Social stress, social support, locus of control and depression among middle and high school-aged population

Nasser M. Al-Mehaizie
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Social stress, social support, locus of control and depression among middle and high school-aged population

Al-Mehaizie, Nasser M., Ph.D.

Iowa State University, 1994
Social stress, social support, locus of control and depression among middle and high school-aged population

by

Nasser M. Al-Mehaizie

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements of the Degree of
DOCTOR OF PHILOSOPHY

Department: Sociology
Major: Sociology

Approved:
Signature was redacted for privacy.

In Charge of Major Work
Signature was redacted for privacy.

For the Major Department
Signature was redacted for privacy.

For the Graduate College

Iowa State University
Ames, Iowa
1994
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CHAPTER I. INTRODUCTION

Introduction

Current interest in depressive symptoms in adolescence arises from both the high prevalence of the problem and its threat to adolescents' present and future functioning (Reinherz et al., 1990). Depressive symptoms in adolescence have threatening implications because they have been found to be associated with poor psychological behavioral adjustment. Suicidal ideation and attempts, aggression, delinquency, truancy, chemical abuse, and sexual promiscuity are observed to be associated with depression among adolescents (Gaber, 1984; Hodges & Siegel, 1985; Rutter, 1986). Lower job and school performance also have been found to coexist with depressive symptoms in children and adolescents (Carlson, 1983; Kaslow, Rehm, & Siegel, 1984; Simons & Miller, 1987). These psychological and behavioral problems among adolescents can be viewed either as negative health outcomes and symptoms of depression or a reflection of the dysfunctional strategies many youth use to cope with depression and emotional distress (Huba, Winegard, & Bentler, 1980).

Social scientists have focused on a wide range of factors that influence depression, including those intrinsic [e.g., cognitive or neuro-chemical process] and extrinsic [e.g., family, school, social stress, or societal expectation] of the individual (Suomi, 1991).
The literature on life stress, social stress or closely allied concepts, suggest a general association for these life stressors and depression (Brown & Harris, 1986; Lloyd, 1980; Monroe & Peterman, 1988). Some social researchers have focused on a single stressor in their attempt to study adolescents' depression and mental health. For example, much attention has been given to the mental health effects of pubertal change (Brooks-Gunn & Petersen, 1983; Petersen, 1988), school transitions (Simmons & Blyth, 1987), transition that involves increasing levels of strain within parent-child interaction (Simetana, 1988; Lewinsohn & Rosenbaum, 1987; Blatt et al., 1979), gender role expectation (Hill & Lynch, 1983), female victimization (Culter & Nolen-Hoekseman, 1991), unemployment related life style changes among adolescents (Olaffson & Svensson, 1986) and family financial stress (Clark-Lempers, 1990). Buros (1965) incorporated some of these factors and other life stressors (e.g., breaking up with a boyfriend or girlfriend, death of a close relative or friend) to establish a stressful life events scale.

Each of these various lines of research conceptualizes stress in a general perspective that incorporates personal, universal and social stressful negative experiences without distinguishing those of social origin from other personal or universal negative experiences. In fact, few studies of adolescent depression have explicitly examined the effect of
social stress that stems from a societal context that promotes an unequal distribution of power and resources and place certain categories of persons under the greatest social pressure. This study will conceptualize social stress to reflect a more sociological view by focusing on experiences that are rooted in the social structure of power and resources. Competition, gender discrimination, opportunity strain, and experience of physical abuse, for example, are stressors shaped by the social position of individuals and may induce feelings of helplessness, hopelessness and depression.

While many authors conceptualize stress as a central determinant of depression, (Brown & Harris, 1978, 1986; Cooke & Hole, 1983) others relegate stress to a more peripheral role in the complex of factors that lead to depression (e.g., Clyton, 1986; Tennant, 1981). The effect of social stress on depressive symptoms and emotional well-being is believed to be mediated by a sense of control and perception of social support (Windle, 1992; Barrera & Garrison-Jones, 1992; Ross & Mirowsky, 1989). In theory, a sense of control reduces depression because it encourages active problem solving and creates a sense of controlling one's own life rather than being at the mercy of more powerful others and outside forces (Ross & Mirowsky, 1989). Social support reduces depression because it buffers stress by providing the individual with emotional support, guidance, and assistance with tasks (Caplan, 1974).
This research will examine the effects of social stressors (such as physical abuse, competition, gender discrimination, lack of job opportunities) on patterns of depression. The direct as well as the indirect effects of social stress, social support, and sense of control are examined in their relationship with adolescent depression.

**Objectives**

The main objective of this study is to investigate the phenomenon of depression among adolescents and to account for some of the social factors that increase or decrease their vulnerability to depression. The study will examine 1) whether adolescents' experience of social stressors (physically hurt, competition, gender discrimination, lack of job opportunity) create a sense of powerlessness that results in depression; 2) whether perceived locus of control, and social support mediate the effects of these social stressors and patterns of depression.

**Assumptions**

Cross cultural research offers evidence of cultural variations in depressive modes and symptoms. Dysphoria or sadness, hopelessness, unhappiness, lack of pleasure with the things of the world and with social relationships, has dramatically different meanings and forms of expression in different societies (Kleinman & Good, 1985). In this study
the researcher assumes that the cultural factor can be held constant because all subjects are from the dominant American culture.

While depression is considered an emotional state of the individual, the researcher assumes that social life produces emergent dimensions of emotion that causally transcend psychological and physiological explanation. It is true that depression is an emotional state that seems to be too private and psychological to be of much relevance to sociology, or to be a manageable variable in sociological analysis. The sociological perspective, however, allows us to illustrate how such an apparently individual behavior is shaped by social forces. Since the late 1970s, sociologists have challenged the common belief that emotions were a private, biological, or psychological phenomenon by expressing the insight that most emotions originate in social events (Smith-Lovin 1989). Gordon (1990) states that although each person's emotional experience has idiosyncratic features, culture and social structure shape the occasion, meaning, and expression of affective experience. Schieffelin (1985), in his anthropological analysis of depressive effects, argues that emotion should be viewed as a system of social behavior, having a structural component external to personality, and located in a social field of behavior, not just in the inner self.
CHAPTER II. REVIEW OF THE LITERATURE

The review of the literature is divided into five sections. Section one discusses the social origins of depression. Section two discusses the definition and scope of adolescent depression. Section three, four, and five discuss social stress, social support, and locus of control and their relationships with depression.

