*, 2000). That is, strain in the form of negative life events, such as conflict with family members, has been shown to be significantly and positively related to adolescent delinquency. Agnew and White (1992) found that delinquency was related to three scales measuring negative relations at home. The relationship was partly mediated through measures of anger. Paternoster and Mazerolle (1994) found that negative relationships with adults, and the experience of stressful events, such as family breakup, unemployment, and moving, were related to delinquency. Aseltine *et al.* (2000) also showed that strain, in the form of conflict with family members, is significantly and positively related to adolescent delinquency. Their study also confirmed the role of anger in mediating the impact of troubled social relationships on adolescent violent and aggressive acts.

Adolescents living under circumstances of family conflict experience anger, which increases their propensity to commit delinquent acts. Such acting out or what Agnew (1992) refers to as "corrective action" is aimed at making the adolescent feel better by reducing the negative emotions. Thus, on the basis of general strain theory and prior research, we expect anger to increase the likelihood of delinquent behavior.

Hypothesis 2. Anger resulting from family conflict is positively related to delinquency.

It has been suggested that depression, too, may increase the likelihood of delinquency as individuals suffering from such feelings may still feel pressure to relieve their suffering through delinquency (Berkowitz, 1986). Research has indeed found a relationship between depressed mood and delinquent behavior (Kandel and Davies, 1982; Scheier and Botvin, 1997). Agnew however argues that individuals who experience negative emotional responses other than anger are comparatively less likely to respond with illegitimate coping strategies, i.e., delinquent behavior. In an initial test of this aspect of general strain theory, Broidy (2001) found that while anger increases the likelihood of criminal outcomes, other negative emotions, including depressed mood, were associated with a significant decrease in criminal outcomes. Broidy however did not test depressed mood as a separate mediating variable between stressful life events and delinquent behavior, but included depressed mood in a scale of negative emotions other than anger (e.g., feeling disappointed, guilty, insecure, overwhelmed, scared, stressed, worried, and worthless).

It is furthermore important to recognize that anger and depressed mood have been shown to co-occur in children and adolescents (Compas and Hammen, 1994). Some researchers have even argued that symptoms of irritability/anger are so common in depressed children and adolescents that both should be included in the same *DSM* diagnostic criteria for depression. Depressed mood, marked by withdrawal from interaction, and feelings of hopelessness toward the future is often accompanied by outbursts of anger and aggression (Menaghan, 1999). Compas and Hammen (1994), for example, describe a typical depressed adolescent as persistently sad and unhappy, overcome with feelings of personal worthlessness, socially withdrawn from others, constantly tired but finding it difficult to sleep, and finding it hard to concentrate on work at school. However, withdrawal is often accompanied by periodic outbursts of anger and aggression. From time to time the adolescent lashes out in rage at parents or others, becomes involved in fights with other students at

school, and has difficulty complying with rules. Although substantial research has documented these patterns of co-occurrence of anger and depressed mood (Compas and Hammen, 1994; Renouf and Harter, 1990), their implications remain to be explored. Thus, studies revealing that depressed mood and delinquent behavior are positively related have failed to distinguish depressed mood from other negative emotions such as anger in predicting outcomes, such as delinquency. That is, a number of studies have shown that although children and adolescents clearly experience depressed mood in addition to anger, it is unclear whether depressed mood has independent effects on delinquent behavior.

Hypothesis 3.   Controlling for anger, depressed mood will not affect delinquent behavior.

Gender Differences in Reaction to Strain

Empirical studies have shown that adolescent girls report and exhibit more symptoms of depression than do adolescent boys (Kandel and Davies, 1982; Nolen-Hoeksema, 2001; Siegel *et al.*, 1998). These gender differences persist into adulthood, with the prevalence of depression in community studies of adults being about twice as high for women as men (Broidy and Agnew, 1997; Nolen-Hoeksema, 2001).

As regards delinquent behavior, decades of research have shown that males have higher crime rates than do females (Broidy and Agnew, 1997; Steffensmeier and Allan, 1995). These gender gaps in depression and delinquency have often been explained in similar ways. Traditional strain theories focus on more strain in boys′ lives as explanations for their delinquent behavior. Strain in this sense stems from their inability to reach the goals of monetary success or middle-class status or both (Cloward and Ohlin, 1960; Cohen, 1955; Merton, 1938). Within the mental health literature, strain has also been found to be an important explanation for higher levels of depressed mood among girls. A number of studies conclude that girls report more stress and strain than do boys, and that they are more likely to respond to strain with depression (Gore *et al.*, 1992; Seiffge-Krenke and Stemmler, 2002). Conflict in interpersonal relationships has furthermore been shown to be an especially detrimental source of depressed mood among girls (Nolen-Hoeksema, 2001).

In 1995 Mirowsky and Ross pointed out that women and men may experience equal levels of frustration and hardship that produce emotional reactions in women and behavioral problems in men. In line with that, contem-

porary ideas about gender-role socialization suggest the possibility of gendered response to stressors. According to those ideas, girls respond to strain with depressed mood, whereas boys are more likely to respond with anger and hostility (Dornfeld and Kruttschnitt, 1992; Kopper and Epperson, 1991; Mirowsky and Ross, 1995; Ogle *et al.*, 1995). Research on gender, strain, and anger however challenges this view, as girls have been shown to be just as likely, as or even more likely than boys to respond to strain with anger (Broidy and Agnew, 1997; Campbell, 1993; Conger *et al.*, 1993; Kopper and Epperson, 1991). General strain theory emphasizes anger as the most important emotional reaction to increase the likelihood of delinquency. This emphasis makes higher levels of anger among girls and higher levels of delinquency among boys problematic. Why should girls become angrier than boys, but less delinquent? One potential explanation for this has been suggested, namely that although girls experience higher levels of anger than boys, they also experience higher levels of depressed mood. Their depressed mood hence may counteract their anger and decrease the likelihood of delinquency among girls (Broidy and Agnew, 1997). In the current study, we test this suggestion. We expect that girls experience higher levels of depressed mood and anger than boys. However, we hypothesize that anger will be associated with higher levels of delinquency among boys than among girls. In line with prior arguments in the current study, we expect that controlling for anger, depressed mood will not affect delinquent behavior among boys nor among girls.

Hypothesis 4.   Being exposed to conflict within the family, in the form of arguments and violence, is more strongly positively related to feelings of depressed mood among girls than boys.

Hypothesis 5.   Being exposed to conflict within the family, in the form of arguments and violence, is more strongly positively related to feelings of anger among girls than boys.

Hypothesis 6.   Anger is more strongly positively related to delinquency among boys than among girls.

