

AN ABSTRACT OF THE THESIS OF

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Title: Coping Resources Mediating the Relationship Between Stressful Life Events and Delinquent Behavior Among Adolescents

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Stressful events of both major and minor magnitude in the lives of children and adolescents are significantly related to emotional and behavioral problems (Compas, 1987a; Johnson, 1986). It is also apparent, however, that this relationship is complicated and that individuals vary greatly in their responses to stress. The purpose of this study was to explore factors that mediate the relationship between negative life events and behavioral problems during adolescence.

In this study, it was hypothesized that negative life events would lower personal resources which, in turn, would lower social resources. Adolescents with lower levels of personal and social resources were predicted to have higher levels of delinquent behavior.

Data were collected from 217 of the 9th graders in a high school in a coastal community of Oregon. One hundred sixty-one returned completed surveys. The following scales were used; the Divorce Events Schedule for Children (Sandler,

Wolchik, Braver, & Fogas, 1986), a shortened form of the Adolescent Perceived Events Scale (Compas, Davis, Forsythe, & Wagner, 1987); Rosenberg Self-Esteem Scale (Rosenberg, 1965); Desirable and Undesirable Event Locus of Control Scale (Rothbaum, Wolfer, & Visintainer, 1979); Erikson Psychosocial Stage Inventory (Rosenthal, Gurney, & Moore, 1981); Social Support Scale for Children (Harter, 1986); Delinquency Lifestyle Scale (Ageton & Elliott, 1978). For data analysis, a series of path analyses using regression techniques was used.

Results indicated that coping resources mediated the relationship between negative life events and delinquent behavior. A high level of stress was related to lower levels of personal resources. These personal resources were not directly related to more delinquent behavior, however. Rather, they were associated with lower social support and then more delinquent behavior.

The findings related to specific personal resources were both consistent and contrary to predictions. Negative life events lowered self-esteem, identity, and autonomy development significantly. Consistent with previous research, adolescents with external locus of control orientation had more delinquent behavior and perceived less social support. Social support was a mediator between negative life events and delinquent behavior, implying the importance of social support from family, school, and peer in preventing delinquent behavior among adolescents.

COPING RESOURCES MEDIATING THE RELATIONSHIP BETWEEN
STRESSFUL LIFE EVENTS AND DELINQUENT
BEHAVIOR AMONG ADOLESCENTS

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COPING RESOURCES MEDIATING THE RELATIONSHIP BETWEEN
STRESSFUL LIFE EVENTS AND DELINQUENT
BEHAVIOR AMONG ADOLESCENTS

CHAPTER 1
INTRODUCTION

Stressful events of both major and minor magnitude in the lives of children and adolescents are significantly related to emotional and behavioral problems (Compas, 1987a; Johnson, 1986). It is also apparent, however, that this relationship is complicated and that individuals vary greatly in their responses to stress. The purpose of this study was to explore certain proposed psychological factors which might mediate the relationship between negative life events and behavioral problems and to explore these variables at the level of self-report among adolescents.

Individual differences in the level of problems that are associated with stressful experiences are due, in part, to the level of personal and environmental resources available to an individual. Personal resources exist within an individual, such as self-esteem and locus of control orientation. An often studied environmental resource is social support. Although social support has been found to moderate or mediate the negative impact of stress, many questions remain concerning variability in the availability and utilization of social support.

Stress and coping research emphasizes the balance between

stress from life events and the availability of coping resources in predicting outcomes of stress. Effective adaptation to stressful events entails the complex interplay of several different factors. These include the nature of the event itself, personal and social coping resources available to the individual, and the relationship between personal and social resources.

A number of questions remain unanswered regarding the impact of life events on personal resources, such as self-esteem, locus of control orientation and psychosocial development. Stress itself may lead to the development of a low level of personal resources: such as low self-esteem, external locus of control orientation, low psychosocial development. The lack of these personal resources may reduce the chances that the individual will develop social supports.

A certain level of personal resources may be associated with an individual's ability to attract, maintain, and mobilize support from others. That is, personal factors may influence the perceptions of available support and then the outcomes of stress. For example, a person with low self-esteem might feel less social support than is actually the case. In contrast, a person with an internal locus of control orientation might create social supports that further enhance their ability to cope positively. In a similar way, a certain level of psychosocial development may lead adolescents to perceive more or less support than is actually available.

Like a vicious cycle, adolescents having high levels of negative life events may show low self-esteem, external locus of control orientation, and low psychosocial development. Low levels of personal resources may lead adolescents to obtain less social support. Thus, adolescents who most need support may sometimes be the least likely to attain it.

In this study, it was hypothesized that negative life events lowered personal resources which, in turn, lowered social resources. Thus, adolescents who experienced a high level of negative life events would be less likely to have the coping resources they needed to deal with the stressors. Personal resources that were examined were self-esteem, locus of control orientation, and psychosocial development. Adolescents with high self-esteem, internal locus of control orientation, and high psychosocial development would report higher levels of support than adolescents with low self-esteem, external locus of control orientation, and low psychosocial development. Adolescents having low personal resources and low social support would show more behavior problems.

CHAPTER 2 REVIEW OF LITERATURE

The literature review is presented in three main parts, followed by the research hypotheses. The first part of the literature review provides a general overview of the literature on stress during adolescence. The second part examines the effects of negative life events on behavioral problems. The third part examines variables that have been found to mediate the relationship between stress and behavioral problems. These include self-esteem, locus of control orientation, psychosocial development, and social support.

2.1. STRESS DURING ADOLESCENCE

Adolescence is an especially interesting and potentially significant period of development for the investigation of stress and coping processes (Compas, Davis, & Forsythe, 1985), since early events during childhood and adolescence may alter the course of subsequent development, either directly or transactionally (Rutter, 1981). A certain environment can provide children and adolescents with greater or lesser chances to develop coping skills in their lives. As a result, while development continues in a transactional pattern, the impact of life events may be more pervasive than events occurring during adulthood.

Adolescents can experience a spectrum of stressors ranging from ordinary to severe. Normative adolescent life events (e.g., puberty, fostering intimate relationships, etc.), in conjunction with the occurrence of any nonnormative, or idiosyncratic, life events (e.g., parental death or getting arrested by the police, etc.) may make relatively potent demands on adolescents in life domains and situations not previously encountered (Windle, 1992a).

Negative events have been found to be related to a wide range of problems, including depression and anxiety (Compas et al., 1986a; Greenberger, Steinberg, & Vaux, 1982; Johnson & McCutcheon, 1980; Mullins, Siegel, & Hodges, 1985; Siddique & D'Arcy, 1984; Swearingen & Cohen, 1985), delinquent behavior (Gad & Johnson, 1980; Greenberger et al., 1982; Vaux & Ruggiero, 1983), suicide attempts (Cohen-Sandler, Berman, & King, 1982), substance use (Gad & Johnson, 1980; Greenberger, Steinberg, & Vaux, 1982; Newcomb & Harlow, 1986), and acting-out behavior (Sandler, 1980; Sandler & Block, 1979).

In order to understand the impact of life events on adolescent development, measures of life events are being used to study adolescent stress (Williams & Uchiyama, 1989). Three reasons for using life events in studies of adolescents have been proposed. First, adolescence is a period of many changes, and change in a person's life has been viewed as an inherent component and a high main effect of stress (Compas, Davis, & Forsythe, 1985; Cohen et al., 1987). Adolescence is

characterized by changes in biological functioning, cognitive development, social roles, and social environments (Hamburg, 1974). Second, the conceptualization of stress has emphasized the importance of "transitions" and adaptation (e.g., Felner, Farber, & Primavera, 1983). Adolescence involves a number of such transitions, including those from junior to senior high school, from high school to college or work, and from living with parents to living independently. Adolescence requires adaptation to new environments.

Third, important growth in cognitive and social development during adolescence may make it an optimal time for learning new coping skills to reduce the adverse effects of stressful events. There is an increase in independence during adolescence (Swearingen & Cohen, 1985). The ability to take control and responsibility over life events comes with independence. An adolescent is no longer a passive bystander but is able to seek out, and attend to events arising in life.

2.2. The LINK BETWEEN NEGATIVE LIFE EVENTS AND DELINQUENCY

As mentioned earlier, research has demonstrated that negative life events are associated with delinquent behaviors. In an early work about the effects of life change on delinquency, Masuda, Cutler, Hein, & Holmes (1978) retrospectively examined the life change (e.g., beginning or ending school, death of a close family member, or changes in

social activities, etc.) scores of 176 male prisoners for 5 years prior to incarceration and for up to 5 years following incarceration. Prisoners' life change scores were found to peak during the year immediately prior to incarceration. For the most part, this finding survived disaggregation of the data by race, age, and educational level. The authors concluded, therefore, that life events are causally related to criminality.

Levinson and Ramsay (1979) assessed the accuracy of mental health paraprofessionals in predicting "dangerousness" as a prerequisite to involuntary psychiatric hospitalization. In examining sources of error in prediction, the authors discovered a significant relationship between dangerousness and life stress. Of those individuals classified as having experienced high life stress (as measured by the Schedule of Recent Experiences (SRE), Holmes and Masuda, 1972), 65% subsequently showed dangerous behavior, while only 31% of a low-stress group did so. The authors interpreted the etiological significance of this finding in the following manner: "It is likely that [dangerous] behavior and life events were both causes and effects in a snowballing interaction. But SRE scores were not simply a result of unusual or dangerous behavior" (p.184). Levinson and Ramsay (1979), therefore, although more cautiously than Masuda et al. (1978), also proposed that life change plays a role in the etiology of dangerous or criminal behavior.

Vaux & Ruggiero (1983) commented that previous research (Masuda et al., 1978 & Levinson and Ramsay, 1979) about delinquent behavior had a biased small subsample of the potential population and indicated some concern about the construct validity of the dependent variables, "criminal behavior" and "dangerous". They sampled carefully a noninstitutionalized, non-agency-contacted population to allow for greater external validity than had been achieved by earlier research efforts. They found that for both males and females, 14 to 19 years, life change added significantly to age and SES in predicting violence, theft, drug use, property damage, and a group of relatively nonserious delinquent acts. Adolescents who reported more stressful life change reported more involvement in a variety of delinquent and criminal behaviors. The contribution of life change to the prediction of delinquency was significant regardless of the type of delinquent behavior examined--violence, theft, drug use, property damage, or nonserious delinquency--and regardless of whether the seriousness of the delinquent acts was taken into account.

Novy and Donohue (1985) administered the Adolescent Life Change Event Scale (Yeaworth, York, Hussey, Ingle, & Goodwin, 1980) to 55 adolescents ranging in age from 12 to 16 years who were on probation or being held in detention for offenses ranging from a felony to conduct indicating a need for supervision. The offenses committed during the previous 12

months were given weights. Pearson product moment correlation was computed to obtain a relationship between stress events and offenses. Some patterns were found in runaway behavior and truancy that were related to several of the stress events; 87.5 percent of runaway subjects had experienced "hassling with parents," and 43.8 percent had experienced a "family member other than themselves having trouble with alcohol"; 94.1 percent of truancy subjects had experienced "failing one or more subjects in school," and 64.7 percent had experienced "getting into drugs or alcohol."

In the study of the measurement of adolescents' life events, Swearingen and Cohen (1985) found that negative events among junior high school students were significantly related to the maladjustment criteria, such as depression, anxiety, and number of missed school days.

Consistent with prior cross-sectional research, the longitudinal research was associated with higher levels of stressful events and other problem behaviors. For instance, in a 2-wave longitudinal design, with a 6-month interval between occasions of measurement, Windle (1992a) found that stressful life events were a significant prospective predictor of problem behaviors for adolescents (mean age = 15.7 years).

Throughout history, alcohol and other drug use (one type of delinquent behavior) has been used to provide relief in times of stress and frustration. Research has confirmed this association between disruptive life change events and

substance use (Gad & Johnson, 1980; Greenberger, Steinberg, & Vaux, 1982; Newcomb & Harlow, 1986). Similarly, Wills (1986) found that in two cohorts of urban adolescents, stress during the seventh-to eighth-grade period was positively related to substance use.

Research shows that stressful life events are associated with greater maladaptive behaviors. Little is known, however, of the manner in which the various components of stress are interconnected to form a process. The primary purpose of this study is to identify some of these connections. The next section will examine associations between stress, coping resources, and delinquency.

2.3. ASSOCIATIONS BETWEEN STRESS, COPING RESOURCES, AND DELINQUENCY

2.3.1. Self-Esteem

2.3.1.1. The association between negative life events and self-esteem

Several studies have indicated that one of the manifestations of stress is to lower self-esteem (i.e., how an individual feels about himself or herself (Steinberg, 1989). Pearlin, Menaghan, Lieberman, and Mullan (1981), from their longitudinal data comprised of 2,300 adults between the ages of 18 and 65 provided evidence regarding how life events, chronic life strains, self-concepts, coping, and social

supports come together to form a process of stress. Exacerbated strains eroded positive concepts of self, such as self-esteem and mastery. The diminished self-concepts then left one especially vulnerable to experiencing symptoms of stress. Furthermore, they suggested that if uncontrollable negative events decrease a sense of mastery and self-esteem, these effects, in turn, discourage active coping attempts or support utilization.

In a study of adolescents, Hoffman, Ushpiz, and Levy-Shiff (1988) found the negative influence of stress on self-esteem among ninth-, tenth-, and eleventh-grade homerooms in an Israeli high school. Life events stress was measured by forty-two events which indicated changes, crises, and transitions which occurred over the last six months. More frequent events were associated with reduced esteem.

In a study of the relationship between life events and disturbed self image in adolescents, Palazzi, De Vito, Luzzati, Guerrini, and Torre (1990) found that, among Italian adolescents, a disturbed self image was significantly associated with reported excess of events (one standard deviation above the mean), and with the reporting of specific classes of events. These included serious disagreement between parents, sudden decrease in family income, serious abuse either within the family or outside the family, and having had an abortion. The rarest and subjectively most

important events were often associated with a higher risk of a disturbed self image.

Similarly, Youngs, Rathge, Mullis and Mullis (1990) examined adolescent stress and its effects on self-esteem. A total of 2,154 North Dakota high school students between the ages of 14 and 19 participated by completing the Life Experiences Survey and the Self-Esteem Inventory. The findings indicated that, as the number of life events increased, the level of self-esteem decreased. The relationship was especially true for negative events.

Moran and Eckenrode (1991) also found that lower self-esteem was strongly correlated with social stress among adolescents in grades 7 through 11. However, social stress was significantly related to low levels of self-esteem for females but not for males.