Social Origins of Depression

Psychiatrists and psychologists have traditionally considered depression as a clinical disorder that is caused by biological and psychological factors. Psychiatrists and psychologists have found ample evidence implicating abnormalities of neurotransmitters in the central nervous system and family history of depression in first degree relatives which suggests there is a genetic predisposition. This bioamine hypothesis that has been the dominant biological schema of depression etiology (namely, that in depression there is a decrease in key bioamine neurotransmitter the brain), however, is being called into question (Kleinman, 1986) because it has never been empirically confirmed (Kleinman, 1986).

In fact, there is evidence that certain social environments and interactions provoke and trigger the
biological and psychological changes characteristically found in depression (Kleinman, 1986; Lewinsohn & Arconad, 1981).

Emile Durkheim in his study of suicide, stated that the disintegration of society and the weakness of the collective conscience lead individuals to pursue their private interests in whatever manner they wish. Unlimited desires must be adequately proportioned to an individual's means. The individual however has no way of restricting his/her own needs, so it must be done by a force external to him/her. To Durkheim, it is the principal task of society to play this regulating role. Under exceptional circumstances, when society is disturbed by sudden changes (whether favorable or unfavorable changes) it is incapable of regulating human's passion, it is then in a state of anomie. Such unrestrained egoism is likely to lead to considerable personal dissatisfaction, because all needs cannot be fulfilled, and those fulfilled simply lead to the generation of more and more needs. These unfulfilled needs lead to "currents of depression and disillusionment" and ultimately lead some individuals to commit egoistic suicide (Durkheim, 1897, 1951). Durkheim's concept of social integration refers to the degree to which collective sentiments are shared. According to Durkheim, individuals who are married, who have several children, or who are from large families tend to be more socially integrated than single individuals, or married
couples who have fewer children, or come from small families (Durkheim, 1951).

Robert Merton (1967), in his well-known theory of social structure and anomie, perceives some activities of psychotics, artists, outcasts and drug addicts as a mode of adaptation (or maladaptation). Retreatism is one of the modes of adaptation to socially emphasized goals of material success and restrained institutional means to attain them and manifests itself in rejecting cultural goals and institutional means.

People who adapt in this fashion are in the society but not of it. They have relinquished culturally prescribed goals and their behavior does not accord with institutional norms (Merton, 1967: 125).

In a competitive society, individuals who cannot cope with competitive order (because they are shut off from means that are both legitimate and effective) become frustrated and handicapped and eventually "drop out." Defeatism, quietism, and resignation are manifested in escape mechanisms that ultimately lead to escape from the requirements of the society (Merton, 1967; p. 125).

Neither Durkheim nor Merton have explicitly attempted to explain the social origins of depression. Some anthropologists and social psychologists, however, have investigated the social causes of depression and found evidence supporting the hypothesis that social environment and interaction causally transcend psychological and biological
factors in determining the depressive emotional state of individuals.

Scrole (1956) adopted the concept of anomie used by Durkheim and Merton to developed a scale to measure the individual's degree of anomie. Anomia, according to Scrole, refers to "the breakdown of those moral norms that limit desires and aspiration" (1956:712). Scrole applies the term to explore the "molecular view of individuals as they are integrated in the total action of interpersonal relationships and reference groups" (p. 710). Scrole uses the concept of "social integration" and "interpersonal alienation" as equivalents to anomia which refers to a socio-psychological condition of individuals' perception of 'self-to-others distance' and 'self-to-others alienation', a condition which is regarded to be determined by sociological and psychological processes. Scrole (1978) applied the anomia approach to examine the prevalence of mental disturbances in a sample of 1660 non-hospitalized Manhattan residence. The result showed that mental disturbances were obvious outcomes of anomia and that anomia was inversely related to socio-economic status independent of mental disturbances (Scrole et al., 1978).

Brown and Harris (1978) demonstrate that vulnerability factors (e.g., working-class background, marriage, presence of small children in home, lack of employment outside the home, absence of confiding intimate relationship, or loss of
maternal figure in childhood factors) predispose women to depression.

Kleinman and Kleinman (1985), in their anthropological study of depression in China, found that the Chinese patients they studied had experienced severe political, financial, and social (work and family) distress. Kleinman and Kleinman, (1985) agree with Brown and Harris that there are social sources of human misery which generate feelings of hopelessness, demoralization, and a self-defeating conception of self and situation. They maintain that

"these social sources of affection give rise to situations that undermine self-esteem, block alternative behavioral options, further limit access to already limited resources, create untenable interpersonal tensions, delegitimate established roles, and lead outcomes which are simply intolerable" (Kleinman & Kleinman, 1985: 176).

Kleinman (1986) asserts that the social sources of human distress are found in societal contexts

"of power that distribute resources unequally, that transmit the effects of large-scale sociopolitical, economic, and ecological forces unjustly, and that place particular categories of persons under greatest social pressure" (Kleinman, 1986:177).

It seems most convincing that structural (macro) or situational (micro) factors make some individuals and groups more vulnerable to stressful life events than others in the same social contexts. While many empirical studies have found that social pressure and stressful events are causally related to depressive affect (Rahe, 1967; Brown, 1973), only a few
have attempted to examine the interaction between major stressful life events and social support with local human contexts of power that influence one's ability to secure resources to cope with social stressors (Kleinman, 1986).

Adolescent Depression

The term depression refers to changes in modes and behaviors that range from a mild degree of reactive sadness to intensely experienced feelings of dysphoria and possibly even suicidal thoughts (Klerman, 1984). Among the common symptoms of depression are feeling of sadness, crying spells, marked restlessness, changes in appetite, diminished abilities in concentration and decision making, loss of interest in daily activities, and repeated thoughts of suicide (American Psychiatric Association, 1987). According to the Diagnostic and Statistical Manual (3rd ed, rev-DSMIII-R) classification systems, these symptoms must be present for several weeks along with noticeable disturbance in social and personal functioning in order to be considered symptoms of clinical depression (American Psychiatric Association, 1987).

The evidence indicates that adolescent depression is more difficult to recognize than its adult counterpart (Ehrenberg, et al., 1990). For many years there has been much controversy surrounding the existence and diagnosis of depression in childhood and adolescence because its symptoms are likely to
be masked or intermixed with other behavioral and psychological problems (Cytryn, et al., 1980; Oster & Caro, 1990). Behaviors that may mask depression include somatic complaints, conduct problems, aggressive behavior, delinquency, school phobia, and academic under-achievement (Toolen, 1981). Furthermore, a depressed mood in adolescence is associated with suicidal feelings and behaviors (Rubenstein et al., 1988), with poor school performance, dropping out, and other indicators of deviance including drug and alcohol use (Newcomb & Bentler, 1988; Alessi, 1985). In addition, longitudinal analyses by Kandel and associates (Kadnel, Kessler, & Margulies, 1978) have shown that a depressed mood is an important determinant of initiation into illicit use of drugs other than marijuana and that many adolescents continue to use drugs as a means of alleviating depression (Kadnel & Davies, 1982). Weiner (1980) argues that children and early adolescents are incapable of expressing depression in the usual adult forms, and use acting out behaviors both as attempts to ward off depression and as appeals for help. In later adolescence, sex and drugs may be significant mechanisms for expressing depression.