Hypothesis 7.   Controlling for anger, depressed mood will not affect delinquent behavior among girls and boys.

A MODEL OF AVERSIVE FAMILY CIRCUMSTANCES, EMOTIONAL REACTIONS, AND BEHAVIOR

We investigate the relationship between family conflict and delinquency among adolescents mediated
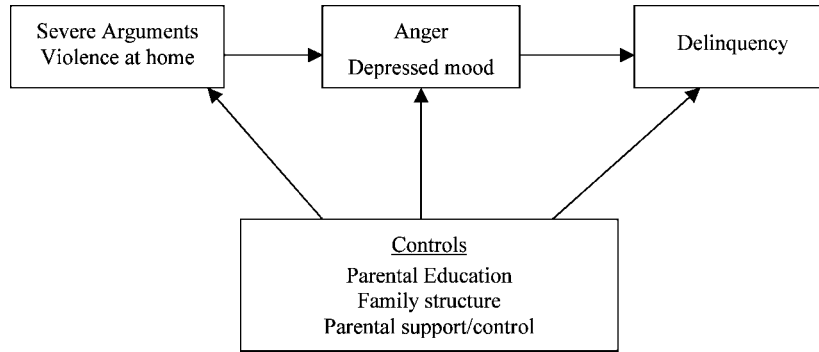
Fig. 1. A model of family conflict, depressed mood, anger, and delinquent behavior.

through both anger and depressed mood. As shown in Fig. 1, we estimate the effects of family conflict, measured as severe arguments and violence in the home, on depressed mood and anger, as well as their mediating effects on delinquency. The model is estimated controlling for the impact of parental support/control. In addition, the model is estimated controlling for the potentially confounding influence of socioeconomic status, measured as parental education, and family structure, that is whether adolescents live with either natural parents, or in other family arrangements.

We provide a test of whether the relationship between family conflict, emotional reactions, and delinquency differs by gender. We do so by comparing the fit of the model when it is estimated separately for boys and girls, to that of the model in which males and females are analyzed together.

METHOD

Sample and Data

The data used in the study come from a national survey of Icelandic adolescents (Thorlindsson *et al.*, 1998). The sample consists of all students attending the 9th and 10th grades in all Icelandic secondary schools. Anonymous questionnaires were administered to all students that were present in class on March 17, 1997. Teachers and research assistants distributed the questionnaires, and students sealed them in blank envelopes upon completion (for methodological details, see Bjarnason, 1995). Valid questionnaires were obtained from 7758 individuals, approximately 89% of all students in these age groups.

In Iceland, schooling is obligatory for these grades and all schools are funded by the municipalities and supervised by the Ministry of Education. The Icelandic ed-

ucational system is divided into 9 geographical districts. In terms of student population, the largest districts include Reykjavik (33.1%), the surrounding capital area (21.9%), and the Northeast district where the large town of Akureyri is located (10.1%). The other 6 districts account for the remaining 34.9% of the student population in these age groups. However, the more rural districts are characterized by numerous, smaller schools. As a result, the number of schools is roughly equal in all districts (8–13% of total), with the exception of fewer schools in the Reykjanes district.

Control Variables

Five latent variables were used in the study along with three observed variables. All latent constructs were measured with multiple indicators. Appendix A presents means and standard deviations of the variables in the analysis. Two variables were used as control variables in the study, family structure, i.e., whether adolescents live with both biological parents or in other family arrangements and family socioeconomic status, measured by parental education. In Iceland, around 94% of the population is of Anglo-Saxon descent (Hagsstofa Íslands, 2001) and 88% of the population belongs to the Lutheran Church (Hagsstofa Íslands, 2001). Because of this homogeneity, other exogenous factors, such as race, ethnicity, and religion, often used in research in the United States, are not included in the study.

Family Structure

Family structure measures whether adolescents live with both biological parents (74%) or in other family arrangements (26%). Within the group of adolescents living

in other arrangements, a total of 10.4% lived with a single mother and 11.4% with a mother and stepfather. The remaining students lived with a single father (1.3%), their father and stepmother (1.3%), or in other settings (1.6%), such as with grandparents, siblings, relatives, or on their own.

Parental Education

As an indicator of socioeconomic status, respondents were asked about the educational attainment of each of their parents (1 = "finished elementary school or less," 2 = "started a school on the secondary level," 3 = "finished secondary level," 4 = "started university level," 5 = "has a university degree"). The scores were summarized on two scales ranging from 1 (mother finished elementary education or less), to 5 (mother has a university degree), and from 1 (father finished elementary education or less) to 5 (father has a university degree).

Parental Support/Social Bonds

Parental support was measured by questions about how easy or hard it would be for adolescents to get the following from their parents: warmth and caring, discussions about personal affairs and advice about their studies. Answers ranged on a Likert scale from 1 (very difficult), 2 (rather difficult), 3 (rather easy), to 4 (very easy).

Family Conflict Variables

Two questions were used to measure conflict within the adolescents' homes.

Severe arguments. The adolescents were asked whether, in the last year, they had experienced severe arguments at home. Answers ranged on a scale from 1 = "no," 2 = "yes, 10–12 months ago," 3 = "yes, 7–9 months ago," 4 = "yes, 4–6 months ago," 5 = "yes, 3 months ago or less." Note that these arguments may have been entirely between the parents or may have included the adolescent.,

Physical violence. The adolescents were asked whether, in the last year, they had experienced physical violence at home. Answers ranged on a scale from 1 = "no," 2 = "yes, 10–12 months ago," 3 = "yes, 7–9 months ago," 4 = "yes, 4–6 months ago," 5 = "yes, 3 months ago or less." Note that physical violence at home may have been entirely between the parents or may have included the adolescent.

Mediating Variables

Depressed Mood

Feelings of depressed mood were tapped by 10 questions. Respondents were asked how often during the last week the following statements applied to them: "I was sad or had little interest in doing things," "I had little appetite," "I felt lonely," "I had sleeping problems," "I cried easily or wanted to cry," "I felt sad or blue," "I was not excited in doing things," "I was slow or had little energy," "The future seemed hopeless," and "I thought of committing suicide." Answers ranged from 1 = "never," 2 = "seldom," 3 = "sometimes," to 4 = "often."

Anger

To measure anger, respondents were asked how often during the last week the following statements applied to them: I was easily annoyed and irritated, I experienced outbursts of anger that I could not control, I wanted to break or damage things, I yelled at somebody or threw things. Answers ranged from 1 = "never," 2 = " seldom," 3 = "sometimes," to 4 = "often."

