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#### ABSTRACT

Development of a psychosocial explanation of antisocial and delinquent behavior to guide prevention efforts has recently gained attention. This study considered several types of social stressors and compared their effects on levels of antisocial and delinquent behavior. Male and female adolescents (N=84) were surveyed for socioeconomic status, family systemic functioning, and four types of social stress (Induced Transitions, Daily Hassles, Developmental Transitions, and Circumscribed Life Events) in relation to level of antisocial and delinquent behavior to determine the individual and cumulative effect of these psychosocial predictors. Univariate analyses indicated that perceived and desired family cohesion and Daily Hassles, Circumscribed Life Events, and Developmental Transitions correlated significantly with reported delinguent behavior. Multivariate analyses indicated that socioeconomic status was of little use in understanding such behavior, at least among the general population, and that family cohesion and two types of stress, Developmental Transitions and Daily Hassles were the most useful indicators. These findings suggest that the ability of family members to support one another and to harness that support to solve daily problems is important in decreasing delinquency risk. Also, skill development, such as social skills training, may be indicated in order to improve ability to cope with daily hassles. (KS)

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# Social Stress Dimensions and Antisocial and Delinquent Behaviors in Adolescents

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#### Abstract

84 male and female adolescents were surveyed for socioeconomic status, family systemic functioning, and four types of social stress (Induced Transitions, Daily Hassles, Developmental Transitions, and Circumscribed Life Events) in relation to level of antisocial and delinquent behavior to determine the individual and cumulative effect of these psycho-social predictors. Univariate analyses indicate that perceived and desired family Cohesion and Daily Hassles, Circumscribed Life Events, and Developmental Transitions correlate significantly with reported delinquent behavior. Multivariate analyses indicate socioeconomic status is of little use in understanding such behavior, at least among the general population, and that family Cohesion and two types of stress, Developmental Transitions and Daily Hassles are most useful. These findings suggest that a family's ability to support each other and to harness that support to solve daily problems is important to decreasing delinquency risk. Also, skill development, such as social skills training may be indicated in order to improve ability to cope with daily hassles.



Development of a psycho-social explanation of antisocial and delinquent behavior to guide prevention efforts has been gaining an increasing amount of attention (Loeber & Dishion, 1983; Lorion, Tolan, & Wahler, In press; Rutter & Giller, 1984). The available studies converge to indicate that adequate explanation and subsequent accurate prediction will require consideration of the interactive influence of several types of variables. However, there is still diverse opinion as to which variables to consider and what weight to give to each. In addition, there is relatively little research to guide this evaluation.

One variable that has consistently shown importance in identifying delinquents and those at-risk for delinquency has been the family's systemic functioning (Loeber & Dishion, 1983; Patterson, 1986; Tolan, Cromwell, & Brasswell, In press). Several studies have found that family characteristics such as parents behavior management skills or the family's ability to organize and adapt to problem solving demands distinguish delinquents from other types of pathological families and from normals (Jacob, 1976; Reiss, 1981). In addition, family systemic functioning was found to be the only psycho-social variable to add explanation to age of onset in a test of a variety of psycho-social indicators in a multivariate model (Tolan & Lorion, 1986), and to be the major determinant of a multivariate model of predictors of age of onset (Tolan, In press). Beyond noting family functioning



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. in general, the family systems concepts that will best explain the influence of the family have not been ascertained to date. One conceptual model that has recently been applied successfully in a multivariate model of delinquency explanation is Olson's Circumplex model which conceives of the family system as the interaction of two orthogonal dimensions: adaptation and cohesion (Hanson, Hennggeler, Haefle, & Rodick, 1984; Olson, Russell, & Sprenkle, 1979). Adaptation is defined as the extent to which the family is flexible and apt to change. Cohesion is defined as the degree to which family members are separate or connected to each other. According to the Circumplex model, families that are in the middle or the "balanced" range of each dimension are most functional. Thus, one would expect that families of delinquents would be more extreme on one or both of the scales and that the family's relative position on each scale would contribute to explaining definquent behavior. The Family Adaptability and Cohesion Evaluation Scales II (FACES II) was developed and validated to measure these characteristics and to classify families (Olson, Portner, & Bell, 1982)..