Another problem with diagnosing depression among children and adolescents arises from the difficulty of distinguishing sadness that is a normal reaction to negative everyday experiences from sadness that manifests clinical depression.
Because the experience of sad feelings is a common response to life stress, family members and friends are likely to underestimate the severity of symptoms and less likely to ascribe a clinically depressed emotional state to a teenager who shows signs of indifference and agitation. Parents, for example, may describe the troubled adolescent to be lazy or manipulative, thereby attributing the symptoms to character traits (Oster & Cero, 1990). Some authors (Gleser, 1981; Lesse, 1981) view the difficulty of diagnosing childhood and adolescent depression to be a direct result of using adult assessment techniques for preadult clients.

Nevertheless, there has been accumulating evidence drawn from empirical and clinical findings demonstrating that children and adolescents, do in fact, experience depression (Kovacs, 1989; Oster & Cero, 1990). In fact the current research literature on adolescent mental health shows evidence of increases in rates of depression since World War II (Klerman & Weissman, 1989) and that current rates are as high as those reported for adults. For example, community surveys suggest a prevalence of about 2-5% for major depression and dysthymia (Kovacs, 1989). Until the teenage years, the gender ratio is about equal, but by adolescence the ratio changes to 4:1 with girls suffering the highest rates (Parry-Jones, 1989). Prevalence of major depression in adolescence may be
about 4.7%, for dysthymia, and depression may constitute up to 25% of psychiatric referrals (Parry-Jones, 1989).

Depressed children and adolescents often do not simply grow out of it. An episode may last for 9 months or longer, and can have serious, adverse consequences over the long term into adulthood. Depression in children and adolescents have negative effects on development and attainment (Jilbert, 1992). Since positive affect has been found to facilitate creative problem-solving (Isen, 1990) and explorative behavior, it is not surprising these would be affected by depressed states. Furthermore, it has been observed that depressed kids are less attractive as playmates and may have greater difficulties with peer relationships (Jilbert, 1992).

The social sources of adolescents stress that are believed to promote depression are somehow different from those of the adults. Clark-Lempers et al. (1990) found a strong relationship between parental reports of family financial stress and adolescent reports of depressive symptoms. Olafasson and associates (1986) reported various studies from the US, Sweden, and the UK that reveal a significantly higher prevalence of mental disorders among unemployed youngsters, with higher admission rates to mental hospitals, para-suicides, and depression. From a sample of 1,208 high school-aged adolescents, Susan Gore and her associates (1992) examined the means through which life stress
is associated with depressive symptoms. Their analysis focused on family structure, socioeconomic status, and gender. Some of the findings indicate: (1) while significant gender differences are evident in aspects of stress exposure and in additive models of stress effects, stresses and supports do not explain the significant gender difference in depressive symptoms; (2) girls with low education backgrounds have the highest levels of depressive symptoms; (3) Children in single-parent families have higher symptom levels of depression which is explained by economic conditions and stress exposure (Gore et al., 1992).

Depression and Stress

The origin of the theoretical interest in social epidemiology, can be found in Durkhiem's study of suicide in 1897. Over the past thirty-five years, a new theoretical development has taken place in the formulation of the life stress paradigm in social psychiatry, psychology and social psychology. The life stress paradigm assumes that the undifferentiated response (physiological and psychological) that is generated by diverse external stimuli (stressors) links sociological constructs to the internal individualistic responses made by individuals to their environment. This stress-distress model stimulated a new approach that relates the earlier sociological concerns of the consequences of
social integration with the psychological modeling of internal responses to the external environment (Brogatta & Brogatta, 1992).

The definition of stress has several related meanings found in the use of stress construct by social epidemiologists, psychologists, and social psychologists (Lin et al., 1990). Stress can be defined in terms of physical pressure exerted by one thing on another (strain), the importance or significant attached to things (emphasis), an internal response to external factors (reaction or resistance), or a stimulus as fear or pain that disturbs or interferes with normal physiological equilibrium of an organism (disruption).

Social research has focused on a class of stimuli that has its origin in the course of social life (Dohrenwend & Dohrenwend, 1974). Social stress is defined in terms of the impact of significant life events experienced by individuals and the family as a whole (Holmes & Rahe, 1976). Selye defines stress as a "general adaptation syndrome," a set of general psychological reactions to adverse environmental stimuli (1956). Lazarus and Folkman (1984) define stress as "a relationship between the person and the environment that is taxing or exceeding his or her resources and endangering his or her well being" (Lazarus & Folkman, 1984: 19).
The etiological role of stress on depression has been documented by many social researchers on (Brown & Harris, 1986; Lloyd, 1980; Monroe & Peterman, 1988). In a zero-order correlation, the relationship between life stressors and depressive symptoms ranges between .25 and .40 (Rabkin & Stuening, 1976).

Some researchers have focused on a single stressor in their attempt to study adolescents' depression and mental health and define stress based on their theoretical orientation. Research on adolescent development, for example, is based on understanding of stress as inherent in the biological, cognitive and social changes that characterize the adolescent years (Gore et al., 1992). As a result major attention has been given to the mental health effects of pubertal change (Brooks-Gunn & Petersen, 1983; Petersen, 1988), and school transitions (Simmons & Blyth, 1987) in early adolescence. Other research has focused on social transitions that involve increasing levels of strain within parent-child interaction (Simetana, 1988; Lewinsohn & Rosenbaum 1987; Blatt et al., 1979), gender role expectation (Hill & Lynch, 1983), female victimization (Culter & Nolen-Hoekseman, 1991). In addition, some researchers have perceived stress as related to the financial situation of adolescents and their families and attempts to study the effects of unemployment as related to life style changes among adolescents (Olaffson & Svensson,
1986) and family financial stress (Clark-Lempers, 1990) on depression.

The epidemiological researchers incorporated some of these factors and other life stressors to develop measures of life experiences that require social adjustments known as inventories of life events (Buros, 1965; Holmes & Rahe, 1967; Dohrenwend & Dohrenwend, 1974, 1981; Myers & Pepper, 1972).