Dependent Variable

Delinquency

To assess respondents' delinquent behavior, they were asked how often they had done something of the following in the past 12 months: stolen something that was worth less than 5000 Icelandic kroners (approximately $50), stolen something that was worth more than 5000 Icelandic kroners, committed a burglary to steal, vandalized, and used physical violence. Answers ranged on a Likert scale from 1 = "never," 2 = "once," 3 = "2–5 times," 4 = "6–9 times," 5 = "10–13 times," 6 = "14–17 times, to 7 = "18 times or more often."

Statistical Analysis

The following data analysis is based on structural equation modeling (SEM) and was conducted by using AMOS (Arbuckle and Wothke, 1999; Maruyama, 1998). SEM allows us to explicitly model both direct and indirect effects using both measured and latent variables.

The Measurement Model

As a first step toward testing the structural model, we specified and tested the measurement model. We specified 5 latent variables: parental education, parental support, depressed mood, anger, and delinquency. The specification includes the number of factors, the number of indicators for each factor, and whether the measurement errors are allowed to correlate or not. Confirmatory factor analysis was used to test the fit of the hypothesized factor structure to the covariance matrix of the observed variables. In the construction of all latent variables we used confirmatory factor analysis from the beginning, as the latent variables already made clear what indicators we should be seeking.

The structural equation model in Fig. 1 can be expressed as

$$\eta = \beta\eta + \Gamma\xi + \zeta$$

where β is the matrix of regression weights relating the endogenous (η) variable, delinquency to the mediating variables depressed mood, anger, arguments, violence, and support. Γ is the matrix of regression weights relating the exogenous (ξ) variables, parental education and family structure to the endogenous (η) ones, and ζ is a vector of error terms. Table I lists the factor loadings of items on each of the constructs, separated out by gender. They are all substantial and statistically significant.

We analyzed 2 models, one for the entire sample and another for boys and girls separately. The traditional method in structural equation models is to perform a chi-square test of the null hypothesis that the observed and the expected matrices are identical. The model is thus accepted if the test fails to reject the null hypothesis. In large samples such tests will reject good models on the basis of trivial misspecifications (Gerbing and Anderson, 1993). This happens in both our models. The chi-square tests turn out significant, because of large sample sizes (the whole model includes 7785 cases). In Table II the fit indices for both models are shown. Other fit indices than the chi-square test reveal that both models fit the data well although the second one, split by gender, seems to be better

Table I. Standardized Factor Loadings for Latent Constructs

	Boys/girls				
	Parental education	Support	Depressed mood	Anger	Delinquency
Mothers education	0.81/0.71				
Fathers education	0.65/0.70				
How easy or hard it is to get warmth and caring from parents		0.76/0.77			
How easy or hard it is to get discussions with parents about personal affairs		0.76/0.70			
How easy or hard it is to get advice from parents about studies		0.54/0.53			
I was sad or had little interest in doing things			0.57/0.63		
I had little appetite			0.44/0.40		
I felt lonely			0.65/0.67		
I had sleeping problems			0.47/0.47		
I cried easily or wanted to cry			0.53/0.72		
I felt sad or blue			0.75/0.84		
I was not excited in doing things			0.56/0.67		
I was slow or had little energy			0.58/0.63		
The future seemed hopeless			0.68/0.71		
I thought of committing suicide			0.53/0.59		
I was easily annoyed and irritated				0.58/0.62	
I experienced outbursts of anger that I could not control				0.78/0.81	
I wanted to break or damage things				0.75/0.77	
I yelled at somebody or threw things				0.65/0.66	
Stole something that was worth less than 5000 Icelandic kroners (approximately $50)					0.62/0.52
Stole something that was worth more than 5000 Icelandic kroners					0.83/0.67
Committed a burglary to steal.					0.59/0.55
Vandalized					0.80/0.63
Used physical violence					0.69/0.67

Note. All factor loadings are statistically significant; $p < 0.01$.

Table II. Fit Measures for the Models

	Whole sample model	Model split by gender
Number of distinct sample moments	405	810
Number of distinct parameters to be estimated	99	202
Degrees of freedom	306	608
Chi-square	10172	9662
Tucker–Lewis	0.97	0.98
RMSEA	0.064	0.040

than the one for the full sample. The Tucker–Lewis Index (Non-Normed Fit Index) adjusts for model complexity but measures how much better the model fits compared with the baseline model. It has been shown to have the best overall performance regardless of sample size. A value of at least 0.90 is required to accept a model and a value of at least 0.95 is required to judge the model fit as good. The model split by gender in Table II has a Tucker–Lewis index value of 0.98, which implies that it fits the data very well. RMSEA is a measure of lack of fit of the model to the population covariance matrix per degree of freedom for the model. The model for boys and girls in Table II has RMSEA of 0.04, which indicates a good fit. Hence, we use the results for the second model in this paper.

Intercorrelations for the study variables are presented in Appendix B. In line with studies showing the comorbidity of anger and depressed mood in children and adolescents, our findings in Appendix B show that depressed mood and anger are highly correlated for both girls ($r = 0.64$) and boys ($r = 0.53$). This underlines the importance of controlling for each item when estimating the effects of the other.

The findings in Appendix B also indicate that experiencing severe arguments at home is positively related to depressed mood at $r = 0.30$ for girls and $r = 0.23$ for boys and related to feelings of anger at $r = 0.34$ for girls and $r = 0.26$ for boys. Being witness to or a victim of domestic violence is also related to depressed mood at $r = 0.20$ among girls and among boys at $r = 0.18$ and to anger among girls at $r = 0.24$ and among boys at $r = 0.23$ boys. The correlation between anger and delinquency is positive and significant at $r = 0.29$ for girls and at $r = 0.27$ for boys. The correlation between depressed mood and delinquency is positive and significant for both girls ($r = 0.23$) and boys ($r = 0.16$). This finding is in line with other studies that have revealed a positive relationship between depressed mood and delinquent behavior among children and adolescents (Kandel and Davies, 1982).

The findings reveal that there are significant differences in mean levels of depressed mood, anger, and delinquent behavior among girls and boys. Girls experience significantly higher levels of depressed mood than boys. They furthermore experience higher levels of anger than boys. Although the difference is small, it is statistically significant. As expected, boys however report higher levels of delinquent behavior.

We also see that support from parents correlates substantially with both depressed mood ($r = -0.33$ for girls and $r = -0.24$ for boys) and anger ($r = -0.28$ for girls and $r = -0.21$ for boys) as well as with the outcome variable, delinquency ($r = -0.16$ for girls and $r = -0.14$ for boys). This shows the importance of controlling for parental support while modeling the effects of strain on delinquent behavior through anger and depressed mood.