2.3.1.2. The association between self-esteem and delinquency

Research has investigated the relationship between self-esteem and delinquency among different racial groups as well as among youth with different problems. Most research has found that low self-esteem is related to high frequency of delinquent behaviors. Rosenberg and Rosenberg (1978) used a cross-lagged panel correlation technique to examine whether self-esteem had a greater effect on delinquency than delinquency had on self-esteem. Analysis of a nationwide study of tenth-grade boys showed that self-esteem is the more

powerful causal factor, even when initial levels of delinquency are held constant. Bynner, O'Malley and Bachman (1981) also used Rosenberg & Rosenberg (1978)'s data and reported that teenagers low in self-esteem, who subsequently engaged in delinquent behavior, were able to restore their self-esteem.

Leung and Drasgow (1986) investigated the hypothesis that low self-esteem is related to high frequencies of delinquent behavior in the United States from three ethnic groups (blacks, whites, and hispanics) within the age range of 14 to 21. Regression analyses showed that the proposed hypothesis might hold for the white sample, but not for the black and hispanic samples. Among whites, the higher their self-esteem composite score, the lower their self-reported frequency of delinquent behavior.

Leung and Lau (1989) investigated 1668 students from Grade 7 to Grade 9 using questionnaires to measure their general self-esteem; their self-concept with regard to physical ability, social ability, physical appearance, and academic ability; the frequency with which they committed 15 different delinquent acts; and the perceived approval of committing these acts from their parents, teachers, and friends (for 15 deviant behaviors, subjects indicated to what extent their family, good friends, and teachers, respectively, would agree or disagree with their enactment of such behaviors on a 5-point scale). Delinquent behavior was not related to

general self-esteem, but was meaningfully related to various aspects of self-concept. Specifically, delinquency was found to correlate positively with an poor academic self-concept and poor relationships with parent and school.

Rosenberg, Schooler and Schoenbach (1989) used a panel of 1886 adolescent boys to explore the reciprocal relationships between self-esteem and three problems of youth: juvenile delinquency, poor school performance, and psychological depression. They indicated that low self-esteem fostered delinquency, and that delinquency might enhance self-esteem. Low self-esteem was found to predispose a person to delinquent behavior. Evidence consistent with this reasoning was presented in a study by Kaplan and Robbins (1983), in which a general measure of self-esteem was shown to be negatively correlated with the frequency of committing several delinquent acts in a longitudinal study of 7th, 8th, and 9th grade students. Kaplan (1978) found that deviant response patterns (alcohol and drug abuse, delinquent patterns, etc.) functioned to reduce self-rejecting feelings among initially highly self-derogating subjects among seventh grade students. So deviant behavior played a role of self-enhancement.

The predominant and most explicitly developed causal schema of the relationship between delinquency and self-concept is the "esteem enhancement" model (Kaplan, 1975). This model emphasized the valutive components of self-attitudes which are expressed in a person's sense of self-

esteem. The fundamental assumption is that people universally need to think well of themselves and avoid negative self-conceptions. Individuals are motivated to perceive and interpret stimuli, and act and react to situations in ways that maintain positive self-evaluation. Thus, low self-esteem provides a "drive mechanism" that pushes a person toward remedial actions aimed at increasing self-regard. Prior theory and research suggests that self-esteem derives from two general kinds of valuative experiences: 1) accomplishment in valued social roles and task, (sense of competence and confidence), and 2) acceptance in valued social relationships (sense of worth and significance). Not only are self-attitudes the product of social relationships and activities, they also motivate and direct subsequent social behavior, affecting individuals' choices and responses. Thus, the model is an ongoing feedback process in which self-esteem is both cause and effect of social events (Wells & Rankin, 1983).

Wells and Rankin (1983) found no evidence of a self-enhancement effect (i.e., positive effect of delinquency on subsequent self-concept) among high school students through self-reported data from a national panel survey. Similarly, McCarthy and Hoge (1984) evaluated the dynamics of the self-esteem--delinquency relationships, employing a three-wave panel study of adolescents which contained subscales of self-reported delinquent behavior. In contrast to other studies, the results showed that the effect of self-esteem on

subsequent delinquent activity is negligible, although there are consistent but weak negative effects of delinquent behavior on subsequent self-esteem.

2.3.2. Locus of Control Orientation

Locus of control orientation has been defined as being on a continuum from internal to external (Rotter, 1966). Internal locus of control orientation refers to the feeling that control over a stressful event lies within one's self. External locus of control orientation refers to the idea that control over aversive conditions lies beyond one's ability to change these conditions.

Evidence suggests that internals and externals differ in the nature and effectiveness of their coping behavior. Those who believe that they have control over their environments are more likely to actually control outcomes they experience. They also may be less vulnerable to maladjustment problems.

Research emphasizes that the adolescents' beliefs about themselves make important differences in how they handle stress. Especially significant is having a sense of control over events. If adolescents believe they have effective resources for handling demanding encounters, they probably will react with more composure and confidence than they would otherwise. Adolescents' beliefs that they can effectively control their world and have an impact on it is an important

contributor to their coping capabilities (Lazarus, 1984).

There has been considerable research attempting to support the commonly held notion that locus of control orientation plays a role in affecting outcomes of stress. For instance, Sandler and Lakey (1982) investigated the effects of locus of control beliefs as an individual difference variable on the relationship between negative life events and psychological disorder, perceptions of control over negative life events, and the receipt and impact of social support. The correlation between negative events and anxiety was greater for externals than for internals among college students.

Factors that allow adolescents to maintain socially competent behaviors despite stress were examined among 144 inner-city ninth-grade students with a mean age of 15.3 years. Luthar (1991) found that, in comparison to ninth grade adolescents with an internal locus of control orientation, those with an external locus of control orientation showed greater declines in function with increasing stress levels.

Parkes (1984) investigated locus of control and coping processes in relation to specific stressful episodes reported by student nurses. The patterns of coping reported by internals were potentially more adaptive in relation to types of appraisal than those of externals.

The above studies all focused on how internal or external people respond to their stressful life events. However, this

study assumes that life events themselves can affect adolescents' locus of control orientation. If adolescents are surrounded by many uncontrollable events, their belief system toward their lives may be affected by those events. Those uncontrollable events may lead adolescents to develop more external locus of control orientation of their world.

Research findings support this assumption. Many distressful events can occur environmentally or interpersonally that are beyond personal control (Newcomb & Harlow, 1986). These uncontrollable negative events or inescapable stressors often lead to a perceived loss of control, perhaps even to a sense of powerlessness, inefficacy, or helplessness (e.g., Bandura, 1982; Fleming, Baum, & Singer, 1984; Folkman, 1984; Seligman, 1975). A person will not feel as helpless, out of control, or that external influences are in control if he or she can influence whether or not the events takes place (Newcomb & Harlow, 1986).

Newcomb and Harlow (1986) reported that, among college students, the association between stress and drug use was clearly accounted for by the mediating constructs: perceived loss of control and meaninglessness in life. The more uncontrollable negative life events experienced by the teenager, the less personal control they experienced.

Bandura (1977, 1982) emphasized the role of outcome expectancies in the generation of futility, owing to the perception that one has little personal control over the

environment. He called this loss of personal control. This is similar to an external locus of control orientation, where people feel their life is controlled not by themselves but by "fate, chance, or powerful others" (Ashkanasy, 1985, p.1328).

Thus, a perceived lack of personal control may result from experiencing various life change events that are beyond the personal control of the individual and, in fact, may lead to helplessness, powerlessness, or inefficacy given the right circumstances (Abramson, Seligman, & Teasdale, 1978, Bandura, 1982). These feelings of low personal control may then lead to negative outcomes. For example, research has found that lack of mastery (low personal control) in regard to various life tasks (Pearlin & Radabaugh, 1976), low personal competence (Smith & Fogg, 1978), and feelings of powerlessness or inadequacy (Beckman, 1980) are associated with increased alcohol and drug use.

In a study of the relationship between locus of control orientation and delinquency, Parrott and Strongman (1984) examined a sample of delinquent and nondelinquent male adolescents between the ages of 12 and 17 years. The delinquent adolescent males scored significantly more external on the Rotter's Internal-External Scale.

2.3.3. Psychosocial Development

During adolescence, three important tasks of psychosocial

development are identity, autonomy, and intimacy. An important area to consider when investigating stress in adolescence is the impact of stress on these developmental tasks.

2.3.3.1. Identity

Developing identity becomes important to the individual who enters what Erikson calls a psychosocial moratorium, a gap between childhood security and adult autonomy. The youth who successfully copes with the conflicting identities emerges with a new sense of self that is both refreshing and acceptable. Adolescents who do not successfully resolve this identity crisis suffer what Erikson calls identity confusion. This confusion takes one of two courses: individuals withdraw, isolating themselves from peers and family, or they lose their identity in the crowd (Santrock, 1993).

Identity development involves changes in the way people think and feel about themselves. It has been said that adolescence is an especially important time for changes in identity because of the physical, intellectual, and social transformations characteristic of the period (Steinberg, 1989).

According to Erikson (1956), a number of family and childhood factors are associated with unfavorable outcomes of the identity crisis. Among these are insecure attachments in childhood, absent or weak adult models with whom to form

identifications, and severe physical trauma "either in the oedipal period or in early puberty associated with a separation from home" (Erikson, 1956, p. 92). Sense of identity is inseparable from the self and from the social and environmental context in which the self is placed (Hobfoll, Freedy, Lane, & Geller, 1990). Thus, it is important to examine how daily life events affect the formation of adolescents' identity.

Newman (1987) investigated the relationship between the form of an adolescent's identity crisis and early unfortunate life events, including physical and sexual abuse, major separations from parents, loss of and death of parents, placements in foster and group homes and school failure. Ego development was assessed using two well-validated and widely-used sentence completion forms: the Ego Identity Incomplete Sentences Blank and the Sentence Completion Test. The unfortunate life events were assessed by means of a detailed, semi-structured history interview. He discussed that unfortunate events among distressed adolescent females played an unsatisfactory role in their identity formation process.

2.3.3.2. Autonomy

Adolescence is a period of development when individuals push for autonomy (the perception that they have control over their behavior) and gradually develop the ability to take that control.

Research on the growth of autonomy during adolescence has focused on three aspects of the adolescent's developing sense of independence: emotional autonomy, which refers to emotional independence in relationships with others; behavioral autonomy, which concerns the development of independent decision-making abilities; and value autonomy, which concerns the development of independent beliefs.

Studies of influences on the development of autonomy show that the most autonomous adolescents have warm, not distant, relationships with their parents and come from authoritative families, in which independence was granted progressively throughout childhood and adolescence. These studies imply that environment affects or shapes the development of adolescent autonomy.

There is no research about explicit relationships between stressful life events and autonomy except from the viewpoint of a major or single life event, such as divorce. As Lebowitz (1985) stated, divorce is particularly hard on adolescents who need the security of the family while testing their autonomy. In an intact family, disengagement by the adolescent occurs normally, if not uneventfully, during adolescence. Children in divorced families may feel pressured to grow up too quickly, which could also have a negative effect on the development of autonomy (Wallerstein & Kelly, 1980). Autonomy development may also be negatively affected if the remaining parent depends emotionally on the adolescent (Slater et al,

1983). From the viewpoint of definition of autonomy, that is, the perception of control over people's behavior, it could be assumed that when adolescents experience stressful life events, their sense of autonomy may be less developed.

2.3.3.3. Intimacy

An intimate relationship is an emotional attachment between two people characterized by concern for each other's well-being, a willingness to disclose private, and occasionally sensitive, topics, and a sharing of common interests and activities. Close attachment with a significant other contributes to the formation of social identity and a view of self as valued and deserving of love and appreciation. The individual then proceeds to protect these attachments in order to preserve the healthy integrity of the self. This protection is especially important in the face of stressful circumstances as these so often threaten social attachments (Thoits, 1983).

Divorce of parents is a stressful life event to children and adolescents. Divorce may have a substantial impact on the completion of adolescent developmental tasks in regard to intimacy. Lebowitz (1985) stated that adolescents experiencing parental divorce worried more about their own sexuality. Teenagers in nondivorcing families are usually able to deny their parents' sexuality, but teenagers in

divorcing families must often confront the reality of their parents' sexuality. Similarly, research has revealed that adolescents from divorced families worry more than adolescents from intact families about their ability to become a suitable marriage partner (Slater et al., 1983; Wallerstein & Kelly, 1980).

There is little research about the relationship between psychosocial development and delinquent behavior. Ryan and LaVoie (1986) indicated that delinquent adolescents had higher social maladjustment scores compared to nondelinquents, and some appeared to have adopted a negative identity. Positive identity integration thus appeared more problematic for delinquents (cited in Arehart & Smith, 1990). Arehart and Smith (1990) compared delinquents and nondelinquents in psychosocial task resolutions. They found that by using the Erikson Psychosocial Stage Inventory delinquent adolescents who were in a temporary detention facility (mean age = 15.8 years) had poorer crisis resolutions than nondelinquents in task resolutions (trust, initiative, industry, identity, autonomy).

2.3.4. Social Support

2.3.4.1. The association between negative life events, social support, and maladjustment

A situational variable which has frequently been considered as a potential mediator or moderator of the effects

of stress on an individual's well-being is social support (Cohen, Sherrod, & Clark, 1986). Thoits (1982), who has reviewed the literature on the buffering hypothesis, broadly conceives of social support as interpersonal interaction that satisfies basic social needs, including affection, esteem or approval, belonging, identity and security. Resources in the environment are those things that can support or develop an adolescent's ability to coordinate emotion, cognition, and behavior both in the service of short-term adaption and long-term developmental progress.

Numerous studies have shown that social support is linked to psychological, physical health outcomes, and problem behaviors. The buffering hypothesis suggests that social support can moderate the impact of life events upon mental health and problem behaviors: individuals with a strong social support system should be better able to cope with major or minor life changes. Those with little or no social support may be more vulnerable to life change, particularly undesirable ones.

Compas, Wagner, Slavin, and Vannatta (1986b) found that during the transition from high school to college, the association of symptoms with prior life events was highest when students had recently entered a new school and living environment. Poor support made one vulnerable to experiencing symptoms of anxiety, depression, or somatic problems during a period of transition.

Researchers have studied factors related to the amount of support, types of support (e.g., socioemotional and instrumental), and sources of support in people's lives (e.g., spouse, friends, kin, coworkers). Sandler (1980) investigated the effects of the presence of social support resources as moderators of the relationship between stress and maladjustment based on parent ratings of children's adjustment problems. The sample was subdivided to reflect the presence versus absence of three social support resources: older sibling vs. no older sibling, one- vs. two-parent family, and ethnically congruent vs. incongruent with community. He found that the negative effects of stress on kindergartners through third-graders, such as aggression and inhibition were reduced by having older siblings and two parents in the family.