Each of these various perspectives suggests that, although social stress is a significant etiological factor in mental health and depression of adolescents, it only provides a partial explanation of the origins, nature, and consequences of stress of the adolescent (Gore et al., 1992). For example, the developmental studies noted above ignore other non-normative life stress and features of the broader socio-economic and familial context in which development occurs (Gore & Colten, 1991). Epidemiological studies attempt for a more comprehensive assessment of mental health effects of life events, but they typically model these variables as independent and additive giving little attention to conceptualizations of the links between social structure, stress, and mental health (Gore et al., 1992). Stress, as defined by the impact of life events, is so broad that it can include just about any type of event from loss of a job, shortage of resources, interpersonal conflict and so on (Gilbert, 1992). Furthermore, the life event scales do not
distinguish between negative events or experiences that are universal (e.g., that could happen to any one like death or illness of one's parent) from negative experiences that are socially determined and may vary as result of class, race, or gender differences.

This present study focused on specific type of stressors believed to be originated from unequal social distribution of power and resources and which limit individuals' aspiration and self-actualization. Experiences of limited job opportunity, gender discrimination, incompetence for competition (as result of lacking certain skills in a very competitive society), and abuse are stressors that threaten basic human needs.

1) Lack of Job Opportunity

The age of adolescence is the time of transition from being totally dependent on adults and care givers to autonomy and independence. Adolescents who enjoy the prestige that comes with "youth" in America, are often suffer from political and economic dependence (Turner, 1986). Employers usually tend to raise minimum age requirements during periods of reduced employment, hoping to get more mature, reliable workers and to avoid turnover and the time and cost of training young workers (Social Dynamite, 1961).

Because, adolescents identify more closely with a peer culture that emphasizes material goods, the loss of the
ability to keep up with friends is a major stressor when they can not find a job that meets their needs (especially when parents can not provide these for them). Therefore, unemployment among adolescents is an important cause of mental health problems. The research of Olafasson et al., (1986) revealed a significantly higher prevalence of mental disorders among unemployed adolescents, with higher admission rates to mental hospitals, para-suicides, and depression.

2) Competition in School

American society is based on individual competition and achievement as the means to achieve social, economic, and political rewards. Children in schools learn the norms of competition and achievement and accept the idea that it is fair to give different rewards for different levels of achievement. They learn that those who get their lessons done quickly and accurately will be praised and rewarded with good grades. Later on, kids learn that most activities are competitive, including dating, making athletic teams, winning college scholarship, being admitted to the best college, getting in professional or graduate school, and getting the best jobs (Kammeyer, Ritzer, & Yesman, 1990).

Children and adolescents however, vary in their skills, ability and resources that, in turn, give them the confidence and abilities to compete and highly achieve. One determinant for this variation is the student's socio-economic background,
which favors those who come from middle or high class background. Thus, competition becomes a stressful experience for those who fail to compete and achieve because they lack the skills, abilities, and resources. Merton (1967) has observed that individuals in a competitive society who can not cope with competitive order (because they are shut off from means that both are legitimate and effective) become frustrated and handicapped, and eventually drop out. "Defeatism, quietism, and resignation are manifested in escape mechanisms which ultimately leads to escape from the requirements of the society" (Merton, 1967: 125).

3) Gender Discrimination in School

American society, based on its constitutionally given institutions and rights, permits more individual freedom and equality than most other contemporary societies. Even here, however, an equal opportunity is limited by sexism and gender inequality (Ritzer, 1983). Female roles, typically receive less money, prestige, and power. These roles are enforced in school, peer, and family socialization. Girls learn to become class secretary, cheerleaders, and members of home economic clubs. Girls typically are directed into English and the humanities; boys are encouraged to develop math, science, or vocational skills. Furthermore, girls are encouraged to play less assertive and less competitive roles, while boys play active and competitive roles while learning occupational
skills (Turner, 1985). These gender inequalities result in frustration and stress because girls feel they are denied of their talents and individual worth.

4) Physical Abuse

Safety and security are basic human needs such that any threat against them can result in mental and physical difficulties. There is growing evidence that abuse gives rise not only to mood disturbance but also to a variety of other difficulties (e.g., sexual difficulties, alcoholism, social anxiety, self mutilation, and others). It is not only abuse from fathers that is significant but also from siblings, uncles, cousins, peers, teachers and other individuals (Gilbert, 1992).

In general, these stressors can be regarded as the social sources of human distress that generate helplessness, hopelessness, and self-defeating conceptions. Unlike the indicators of life events scales, the present study's indicators of social stress are believed to be socially determined by social roles that give rise to situations that block access to already limited resources, sabotage self-esteem, and create a sense of defeatism and hopelessness. Furthermore these indicators may detect gender and socio-economic differences on patterns of depression.

An important question is, how can life stress, occurring within social contexts, produce depressive affects?. In fact,
the effect of social factors on depressive symptoms, and emotional well-being is believed to be mediated by a sense of control, and perception of support (Windle, 1992; Barrera & Garrison-Jones, 1992; Ross & Mirowsky, 1989, Seligman, 1975).

Social Support and Depression

The study of social support attracts multidisciplinary interests, including the fields of sociology, epidemiology, clinical psychology, health services research, and social work (Brogatta & Brogatta, 1992). Several studies have attempted to define and measure social support; however the ambiguity of the concept remains problematic (Lee, 1992). Social support has been defined in several ways, the individual's perceptions of his/her support network, the effect of or outcomes of the supportive exchange, and the specific types of support provided to the individual (Brogatta & Brogatta, 1992).

Kaplan for example, differentiates between objective and subjective dimensions of support. The objective dimensions are observable indications of support conditions, from which information can be collected from others independently of individual's receiving support. The subjective aspects of social support are the individuals personal understanding and evaluation of support that reflect the perception of reality.
Kaplan et al. (1977) define social support as the relative presence or absence of psychosocial support resources from significant others.

There are three types of relationships that could provide sources of support: the individual's community (e.g., church and school, recreation and sport activities, clubs and so on), networks (e.g., kinship, shared work environment, and friendship), and confiding partners (e.g., close friends, spouse, parents, close relatives) (Lin, et al. 1986). Lin et al. (1986) assert that each of these types of relationships are important in providing support, but that the importance of each level differs from the others. Relations with the community should have the least impact on the individual's well-being, while relations with confiding partners should have the most. Brown & et al. (1975) single out the lack of an intimate, confiding relationship with a husband or a boyfriend as the most powerful mediator between negative life events and psychiatric disturbance for women. Cassel (1974) implies that significant social support is provided by the primary groups that are of most importance to the individuals.