Another frequently considered variable is socioeconomic status. Socioeconomic effects were originally thought to be quite important in understanding antisocial and delinquent behavior (Cohen, 1955). However, with the use of self-reports and the ensuing focus on antisocial and delinquent behavior prior to official recognition, socioeconomic effects seemed to be due to differences in court processing rather than



differences in actual behavior patterns (Williams & Gold, 1972; Empey, 1978). Recently, Rutter and Giller (1984) reviewed the delinquency research as a whole, comparing official records data and self-report data and concluded that socioeconomic status may still be important in understanding such behavior because it functions as a contextual variable that influences the meaning and impact of other influencing factors rather than as a direct effect. Thus, according to Rutter and Giller, in a multivariate model, socioeconomic status needs to be considered prior to examining the psychosocial variables that determine individual risk.

A third type of variable that has been getting some attention as a possible contributor to a multivariate model of antisocial and delinquent behavior is stressful life events. Bry, McKeon, & Pavalina (1982) reported that drug use was correlated to the number of psycho-social risk factors rather than the presence of any specific factor. Vaux and Ruggerio (1983) reported that level of experience of stressful life events in the previous twelve months correlated to level of self reported delinquent behavior across several types of offenses and levels of seriousness. They also reported that life events experience added significant variance to that explained by socioeconomic status and age in a multivariate analysis of delinquency.. Patterson (1986) summarized severa: years of studies and presented a model of antisocial behavior in boys. He reported that social stress was second only to family interaction style in contributing to variance explained



in antisocial behavior. Thus, this approach seems promising in understanding antisocial behavior.

These studies suggest social stress might be a viable explanation of antisocial and delinquent behavior among adolescents. However, as noted by Patterson (1986) this approach has two limitations. First, social stress impact is probably multifaceted. Therefore, the relative impact of different types of stressors needs to be considered. families differ in their ability to mediate stress. Therefore, similar levels and types of stress can have differential impact on adolescents depending on the family functioning. In addition to these concerns, our previous study found that a multivariate model that included a tally of social risk factors (as is often done in stress models) was less capable of explaining variance in delinquency than a specific factor model. In that study, family functioning was distinctly important in explaining delinquent behavior (Tolan & Lorion, 1986). Thus the impact of stress on adolescent's antisocial behavior and delinquency may be best understood in the context of family functioning and the influence of stress dependent upon the type of stress (McCubbin, Joy, Cauble, Comeau, Patterson, & Needle, 1980; Tolan, et al., In press).

Three distinctions of type of life events appear most relevant for understanding antisocial behavior in adolescents. The first distinction is the one drawn by Newcomb, Huba and Bentler (1981) between "daily hassles" (such as arguments over the use of the car) and more circumscribed but traumatic

events (such as a car accident). As reported by Newcomb et al. and confirmed by Swearingen and Cohen (1985) adolescents! symptoms are more related to level of day-to-day conflicts and pressures than traumatic events. Another important distinction, drawn conceptually and demonstrated empirically by Felner, Farber, and Primavera (1983), was between life events that are more precisely understood as markers of transitions rather than events because they require adjustment and adaptation over a period of time (e.g. starting at a new school or parental divorce) from those that are relatively discrete events (e.g. auto accident). Finally, because adolescence is a developmental stage that is characterized by change, it may be important to distinguish the stress effects of normal developmental changes from those induced due to external circumstances (e.g puberty vs. parental divorce; Moss (1981)). Thus, four types of social stressors can be identified, and are considered here: Circumscribed (traumatic) Events, Daily Hassles, Induced Transitions, and Developmental Transitions.

Rutter and Giller's and Patterson's concerns plus our previous findings raise a need to address to what extent social stress adds to the explanation of delinquency provided by family functioning and socioeconomic status and what types of stress are most influential. This study addresses these concerns by considering several types of social stressors and comparing their affects on levels of antisocial and delinquent behavior among a sample of male and female adolescents. Also,



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the relative ability of each type of stress compared to and in addition to socioeconomic status and family functioning is considered.

#### Method

# <u>Subjects</u>

84 (49 females, 35 males) 16-18 year old adolescents solicited through their suburban high school were utilized as subjects. The sample was 83% white and primarily middle class, although all levels of socioeconomic status and a range of ethnic backgrounds were represented in the sample.