Multivariate Results

Findings From the Structural Model

In Table III we present the standardized and the unstandardized regression weights from the structural equation models.

We have already seen that feelings of anger and depressed mood are related. Thus, sadness, lack of interest, and loss of energy often are accompanied with outbursts of anger and aggression. Our results confirm our first hypothesis that not only are these feelings related, but they are also rooted in aversive family situations. While controlling for family background and parental support, family conflict, that is experiencing arguments and violence at home, have direct positive effects on both depressed mood and anger. Table III shows that arguments in the home have a rather strong impact on both depressed mood (girls: $\beta = 0.22$, $t > 1.96$; boys: $\beta = 0.17$, $t > 1.96$) and anger (girls: $\beta = 0.27$, $t > 1.96$; boys: $\beta = 0.20$, $t > 1.96$) among adolescents. Although the effects are considerably lower, especially among girls, the experience of domestic violence also turns out to be a significant predictor of depressed mood (girls: $\beta = 0.06$, $t > 1.96$; boys: $\beta = 0.10$, $t > 1.96$) and anger (girls: $\beta = 0.11$, $t > 1.96$; boys: $\beta = 0.16$, $t > 1.96$). Thus, our results show that experiencing conflict at home makes adolescents both angry and depressed.

Consistent with our second hypothesis, we see that anger resulting from family conflict, in turn, has a significant positive impact on delinquency. The direct effects of anger on delinquency are strong for girls, at 0.26, and boys, at 0.26 ($t > 1.96$). Looking at the indirect effects of family conflict on delinquency, through anger,

Table III. Standardized and Unstandardized Regression Weights for the Final Model With Depressed Mood and Anger as Mediating Factors

	Standardized coefficients		Unstandardized coefficients		SE		CR	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Hypothesized relationships								
Severe arguments → Depressed mood	0.22**	0.17**	0.066	0.046	0.005	0.005	12.733	9.779
Severe arguments → Anger	0.27**	0.20**	0.103	0.082	0.007	0.007	14.883	11.152
Violence → Depressed mood	0.06**	0.10**	0.038	0.044	0.009	0.008	3.962	5.725
Violence → Anger	0.11**	0.16**	0.083	0.113	0.013	0.012	6.596	9.275
Anger → Delinquency	0.26**	0.26**	0.276	0.426	0.028	0.037	10.038	11.426
Depressed mood → Delinquency	0.00n	−0.02n	−0.002	−0.054	0.031	0.051	−0.069	−1.063
Control relationships								
Parental education → Severe arguments	−0.07*	0.02n	−0.091	0.015	0.028	0.018	−3.227	0.843
Parental education → Violence	−0.07**	0.02n	−0.051	0.010	0.015	0.011	−3.402	0.888
Parental education → Support	0.25**	0.17**	0.113	0.064	0.012	0.010	9.405	6.238
Parental education → Depressed mood	−0.04n	0.03n	−0.017	0.007	0.009	0.005	−1.916	1.301
Parental education → Anger	−0.08**	−0.03	−0.043	−0.012	0.012	0.008	−3.600	−1.404
Parental education → Delinquency	0.02n	−0.03n	0.013	−0.024	0.014	0.014	0.900	−1.707
Family structure → Severe arguments	−0.13**	−0.15**	−0.483	−0.463	0.057	0.048	−8.442	−9.627
Family structure → Violence	−0.08**	−0.08**	−0.155	−0.144	0.030	0.029	−5.135	−5.050
Family structure → Support	0.11**	−0.09**	0.124	0.106	0.021	0.021	5.758	4.999
Family structure → Depressed mood	−0.07**	−0.04*	−0.070	−0.033	0.018	0.014	−3.928	−2.373
Family structure → Anger	−0.03n	−0.02n	−0.046	−0.029	0.023	0.022	−1.954	−1.315
Family structure → Delinquency	−0.08**	−0.09**	−0.121	−0.211	0.028	0.037	−4.382	−5.703
Severe arguments → Delinquency	0.04*	0.09**	0.017	0.065	0.008	0.013	2.065	5.169
Violence → Delinquency	0.14**	−0.08**	0.014	0.094	0.015	0.021	7.470	4.557
Support → Depressed mood	−0.37**	−0.26**	−0.348	−0.184	0.022	0.015	−16.023	−12.1
Support → Anger	−0.31**	−0.23**	−0.374	−0.248	0.027	0.023	−13.837	−10.855
Support → Delinquency	−0.04n	−0.07**	−0.058	−0.132	0.034	0.040	−1.695	−3.309

$^*p < 0.05$ (2-tailed). $^{**}p < 0.01$ (2-tailed).

furthermore reveals a significant relationship. The indirect effects of severe arguments on delinquency, through anger, are 0.05 among boys and 0.07 among girls. The indirect effects of family violence on delinquency, through anger, are 0.04 among boys and 0.03 among girls. The total effects of arguments on delinquency among girls is 0.12 and among boys 0.14. The standardized total effect of physical violence at home on delinquency among girls is 0.17 and among boys 0.12. Hence, we see that the effects are partially, not fully, mediated through anger.

We also find that, controlling for anger, depressed mood does not exert a significant effect on delinquency among adolescents. This is an important finding and confirms our third hypothesis. A model that did not include anger revealed a significant positive effect of depressed mood on delinquency for both girls and boys. We present the parameters from such a model in Appendix C.

The findings from that model indicate that the standardized effects of depressed mood on delinquency are substantial, 0.13 for girls and 0.09 for boys. A much more informative picture emerges, however, when we incorporate anger along with depressed mood in the model, as

revealed in Table III. There, we see that the effects of depressed mood on delinquency are rendered insignificant, indicating that adolescents engage in delinquency due to their feelings of anger, not due to their feelings of depressed mood. Adolescents living in aversive circumstances often suffer from feelings of both anger and depressed mood. However, it is the feelings of anger that are associated with delinquency.

It is worth noting that our results underline the need to control for parental support, which turns out to be a strong predictor of both depressed mood and anger, especially among girls. The effects of parental support on depressed mood among girls is −0.37 and among boys −0.26. The effects of parental support on anger are −0.31 among girls and −0.23 among boys. The indirect effects of parental support on delinquency are similar in strength to the family conflict variables, −0.05 among boys and −0.08 among girls.