There have been several attempts to identify the components of social support conceived to be important in relieving the effects of stressful life events and negative experiences. Kaplan (1974), perceives social support as
attachments among individuals or between an individual and a group to: (1) promote emotional mastery, (2) offer guidance, and (3) provide feedback about one's identity and performance. According to Cobb (1979), social support is information that conveys one or more of the following three dimensions: (1) emotional support (one is cared for and loved), (2) esteem support (one is valued and esteemed), and (3) network support (one belongs to a network of communication and mutual obligation).

House (1981) integrated the ideas of previous social support researchers by distinguishing four basic types of research: emotional support (actions that convey esteem), appraisal support (feedback about one's views or behavior), informational support (advice or information that facilitates problem solving), and instrumental support (tangible assistance).

When depression is to be analyzed as related to social support, researchers have focused on intimacy as a major dimension of support (Cassel, 1974; Brown, Bhrolchain, & Harris, 1975; Cobb, 1976; Lin et al., 1986).

In spite of notable variations in definition and measurement of social support, there is an extensive literature suggesting that decreases in social support are associated with poor psychological and physiological health (Lin et al., 1986). Depressed persons report less contact
with friends, fewer friends nearby who can help, less satisfaction with friends and relatives, and less confiding in their spouses (Leaf et al 1984). The association between social support and depression may suggest a direct, indirect, or spurious effect of social support on depression. Cohen and Wils (1985) provide two major statistical methods that describe the relationship between social support and physical, mental, and social outcomes: the buffering effect model (indirect), and the main effect model (direct). The buffering effect model states that social support protect individuals from effects of stressful experiences on depression by improving their adaptive coping behavior. The main effect model assumes that social support has a direct effect on depression regardless of the level of stress experienced.

There is empirical support for both models. Some studies have found that social support protects individuals from the negative effects of social stress leading to depression. (Cohen & Wils, 1985; Thoits, 1982). Garmezy's review of childhood stressors (1981) indicated that family support and external (community-agency) support were the most consistent predictors of child-adolescent adjustment in response to life events.

Other studies have found evidence supporting the main model effect (direct effect) which imply that social support is associated with mental health status regardless of whether
the persons experience of negative life events or stressful situations (Aneshensel & Stone, 1982). According to Cohen and Wils (1985), social support provides positive affect, predictability, stability and validation of self worth which tend to lessen the likelihood that negative experiences will occur. Furthermore, social support tends to decrease feeling of helplessness and lowered self-esteem, while lack of social support tends to produce anxiety and depression.

Kessler and Meleod (1985), in their review of the literature of social support, found strong evidence of the buffering effect model. Furthermore, they found that those studies that did not find evidence of buffering had significant main effects. They assumed that both models represent the different types of social support. The buffering effect is generally limited to emotional support and perceived availability of support, and the direct effects of social support are basically a function of the individual's social integration.

Although most of the research has concluded that social support has a preceding negative effect on depression, numerous criticisms have been leveled against causal inference of these studies. For example, the association between social support may be a result of spurious relationship, or reverse causation. House et al., (1988) argue that the findings of an association between support and depression do not justify the
conclusion that social support protects against depression. While low reports of social support sometimes reflect lack of a supportive relationship, they may indicate the presence or absence of a negative, conflictive relationship (Coyne & Bolger, 1990). Lack of parental support among children and adolescents may signify the presence of parental rejection, negative control, and/or firm control, which have been found to be associated with depressed modes. Lewisohn and Rosenbaum (1987) found that depressed patients recall their parents' behaviors as rejecting and unloving. Therefore, the apparent benefits of social support may in large part represent freedom from the unhealthy effects of relationships that are conflictual, insecure, or otherwise not sustaining (Coyne & Downey, 1991). Other criticisms of the relationship between social support and depression concluded a reversal causal effect. Blazer (1983) in his longitudinal study, found that depressed persons are more likely to improve in social support than non-depressed persons, which suggests that depression increases the level of social support not vis versa.

Locus of Control

Locus of control refers to a set of beliefs about the relationship between behavior and the outcomes of rewards and punishments. The more accurate description for beliefs about locus of control is internal versus external control of
behavioral outcomes. Whenever outcomes (positive or negative) are perceived by the individual as being the result of his or her own behavior, efforts, or relatively constant attributes, we have an example of an internal belief of locus of control. On the other hand, belief in external locus of control involve perceptions that outcomes occur as the result of luck, fate, or the interventions of powerful other and outside forces (Corsini, 1987).

Locus of control is considered to be a mediating variable between certain social conditions and depression. Depression is hypothesized to be the result of a sense of powerlessness. Powerlessness or helplessness is a subjective alienation that grows from negative experiences common in certain social conditions which lead to depression, anxiety and other forms of distress (Ross & Mirsowsky, 1989; Ross & Mirowsky, 1986; Seeman, 1983; Wheaton, 1980). The sense of powerlessness arises from incapacity or failure to achieve one's ends, from inadequate resources and opportunities, from restricted alternatives, and from work environment where one does not choose what to do and how to do it (Kohn, 1976; Kohn & Schooler 1982).

The relationship between depression and a sense of powerlessness (helplessness) has been studied first by the behaviorists who experimented on animals, and then by social learning theorists who attempted to apply the results to
humans. The experimental data on helplessness stretch back some 40 years ago. In 1948 Mowrer & Viek (1948) discovered that if rats were pre-treated with inescapable shock they demonstrated subsequent deficits avoidance learning avoidance. Some 20 years later Seligman and his colleagues (Overmier & Seligman, 1967; Seligman & Maier, 1967) studied the effect of inescapable shock on escape avoidance learning in dogs. In the procedure, dogs were placed on a Pavlovian harness and exposed to series of uncontrollable and inescapable shocks. When the dogs were released from the harness and allowed to learn an appropriate escape response, a majority (though not all) of these animals demonstrated considerable difficulty in learning how to avoid the shock. Instead of actively trying to avoid the shocks, the dogs that have learned helplessness did not attempt to escape from the shocks but lied on the floor of the cage in a clear state of distress. The result is a set of motivational, future learning, and emotional deficits that Seligman found to be very difficult to extinguish. This findings led Seligman (1974) to postulate that rather than "no learning" in the inescapable situation, these dogs actually learnt that their responses were ineffective in controlling the shock and that how he outlined the theory of "learned helplessness."