# Instruments

Socioeconomic Status: Socioeconomic status was measured by using Duncan's Socioeconomic Index (Stevens & Featherman, 1981), which assigns a score for each occupation from 0 to 99, based on NoRC prestige scores. Each parent was assigned a score and the family was assigned a socioeconomic score based on the total of the parents' scores.

Family Adaptability and Cohesion Evaluation Scales II

(FACES II): This is a thirty item self-report designed to measure family adaptation and cohesion as defined above (see Olson et al., 1979). Subjects indicate on a five point scale how well each item describes their family. Subjects complete the scale once to describe their family now, and then complete it to describe how they would like 'eir family to be. Four scores are obtained: Cohesion Now, Cohesion Desired,



Adaptation Now, Adaptation Desired. Scores were tallied and then standardized, based on the manual norms, for each scale. Subjects were also classified into either midrange (no scales more than one standard deviation from the mean) or "clinical" (at least one score more than one standard deviation above the mean).

Social Stress Measure. This is a 69 item meas re developed by the senior author and derived through a review of several measures of social stress for adolescents (Coddington, 1972; Johnson & McCutcheon, 1980; McCubbin, Patterson, Bauman, & Harris, 1982). Items were categorized into the four scales described above by comparing the categorizations of three independent raters working from operational definitions developed by the senior author. Seventy percent of the items were categorized by agreement across all three raters. out of three raters agreed on the classification all but two items (97%). Items with less than unanimous agreement were categorized into the group that the two agreeing raters had assigned. These categorizations yielded a 9 item Davelopmental Transition scale, a 17 item induced Transitions scale, a 28 item Circumscribed Events scale, and a 16 item Daily Hassles scale. Subjects were asked to indicate whether or not each item had happened to them in the last twelve months. Rating scores were recorded as the proportion of items one each scale reported.

The Delinquency Self Report Measure (DSRM). This is a 59 item self-report scale of delinquent behavior (55 items) and



official police and juvenile court contact (4 items), which is a modified version of a scale developed by Hindelang, Hirschi and Weis (1981). This report was utilized because it has been validated with a large and varied sample pool and is relatively comprehensive in the types of acts it taps.

Subjects report the number of times (0 to 99) in the last year they had committed each act. Because previous research (Tolan & Lorion, 1986) suggests frequency and variety and seriousness scores are highly correlated, a simple tally of reported offenses was calculated and recorded for each subject.

A demographic questionnaire was used to record gender, ethnic group, age, and parental occupation.

# Procedure

Subjects were solicited through social science classes in a suburban high school of a large Midwestern city. Of those solicited approximately 70% agreed to participate and received parental permission to do so. Subjects were administered the questionnaires for individual completion during class time.

#### Results

ANOVAS were performed to compare males and females on level of delinquent behavior, socioeconomic status, the four FACES II scores, and the four stress scale scores. Only desired Adaptation level on the FACES II differed  $(\underline{F}\ (1,\ 78)\ =\ 16.78,\ \underline{p}\ <\ .0001)$ , with the females reporting a higher average level (57.99 vs. 51.94). The ANOVA comparison



for experience of daily hassles approached significance  $(\underline{F}(1, 78) = 3.77, \underline{p} < .06)$ , with the females reporting a higher average level. Because there were so little difference by gender, further analyses were carried out on the 89 subjects as one group.

Next, pearson product-moment correlations and, where appropriate, point biserial correlations were calculated between DSRM score and family socioeconomic status, the four family FACES II scales' scores, Circumplex model classification, and the four stress scales' scores. Table 1 summarizes those results. As can be seen there socioeconomic status is not significantly related. Family categorization did not correlate significantly. Cohesion now and Cohesion desired both correlate significantly as do three of the four types of stress. Because family type from the Circumplex categorization was not significantly related, but the scores on the Cohesion scales were, the former measure was not included in any further analyses.