To find out if girls and boys differ significantly with respect to any single parameter, we had AMOS compute a table of critical ratios of differences among all pairs of free parameters. The critical ratio is the difference between the parameters divided by the estimated standard error of the

difference (Arbuckle and Wothke, 1999). Similar to the *t* statistic, the critical ratio statistic can be compared to a table of the standard normal distribution to test whether each pair of parameters listed in the table are equal. Looking at the hypothesized relationships, we find that the principal difference between girls and boys lies in the effects of anger on delinquency, which is almost 2 times stronger for boys than for girls. This finding supports our sixth hypothesis. Looking at Table III, we see that the unstandardized effects of anger on delinquency are 0.28 for girls whereas it is 0.43 for boys. Family conflict furthermore has significantly stronger effects on delinquency among boys than among girls.

The effects of family conflict on emotional reactions are either similar in strength or slightly stronger for girls. These findings partly support our fourth and fifth hypotheses. Hence, the effects of severe arguments on depressed mood are significantly stronger for girls than for boys. The effects of severe arguments on anger are also significantly stronger for girls than for boys. The effects of domestic violence on both anger and depressed mood however are similar for boys and girls. All other relationships are of similar strength among girls and boys. Among both groups, there is no effect of depressed mood on delinquency, when the effects of anger are taken into account, which supports our seventh hypothesis.

Looking at gender differences in the effects of parental support, we find that support from parents has a very different effect by gender, especially on emotional reactions. The unstandardized effects of parental support on depressed mood are −0.35 among girls whereas it is −0.18 among boys. Similarly, the effects of parental support on anger are substantially stronger for girls than for boys. The effects of parental support on delinquency are negative and much stronger for boys than for girls. In general, although gender differentials in the effects of family conflict on negative emotions are only slightly different among boys and girls, the effects of parental support on negative emotional reactions are much stronger for girls than for boys. On the other hand, the effects of family conflict and support on delinquent behavior are in both cases much stronger for boys than for girls.

DISCUSSION

We tested a model of the relationships between family conflict, psychological distress, in the form of anger and depressed mood, and delinquent behavior. A number of observations emerge from this analysis. First, our study provides strong evidence for the importance of examining both depressed mood and anger as reactions to family conflict. Being exposed to conflict within the family causes both feelings of anger and depressed mood among adolescents. Thus, in line with prior research (Aneshensel *et al.*, 1991), we find that the impact of strain on emotional reactions is not limited to a single type of negative emotion. This finding underlines the need to simultaneously consider multiple emotional outcomes if we are to better understand the impact of strain on emotional reactions among adolescents.

Second, in line with general strain theory, our study shows that family conflict increases the likelihood of delinquent acts among adolescents. Similar findings on the effects of aversive circumstances on delinquent behavior have been documented before (Agnew, 1985; Aseltine *et al.*, 2000). Our results also show that the effects of family conflict are partially mediated through anger. This means that location in an aversive environment not only has an indirect effect on delinquency through emotional reactions, but also a direct effect. Adolescents in such environments are more likely to engage in illegal acts, even when not suffering from feelings of anger. This implies that other processes, such as modeling, may be at work in mediating the effects of family conflict on delinquency (Amato *et al.*, 1995; Jekielek, 1998). The basic tenet of modeling theory is that children tend to imitate their parents (e.g., Bandura, 1977). Hence, adolescents witnessing conflict between parents may learn to respond to difficulties by using aggressive behavior, or by breaking rules more generally.

Third, controlling for anger, depressed mood does not affect delinquent behavior. This finding underlines the importance that general strain theory places on anger as a critical mediating variable in the relationship between family conflict and delinquency. Our findings show that anger and depressed mood are highly correlated emotions, indicating that they co-occur to a great extent. This is consistent with the emphasis on comorbidity discussed in previous literature, i.e., the concurrence of internalizing and externalizing symptoms (Curran, 1987; Gispert *et al.*, 1987; Renouf and Harter, 1990; Rutter, 1989). Our results show that comorbidity on the other hand does not mean that these emotions are similar in their relations to behavioral outcomes. Whereas anger energizes the individual for action, lowers inhibitions, and hence increases delinquent behavior, feelings of depressed mood are not related to delinquent behavior. In contrast to studies that have revealed a positive relationship between depressed mood and delinquency, our results show that controlling for anger, depressed mood is not related to delinquent behavior. This finding adds to our understanding of the implications of the interrelatedness between these phenomena. It shows that whereas depressed mood and anger are overlapping

phenomena, they are separate in their relations to behavioral outcomes.

Our results show that the effects of strain on delinquency are different among boys and girls; that is, family conflict has stronger effects on delinquency among boys than among girls. This is not consistent with prior research within general strain theory (Hoffman and Miller, 1998; Paternoster and Mazerolle, 1994), which has found that stressful life events have a similar effect on delinquency and delinquency escalation among males and females. In our case, we see that the main difference between girls and boys lies in the effects of anger on delinquency, which is much stronger for boys than for girls, but in the same direction. While severe arguments affect both depressed mood and anger more strongly among girls than among boys, and girls show higher levels of both emotional reactions, they report less delinquent behavior than boys. At first glance, these findings seem to contradict general strain theory and its emphasis on anger as a critical mediator between aversive circumstances and delinquent behavior. As girls are more strongly emotionally affected by strain and show higher levels of anger, one might expect them to also be more delinquent than boys. Our findings indicate that lower levels of delinquent behavior among girls may stem from counteractive effects of depressed mood and anger on behavior. While our study shows that they indeed feel no less angry than boys in reaction to stress, girls also experience more depressed mood. As the study has revealed, depressed mood and anger often co-occur in adolescents, whereas they have separate effects on behavioral outcomes. High level of depressed mood hence may hinder adolescents in reacting on their feelings of anger by bursting out. As girls in general experience higher levels of depressed mood, this may explain why they are less likely to become delinquent.

In general we find that there is a large difference between the effects of parental support and strain on emotional reactions by gender. Thus, parental support is a stronger predictor of both depressed mood and anger among girls than among boys. Speculating on these findings, it may be that females are more sensitive than males to the level of support they are experiencing. Avison and McAlpine (1992) suggested that their findings, showing a significant difference in the effect of support on depressed mood among girls, might be a function of their choice of mental health outcome, as they did not include anger as a variable in their study. Our results imply that this is not the case. We include both anger and depressed mood in our analysis and find that the effects of parental support on both negative emotions are stronger for girls than for boys.