While Seligman (1974) has popularized the helplessness theory and emphasized the relationship between helplessness
states and depressive states, the work in helplessness has been extensively extended by Anisman and his colleagues (Anisman, 1979; Anisman & Zachako, 1982). Anisman (1987) and his colleagues attempted to study the effect of experiencing uncontrollable and inescapable shocks on the neurochemistry of the brain. Anisman found that the controllability is crucial in determining the patterns of neurochemical changes and this observation is so consistent that its important cannot be overemphasized (Gilbert, 1990). In a human research, Breier et al. (1987) found that in laboratory conditions, exposing subjects to even a mildly but uncontrollable stimulus (uncontrollable noise 100db) activated the hypothalamic-pituitary axis.

In the 1970s much human research was published on the effects of luck of control exploring (1) the degree of generalization of the disruptive influence on subsequent behavior (e.g., problem solving) following experience with uncontrollable trauma or unsolvable problems; (2) the similarities between experimentally induced learning disruption and learning deficits of observable in depressed individuals; (3) the depressed effect of uncontrollable situations (Gilbert, 1992). The general findings of these studies (Fasco & Geer, 1971; Fencil-Morse, & Seligman, 1975; Thorton Jacobs, 1971) suggest that learning the outcomes are uncontrollable results in three deficits: motivational,
cognitive, and emotional. The process is cognitive because mere exposure to uncontrollability is not enough to lead to helplessness, rather, the subject most to expect that outcomes are uncontrollable in order to display helplessness. The emotional deficit consists of retarded initiation of voluntary responses and is seen as a result of the expectation that the outcomes are uncontrollable. If the subject anticipates that its responses will not affect some outcomes, then the probability of emitting such responses decreases. Furthermore, learning that an outcome is uncontrollable, leads to a cognitive deficit since such learning that responses produce that outcome. Finally, the depressed effect is a consequence of learning that outcomes are uncontrollable (Abramson & Seligman, 1978).

In thinking about the relevance of animal studies to human, Rotter (1966) argued that the effect of reinforcement on humans is not a "stamping-in" process. It is a learning process which depends on whether the person sees a causal relationship between his or her own behavior, and the reward or punishment. If a person thinks that the outcome is a result of his or her own action, he or she learns to achieve reward and avoid punishment. If a person believes that the outcomes of his/her behavior are determined by luck, fate, chance and uncontrollable and unpredictable forces (external), he or she learns passively to accepts rewards and punishments.
that come along. If the person believes that the outcomes are
controlled by his abilities and skills (internal) he or she
learns quickly and actively seeks rewards and avoid punishment
(Rotter, 1966). Therefore, locus of control is seen as
psychological coping mechanism that moderates the effects of
stressful experiences on depression. Individuals who feel
they are in control of their environment are coping more
effectively with stressful events than those who do not feel
such control (Lee, 1992). In community surveys, it was found
that depression decreases as one's sense of control increases,
and this phenomenon is regarded in part as the consequence of
active and attentive problem solving (Kohn & Schoolar 1982;
Aiken & Baucom, 1982; Mirowsky & Ross 1983; Turner & Noh 1983;
Lester, Costroaryor & Icli, 1990). When an individual is
faced with stressful situations his/her coping with stress
depends on his/her sense of control. If the stressful
situation is perceived as under control, then a person could
have the confidence to deal with situation and reduce its
negative effect (Lee, 1992). In contrast, if the stressful
situation is perceived as being uncontrollable, a person tends
to be more helpless and does not actively try to overcome the
negative experience (Lefcourt, 1976). If the idea of learned
helplessness and locus of control is correct, an active
response to problems is increased by a sense of control and
reduces depression (Ross & Mirowsky, 1989).
In spite of the popularity of the concept of locus of control, there is vagueness in the definition of the construct (Palenzuela, 1984). Palenzuela (1984) has found that the expression "control of one's destiny" has been employed by Alderman (1980: 23), deCharms (1976: 100), Tiffany et al. (1970: 81) to refer to the internal locus of control, to the "origin" and to self-directed behavior, respectively. Furthermore, the concept of locus of control has been confused with causal attribution.

In spite of the popularity of Seligman's theory of helplessness some criticisms have been leveled against its causal structure. Thornton and Jacobs (1971) for example failed to find significant differences between a control and an inescapable shock-treated groups.

Abramson and Seligman (1978), acknowledged that the original hypothesis of learned helplessness when applied to human have two major problems (1) they do not distinguish between cases when outcomes are uncontrollable for all people and cases in which they are uncontrollable only for some people (universal vis. personal helplessness), and (2) it does not explain when helplessness is specific, or when chronic and when acute. Abramson, Seligman and Teasdale (1978) provided a reformulation based on attributing theory in order to resolve these weaknesses. The new formulation assumes that when people perceive no alternatives, they attribute their
helplessness to a cause. This cause could be stable or unstable, global or specific, and internal or external. The severity and chronicity of depression are in part the result of the perceived cause for not being able to control the desired outcome. Internal, personal, and stable attributions will lead the individual to believe that failure to control an outcome is due to deficits within themselves and that (because of stability of attribution) the same state of affairs will remain in the future. Seligman et al. (1979) demonstrated that depressed college students do tend to attribute negative outcomes to more internal and global causes than non-depressed students.

Causal Model

As already reviewed, social support and locus of control are believed to mediate the effects of social stressors on depression. Locus of control is a personality characteristic that mediates the effect of depression by increasing the coping mechanism and problem solving during periods of stressful experiences. Social support, especially emotional support, involves the exchange of intimate communications and increase personal coping with stress. If a person under stress has a network of persons to talk to, express love to him/her, and understand him/her, this network can supply the confidence and self assurance needed to cope actively with the
supportive network is not that one leans on it in time of trouble, but that they give one the courage to act (Wethington, and Kessler, 1986).

The structural equation model of this study (figure 1, p 38) is based on the literature on stress, social support, locus of control and depression among high school aged population. In this study, it is proposed that stress caused by lack of job opportunities, competition, gender discrimination, and physical abuse predicts depression among adolescents. The effect of stress is mediated by social support and locus of control.