Compas, Slavin, Wagner, and Vannatta (1986a) demonstrated that negative life events and satisfaction with social support were significantly and independently related to a range of psychological symptoms among students from age 16 to 19 years. More specifically, lower levels of satisfaction with social support were significantly related to symptomatology (depression, anxiety, obsessive-compulsiveness, interpersonal sensitivity, and somatization).

Similarly, Benson and Deeter (1992) found that negative life events ratings (versus positive event scores) and social support satisfaction (versus network size) directly predicted depression among students from 16 to 19 years of age. The

interaction of negative life events and social support satisfaction was found to contribute an additional 7% to the prediction of depression scores. Negative life events and social support seem to exert an interactive effect, such that support may play a stronger role in alleviating depressive outcomes among individuals experiencing high levels of negative stress, whereas support is less predictive for low-stress individuals.

Windle (1992b) investigated the interrelations between temperament, perceived family and friend support, depressive symptoms and delinquent activity with a sample of 975 adolescents (mean age = 15.5 years). He found that lower levels of perceived social support appeared to increase levels of depression and fostered "acting-out" delinquent activity.

Burke and Weir (1978) showed gender differences in the level of social support among adolescents 13 to 20 years of age. Female adolescents reported significantly greater life stress, and although they received significantly more social support from peers, they also reported significantly poorer emotional and physical well-being scores than males.

2.3.4.2. The association between personal and social resources

Research (Caldwell & Reinhart, 1988; Sandler & Lakey, 1982) has suggested that some social supports are more effective than others, and that some persons make better use

of supports than others. Personal characteristics can influence the use and effectiveness of support. Not only is it important to study the effects of environments on individuals, but it is also important to study how individuals select supportive or nonsupportive environments. The assets and skills necessary to enter many networks are perhaps as important in understanding the "potency" of that network as are the network's activities and functions.

A number of writers have also questioned whether people differ in the likelihood of deriving benefits from different sources of social support. It is necessary to consider the possibility that they may perceive no suitable support to be available and may actively avoid the opportunity to mix with or confide in other people. The receipt of support in a particular situation may depend as much on an individual's wish for support, and on their conscious efforts to elicit support, as on their more stable personality characteristics.

Thus, in Heller and Swindle's (1983) model of social support and the coping process, social support is viewed in terms of an interaction between environment and person variables occurring across time. More concretely, support levels achieved by an individual are a function of the availability of supportive structures in the environment interacting with individual skills and competencies in accessing and maintaining supportive relationship. Examining the links between personal and social resources is very

important in investigating outcomes from stressful life events.

This paper examined how personal and environment resources mediated the relationship between stress and delinquency. The negative impact of stress on delinquent behavior may not only operate directly, but also indirectly by making it less likely that adolescents who experience stress have the coping resources they need to deal with the stress. Those rich in personal resources may have a dual advantage over those who lack such resources. Personal resources are not only protective themselves, then are also associated with higher levels of environment resources. So adolescents who need the most support may be the least likely to attain it.

There was some support for this idea in the literature, although these relationships have rarely been investigated together, especially the relationship between psychosocial development and social support. For instance, Caldwell and Reinhart (1988) found that among college students high self-esteem was related to receiving both emotional support and support from family members. Individuals with a secure self-concept (high self-esteem) tended to elicit and receive more emotional support.

In a study of earning social support, Lefcourt, Martin, and Saleh (1984) found that college students with an internal locus of control orientation derived greater benefits from social support than did those who have a more external

orientation. In an early study examining the utilization of support, Phares, Ritchie, and Davis (1968) found that, although externals recalled more negative feedback than did internals, internals among college students showed a greater willingness to take action to deal with the problem suggested by the feedback. Likewise, Strickland (1978), in a review of research on locus of control and health-related behavior, reported that internals as contrasted with externals, tended to know more about and make better use of information about their disease and treatment.

Sandler and Lakey (1982) conducted a study comparing internals and externals in their use of and benefits from social support among college students. As expected, internals (those who believed that they were in control of the events that happened in their lives) experienced a stress-buffering effect. In contrast, externals (those who believed that they were not in control of the events that happened in their lives) received more support, but seemed less able to benefit from it.

Similarly, Eckenrode (1983) found that among a sample of 356 women (mean age = 34.7 years) an internal locus of control orientation was related to more coping contacts following stressful events. This was true despite the fact that locus of control orientation was only marginally related to the number of potential supporters named by respondents. This suggests that internals may not possess more social resources

than externals, but that their resources are more effectively mobilized in times of stress. Caldwell, Pearson and Chin (1987) found that among college students the relationships between social support and adjustment varied depending upon which social support measure was used, which adjustment measure was used, as well as the locus of control orientation and gender of the subject. External men were the least able to use social support to aid adjustment.

In the area of psychosocial development, especially autonomy, Lecourt, Martin and Saleh (1984) found that the moderating effect of social supports largely occurred among those who were less generally affiliative and were more highly autonomous among college students. In addition, those who were less generally sociable or more autonomous appeared to benefit the most from the presence of social support. There is no explicit evidence about how identity and intimacy affect adolescents ability to obtain and use social support.

In sum, adolescence is a period in the life span that involves confrontation with a range of biological changes (e.g., puberty and increases in physical size), psychosocial tasks (e.g., fostering intimate relationships with significant others and making career path decisions), and environmental shifts (e.g., transitions from junior to senior high school). Thus, adolescents can be characterized as having stressors that are particularly likely to disrupt functioning, and even to affect the course of subsequent development. Individual

variation in the appraisal of and response to specific life events (Redfield & Stone, 1979) has prompted a search for personal and social resources that may be mediating or moderating factors. Both the personal and situational variables which mediate or moderate the relationship between heightened levels of environmental stress and behavioral maladjustment render individuals differentially vulnerable to the adaptive consequences of life stress.

Research HypothesesHypothesis One

Negative life events will have a direct positive effect on delinquent behavior (Figure 1).

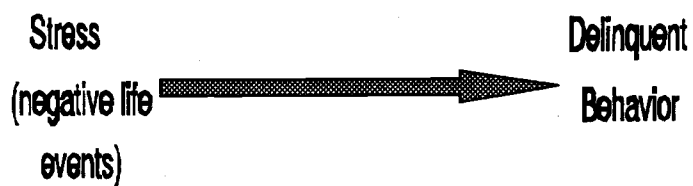


Figure 1. Hypothesis One.

Hypothesis Two

Personal resources will mediate the relationship between negative life events and delinquent behavior (Figure 2).

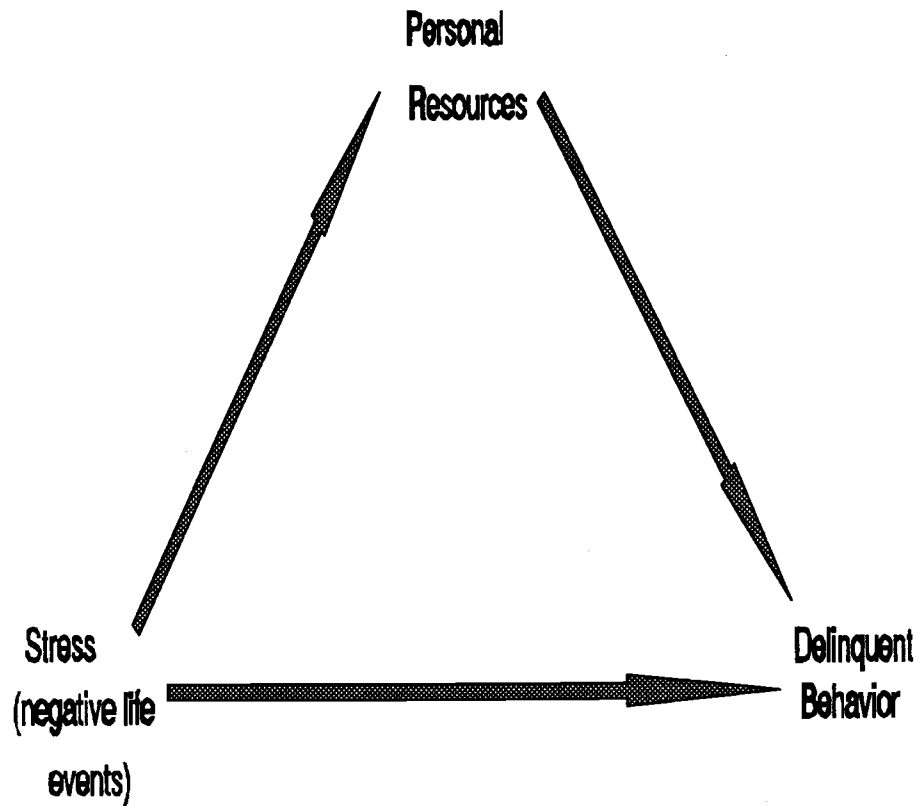


Figure 2. Hypothesis Two.

Hypothesis Three

Personal resources will mediate the relationship between negative life events and social support (Figure 3).

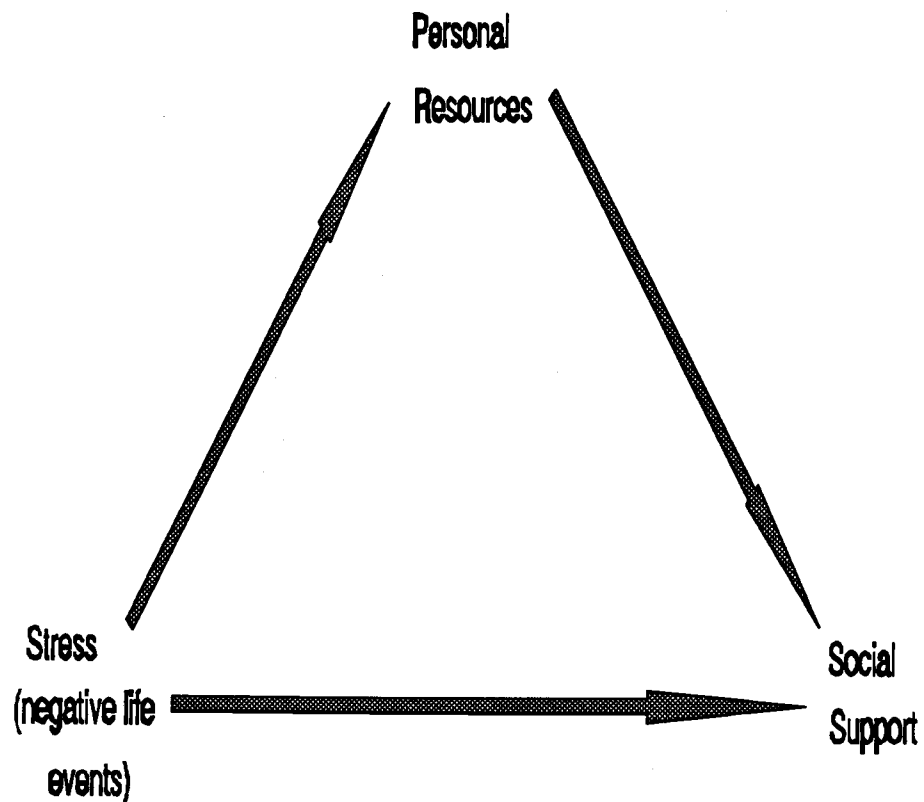


Figure 3. Hypothesis Three.

Hypothesis Four

Social support will mediate the relationship between negative life events and delinquent behavior (Figure 4).

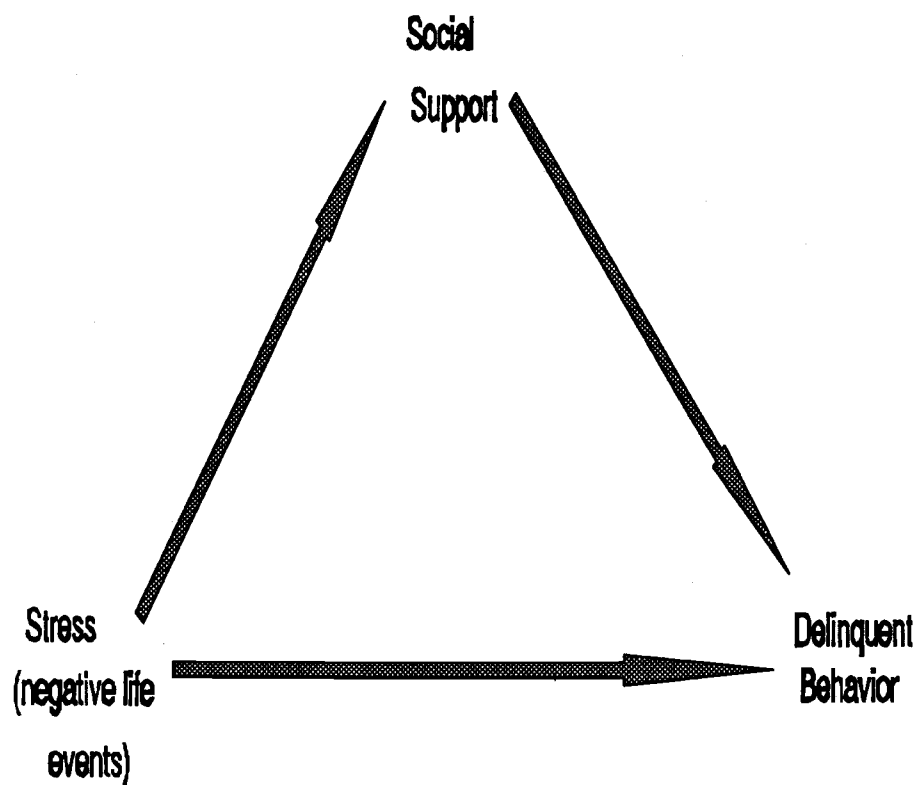


Figure 4. Hypothesis Four.

Hypothesis Five

Personal resources and social support will mediate the relationship between negative life events and delinquent behavior (Figure 5).