APPENDIX A: DESCRIPTIVE STATISTICS

Variables	Range	Girls		Boys	
		M	SD	M	SD
Family structure	0–1	0.74	0.43	0.74	0.44
Living with both parents = 1					
Living in other arrangements = 0					
Parental education	0–10	4.74	2.71	4.63	2.92
Mothers education	0–5	2.19	1.54	2.08	1.67
Fathers education	0–5	2.54	1.60	2.55	1.66
Family conflict					
Severe arguments at home	0–4	0.60	1.33	0.83	1.53
Physical violence at home	0–4	0.18	0.78	0.20	0.80
Parental support	0–9	7.31	1.84	7.01	1.85
How easy or hard it is to get warmth and caring from parents	0–3	2.63	0.65	2.49	0.67
How easy or hard it is to get discussions with parents about personal affairs	0–3	2.25	0.88	2.18	0.87
How easy or hard it is to get advice from parents about studies	0–3	2.43	0.80	2.44	0.77
Depressed mood	0–30	8.25	6.63	5.40	5.00
How often during the last week: I was sad or had little interest in doing things	0–3	1.28	0.97	1.15	0.94
I had little appetite	0–3	1.09	1.05	0.68	0.87
I felt lonely	0–3	0.84	1.01	0.51	0.81
I had sleeping problems	0–3	0.76	1.01	0.62	0.92
I cried easily or wanted to cry	0–3	0.91	1.09	0.18	0.54
I felt sad or blue	0–3	1.02	1.00	0.50	0.77
I was not excited in doing things	0–3	0.79	0.90	0.71	0.84
I was slow or had little energy	0–3	0.64	0.90	0.47	0.77
The future seemed hopeless	0–3	0.60	0.96	0.40	0.81
I thought of committing suicide	0–3	0.36	0.82	0.24	0.69
Anger	0–12	3.03	2.89	2.69	2.74
I was easily annoyed and irritated	0–3	1.50	0.98	1.21	0.95
I experienced outbursts of anger that I could not control	0–3	0.61	0.92	0.45	0.81
I wanted to break or damage things	0–3	0.59	0.97	0.72	1.03
I yelled at somebody or threw things	0–3	0.32	0.74	0.31	0.68
Delinquency	0–30	0.89	2.15	2.14	3.94
Stole something that was worth less than 5000 Icelandic kroners (approximately $50)	0–6	0.56	1.25	0.92	1.54
Stole something that was worth more than 5000 Icelandic kroners	0–6	0.10	0.50	0.29	0.91
Committed a burglary to steal	0–6	0.01	0.17	0.08	0.53
Vandalized	0–6	0.04	0.34	0.26	0.85
Used physical violence	0–6	0.18	0.65	0.61	1.22

Note. N (Boys) = 4000. N (Girls) = 3750.

APPENDIX B: CORRELATION AMONG STUDY VARIABLES FOR GIRLS AND BOYS

	Girl/Boy							
	Parental education	Family structure	Severe arguments	Violence	Support	Depressed mood	Anger	Delinquency
Parental education	1.00/1.00							
Family structure	0.09**/0.06**	1.00/1.00						
			1.00/1.00					
Severe arguments	−0.04*/0.01n	−0.14**/−0.15**						
Violence	−0.04*/0.01n	−0.09**/−0.07**	0.37**/0.33**	1.00/1.00				
Support	0.21**/0.17**	0.10**/0.09**	−0.25**/−0.24**	−0.19**/−0.16**	1.00/1.00			
Depressed mood	−0.11**/−0.01n	−0.14**/−0.09**	0.30**/0.23**	0.20**/0.18**	−0.33**/−0.24**	1.00/1.00		
Anger	−0.12**/−0.05**	−0.11**/−0.08**	0.34**/0.26**	0.24**/0.23**	−0.28**/−0.21**	0.64**/0.53**	1.00/1.00	
Delinquency	−0.02n/−0.04*	−0.13**/−0.12**	0.20**/0.20**	0.20**/0.17**	−0.16**/−0.14**	0.23**/0.16**	0.29**/0.27**	1.00/1.00

$^*p < 0.05$ (2-tailed). $^{**}p < 0.01$ (2-tailed).

APPENDIX C: STANDARDIZED AND UNSTANDARDIZED REGRESSION WEIGHTS FOR THE MODEL WITH DEPRESSED MOOD AS A MEDIATING FACTOR

	Standardized coefficients		Unstandardized coefficients		SE		CR	
Regression weights	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Severe arguments → Depressed mood	0.23**	0.17**	0.070	0.047	0.005	0.005	13.05	9.930
Violence → Depressed mood	0.07**	0.10**	0.041	0.046	0.010	0.008	4.281	5.856
Depressed mood → Delinquency	0.13**	0.09**	0.181	0.234	0.030	0.051	5.962	4.558
Control relationships								
Parental education → Severe arguments	−0.06*	0.02n	−0.091	0.015	0.028	0.018	−3.186	0.83
Parental education → Violence	−0.07**	0.02n	−0.051	0.010	0.015	0.011	−3.373	0.894
Parental education → Support	0.24**	.17**	0.115	0.064	0.012	0.010	9.230	6.160
Parental education → Depressed mood	−0.03n	0.02n	−0.016	0.007	0.009	0.005	−1.694	1.202
Parental education → Delinquency	0.00n	−0.05*	0.002	−0.033	0.014	0.015	0.124	−2.242
Family structure → Severe arguments	−0.14**	−0.15**	−0.482	−0.464	0.057	0.048	−8.429	−9.639
Family structure → Violence	−0.08**	−0.08**	−0.154	−0.144	0.030	0.029	−5.108	−5.065
Family structure → Support	0.11**	0.09**	0.126	0.106	0.022	0.021	5.761	4.971
Family structure → Depressed mood	−0.07**	−0.04*	−0.078	−0.036	0.018	0.014	−4.294	−2.507
Family structure → Delinquency	−0.08**	−0.10**	−0.121	−0.213	0.028	0.037	−4.360	−5.700
Severe arguments → Delinquency	0.08**	0.12**	0.033	0.087	0.008	0.012	4.116	6.974
Violence → Delinquency	0.16**	0.11**	0.130	0.130	0.015	0.021	8.487	6.296
Support → Depressed mood	−0.30**	−0.22**	−0.279	−0.158	0.020	0.015	−13.649	−10.657
Support → Delinquency	−0.07*	−0.09**	−0.082	−0.174	0.030	0.038	−2.741	−4.562

$^*p < 0.05$ (2-tailed). $^{**}p < 0.01$ (2-tailed).

REFERENCES

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology* 30: 47–87.

Agnew, R., and White, H. R. (1992). An empirical test of general strain theory. *Criminology* 30(4): 475–499.

Agnew, R. A. (1985). A revised strain theory of delinquency. *Soc. Forces* 64(1): 151–167.