More precisely, the following hypotheses will be tested:

First, based on the literature of social stress and depression, the direct effects of social stressors on depression will examined by testing the following hypotheses:

1. Hypothesis 1: There is a negative relationship between lack of job opportunities and depression.
2. Hypothesis 2: There is a negative relationship between competition and depression.
3. Hypothesis 3: There is a negative relationship between gender discrimination and depression.
4. Hypothesis 4: There is a negative relationship between physical abuse and depression.
Second, the mediating effects of social support between social stressors and depression will be examined by testing the following hypotheses:

5. Hypothesis 5: There is a negative relationship between lack of job opportunities and social support.

6. Hypothesis 6: There is a negative relationship between competition and social support.

7. Hypothesis 7: There is a negative relationship between gender discrimination and social support.

8. Hypothesis 8: There is a negative relationship between physical abuse and social support.

Third, the mediating effects of locus of control between social stressors and depression will be examined by testing the following hypotheses:

9. Hypothesis 9: There is a negative relationship between lack of job opportunities and locus of control.

10. Hypothesis 10: There is a negative relationship between competition and locus of control.

11. Hypothesis 11: There is a negative relationship between gender discrimination and locus of control.

12. Hypothesis 12: There is a negative relationship between physical abuse and locus of control.

Forth, the following hypotheses will be tested to examined the direct effects of social support and locus of control on depression:
Figure 1. Fully recursive model of the determinants of depression
13. Hypothesis 13: There is a negative relationship between social support and depression.

14. Hypothesis 14: There is a negative relationship between locus of control and depression.

Finally, the moderating effects of gender, social support and locus of control will be examined by testing the invariance hypotheses of beta, gamma, and psi matrices between boys and girls, between low social support group and high social support group, and between low locus of control group and high locus of control group. The null hypotheses are:

15. Hypothesis 15: Beta, Gamma, and Psi matrices are invariant for boys and girls.

16. Hypothesis 16: Beta, Gamma, and Psi matrices are invariant for low and high social support groups.

17. Hypothesis 17: Beta, Gamma, and Psi matrices are invariant for low and high locus of control groups.
CHAPTER III. METHODOLOGY

Development of Instrument

The instrument was developed by Dr. Martin G. Miller of the Iowa State University Department of Sociology and Anthropology following consultation with youth development specialists on the state and area staff of the Iowa State University extension 4-H and Youth Program, and input from advisory groups around Iowa including the Juvenile Justice Advisory Council Prevention Committee. Dr. Miller's research team of undergraduate and graduate research assistants provided support in instrument design, interviewing, and coding. The researcher consulted with Dr. Miller as the study was planned and conducted.

The instrument consisted of questions to assess the behaviors, needs, and desires of Iowa youth. It documented their feelings, concerns, and perceptions about societal problems and solutions. The questions dealt with problems that faced Iowa youth 13 to 18 years of age and their lifestyle (Miller 1990). The instrument was designed to be administered over the telephone. The Sociology Research Laboratory consulted with the research team on formatting and sequencing of questions as well as the overall length of the instrument. Use of a telephone interviewing approach limited
the total number of questions which could be asked to approximately 150 items.

The instrument consisted of 162 possible questions. (The number of the last item in Appendix B is 163; no item 35 exists so the instrument had 162 possible questions.) The actual number of questions asked was about 150 according to the computerized skip pattern that took effect as answers to question were entered into the computer during the interview. Piloting narrowed the initial instrument from 127 questions to 162 questions. A copy of the screening instrument appears in Appendix A. A copy of the survey instrument appears in Appendix B.

Selection of Sample

The sample for the Iowa Youth Poll was selected using a two-stage procedure. Initially, a stratified random sample of Iowa households with telephones was selected. This sample was generated from a list of all known working household, nonbusiness telephone numbers in the state of Iowa. This listing, purchased from a national social science survey sampling organization, which maintains computer files of working telephone numbers, was stratified by county. The list was grouped into replicates of size 200. Each replicate provided a stratified sample across counties in the state of Iowa. Numbers were allocated for calling in replicates, thus
assuring that the final sample would be distributed throughout the state.

Within households, the interviewer requested to speak to one of the heads of the household. The adult respondent was asked to indicate if there were any youth aged 13 to 18 living in the house. If not, the screening call was terminated. If there were one or more youth in this age range, the interviewer provided additional information on the purpose of the survey and requested permission to have a letter sent to the youth in the household providing more information on the survey and asking for the youth's participation. If the parent agreed to have this letter sent, the sex, age, and first name of each eligible child and the household address was requested. If there was more than one eligible youth, the one to be contacted was selected using a simple random selection procedure.

An initial pool of 1,000 numbers was selected for the household screening. This number was later supplemented with an additional 230 numbers. Just over 100 of these additional numbers were from a matched sample of numbers contacted in Fall 1989 Iowa State Social Indicators Survey led by principal investigator Dr. Danny R. Hoyt of the Iowa State University Department of Sociology and Anthropology. This sample was
added to permit the comparison of responses from youth with responses from their parents.

A total of 369 households contacted were not eligible to be included in the sample because there were no youth in the sample age ranges. Another 31 household telephone numbers were found to be invalid or disconnected. Of the total (840) potentially eligible households contacted, 146 refused to participate. Many of the refusals were obtained when the house composition questions were asked. It is estimated that no more than 50 percent of these refusal households actually contained youth in the sample target age range. Another 82 of the potentially eligible households could not be successfully contacted during the screening period. Based upon prior telephone survey experiments in Iowa, some proportion of these non-contacts were likely to be numbers which were not assigned. A total of 612 successful screening contacts were completed in February and March 1990, representing a response rate of 72.5 percent for the household screening.

Collection of Data

Following screening of potentially eligible households, letters were mailed to each of the selected youth providing a description of the survey and information on informed consent rights. The subsequent interview call was placed within one week of the mailing of the letter. At this stage, 12 of the
selected youth were determined to be noneligible when contacted (either too young or old). Of the remaining 590 youth, 20 could not be successfully contacted for an interview and another 25 refused to be interviewed. A total 545 completed interviews was obtained from the eligible youth.

The instrument was administered via telephone rather than mail because of a higher response rate via telephone, and interaction with a telephone interviewer permitted clarification of the questions.

Interviewer training was undertaken with interviewers who had prior Computer Assisted Telephone Interviewing (CATI) experience. Training involved a three-stage process. First, interviewers attended a four-hour session on basic interviewing procedures. They received a copy of the 14-page single-spaced training manual. Second, interviewers were given an in-depth explanation of the survey instrument including question-by-question objectives. They received the 14-question screening instrument as the 162-item questionnaire so they could practice reading the questions to gain experience in appropriate inflection and rate of speech before they began administering the instrument. The first and second stages of training emphasized that precise interviewing procedures were critical to ensure full and accurate data collection and that reliability of the data gathered was
determined by the manner in which interviewers carried out their assignments, asked the questions, and recorded information.

Topics of the first and second stages of the training included an introduction to survey research, the role of the interviewer, and ethical issues. The next section on interviewing techniques covered general interview instruction, interview procedures, the importance of standard questions, interviewer preparation, initial contact and introduction, asking the questions in exactly the same way so results obtained do not vary depending on which interviewer took the interview, pace for reading questions, inflection in reading questions, clarification and definitions for respondent, use of probes, and feedback.