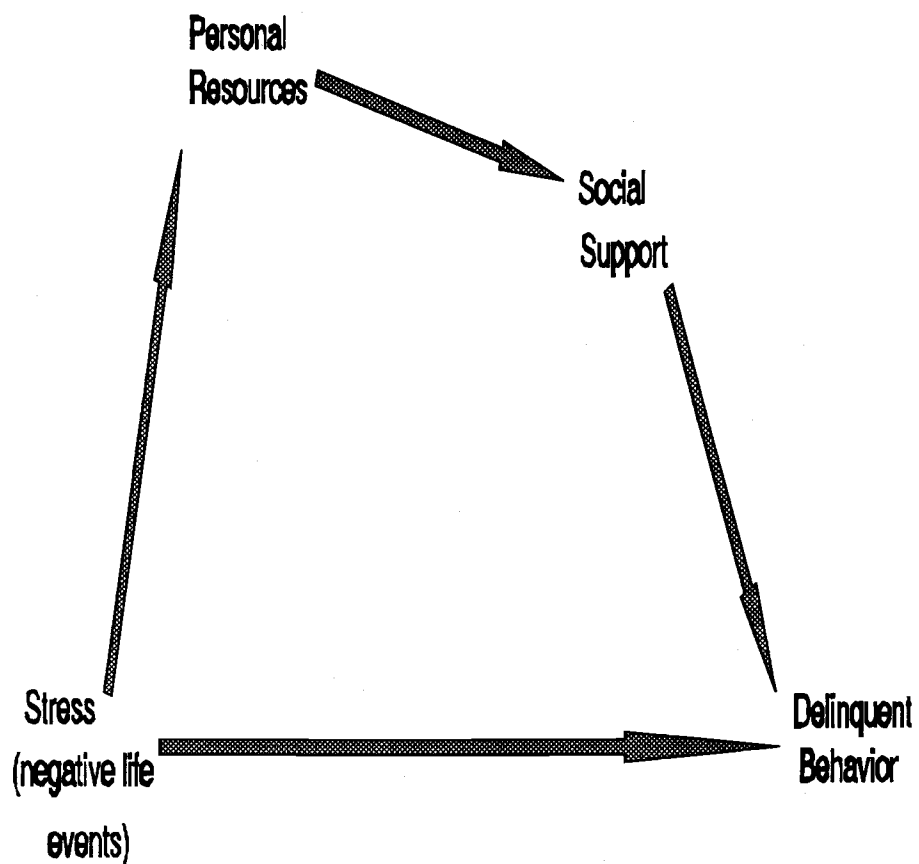


Figure 5. Hypothesis Five.

CHAPTER 3 METHODS AND PROCEDURES

3.1. SUBJECTS

Data were collected from 217 of the 9th graders in a high school in a coastal community of Oregon, 161 returned completed surveys. The high school consists of 9th through 12th grades and has a total student body of 1200. There were 65 male and 96 female subjects age ranging from 14 to 17 years with a mean age of 14.76 years. One person did not report his/her age. The socio-economic status (SES) was determined by a prestige rating scale based on parents' job. The community is economically depressed and is reliant on the timber and fishing industries. The mean scores for occupational prestige was 35.70 for father and 36.75 for mother. These reflect occupations such as laborers, workman, and clerical occupations.

3.2. PROCEDURES

Parental permission was obtained from all subjects. Teachers gave students incentives to get their parents to return the permission forms and incentives to show up on the day when the questionnaire was to be completed. These incentives included allowing them to have a pizza and to see a film after completion of the questionnaire, and gaining credit for missed assignments. The questionnaire was given to

subjects during their English classes. At the end of the class period, the student returned the form to the teacher. To assure confidentiality, student numbers, rather than names, were used. Students had one class period (about 45-50 minutes) to complete the questions.

3.3. MEASURES

3.3.1. Divorce Events Schedule for Children and Adolescent Perceived Events Scale

The Divorce Events Schedule for Children (DESC; Sandler, Wolchik, Braver & Fogas, 1986) and the shortened form of the Adolescent Perceived Events Scale (APES; Compas, Davis, Forsythe, & Wagner, 1987) were used to assess levels and desirability of life events. According to Williams & Uchiyama's (1989) review of life events inventories, with the exception of the APES, most measures assess major life events, rather than negative daily events (or hassles). Compas et al. (1987) included daily hassles in the APES to add another dimension to the study of stressful life events in adolescents. A subsequent study revealed that hassles mediated the relationship between major negative life events and psychological symptomatology (Wagner, Compas, & Howell, 1988) and behavior problems (Gad & Johnson, 1980; Greenberger et al. 1982; Vaux & Ruggiero, 1983).

Combination of the DESC and a shortened APES scale can be

found in Appendix A. Subjects were asked to indicate whether any of 99 life events occurred during the last three months and also to indicate whether the event was good, bad, or neutral. The DESC assesses divorce-related life events and changes and consists of 62 events, while the APES assesses major and daily stressful events during adolescence and consists of 37 events. If the event has occurred the subject then checks whether the event was good, bad, or neutral. For example, one event from the DESC is "You change schools". An example from the APES is "I flunked a grade." The DESC and the APES were scored by summing the number of events checked in the "bad" category.

For the DESC, a 2-week test-retest reliability for the positive event scores was .65 and for the negative event scores was .85. Although no validity score is available, a significant correlation between negative event scores and measures of a child's psychological symptomatology was found, providing evidence of construct validity (Sandler, Wolchik, Braver, & Fogas, 1986).

Two types of test-retest reliabilities were conducted during the construction of the APES. First, the correlation between the number of events reported at two administrations two weeks apart was .85. Secondly, the test-retest reliability of specific events was .83 (Compas et al., 1987).

Validity for the APES was assessed by comparing reports of the subject's life events with reports of subject's life

events obtained from close friends of the subjects. Concurrent validity was .82 for subjects and close friend reports (Compas et al., 1987).

3.3.2. Mediating Resources

3.3.2.1. Rosenberg self-esteem scale

The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) (Appendix B) was used to measure overall, or global self-esteem. The RSE was designed for adolescents and was originally administered to 5,024 high school juniors and seniors in New York (Johnson, 1976). Silber and Tippett (1965) found a 2-week test-retest correlation of .85 and a correlation of .56 between an interview developed to evaluate self-esteem and the RSE. The scale consists of 10 statements, half of which indicate high self-esteem and half of which indicate low self-esteem. Each statement is followed by four possible responses ranging from "strongly agree" to "strongly disagree." Responses are scored from one, indicating lowest self-esteem, to four, indicating highest self-esteem. Scores ranged from a low of ten to a high of forty. The alpha coefficient was .88 in this study.

3.3.2.2. Desirable and undesirable event locus of control scale

The Desirable and Undesirable Event Locus of Control Scale (DUE-LOC; Rothbaum, Wolfer, & Visintainer, 1979) (Appendix C) was used to measure a subject's locus of control orientation. Made up of descriptions of eighteen events, the DUE-LOC asks subjects to respond to one of two response alternatives; one indicating that control over the event is attributed to the subject, and the other indicating that control of the event is attributed to sources outside the subject. For example, question five asks "When you can't understand something, is it usually because a: it was too hard to understand, or b: you haven't thought about it enough. Answer "a" indicates an external locus of control for this event (scored 1), while answer "b" indicates an internal locus of control (scored 0). In this manner locus of control orientation scores can range from a low of zero to a high of eighteen, with a higher score indicating a greater external locus of control orientation. Test-retest reliabilities, with three to six weeks between test administrations, have been found to range from .72 to .74 (Rothbaum, Wolfer, & Visintainer, 1979). The internal consistency (Kuder Richardson Formula 20) was .37 in this study.

Evidence of validity comes from an investigation of the DUE-LOC scores and coping reactions for 18 children, aged 4-12, undergoing stressful experiences associated with

hospitalization. The coping measure consisted of observational ratings of resistance and verbal and nonverbal expressions of fear, anxiety, and anger, taken at the time of the stressful experience. Prior to the stressful experience, children received preparations, including information, sensory feedback and role rehearsal, designed to teach them how they could mitigate the effects of the stressor. Based on the assumption that children with an internal locus of control orientation are more inclined to believe that their own thoughts and actions can influence subsequent outcomes, it was hypothesized that they would be better able to benefit from the preparations. The correlation of $-.55$ between the DUE-LOC and the number of coping behaviors supported this hypothesis (Rothbaum, Wolfer, & Visintainer, 1979).

3.3.2.3. Erikson psychosocial stage inventory

The Erikson Psychosocial Stage Inventory (EPSI; Rosenthal., Gurney, & Moore, 1981) (Appendix D) was used to assess the degree of resolution among subjects of Erikson's six aspects of identity crises in childhood and adolescence. The scale consists of six 12-item subscales (Trust, Identity, Autonomy, Intimacy, Initiative, and Industry). The subscales for identity, autonomy, and intimacy from the EPSI were used for this study. Each subscale contains items to which subjects were asked to respond using a five-point scale to

rate themselves. For example, question eight states "I've got a clear idea of what I want to be". The subject was asked to respond to this statement as being "not true at all," "not true," "neutral," "true," or "very true". Scores range from twelve to sixty for each subscale, with high scores indicating positive resolutions to the crisis.

Reliability and validity measures for the EPSI (Rosenthal et al., 1981) were obtained with Australian adolescents in Grades 9 through 11. Reported alphas were .74 for autonomy, .78 for identity, and .73 for intimacy in the pilot sample (N=97). For the test sample (N=622), alphas were .62 for autonomy, .71 for identity, and .63 for intimacy. The construct validity for the EPSI was examined by comparing the EPSI with the PSM (Psychosocial Maturity Inventory, Form D) (Greenberger, et al., 1974). Subscales of the EPSI showed encouragingly high correlations with relevant subscales of the PSM, providing some measure of construct validity. Intercorrelations between the EPSI and the PSM subscales scores were .56 for identity, .35 for autonomy, and .39 for intimacy.

Arehart and Smith (1990) reported alpha coefficients from two different studies ranging from .65 to .77 for the EPSI from one study and from .66 to .80 in the other study. Mellor (1989) reported alpha coefficients of .72 to .82. In this study, the alpha coefficients for autonomy, identity, and intimacy were .72, .83, and .75, respectively.

3.3.2.4. Social support scale for children

The Social Support Scale for Children (Harter, 1986) found in Appendix E, was used to measure subjects' level of social support. This scale consists of twenty-four items subdivided into three subscales of six items for parents and teachers, and twelve items from peers. The three subscales measure the level of social support each subject receives from parents, teachers, and peers.

Subjects were first asked to consider which of two descriptions was more like themselves. For example one description states "some kids have parents who don't seem to want to hear about their children's problems," and "other kids have parents who do want to listen to their children's problems." Once this decision is made, then subjects are asked to decide which description best fits them. The second part indicates whether the description they chose was "really true for them" or "sort of true for them." Answers were scored from one to four, based on the subject's responses. A score of one indicates that the child does not have that form of support, while a score of four indicates that the child frequently has that form of support. In this manner the scores for each subscale could range from a low of six (very little, or no support) to a high of forty eight (a high level of support).

Subscale reliabilities from two middle schools were reported. Alpha was .88 for parent, .78 and .83 for classmate

and friend (peers in the present study), and .84 for teacher in sample A. Alpha was .86 for parent, .74 and .77 for classmate and friend (peers in the present study), and .84 for teacher in sample B (Harter, 1986). The alpha coefficient was .87 in this study.

For validity, parent support subscale was correlated with a measure of the congruence of values among children and their parents. The correlation was .48. Classmate support was correlated with the popularity score from the Social Acceptance/Popularity subscale that children receiving social support should be those children whose self-perception is one of popularity. The prediction was confirmed by strong correlation ($r = .69$). The close friend subscale was correlated with children's perceived ability to disclose personal thoughts and feelings to a friend, a subscale tapped on Social Skills Scale for children. The correlation was .46 (Harter, 1986).

3.3.3. Outcome

3.3.3.1. Delinquency lifestyle scale

The Delinquency Lifestyle Scale, found in Appendix F, was used to measure the extent to which subjects were involved in behaviors considered to be consistent with a delinquent lifestyle. Developed by Ageton and Elliott (1978), this scale

measures patterns of delinquent behavior. The thirteen items that make up the scale describe different behaviors indicative of delinquency. Subjects were asked to indicate how many times in the past year they performed each of the behaviors. For example, subjects were asked to answer how many times in the past year they had run away from home, hit or threatened to hit other students, or cheated on tests (e.g., questions two, five, and nine). Scores on this scale can range from zero (the behavior was not performed) to nine (behavior performed 9 or more times). Test-retest reliability has been found to be .78 between two administrations 68 days apart (Dishion et al., 1984; Snyder, Dishion, & Patterson, 1986). The alpha coefficient was .83 in this study.

3.4. ANALYSES

A series of path analyses using regression techniques was used to examine the research hypotheses. For the first hypothesis, delinquent behavior scores were regressed on negative life events scores. For the second hypothesis, personal resources scores, that is, self-esteem, locus of control orientation, and psychosocial development scores were regressed on the negative life events scores. Then delinquent behavior scores were regressed on these personal resources scores and negative life events scores. For the third hypothesis, social support scores were regressed on personal

resources scores and negative life events scores. For the fourth hypothesis, social support scores were regressed on negative life events scores and then delinquent behavior scores were regressed on social support scores and negative life events scores. For the fifth hypothesis, delinquent behavior scores were regressed on negative life events scores, personal resources scores, and social support scores.

CHAPTER 4
RESULTS

4.1. DESCRIPTION OF THE SAMPLE

Separate analyses for males and females did not reveal substantial differences on most of the variables in this study. Therefore, analyses were run for males and females together.

Table 1 presents the means and standard deviations for every variable. Appendix G presents the means and standard deviations for males and females from every variable. Appendix H presents Pearson correlations among variables.

Table 1. Means and Standard Deviations of the Subjects

Variable	M	SD
Stress (negative life events)	6.12	6.28
Self-esteem	29.28	5.37
Locus of control orientation	6.59	2.34
Identity	43.12	7.74
Autonomy	45.99	6.25
Intimacy	43.57	7.08
Social support	73.34	11.78
Delinquent Behavior	16.40	18.65

4.2. TESTING THE HYPOTHESES

4.2.1. Hypothesis One

As predicted in hypothesis one, results indicated that negative life events had a significant direct positive effect on delinquent behavior (see Figure 6).

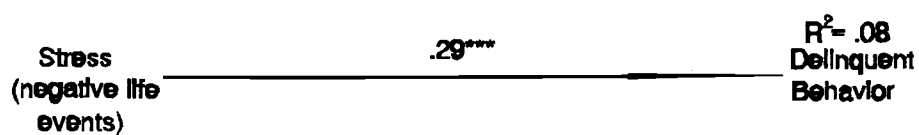


Figure 6. Results of Path Analysis.
Dependent Variable: Delinquent Behavior.
(*** $p < .001$)

4.2.2. Hypothesis Two

Hypothesis two stated that personal resources would mediate the relationship between negative life events and delinquent behavior. As shown in Figure 7, negative life events were significantly related to lower self-esteem (Beta = $-.34$, $p = .0001$), lower identity (Beta = $-.31$, $p = .0001$), and lower autonomy (Beta = $-.29$, $p = .0002$). However, negative life events were not significantly related to external locus of control orientation and lower intimacy.