Amato, P. R. (1993). Children's adjustment to divorce: Theories, hypotheses, and empirical support. *J. Marr. Fam.* 55(1): 23–38.

Amato, P. R., and Keith, B. (1991). Parental divorce and the well-being of children: A meta-analysis. *Psychol. Bull.* 110: 26–46.

Amato, P. R., and Rezac, S. J. (1993). Contact with non-resident parents, interparental conflict, and children's behavior. *J. Fam. Issues* 15: 191–207.

Amato, P. R., and Sobolewski, J. M. (2001). The effects of divorce and marital discord on adult children's psychological well-being. *Am. Sociol. Rev.* 66(6): 900–921.

Amato, P. R., Spencer, L., and Booth, A. (1995). Parental divorce, marital conflict and offspring well-being during early adulthood. *Soc. Forces* 73: 895–915.

Aneshensel, C. (1992). Social stress: Theory and research. *Annu. Rev. Sociol.* 18: 15–38.

Aneshensel, C., Rutter, C. M., and. Lachenbruch, P. A. (1991). Social structure, stress, and mental health: Competing conceptual and analytic models. *Am. Sociol. Rev.* 56(2): 166–178.

Arbuckle, J. L., and Wothke, W. (1999). *AMOS 4.0 User's Guide*. Small-Waters Corporation, Chicago, Illinois.

Aseltine, R. H., Jr., Gore, S., and Gordon, J. (2000). Life stress, anger and anxiety, and delinquency: An empirical test of general strain theory. *J. Health Soc. Behav.* 41: 256–275.

Avison, W. R., and McAlpine, D. D. (1992). Gender differences in symptoms of depression among adolescents. *J. Health Soc. Behav.* 33: 77–96.

Bandura, A. (1977). *Social Learning Theory*. Prentice-Hall, Uppersaddle River, NJ.

Berkowitz, L. (1986). *A Survey of Social Psychology*. Holt, Rinehart and Winston, New York.

Beyers, J. M., and Loeber, R. (2003). Untangling developmental relations between depressed mood and delinquency in male adolescents. *J. Abnorm. Child Pscyhol.* 31(3): 247–266.

Bjarnason, T. (1995). Administration mode bias in a school survey on alcohol, tobacco and illicit drug use. *Addiction* 90: 550–559.

Broidy, L. M. (2001). A test of general strain theory. *Criminology* 39: 9–36.

Broidy, L. M., and Agnew, R. (1997). Gender and crime: A general strain theory perspective. *J. Res. Crime Delinquency* 34: 275–306.

Buchanan, C. M., Maccoby, E. E., and Dornbusch, S. M. (1991). Caught between the parents: Adolescents' experience in divorced homes. *Child Dev.* 62: 1008–1029.

Campbell, A. (1993). *Men, Women, and Aggression*. Basic Books, New York.

Cherlin, A. J., Furstenber, F. F., Chase-Lansdale, P. L., Kiernan, K. E., Robins, P. K., Morrison, D. R., and Teitler, J. O. (1991). Longitudinal studies of effects of divorce on children in Great Britain and the United States. *Science* 252: 1386–1389.

Cloward, R., and Ohlin, L. (1960). *Delinquency and Opportunity*. Free Press, New York.

Cohen, A. (1955). *Delinquent Boys*. Free Press, New York.

Coleman, J. S. (1988). Social capital in the creation of human capital. *Am. J. Sociol.* 94: 95–120.

Colvin, M., Cullen, F. T., and Vander Ven, T. (2002). Coercion, social support, and crime: An emerging theoretical consensus *Criminology* 40: 19–42.

Compas, B. E., Grant, K. E., and Ey, S. (1994). Psychosocial stress and child and adolescent depression: Can we be more specific? In Reynolds, W. M., and Johnston, H. F. (eds.), *Handbook of Depression in Children and Adolescents*. Plenum Press, New York, pp. 509–525.

Compas, B. E., and Hammen, C. L. (1994). Child and adolescent depression: Covariation and comorbidity in development. In Haggerty, R. J., Sherrod, L. R., Garmezy, N., and Rutter, M. (eds.), *Stress, Risk and Resilience in Children and Adolescents: Processes, Mechanisms, and Interventions*. University Press, Cambridge, pp. 225–267.

Conger, R. D., Lorenz, F. O., Elder, G. H., Simons, R. L., Jr., and Ge, X. (1993). Husband and wife differences in response to undesirable life events. *J. Health Soc. Behav.* 34: 71–88.

Cullen, F. T. (1994). Social support as an organizing concept for criminology: Presidential address to the Academy of Criminal Justice Sciences. *Just. Q.* 11: 527–599.

Cummings, E. M. (1987). Coping with background anger in early childhood. *Child Dev.* 58: 976–984.

Cummings, E. M., Zahn-Waxler, C., and Radke-Yarrow, M. (1981). Young children's reactions to expressions of anger and affection by others in the family. *Child Dev.* 52: 1274–1281.

Curran, D. K. (1987). *Adolescent Suicidal Behavior*. Hemisphere, Washington, DC.

Dornfeld, M., and Kruttschnitt, C. (1992). Do the stereotypes fit? Mapping offender-specific outcomes and risk factors. *Criminology* 30: 397–419.

Emery, R. E., and Forehand, R. (1994). Parental divorce and children's well-being: A focus on resilience. In Haggerty, R. J., Sherrod, L. R., Garmezy, N., and Rutter, M. (eds.) *Stress, Risk and Resilience in Children and Adolescents*. Cambridge University Press, Cambridge, UK, pp. 64–99.

Gerbing, D. W., and Anderson, J. C. (1993). Monte Carlo evaluations of goodness-of-fit indices for structural equation models. In Bollen, K. A., and Long, J. S. (eds.), *Testing Structural Equation Models*. Sage, Newbury Park, CA.

Gispert, M., Davis, M. C., Marsh, L., and Wheeler, K. (1987). Predictive factors in repeated suicide attempts by adolescents. *Hospital Community Psychol.* 38: 390–393.

Goodyer, I. M. (1990). *Life Experiences, Development and Childhood Psychopathology*. Wiley, Chichester, UK.

Gore, S., Aseltine, R. H., Jr., and Colton, M. E. (1992). Social structure, life stress and depressive symptoms in a high school-age population. *J. Health Soc. Behav.* 33: 97–113.

Gorman-Smith, D., and Tolan, P. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Dev. Psychopathol.* 10: 101–116.

Hagan, J., and Foster, H. (2001). Youth violence and the end of adolescence. *Am. Sociol. Rev.* 66: 874–899.