# Table 1 about here

Next a hierarchical regression analysis was performed with socioeconomic status entered first, followed by simultaneous entrance of the four family scale scores and then simultaneous entry of score on the four stress scales to compare the contribution of each factor in explaining the antisocial and delinquent behavior. As can be seen in Table



2 which summarizes the model, at the first step when only socioeconomic status is entered, the model is not significant. When the family variables were entered, the model became significant ( $\mathbf{F}$  (5, 73) = 5.32,  $\mathbf{p}$  < .001,  $\mathbf{R}2$  = .27). At the third step, when the stress variables were entered, the model continued to be significant ( $\mathbf{F}$  (9, 69) = 4.56,  $\mathbf{p}$  < .0001,  $\mathbf{R}2$  = .37). Thus, it appears that socioeconomic status is not in and of in and of itself useful for explaining antisocial and delinquent behavior, although family functioning and social stress levels are.

# Table 2 about here

Next, a hierarchical regression analysis was performed, in which socioeconomic status was entered, but within the family and stress factors the order of entrance was based on a stepwise criteria. These results are also summarized in Table 2. After socioeconomic status desired family cohesion entered next yielding a significant model that accounts for 20% of the variance ( $\mathbf{F}$  (2, 76) = 9.76,  $\mathbf{p}$  < .001). Desired family Adaptation entered next, adding 6% more variance. None of the other family variables entered. Of the stress variables, experience of Developmental Transitions entered, adding 7% of additional variance, and a final model that accounts for 33% percent of the variance ( $\mathbf{F}$  (4, 74) = 8.97,  $\mathbf{p}$  < .0001).

A stepwise regression analysis was then run to determine which variables would contribute if entrance relied solely on

amount of variance explanation added. As can be seen in Table 3, desired family Cohesion entered first, contributing 18% of the variance explanation, followed by experience of Daily Hassles. Desired family Adaptation and experience of Developmental Transitions entered next, but at levels close to the .01 level of significance. Thus, a model based only on statistical criteria, suggests that desired family functioning and experience of daily hassles and developmental transitions most efficiently explain antisocial and delinquent behavior among a "normal" sample of adolescents.

#### Discussion

This study intended to examine the individual and combined ability of three factors that seemed promising in explaining delinquent and antisocial behavior among adolescents: socioeconomic status, family systemic functioning, and social stress. Initial correlational analyses suggested socioeconomic status did not correlate and its lack of importance was borne out throughout the subsequent multivariate analyses. It did not contribute significant explanation when entered first, or when entrance was based on its unique contribution as in the final stepwise analysis.

SES seems relatively unimportant, whether considered as a contextual variable or as a direct influence on antisocial and delinquent behavior.

On the other hand, family systemic functioning and social stress showed significant univariate relationships and were



significant contributors to the multivariate model. However, the general effects seem to be more due to specific aspects of family functioning and specific types of social stress than to general effects. The specific model was as powerful as the general model, with both accounting for about 1/3 of the variance.

Utilizing the Circumplex model of family systemic functioning (Olson et al., 1979), it was found that those who report higher levels of delinquent behavior also reported lower levels of cohesion and desired lower levels of cohesion. Also, desired lower cohesion helped explain higher level of delinquency in the stepwise multivariate models. Although not significantly correlated in the univariate analysis, desired Adaptability did contribute to the stepwise model, but at a much lower level than desired cohesion. Notably, it was not the discrepancy between perceived family characteristics and desired characteristics that correlated or the family's level of functioning as indicated by falling out of the midrange on either scale that correlated to delinquency. Apparently it is not satisfaction with the family or the family's overall level of functioning that is important. hose adolescents who perceive their families as less supportive and connected to each other engage in more antisocial behavior. However, they desire lower levels of connection, and this variable correlates at a level much higher than any of the other family variables. This suggests that delinquency is related to a desire to separate oneself from the family emotionally.



Similar results are reported by Reiss (1981). He found that delinquents' families were distinguished by their tendency to interact with each other with heightened individual interest and greater defensiveness. What is uncertain is whether these delinquent adolescents desire less involvement with the family because that is the site of conflict and turmoil, or whether their delinquent and antisocial behavior has made family contact painful for everyone and diminished family unity and cohesion in general: for this to be determined prospective studies and direct observations of whole families will be necessary.