After controlling for negative life events, as Figure 7 indicates, there was a significant positive relationship between locus of control orientation and delinquent behavior (Beta = $.19$, $p = .0255$). There was a significant negative relationship between identity and delinquent behavior (Beta = $-.31$, $p = .0133$). The relationships between self-esteem and delinquent behavior, between autonomy and delinquent behavior, and intimacy and delinquent behavior were not significant.

After controlling for all the personal resources, negative life events showed a significant positive effect on delinquent behavior (Beta = $.33$, $p = .0001$).

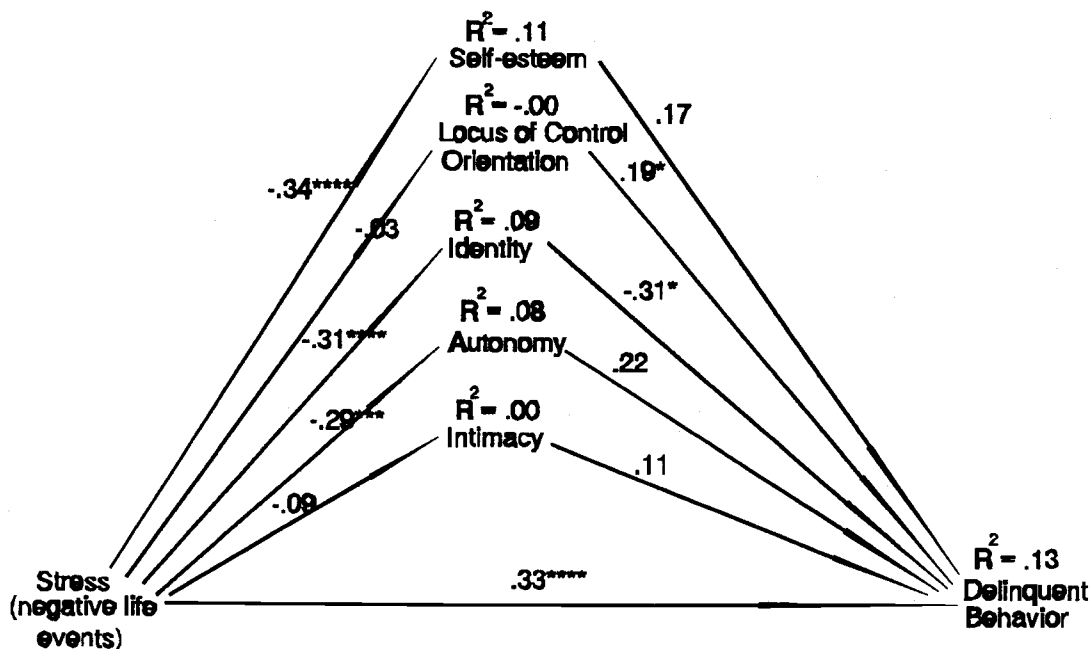


Figure 7. Results of Path Analysis: The Mediating Influences of Self-esteem, Locus of Control Orientation, Identity, Autonomy, and Intimacy on Delinquent Behavior.
 (* $p < .05$; *** $p < .001$; **** $p < .0001$)

A composite score using z-scores was made for all of the personal resources. The alpha coefficient of the composite score was .79 in this study. As Figure 8 indicates, there was a significant negative relationship between negative life events and the composite score of personal resources (Beta = -.27, $p = .0005$). The mediation of the personal composite score between negative life events and delinquent behavior was not significant (Beta = -.01, NS). After controlling the composite score of personal resources, negative life events

had a significant positive effect on delinquent behavior (Beta = .28, $p = .0004$).

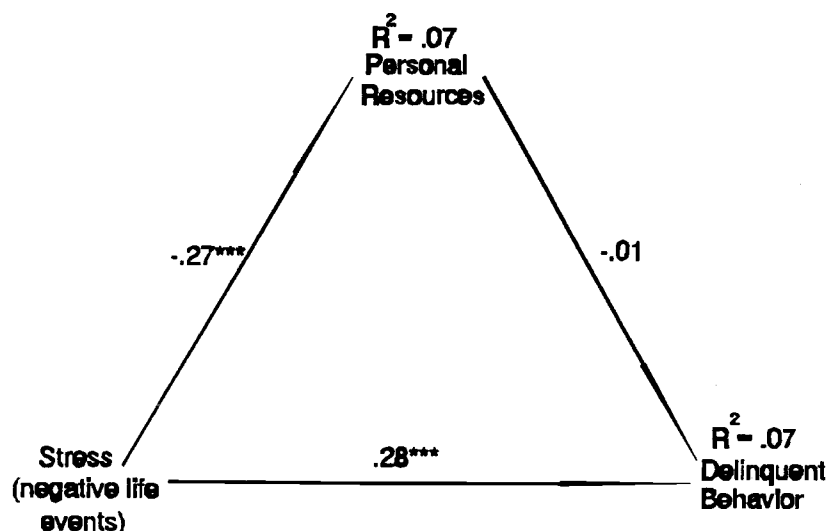


Figure 8. Results of Path Analysis: The Mediating Influence of the Composite Score of Personal Resources on Delinquent Behavior. (***) $p < .001$

4.2.3. Hypothesis Three

Hypothesis three stated that personal resources would mediate the relationship between negative life events and social support. As Figure 9 indicates, there was a significant negative relationship between locus control of orientation and social support (Beta = $-.20$, $p = .0031$). There were significant positive relationships between identity and social support (Beta = $.42$, $p = .0001$), and intimacy and social support (Beta = $.19$, $p = .0048$). The relationships between self-esteem and social support and between autonomy

and social support were not significant. Negative life events after controlling for all personal resources had a significant negative effect on social support (Beta = $-.33$, $p = .0001$).

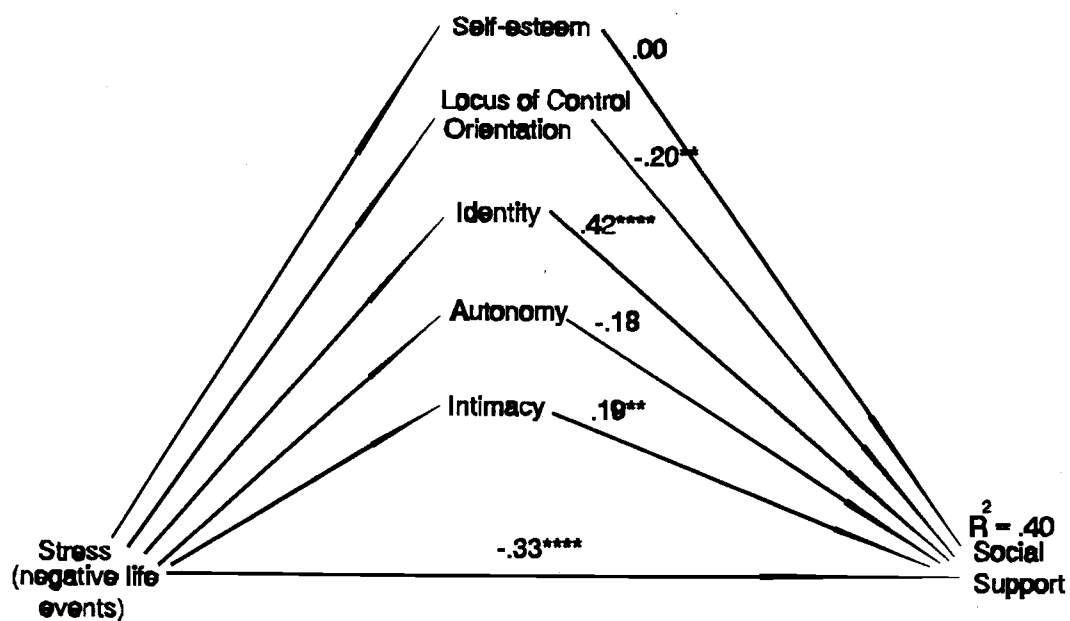


Figure 9. Results of Path Analysis: The Mediating Influences of Self-esteem, Locus of Control Orientation, Identity, Autonomy, and Intimacy on Social Support.
 (** $p < .01$; **** $p < .0001$)

In the composite score of personal resources, as Figure 10 indicates, the relationship between personal resources and social support was significantly positive controlling for negative life events (Beta = .45, $p = .0001$). After controlling for the composite score of personal resources, negative life events showed a significant negative effect on social support (Beta = $-.29$, $p = .0001$).

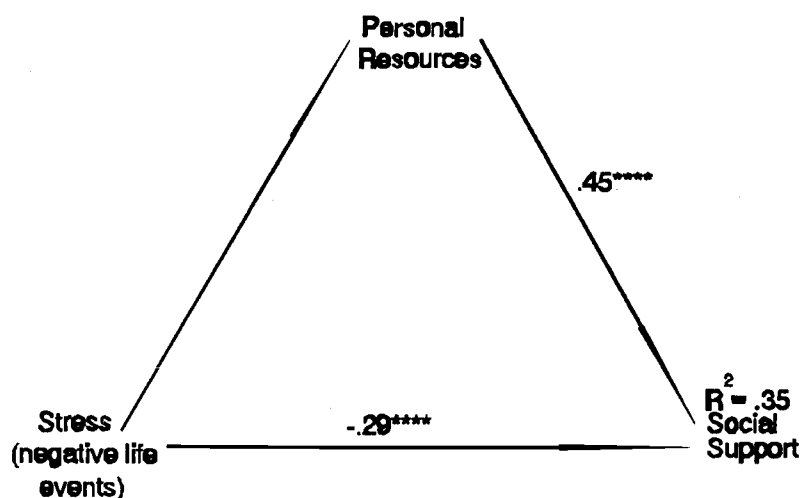


Figure 10. Results of Path Analysis: The Mediating Influence of the Composite Score of Personal Resources on Social Support. (**** $p < .0001$)

4.2.4. Hypothesis Four

Hypothesis four stated that social support would mediate the relationship between negative life events and delinquent behavior. As Figure 11 shows, there was a significant negative relation between negative life events and social support (Beta = $-.42$, $P = .0001$) and between social support and delinquent behavior after controlling for negative life events (Beta = $-.37$, $P = .0001$). After controlling for social support, the relationship between stress and delinquent behavior was not significant.

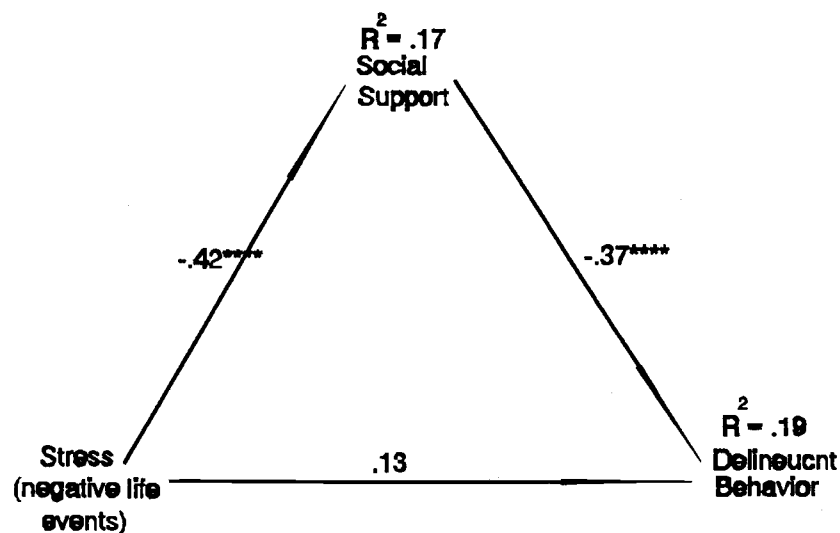


Figure 11. Results of Path Analysis: The Mediating Influence of Social Support on Delinquent Behavior. (**** $p < .0001$)

4.2.5. Hypothesis Five

Hypothesis five stated that personal resources and social support would mediate the relationship between negative life events and delinquent behavior. As Figure 12 indicates, among personal resources, only intimacy had a significant positive effect on delinquent behavior after controlling for negative life events and social support (Beta = .19, $p = .0144$). After controlling for negative life events and all the personal resources, social support had a significant negative effect on delinquent behavior (Beta = $-.44$, $p = .0001$). After controlling for all personal resources and social support, negative life events still had a significant positive effect on delinquent behavior (Beta = .18, $p = .0247$). These analyses showed entering social support into the path of the hypothesis two considerably increased the amount of variance accounted for in the dependent variable, delinquent behavior.

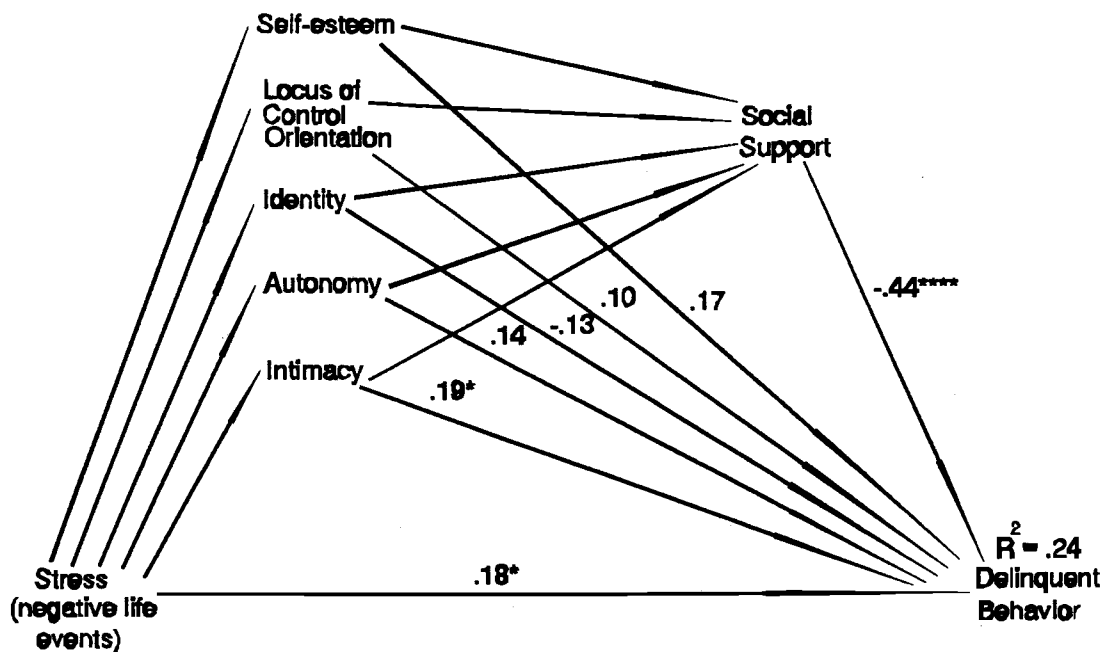


Figure 12. Results of Path Analysis: The Mediating Influences of Self-esteem, Locus of Control Orientation, Identity, Autonomy, Intimacy, and Social Support on Delinquent Behavior.
 (* $p < .05$; **** $p < .0001$)

As Figure 13 indicates, the composite score of personal resources showed a significant positive effect on delinquent behavior after controlling for negative life events and social support (Beta = .20, $p = .0148$). After controlling for negative life events and the composite score of personal resources, social support showed a significant negative effect on delinquent behavior (Beta = $-.47$, $p = .0001$). After controlling for the composite score of personal resources and

social support, negative life events was not significantly related to delinquent behavior.