Hagsstofa Íslands (2001). *Statistical Yearbook of Iceland 2001*/Statistics of Iceland III, 82. Reykjavik.

Hanson, T. L. (1999). Does parental conflict explain why divorce is negatively associated with child welfare? *Soc. Forces* 77(4): 1283–1316.

Henning, K., Leitenberg, H., Coffey, P., Bennett, T., and Jankowski, M. K. (1997). Long-term psychological adjustment to witnessing interparental physical conflict during childhood. *Child Abuse Neglect* 21(6): 501–515.

Hirschi, T. (1969). *Causes of Delinquency*. University of California Press, Berkley.

Hoffman, J. P., and Miller, A. S. (1998). A latent variable analysis of general strain theory. *J. Quant. Criminol.* 14(1): 83–110.

Horwitz, A. V., and Widom, C. S. (2001). The impact of childhood abuse and neglect on adult mental health: A prospective study *J. Health Soc. Behav.* 41(2): 184–210.

Jekielek, S. M. (1998). Parental conflict, marital disruption and children's emotional well-being. *Soc. Forces* 76(3): 905–936.

Kandel, D., and Davies, M. (1982). Epidemiology of depressive mood in adolescents. *Archiv. Gen. Psychiatry* 3: 1205–1212.

Kemper, T. D. (1978). *A Social Interactional Theory of Emotions*. Wiley, New York.

Kendler, K. S., Neale, M. C., Kessler, R. C., Heath, A. C., and Eaves, L. J. (1992). Life events and depressive symptoms. A twin study perspective. In McGuffin, P., and Murray, R. (eds.), *The New Genetics of Mental Illness*. Butterworth-Heineman, Oxford.

Kluegel, J. R., and Smith, E. R. (1986). *Beliefs About Inequality*. Aldine De Gruyter, New York.

Kopper, B. A., and Epperson, D. L. (1991). Women and anger. *Psychol. Women Q.* 15: 7–14.

Kuh, D., and MacLean, M. (1990). Women's childhood experience of parental separation and their subsequent health and socioeconomic status in adulthood. *J. Biosoc. Sci.* 22: 121–135.

Lin, N., Ye, X., and Ensel, W. M. (1999). Social support and depressed mood: A structural analysis. *J. Health Soc. Behav.* 40: 344–359.

Margolin, G., and Gordis, E. B. (2000). The effects of family and community violence on children. *Annu. Rev. Psychol.* 51: 445–479.

Maruyama, G. M. (1998). *Basics of Structural Equation Modeling*. Sage, Beverly Hills, CA.

Menaghan, E. G. (1999). Social stressors in childhood and adolescence. In Horwitz, A. V., and Scheid, T. L. (eds.), *Handbook for the Study of Mental Health*. Cambridge University Press, Cambridge, UK, pp. 315–327.

Merton, R. (1938). Social structure and anomie. *Am. Sociol. Rev.* 3: 672–682.

Mirowsky, J., and Ross, C. E. (1995). Sex differences in distress: Real or artifact? *Am. Sociol. Rev.* 60: 449–468.

Nolen-Hoeksema, S. (2001). Gender differences in depression. *Curr. Direct. Psychol. Sci.* 10: 173–176.

Ogle, R. S., Maier-Katkin, D., and Bernard, T. J. (1995). A theory of homicidal behavior among women. *Criminology* 33: 173–193.

Paternoster, R., and Mazerolle, P. (1994). General strain theory and delinquency: A replication and extension. *J. Res. Crime Delinquency* 31(3): 235–263.

Pearlin, L. I. (1989). The sociological study of stress. *J. Health Soc. Behav.* 30: 241–256.

Renouf, A. G., and Harter, S. (1990). Low self-worth and anger as components of the depressive experience in young adolescents. *Dev. Psychopathol.* 2: 293–310.

Rutter, M. (1989). Isle of Wight revisited: Twenty-five years of child psychiatry epidemiology. *J. Am. Acad. Child Adolesc. Psychiatry* 28: 633–653.

Rutter, M., and Sandberg, S. (1992). Psychological stressors: Concepts, causes and effects. *Eur. Child Adolesc. Psychiatry* I: 3–13.

Scheier, L. M., and Botvin, G. J. (1997). Psychosocial correlates of affective distress: Latent-variable models of male and female adolescents in a community sample. *J. Youth Adolesc.* 26: 89–115.

Schwab-Stone, M., Ayer, T. S., Kasprow, W., Voyce, C., Barone, T. S., and Weissberg, R. (1995). No safe haven: A study of violence exposure in an urban community. *J. Am. Acad. Child Adolesc. Psychiatry* 38: 1343–1352.

Seiffge-Krenke, I., and Stemmler, M. (2002). Factors contributing to gender differences in depressive symptoms: A test of three developmental models. *J. Youth Adolesc.* 31(6): 405–417.

Siegel, J. M., Aneshensel, C. S., Taub, B., Cantwell, D. P., and Driscoll, A. K. (1998). Adolescent depressed mood in a multiethnic sample. *J. Youth Adolesc.* 27: 413–427.

Silver, E., and Teasdale, B. (manuscript submitted for publication). Mental disorder and violence: The role of stressful life events and impaired social support.

Steffensmeier, D., and Allan, E. (1995). Criminal behavior: Gender and age. In Sheley, J. F. (ed.), *Criminology: A Contemporary Handbook.* Wadsworth, Elmont, CA, pp. 83–113.

Stillion, J., and Wass, H. (1984). Children and death. In Schneidman, E. S. (ed.), *Death: Current Perspectives*, 3d edn. Mayfield, Mountain View, CA, pp. 225–249.

Thoits, P. A. (1995). Stress, coping, and social support processes: Where are we? What next? *J. Health Soc. Behav.* (Extra issue): 53–79.

Thorlindsson, T., Sigfusdottir, I. D., Bernburg, J. G., and Halldorsson, V. (1998). *Vimuefnaneysla Ungs Folks: Umhverfi og Adstaedur* [The social context of drug use among Icelandic youth]. Reykjavik: Institute for Educational Research.

Turner, R. J., and Lloyd, D. A. (1995). Lifetime traumas and mental health: The significance of cumulative adversity. *J. Health Soc. Behav.* 36(4): 360–376.

Turner, R. J., and Lloyd, D. A. (1999). The Stress process and the social distribution of depression. *J. Health Soc. Behav.* 40: 374–404.

Wan-Ning, B., Whitbeck, L. B., and Hoyt, D. R. (2000). Abuse, support, and depression among homeless and runaway adolescents. *J. Health Soc. Behav.* 41(4): 408–420.