Level of experience of three of the four types of social stress correlated significantly with reported behavior in univariate analyses. These results support Patterson's contention that social stress effects on antisocial behavior is likely to be multifaceted. Only the experience of induced transitions was not significantly related. This is surprising as transitions such as moving or parental divorce have been considered influential on delinquency risk (Rutter & Giller, 1984). These results provide some further support for the contention that marital status per se is not a very salient factor in explaining delinquent behavior (Tolan & Lorion, 1986).

Multivariate analyses, however, suggest that developmental transitions and day-to-day hassles are the most influential types of stress. Circumscribed life events that are traumatic seemed to have little direct impact compared to



daily hassles and developmental transitions. It could be that family functioning mediates this type of stress effect more than the daily hassles and developmental stresses, so that it would not be prominent in the multivariate model once family variables were entered..

Apparently, the stress of developmental change, and the "pile-up" of developmental transitions can lead to greater levels of antisocial behavior. This finding is important because it suggests a tie between normal expectable developmental transitions of the adolescent years and antisocial behavior in adolescence (Tolan, 1986). Also, most stress studies have not considered this category of stressor in evaluating stress effects on adolescents. If adolescence is a time of transition by nature, then the impact of life stressors must be considered within the relative stability of its developmental context. The timing and relative "pile-up" of developmental changes may be important in understanding risk for delinquency in adolescence and for distinguishing transient adolescence from more chronic patterns (Tolan, In press; 1986).

However, it appears that, at least for this "normal" sample, day-to-day hassles are most related to their behavior problems. This finding bears out the reports of others (Huba et al., 1981; Swearingen & Cohen, 1985) that adolescent problems are most related to daily hassles. Apparently, it is the chronic but relatively minor conflicts with parents, peers, and teachers, and demands of day-to-day life that



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results in greater displays of delinquent behavior. However, as noted by Swearingen and Cohen, as with the family systems correlations, it is unclear from this data, if daily hassles increase delinquent behavior or if increased delinquent behavior leads to greater daily hassles. In either case, this data suggests as has been noted by Rutter and Giller (1984), that social skills training to manage day-to-day hassles such as arguments with parents or school problems may be an effective secondary prevention method for the general population. Also, it may be that families with low cohesion are less able to function together to productively cope with daily hassles and incorporate developmental changes. Thus, interventions that support family cohesion and problem solving may be quite helpful in limiting or preventing delinquency.

These results are preliminary and exploratory. However, they support previous studies that indicate a combination of family functioning and social stress variables are important in understanding antisocial and delinquent behavior in adolescents. Contrary to previous studies few gender differences in behavior or correlates were found. In addition to confirming the finding that daily hassles are important influences on adolescents' behavior, this study also highlighted the importance of understanding developmental stress and suggest a need for further investigation of how family systemic functioning can mediate stress effects.



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Table 1. Correlations of Socioeconomic Status, Family, and Stress Variables to DSRM Score.

Variable	DSRM Score
Socioeconomic Status	.12
Family Variables	
Cohesion Now	~:21×
Adaptability Now	-:12
Cohesion Ideal	42***
Adaptability Ideal	. Ö <b>i</b>
Circumplex Classification	.09
<u>Stress Variables</u>	
Developmental Scress	.25**
Induced Transitions	.10
Circumscribed Events	. 25*
Daily Hassles	.41***

<sup>\*</sup>p < .05



<sup>\*\*&</sup>lt;u>P</u> < .01

<sup>\*\*\*</sup>p < .001

<sup>\*\*\*\*&</sup>lt;u>P</u> < .0001

Table 2.

Hierarchical Regression Analyses of Socioeconomic

Status, Family Functioning, and Social Stress Variables on DSRM score.

Variable Entered	<u>R</u> 2	Model Sig.	<u>R</u> 2 chāngē	Sig.	
All variables Entere	ed at E	ach Step	<del></del>		
SES	.01	NS	.01	NS	
Family Functioning	. 27	.0001	. 25	.0001	
Social Stress	:37	.0001	.11	.03	
Family and Stress Variables Entered Stepwise					
SES	.01	NS	.01	NS	
Desired Cohesion	. 20	.0001	.19	.0001	
Desired Adaptation	. 26	.0001	.06	.02	
Developmental Trans.	.33	.0001	.07	.01	
•					

NS=Not Significant