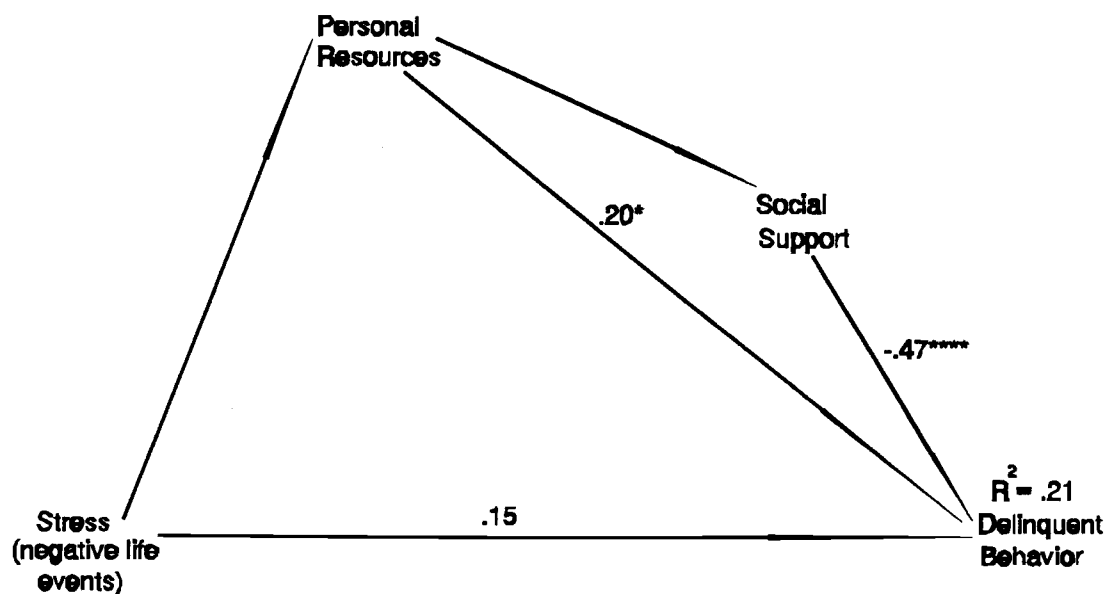


Figure 13. Results of Path Analysis: The Mediating Influences of the Composite Score of Personal Resources and Social Support on Delinquent Behavior. (* $p < .05$; **** $p < .0001$)

CHAPTER 5

DISCUSSION AND CONCLUSIONS

Stress and coping research suggests that the impact of stressors is best understood by the balance between the level of stressors in an individual's life and the level of coping resources available to the individual. A person who experiences a high level of stressors may not be negatively affected if a high level of coping resources is available. In contrast, a person who experiences a low level of stressors may be negatively affected if there are few coping resources available.

Even though they are often treated as though they are separate, stressors and coping resources are actually related to each other. An adolescent's prior negative life situation, or ongoing stressful processes, may be related to the development of coping resources. For example, stress may be related to lower self-esteem. Thus, the very individuals who need coping resources the most may be least likely to have them.

Coping resources are often divided into two major categories, personal and environmental resources. In this study, personal resources included self-esteem, locus of control orientation, identity, autonomy, and intimacy. Environmental resources included social support from parent, peer, and teacher.

Although personal and environmental resources are often treated as though they are unconnected, there is good reason to believe that they are actually interconnected. According to a transaction model, persons and environments reciprocally influence one another. The kinds of social environments experienced by adolescents may be determined in part by their personal characteristics. Thus, a certain level of personal resources may be associated with an individual's ability to maintain and mobilize support from others.

The primary purpose of this study was to examine the connectedness between level of stress, coping resources, and one outcome--delinquent behavior. It was hypothesized that stressful life events would be related to lower levels of personal coping resources. A lower level of personal resources was predicted to be related to a lower level of social support which was predicted to be associated with higher delinquent behavior.

Results showed that negative life events were positively related to delinquent behavior. It is not difficult to speculate why this occurs. Negative life events are predictive of a variety of emotional and behavioral maladjustment in adolescents. It is apparent, however that this relationship is complicated and that individuals vary in their responses to stress.

Since person and environment factors influence each other reciprocally, it is important to consider whether coping

resources mediate the relationship between stressful life events and delinquent behavior. The findings in this study indicated that coping resources mediated the relationship between negative life events and delinquent behavior. A high level of stress was related to lower levels of personal resources. These personal resources were not directly related to more delinquent behavior, however. Rather, they were associated with lower social support and then more delinquent behavior.

This finding is important because it identifies an interrelationship between factors that are associated with delinquent behavior. Like a vicious circle, adolescents who experience a high level of stressful events are more likely to have lower personal coping resources and these low levels of personal resources are associated with low levels of social support. Low levels of social support are related to a high level of delinquent behavior.

The findings related to specific personal resources were both consistent and contrary to predictions. Stressful life events were related to lower self-esteem, lower identity development, and lower autonomy development. These findings indicate that adolescents having a high level of stressful life events are more likely to have low levels of personal resources.

The relationship between self-esteem and delinquent behavior was not significant. The finding of a study by Leung

and Lau (1989) may help to explain this finding. They found no correlation between Rosenberg's general measure of self-esteem and delinquent behavior. However, with the use of a multidimensional measure of self-concept, they found that delinquent behavior was meaningfully related to various aspects of self-concept. Specifically, delinquency was found to correlate positively with poor academic self-concept and poor relationships with parent and school. The failure of this link in the present study might be attributable to the fact that a general measure of self-esteem was used.

Consistent with previous research and the prediction of this study, results indicated that external locus of control orientation was positively related to delinquent behavior. The scale used in this study contains both desirable and undesirable events to measure subjects' locus of control orientation. A supplemental analysis indicated that high externals from only desirable events showed more delinquent behavior. This finding supports Rothbaum et. al (1979)'s findings. They found that among children aged 4 to 12 years desirable-event items were better able to distinguish between inward behavior (withdrawn, somaticizing, fearful) and outward behavior (antisocial, hostile, aggressive) than were undesirable-event items. The separate analysis of desirable and undesirable events would be appropriate in future research.

Adolescents with a high level of identity development

showed fewer behavior problems than adolescents with a low level of identity development. This finding is consistent with other research which indicates delinquent adolescents have a poorer resolution in psychosocial development than nondelinquents (Arehart & Smith, 1990).

A situational variable which was considered as a potential mediator is social support. Social support in this study was a mediator between negative life events and delinquent behavior, suggesting the importance of social support from family, school, and peer to prevent delinquent behavior among adolescents. This finding is consistent with research by Windle (1992b). He found that low-perceived support was significantly associated with delinquency. Given that adolescence represents a period in the life span often characterized by challenges and changes (e.g., puberty, school transitions, individuation), strong family and friend support may enhance adjustment processes.

Results showed that a high level of personal resources was related to a high level of social support. Adolescents having internal locus of control orientation, high identity, and high intimacy development perceived more social support than adolescents having external locus of control orientation, low identity, and low intimacy development in this study. These findings imply that adolescents with certain personal characteristics are more likely successful in getting and perceiving social support.

When personal resources and social support were treated as mediators to examine the relationship between negative life events and delinquent behavior, negative life events still had a direct effect on delinquent behavior. So, while the impact of stress on coping resources is important in explaining delinquent behavior, there are other unexplained links between stress and delinquency.

Interestingly, adolescents with high intimacy development showed more delinquent behavior when social support and the other personal resources were taken into account. How does the intimacy development enhance more delinquent behavior during adolescence? One explanation may have to do with the increased influence of peer during adolescence. Over the course of the adolescent years, individuals become more capable of emotional closeness, and they become more interested in seeking it in their relationships with other people. In addition, the adolescents social world broadens considerably. Close relationships with peers come to supplement (but not replace) close relationship in the family (Steinberg, 1989). Leung and Lau (1989) found that peer approval had the strongest effect on delinquent behavior than any of the other approvals, such as parental and teacher approval. Peers play an important role in influencing adolescent behavior. For example, if friends are participating in delinquent behavior, adolescents may have more tendency to be involved in the activity. Thus, this

finding may be interpreted from the development of peer intimacy and peer pressure in delinquent behavior. The measure of peer intimacy in this study may also be related to peer influence.

Adolescents with high social support showed significantly less delinquent behavior than adolescents with low social support after controlling for negative life events and all personal resources. Again, this finding implies the importance of social support in protecting adolescents from delinquent behavior. Low support may make adolescents vulnerable to behavior maladjustment.

There are some limitations of this study. First of all, the level of personal resources and social support before negative life events happened are not controlled. Thus, concluding that stressful life events in this study lead to the development of low personal resources is not possible. Because data are based on cross-sectional sampling, the interpretation of findings must be viewed as merely suggestive. Some of the relationships that this study presented as unidirectional might be reciprocal. Obviously, mutidirectionality must eventually be taken into account to capture more fully the complexities of the process through the life course. The data do, however, strongly support the notion that stressful life events affect the development of personal coping resources and that personal coping resources are related to social coping resources.

Secondly, it must be noted that this sample was primarily comprised of caucasian adolescents from low S.E.S. families. It is unclear whether the findings are generalizable to other populations. The criterion measure was based on the adolescents' self-reports, and future research should include more objective indices of variables and use multiple indicators. The adolescents' life events were determined via questionnaires, and it is unclear if the results obtained would be replicated with an interview methodology, which potentially might clarify the context of experienced events. In all retrospective studies there is the issue of accuracy in the recall of life events and delinquent behavior.

Despite its limitations, this study adds significant new insights in understanding mediating factors between stressful life events and delinquent behavior, especially, the link between stressful life events and personal resources and the link between the personal resources and environmental resources. The general findings and related results have implications for parents and professionals who work with adolescents. First, the data suggest that, since stressors themselves are related to reducing personal coping resources and then reducing environment resources, coping resources of stressed adolescents should be carefully monitored and actively supported. The present study raises important issues regarding the relationship between stressful life events and psychosocial development, between psychosocial development and

social support, and between psychosocial development and delinquent behavior that have received too little attention in research as personal coping resources.

Secondly, the findings of this study have the implications for the development of interventions to prevent delinquency in adolescents experiencing highly stressful life situations. It is desirable to focus on coping skills that are relevant for dealing with general life stressors in order to reduce delinquency. This will not only help the adolescents directly, it will also increase the likelihood that the adolescents will reach out to others for support.

Further research on mediating factors between stressful life events and delinquent behavior is recommended in the following directions. The validity of adolescents' life-event reporting should be investigated by comparing adolescents' self-reports with the reports of parents, siblings, and close friends. Also, because most studies of children and adolescents, including the present study, have utilized a cross-sectional approach, inferences concerning causality are unwarranted. Longitudinal studies may help explain the direction of the life stress-delinquent behavior relationship, and may help determine if that relationship is attributable to covariation with other variables intrinsic to an adolescent's life situation (Gersten et al., 1977).

Furthermore, future longitudinal research is needed to assess further the cross-temporal and bidirectional nature of

the interrelations among variables investigated in this study, and to chart developmental pathways toward or away from escalating levels of problem behaviors. A related issue which deserves attention is the relationship between life stress experienced by adolescents and their peers. Also, future research with varying age groups is important.

In conclusion, the findings of this study indicate that the impact of stressful life events on delinquent behavior is mediated by personal and social coping resources. Escalating stressful life events are positively associated with delinquent behavior. The experience of negative life events appears to be the contributor to low personal resources. The low levels of personal resources are powerful contributors to the low levels of social support which, in turn, predict higher levels of delinquent behavior among adolescents.

References

- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.
- Ageton, S. S., & Elliott, D. S. (1978). The dynamics of delinquent behavior: A national survey. MTT 27552, Project Report No. 3. Boulder, CO: Behavior Research Institute.
- Arehart, D. M., & Smith, P. H. (1990). Identity in adolescence: influences of dysfunction and psychosocial task issues. Journal of Youth and Adolescence, 19(1), 63-72.
- Ashkanasy, N. M. (1985). Rotter's Internal-External Scale: Confirmatory factor analysis and correlation with social desirability for alternate scale formats. Journal of and Social Psychology, 48, 1328-1341.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.
- Beckman, L. (1980). Perceived antecedents and effects of alcohol consumption in women. Journal of Studies on Alcohol, 41, 5-21.
- Benson, L. T., & Deeter, T. E. (1992). Moderator of the relation between stress and depression in adolescents. The School Counselor, 39, 189-194.
- Burke, R. J., & Weir, T. (1978). Sex differences in adolescent life stress, social support, and well-being. The Journal of Psychology, 98, 277-288.
- Bynner, J. M., O'Malley, P. M., & Bachman, J. G. (1981). Self-esteem and delinquency revisited. Journal of Youth and Adolescence, 10(6), 407-441.
- Caldwell, R. A., Pearson, J. L., & Chin, R. J. (1987). Stress-moderating effects: Social support in the context of gender and locus of control. Personality and Social Psychology Bulletin, 13(1), 5-17.
- Caldwell, R. A., Reinhart, M. A. (1988). The relationship of personality to individual differences in the use of type

- and source of social support. Journal of Social and Clinical Psychology, 6(1), 140-146.
- Cohen, L. H., Burt, C. E. & Bjorck, J. P. (1987). Life stress and adjustment: Effects of life events experienced by young adolescents and their parents. Developmental Psychology, 23, 583-592.
- Cohen-Sandler, R., Berman, A. L., & King, R. A. (1982). Life stress and symptomatology: Determinants of suicidal behavior in children. Journal of the American Academy of Child Psychiatry, 21(2), 178-186.
- Cohen, Sheldon, Sherrod, D. R., & Clark, M. S. (1986). Social skills and the stress-protective role of social support. Journal of Personality and Social Psychology, 50(5), 963-973.
- Compas, B. E. (1987a). Coping with stress during childhood and adolescence. Psychological Bulletin, 101, 393-403.
- Compas, B. E. (1987b). Stress and life events during childhood and adolescence. Clinical Psychology Review, 7, 275-302.
- Compas, B. E., Davis, G. E., & Forsythe, C. J. (1985). Characteristics of life events during adolescence. American Journal of Community Psychology, 13(6), 677-691.
- Compas, B. E., Davis, G. E., Forsythe, C. J., & Wagner, B. M. (1987). Assessment of major and daily life events during adolescence: The Adolescent Perceived Events Scale. Journal of Consulting and Clinical Psychology, 55, 534-541.
- Compas, B. E., Slavin, L. A., Wagner, B. M., & Vannatta, K. (1986a). Relationship of life events and social support with psychological dysfunction among adolescents. Journal of Youth and Adolescence, 15(3), 205-221.
- Compas, B. E., Wagner, B. M., Slavin, L. A., & Vannatta, K. (1986b). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. American Journal of Community Psychology, 14(3), 241-257.
- Dishion, T. J., Loeber, R., Stouthamer-Loeber, M., & Patterson, G. R. (1984). Skill deficits and male adolescent delinquency. Journal of Abnormal Child Psychology, 12(1), 37-54.
- Eckenrode, J. (1983). The mobilization of social supports:

- some individual constraints. American Journal of Community Psychology, 11(6), 509-528.
- Erikson, E. H. (1956). The problem of ego identity. Journal of the American Psychoanalytic Association, 4, 56-121.
- Felner, R. D., Farber, S. S. & Primavera, J. (1983). Transitions and stressful life events: a model for primary prevention. In R. D. Felner, L. A. Jason, J. N. Moritsugu, & S. S. Farber (Eds.), Preventive psychology: Theory, research, and practice. New York: Pergamon.
- Fleming, R., Baum, A., & Singer, J. E. (1984). Toward an integrative approach to the study of stress. Journal of Personality and Social Psychology, 46, 939-949.
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. Journal of Personality and Social Psychology, 46, 839-852.
- Gad, M. T., & Johnson, J. H. (1980). Correlates of adolescent life stress as related to race, SES, and levels of perceived social support. Journal of Clinical Child Psychology, 9, 13-16.
- Gersten, J. C., Langner, T. S., Eisenberg, J. G., & Simcha-Fagan, O. (1977). An evaluation of the etiologic role of stressful life-change events in psychological disorders. Journal of Health and Social Behavior, 18, 228-244.
- Greenberger, R. M., & Sørensen, A. B. (1974). Toward a concept of psychosocial maturity. Journal of Youth and Adolescence, 3, 329-358.
- Greenberger, E., Steinberg, L. D., & Vaux, A. (1982). Person-environment congruence as a predictor of adolescent health and behavioral problems. American Journal of Community Psychology, 10(5), 511-526.
- Hamburg, B. A. (1974). Early adolescence: A specific and stressful stage of the life cycle. In G. V. Coelho, B. A. Hamburg, & J. E. Adams (Eds.), Coping and adaptation. New York: Basic Books.
- Harter, S. (1986). Manual: Social support scale for children. University of Denver.
- Heller, K. & Swindle, R. W. (1983). Social networks, perceived social support, and coping with stress. In R. D. Felner, L. A. Jason, J. N. Moritsugu, & S. S. Farber (Eds.), Preventive psychology: Theory, research and practice. New York: Pergamon.

- Hobfoll, S. E., Freedy, J., Lane, C., & Geller, P. (1990). Conservation of social resources: social support resource theory. Journal of Social and Personal Relationships, 7, 465-478.
- Hoffman, M. A., Ushpiz, V., & Levy-Shiff, R. (1988). Social support and self-esteem in adolescence. Journal of Youth and Adolescence, 17(4), 307-316.
- Holmes, T. H., & Masuda, M. (1972). Life change and illness susceptibility. In D. R. Heise (Ed.), Personality and Socialization (pp. 434-449). Chicago: Rand McNally.
- Johnson, G. (1976). Tests and measurements in child development: Handbook II. Jossey-Bass.
- Johnson, J. H. (1986). Life events as stressors in childhood and adolescence. Beverly Hills, CA: Sage.
- Johnson, J. H., & McCutcheon, S. (1980). Assessing events in older children and adolescents: preliminary findings with the life events checklist. In I. G. Sarason & C. D. Spielberger (Eds.), Stress and anxiety (Vol. 7, pp. 111-125). Washington, D. C.: Hemisphere.
- Kaplan, H. B. (1975). Self-attitudes and deviant behavior. Pacific Palisades: Goodyear Press.
- Kaplan, H. B. (1978). Deviant behavior and self-enhancement in adolescence. Journal of Youth and Adolescence, 7, (3), 253- 277.
- Kaplan, H. B., & Robbins, C. (1983). Testing a general theory of deviance behavior in longitudinal perspective. In K. T. Van Dusen & S. A. Mednick (Eds.), Prospective studies of crime and delinquency (pp. 117-146). Boston: Kluwer-Nijhoff.
- Lazarus, R. (1984). On the primacy of cognition. American Psychologist, 39, 124-129.
- Lebowitz, M. L. (1985). Divorce and the American teenager. Pediatrics, 40, 695-698.
- Lefcourt, H. M., Martin, R. A., & Saleh, W. (1984). Locus of control and social support: Interactive moderators of stress. Journal of Personality and Social Psychology, 47(2), 378-389.
- Leung, K., & Drasgow, F. (1986). Relation between self-esteem and delinquent behavior in three ethnic groups: An application of item response theory. Journal of Cross-

- application of item response theory. Journal of Cross-cultural Psychology, 17(2), 151-167.
- Leung, K., & Lau, S. (1989). Effects of self-concept and perceived disapproval of delinquent behavior in school children. Journal of Youth Adolescence, 18(4), 345-359.
- Levinson, R. M., & Ramsay, G. (1979). Dangerous, stress, and mental health evaluations. Journal of Health and Social Behavior, 20, 178-187.
- Luthar, S. S. (1991). Vulnerability and resilience: a study of high-risk adolescents. Child Development, 62(3), 600-616.
- Masuda, M., Cutler, D. L., Hein, L. & Holmes, T. H. (1978). Life events and prisoners. Archives of General Psychiatry, 35, 197-203.
- McCarthy, J. D., & Hoge, D. R. (1984). The dynamics of self-esteem and delinquency. American Journal of Sociology, 90(2), 396-410.
- Mellor, S. (1989). Gender differences in identity formation as a function of self-other relationships. Journal of Youth and Adolescence, 18, 365-375.
- Moran, P. B., & Eckenrode, J. (1991). Gender differences in the costs and benefits of peer relationships during adolescence. Journal of Adolescent Research, 6(4), 396-409.
- Mullins, L. L., Siegel, L. J., & Hodges, K. (1985). Cognitive problem-solving and life event correlates of depressive symptoms in children. Journal of Abnormal Child Psychology, 13(2), 305-314.
- Newcomb, M. D., & Harlow, L. L. (1986). Life events and substance use among adolescents: Mediating effects of perceived loss of control and meaninglessness in life. Journal of Personality and Social Psychology, 51(3), 564-577.
- Newman, F. (1987). Working with distressed adolescent females: Countertransference issues. Women and Therapy, 6(1-2), 73-89.
- Novy, D. M., Donohue, S. (1985). The relationship between adolescent life stress events and delinquent conduct including conduct indicating a need for supervision. Adolescence, 20(78), 313-321.

- Palazzi, S., De Vito, E., Luzzati, D, Guerrini, A, & Torre, E. (1990). A study of the relationship between life events and disturbed self image in adolescents. Journal of Adolescence, 13, 53-63.
- Parkes, K. R. (1984). Locus of control, cognitive appraisal, and coping in stressful episodes. Journal of Personality and Social Psychology, 46(3), 655-668.
- Parrott, C. A., & Strongman, K. T. (1984). Locus of control and delinquency. Adolescence, 19(74), 459-471.
- Pearlin, L. I., Menaghan, E. G., Lieberman, M. A., & Mullan, J. T. (1981). The stress process. Journal of Health and Social Behavior, 22, 337-356.
- Pearlin, L. I., Radabaugh, C. W. (1976). Economic strains and the coping functions of alcohol. American Journal of Sociology, 82, 652-663.
- Phares, E. J., Ritchie, D. E., & Davis, W. L. (1968). Internal-external control and reaction to threat. Journal of Personality and Social Psychology, 10, 402-405.
- Redfield, J., & Stone, A. (1979). Individual viewpoints of stressful life events. Journal of Consulting and Clinical Psychology, 47, 147-154.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton University Press, Princeton, NJ.
- Rosenberg, F. R., & Rosenberg, M. (1978). Self-esteem and delinquency. Journal of Youth and Adolescence, 7(3), 279-291.
- Rosenthal, D. A., Gurney, R. M., & Moore, S. M. (1981). From trust to intimacy: A new inventory for examining Erikson's stages of psychosocial development. Journal of Youth and Adolescence, 10, 525-537.
- Rosenberg, M., Schooler, C., & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modeling reciprocal effects. American Sociological Review, 54, 1004-1018.
- Rothbaum, F., Wolfer, J., & Visintainer, M. (1979). Coping behavior and locus of control in children. Journal of Personality, 47, 118-135.
- Rotter, J. (1966). Generalized expectancies for internal versus external locus of control of reinforcement. Psychological Monographs, 80 (No.1, whole No. 609), 1-28.

- Rutter, M. (1981). Stress, coping, and development: Some issues and some questions. Journal of Child Psychology and Psychiatry, 22(4), 323-356.
- Ryan, M. F., & LaVoie, J. C. (1986). Affective, moral, and perception of behavioral characteristics among delinquent and nondelinquent adolescents. Paper presented at the first biennial meeting of the Society for Research on Adolescence, Madison, WI.
- Sandler, I. N. (1980). Social support resources, stress, and maladjustment of poor children. American Journal of Community Psychology, 8(1), 41-52.
- Sandler, I. N., & Block, M. (1979). Life stress and maladaptation of children. American Journal of Community Psychology, 7, 425-440.
- Sandler, I. N., & Lakey, B. (1982). Locus of control as a stress moderator: The role of control perceptions and social support. American Journal of Community Psychology, 10(1), 65-80.
- Sandler, I., Wolchik, S., Braver, S, & Fogas, B. (1986). Significant events of children of divorce. In S. M. Auerbach, and A. L. Stolberg (Eds.), Crisis intervention with children and families (pp.65-83). Washington: Hemisphere Publishing Corporation.
- Santrock, J. W. (1993). Adolescence: An introduction (5th.). Dubuque: Wm. C. Brown Communications, Inc.
- Seligman, M. E. P. (1975). Helplessness: On depression, development, and death. San Francisco: Freeman.
- Siddique, C. M., & D'Arcy, C. (1984). Adolescence, stress, and psychological well-being. Journal of Youth and Adolescence, 13, 459-473.
- Silber, E., & Tippett, J. S. (1965). Self-esteem: Clinical assessment & measurement evaluation. Psychological Reports, 16, 101-107.
- Slater, E. J., Stewart, K. J., & Linn, M. W. (1983). The effects of family disruption on adolescent males and females. Adolescence, 18. 931-942.
- Smith, G. M., & Fogg, C. P. (1978). Psychological predictors of early use, late use, and nonuse of marijuana among teenage students. In D. B. Kandel (Ed.), Longitudinal research on drug use: Empirical findings and

- methodological issues (pp.101-114). Washington. DC: Hemisphere.
- Steinberg, L. (1989). Adolescence (2nd.). New York: Alfred A. Knopf, Inc.
- Swearingen, E. M., & Cohen, L. H. (1985). Measurement of adolescents' life events: the junior high life experiences survey. American Journal of Community Psychology, 13(1), 69-85.
- Strickland, B. R. (1978). Internal-external expectancies and health-related behaviors. Journal of Consulting and Clinical Psychology, 46(6), 1192-1211.
- Snyder, J., Dishion, T. J., & Patterson, G. R. (1986). Determinants and consequences of associating with deviant peers during pre-adolescence and adolescence. Journal of Early Adolescence, 6, 28-43.
- Thoits, P. A. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. Journal of Health and Social Behavior, 2, 145-159.
- Thoits, P. A. (1983). Dimensions of life events that influence psychological distress: an evaluation and synthesis of the literature. In H. B. Kaplan (Ed.), Psychological stress: Trends in theory and research (pp.33-103). New York: Academic Press.
- Vaux, A., Ruggiero, M. (1983). Stressful life change and delinquent behavior. American Journal of Community Psychology, 11(2), 169-183.
- Wagner, B. M., Compas, B. E., & Howell, D. C. (1988). Daily and major life events: A test of an integrative model of psychosocial stress. American Journal of Community Psychology, 16(2), 189-205.
- Wallerstein, J. S., & Kelly, J. B. (1980). Surviving the breakup: How children and parents cope with divorce. New York: Basic Books.
- Wells, L. E. & Rankin, J. H. (1983). Self-concept as a mediating factor in delinquency. Social Psychology Quarterly, 46(1), 11-22.
- Williams, C. L., & Uchiyama, C. (1989). Assessment of life events during adolescence: The use of self-report inventories. Adolescence, (93), 1989.

- Wills, T. A. (1986). Stress and coping in early adolescence: Relationships to substance use in urban school samples. Health Psychology, 5(6), 503-529.
- Windle, M. (1992a). A longitudinal study of stress buffering for adolescent problem behaviors. Developmental Psychology, 28(3), 522-530.
- Windle, M. (1992b). Temperament and social support in adolescence: Interrelations with depressive symptoms and delinquent behaviors. Journal of Youth and Adolescence, 21(1), 1-21.
- Yeaworth, R. C., York, J., Hussey, M. A., Ingle, M. E., & Goodwin, T. (1980). The development of an adolescent life change event scale. Adolescence, 15(57), 91-98.
- Youngs, G. A., Rathge, R., Mullis, R., & Mullis, A. (1990). Adolescent stress and self-esteem. Adolescence, 25(98), 333- 341.

APPENDICES

APPENDIX A
THE DIVORCE EVENTS SCHEDULE FOR CHILDREN
AND THE ADOLESCENT PERCEIVED EVENTS SCALE

Divorce Events Schedule For Children
(Sandler, Wolchik, Braver & Fogas, 1986)

1. Mom and Dad differ in how they want you to be (activities they want you to be (activities they want you to do or your ideas about things)
2. People in your neighborhood say bad things to you about your parents.
3. You have chores to do around the house (like making meals or cleaning your room).
4. Dad is unhappy.
5. Your friends tease you or are mean to you.
6. Dad does extra nice things for you, that you like.
7. Mom tells you that she doesn't like you spending time with Dad.
8. Mom is strict.
9. You do fun things with Dad.
10. You have to watch out for, or take care of, your brothers and sisters.
11. Dad takes care of the things that need to get done for you (like giving you a ride or making your meals).
12. Mom asks you questions about Dad's private life.
13. Dad says bad things about Mom.
14. Dad is strict.
15. Mom says bad things about Dad.
16. You have free time to do things you like (playing, relaxing).
17. Mom gets mad at you or tells you that you are bad.
18. Mom and Dad argue in front of you.
19. Your relatives say bad things to you about your parents.
20. Dad asks you questions about Mom's private life.

21. You spend time with your Fathers family.
22. Your parent _____ misses scheduled visits.
23. Mom does extra nice things for your, that you like.
24. Household routines get done smoothly (like dinner on time, regular bedtime, your clothes get washed, you get ready for school on time).
25. You do fun things with Mom.
26. You get toys, clothes, and other things you like.
27. Dad tells you not to tell some things to your Mom.
28. Dad tells you that he doesn't like you spending time with Mom.
29. Dad gets mad at you or tells you that you are bad.
30. Mom takes care of the things that need to get done for you (like giving you a ride or making your meals).
31. Mom tells you not to tell some things to your Dad.
32. You spend time with Mom.
33. You spend time with your Mother's family.
34. You get to see your old friends.
35. Dad tells you about things in his life, like problems, or his feelings about things.
36. Mom is unhappy.
37. You are making new friends.
38. You spend time with Dad.
39. You spend time alone, by yourself.
40. You have to give up pets or other things that you like.
41. Mom tells you about things in her life, like problems, or her feelings about things.
42. Mom or Dad talk to you about why they got divorced.
43. Mom or Dad talk to you about which parent you want to live with.

44. Mom and Dad make you follow different rules while you are at their house.
45. The parent you live with works.
46. Your mother's boyfriend or husband tells you to do things.
47. Your parents hit each other or physically hurt each other.
48. Your father's girlfriend or wife tells you to do things.
49. Dad starts to go out on dates.
50. Dad remarries or has a girlfriend come live with him.
51. Dad or Mom told you the divorce was because of you.
52. You change schools.
53. Mom remarries or has a boyfriend come live with her.
54. Dad gets a steady girlfriend.
55. Mom gets a steady boyfriend.
56. Mom starts to go out on dates.
57. Your parent _____ moves out of town.
58. Your brothers and sisters live in a different house than you.
59. You move to a new house.
60. You change which parents you live with.
61. You have to talk to a lawyer or judge.
62. New kids move into your house.

The Adolescent Perceived Events Scale
(Compas, Davis, Forsythe, & Wagner, 1987)

63. A new brother or sister was born in my family.
64. I was suspended from school.

65. I broke up with my boyfriend/girlfriend.
66. I make a new friend.
67. I broke up with a close friend.
68. A close friend of mine died.
69. I received academic honors (honor roll, etc.).
70. I began to date.
71. I was seriously ill or injured.
72. My mother or father was seriously ill or injured.
73. My brother or sister was seriously ill or injured.
74. I changed schools.
75. I began drinking alcohol or taking drugs.
76. A new person joined our household (grandparent, stepbrother, or other).
77. I was accepted into an important activity (athletic team, etc.).
78. I was not accepted into an important activity.
79. My mother or father lost a job.
80. My favorite pet died.
81. I ran away from home.
82. I flunked a grade.
83. My brother or sister had serious trouble.
84. I started wearing braces or glasses.
85. I was assaulted, robbed, or a victim of another violent crime.
86. A family member of mine was a victim of violence.
87. Outstanding personal achievement (won an award, athletic competition).
88. A close family member of mine died.

89. I argued more with my parents.
90. I argued less with my parents.
91. My family had serious financial troubles.
92. My brother or sister left our household.
93. Because of a job change or other reason, my mother or father spent much more time away from home.
94. My family moved to another house.
95. My parents argued much more with each other.
96. I became a member of a church or religious group.
97. I was arrested or had serious trouble with the law.
98. My mother or father was arrested or had serious trouble with the law.
99. I had braces removed.

APPENDIX B
THE ROSENBERG SELF-ESTEEM SCALE

Rosenberg Self-Esteem Scale
(Rosenberg, 1965)

1. I feel that I'm a person of worth, at least on an equal plane with others.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

2. I feel that I have a number of good qualities.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

3. All in all, I am inclined to feel that I am a failure.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

4. I am able to do things as well as most other people.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

5. I feel I do not have much to be proud of.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

6. I take a positive attitude toward myself.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

7. On the whole, I am satisfied with myself.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

8. I wish I could have more respect for myself.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

9. I certainly feel useless at times.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

10. At times I think I am no good at all.

1. <input type="checkbox"/> Strongly agree	2. <input type="checkbox"/> Agree
3. <input type="checkbox"/> Disagree	4. <input type="checkbox"/> Strongly disagree

APPENDIX C
THE DESIRABLE AND UNDESIRABLE EVENT LOCUS OF CONTROL SCALE

Desirable and Undesirable Event Locus of Control Scale
(Rothbaum, Wolfer, & Visintainer, 1978)

1. When you get better from a cold, is it usually
 - a. because the medicine made you better, or
 - b. because you took care of yourself
2. When you beat someone at a game, is it usually
 - a. because you are good at the game, or
 - b. because the other person doesn't play the game well
3. When you catch a cold, it is usually
 - a. because you caught it from someone else, or
 - b. because you didn't take care of yourself
4. When someone stops spending time with you, is it usually
 - a. because you did something the person didn't like, or
 - b. because the person is busy
5. When you can't understand something, is it usually
 - a. because it was too hard to understand, or
 - b. because you haven't thought about it enough
6. When someone gives you a surprise, is it usually
 - a. because you need it, or
 - b. because the person likes to give people surprises
7. When you get something wrong, is that usually
 - a. because no one showed you how to do it, or
 - b. because you were not careful enough
8. When you are having trouble doing a puzzle, is it usually
 - a. because you can't figure out where the pieces go, or
 - b. because some of the pieces are missing
9. When you are happy, are you usually happy
 - a. because someone was nice to you, or
 - b. because you did something you enjoy
10. When you finally get something you wanted, is it usually
 - a. because you kept trying for it, or
 - b. because things worked out your way

11. When you hurt yourself, is that usually
 - a. because you were in an accident, or
 - b. because you were not careful

12. When someone tells you they are proud of you, is it usually
 - a. because you did something special, or
 - b. because the person is feeling good

13. When you get punished, is it usually
 - a. because you did something you weren't supposed to do,
or
 - b. because the person who punished you is a bad mood

14. When you get the right answer on a difficult problem, is it usually
 - a. because someone explained it to you, or
 - b. because you tried to do it yourself

15. When you run out of money is it usually
 - a. because you didn't have enough to start with, or
 - b. because you didn't plan ahead/save enough

16. When you solve a problem is it usually
 - a. because it was an easy problem, or
 - b. because you did good work on it

17. When someone beats you at a game, is that usually
 - a. because you aren't very good at the game, or
 - b. because the other person is very good at the game

18. When you say something smart, is it usually
 - a. because you thought about it a lot, or
 - b. because you heard somebody smart say it

APPENDIX D
THE ERIKSON PSYCHOLOGICAL STAGE INVENTORY

Erikson Psychological Stage Inventory
(Rosenthal, Gurney, & Moore, 1981)

1=not true at all 2=not true 3=neutral 4=true 5=very true

1. I am able to take things as they come _____
2. I can't make sense of my life _____
3. I get embarrassed when someone begins to tell me personal things _____
4. I can't make up my own mind about things _____
5. I change my opinion of myself a lot _____
6. I'm never going to get on in this world _____
7. I'm ready to get involved with a special person _____
8. I've got a clear idea of what I want to be _____
9. I feel mixed up _____
10. I know when to please myself and when to please others _____
11. The important things in life are clear to me _____
12. I've got it together _____
13. I know what kind of person I am _____
14. I'm warm and friendly _____
15. I really believe in myself _____
16. I can't decide what I want to do with my life _____
17. It's important to me to be completely open with my friends _____
18. I keep what I really think and feel to myself _____
19. I have a strong sense of what it means to be female/male _____
20. I am ashamed of myself _____

21. I think it's crazy to get too involved with people _____
22. I like myself and am proud of what I stand for _____
23. I don't really know what I'm all about _____
24. I care deeply for others _____
25. I find I have to keep up a front when I'm with people

26. I don't really feel involved _____
27. I like to make my own choices _____
28. I don't feel confident of my judgement _____
29. I'm basically a loner _____
30. I have a close physical and emotional relationship with
another person _____
31. I can stand on my own two feet _____
32. I find it hard to make up my mind _____
33. I like my freedom and don't want to be tied down _____
34. I prefer not to show too much of myself to others _____
35. Being alone with other people makes me feel uncomfortable

36. I find it easy to make close friends _____

APPENDIX E
THE HARTER SOCIAL SUPPORT SCALE FOR CHILDREN

Social Support Scale for Children
(Harter, 1986)

Really True for Me	Sort of True for Me			Really True for Me	Sort of True for Me
—	—	Some kids like to do fun things with a lot of other people.	BUT	Other kids like to do fun things with just a few people.	— —
—	—	Some kids have parents who don't really understand them.	BUT	Other kids have parents who really do understand them.	— —
—	—	Some kids have classmates who like them the way they are.	BUT	Other kids have classmates who wish they were different.	— —
—	—	Some kids have a teacher who helps them if they are upset and have a problem.	BUT	Other kids don't have a teacher who helps them if they are upset and have a problem.	— —
—	—	Some kids have a close friend who they can tell problems to.	BUT	Other kids don't have a close friend who they can tell problems to.	— —
—	—	Some kids have parents who don't seem to want to hear about their children's problems.	BUT	Other kids have parents who do want to listen to their children's problems.	— —
—	—	Some kids have classmates that they can become friends with.	BUT	Other kids don't have classmates that they can become friends with.	— —
—	—	Some kids don't have a teacher who helps them to do their very best.	BUT	Other kids do have a teacher who helps them to do their very best.	— —
—	—	Some kids have a close friend who really understands them.	BUT	Other kids don't have a close friend who understands them.	— —
—	—	Some kids have parents who care about their children's feelings.	BUT	Other kids have parents who don't seem to care very much about their children's feelings.	— —
—	—	Some kids have classmates who sometimes make fun of them.	BUT	Other kids don't have classmates who make fun of them.	— —
—	—	Some kids do have a teacher who cares about them.	BUT	Other kids don't have a teacher who cares about them.	— —
—	—	Some kids have a close friend who they can talk to about things that bother them.	BUT	Other kids don't have a close friend who they can talk to about things that bother them.	— —
—	—	Some kids have parents who treat their children like a person who really matters.	BUT	Other kids have parents who don't usually treat their children like a person who matters.	— —
—	—	Some kids have classmates who pay attention to what they say.	BUT	Other kids have classmates who usually don't pay attention to what they say.	— —
—	—	Some kids don't have a teacher who is fair to them.	BUT	Other kids do have teacher who is fair to them.	— —
—	—	Some kids don't have a close friend who they like to spend time with.	BUT	Other kids do have a close friend who they like to spend time with.	— —
—	—	Some kids have parents who like them the way they are.	BUT	Other kids have parents who wish their children were different.	— —

—	—	Some kids don't get asked to play games with classmates very often.	BUT	Other kids often get asked to play in games by their classmates.	—	—
—	—	Some kids don't have a teacher who cares if they feel bad.	BUT	Other kids do have a teacher who cares if they feel bad.	—	—
—	—	Some kids don't have a close friend who really listens to what they say.	BUT	Other kids do have a close friend who really listens to what they say.	—	—
—	—	Some kids have parents who don't act like what their children do is important.	BUT	Other kids have parents who do act like what their children do is important.	—	—
—	—	Some kids have often spend recess being alone.	BUT	Other kids spend recess playing with their classmates.	—	—
—	—	Some kids have a teacher who treats them like a person.	BUT	Other kids don't have a teacher who treats them like a person.	—	—
—	—	Some kids don't have a close friend who cares about their feelings.	BUT	Other kids do have a close friend who cares about their feelings.	—	—

APPENDIX F
THE DELINQUENCY LIFESTYLE SCALE

Delinquency Lifestyle Scale
(Ageton & Elliott, 1978)

How many times in the past year have you ...

1. Purposely damaged or destroyed property that did not belong to you? _____ times
2. Run away from home? _____ times
3. Carried a hidden weapon other than a plain pocket knife? _____ times
4. Stolen or tried to steal things worth \$5 or less? _____ times
5. Hit or threatened to hit other students? _____ times
6. Been loud, rowdy, or unruly in a public place so that other people were disturbed _____ times
7. Stolen or tried to steal something worth more than \$50? _____ times
8. Avoided paying for such things as movies, bus rides, or food (like by sneaking into the movie)? _____ times
9. Cheated on school tests? _____ times
10. Been sent to the office because you had done something wrong? _____ times
11. Been suspended from school? _____ times
12. Skipped school or played hookey? _____ times
13. Damaged school property on purpose? _____ times

APPENDIX G

Means and Standard Deviations of Variables
for Males and Females

Variable	<u>Males</u>		<u>Females</u>	
	M	SD	M	SD
Stress (negative life events)	5.45	5.82	6.57	6.56
Self-esteem	30.68	5.82	28.33	4.86
Locus of control orientation	6.78	2.23	6.46	2.41
Identity	42.92	8.25	43.25	7.42
Autonomy	47.43	6.46	45.01	5.94
Intimacy	40.82	7.27	45.44	6.33
Social Support	71.17	11.90	78.16	10.88
Delinquent Behavior	23.34	21.57	11.71	14.73

APPENDIX H

Pearson Correlations Among Variables

Variable	1	2	3	4	5	6	7	8
1. Stress	_____							
2. Self-esteem	-.34 ^d	_____						
3. Locus of Control Orientation	-.03	-.29 ^c	_____					
4. Identity	-.31 ^d	.68 ^d	-.37 ^d	_____				
5. Autonomy	-.29 ^c	.67 ^d	-.39 ^d	.74 ^d	_____			
6. Intimacy	-.09	.23 ^b	-.15	.40 ^d	.34 ^d	_____		
7. Social Support	-.42 ^d	.38 ^d	-.31 ^d	.54 ^d	.37 ^d	.36 ^d	_____	
8. Delinquent Behavior	.29 ^c	-.04	.14	-.16 ^a	-.03	.04	-.43 ^d	_____

^a p<.05. ^b p<.01. ^c p<.001. ^d p<.0001.

Pearson Correlations Among Variables
(the composite score of personal resources)

Variable	1	2	3	4
1. Stress	_____			
2. Personal Resources	-.27 ^a	_____		
3. Social Support	-.42 ^b	.53 ^b	_____	
4. Delinquent Behavior	.29 ^a	-.09	-.43 ^b	_____

^a p<.001. ^b p<.0001.