The third stage of the training prepared interviewers to use the telephone interviewing equipment.

Upon completion of the initial pilot of the instrument, all of the telephone interviews were completed using the centralized Ci2 CATI system installed in the Sociology Research Laboratory at Iowa State University. The CATI system is particularly effective in elimination of skip-pattern errors often found in complex survey designs (Miller 1990).

The questionnaire was programmed into the CATI system for use in each of the eight interviewing stations. During each
interview, the questionnaire was displayed on a computer terminal. The interviewee's response to each question was directly typed into a computer program that was saved onto a computer disk. When all the interviews were completed, the CATI data was merged into two files one for closed-ended responses and another for open-ended responses. The open-ended responses were then converted for input into a recently developed computer-based content analysis program. Upon completion of the coding of these responses, the data were merged back into the file containing the closed-ended responses. The initial data files were constructed in SPSS/PC+ and SPSS-X format.

When the call was made within one week of the mailing, the interviewer requested the selected youth. Prior to requesting participation a statement about the purpose and use of the survey and informed consent procedures were read to the respondent. (The informed consent procedures had been previously reviewed and approved by the Iowa State University Subjects Committee.) The interview was then conducted with all youth who agreed to be interviewed. The interviewing was completed in April 1990. The average time needed to complete an interview was approximately 18.5 minutes.

If the selected youth was not at home on the initial contact, or if no contact was established on the initial
attempt, then a minimum of six additional contacts were attempted. In some cases, more than 10 call-backs were needed to reach difficult-to-locate respondents. In the case of numbers where no one answered, subsequent attempts were rotated through different days and times of day to maximize the possibility of catching someone at home. Attempts to reach initial no contact households also were stretched over a minimum of two weeks to allow for the possibility of persons being temporarily away from home on business or vacation.

Coding of Instrument
No information linking the respondent's name, telephone number, or address was coded into the computer files. The cover sheets containing that information were separated from the questionnaire as soon as the interview was edited by the supervisor. The cover sheets were placed in a special, secure file accessible only to the principal investigator. The interviews were identified only by numbers. This procedure was followed to allow some of the sample to be interviewed in the future to collect longitudinal data.

Measurement

Depression

Twelve items on the survey questionnaire measured depression. The scale is a modified form of the Center for
Epidemiological Studies of Depression (CES-D) scale which was first tested in the early 1970s using a community sample and a psychiatric patient sample (Weissman, Scholomskes and Newberry, 1975; Pollenger, Prusoff, and Locke, 1977). The CES-D measures symptoms of depression in community populations; it does not indicate a diagnosis of clinical depression. Respondents were asked, How many days during the past week (0-7) have you:

1) felt depressed;
2) been bothered by things that do not usually bother you;
3) felt lonely;
4) felt sad;
5) felt like you can not shake the blues;
6) had trouble sleeping;
7) felt fearful;
8) felt like not eating;
9) had trouble concentrating;
10) felt like everything is an effort;
11) talked less than usual;
12) could not get going.

The responses were summed to produce an index of depression scores 0 to 84. The full CES-D scale consists of twenty items and has alpha coefficients that range from .84 to .90 (Radloff, 1977). Radloff (1975) also tested the validity of CES-D scale and found that the scale would discriminate between clinical groups and general community groups. The modified index is correlated .92 with full CED-D with reported reliability of .76 (Ross & Mirowsky, 1989). In this study the alpha reliability is .79 (See Table 1.). Although depression
Table 1. Reliability analysis of CES-D. (N=514) Alpha = .76

<table>
<thead>
<tr>
<th>Items</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) In the past week, how many days have you felt depressed?</td>
<td>.7877</td>
</tr>
<tr>
<td>2) In the past week, how many days have you been bothered by things?</td>
<td>.8047</td>
</tr>
<tr>
<td>3) In the past week, how many days have you felt lonely?</td>
<td>.7960</td>
</tr>
<tr>
<td>4) In the past week, how many days have you felt fearful?</td>
<td>.8094</td>
</tr>
<tr>
<td>5) In the past week, how many days have you felt sad?</td>
<td>.7877</td>
</tr>
<tr>
<td>6) In the past week, how many days have you felt like you can't shake blues?</td>
<td>.7863</td>
</tr>
<tr>
<td>7) In the past week, how many days have you felt like not eating?</td>
<td>.8050</td>
</tr>
<tr>
<td>8) In the past week, how many days have you had trouble concentrating?</td>
<td>.7977</td>
</tr>
<tr>
<td>9) In the past week, how many days have you felt like everything is an effort?</td>
<td>.8084</td>
</tr>
<tr>
<td>10) In the past week, how many days have you had trouble sleeping?</td>
<td>.8111</td>
</tr>
<tr>
<td>11) In the past week, how many days have you talked less usual?</td>
<td>.8058</td>
</tr>
<tr>
<td>12) In the past week, how many days have you felt that you could not get going?</td>
<td>.8065</td>
</tr>
</tbody>
</table>

scales are high in validity and reliability, they are very sensitive psychological barometer because they are highly correlated with measures of anxiety, unhappiness, and low Self-esteem (Ross & Mirowsky, 1989).

Locus of Control

Perceived locus of control was measured by the degree of agreement with the following statements:

1) I am responsible for my success;
2) I do just anything I set my mind to;
3) I am responsible for my failure;
4) Bad luck due to my mistakes;
5) The things that happen to me are mostly luck;
6) Most of my problems are due to bad breaks;
7) I have little control over bad things;
8) There is no sense of planning a lot.

Responses to the instrumentally worded control questions (5,6,7,8) are coded: (1) Strongly disagree; (2) Disagree;
(3) Neither agree or disagree; (4) Agree; (5) Strongly disagree. Responses to the statements that indicate lack of control (1,2,3,4,) are coded: (1) Strongly disagree;
(2) Disagree; (3) Neither agree or disagree; (4) Agree; (5) Strongly agree.

The eight items used to measure locus of control came from the Multi-Measure Control and Defence Instrument developed Ross and Mirowsky (1989). The measure is conceptually similar to the personal control component of Rutter's (1966) and internal and external locus of control scale (Modified for community surveys). The responses were summed to produce an index of locus of control scored -16 to +16. The reported alpha reliability is .68 (Ross and Mirowsk, 1989). In this study, the alpha reliability for the eight items is .44 which indicates low reliability of the scale. As shown in Table 2 if the seventh item is deleted ("My bad luck is the result of mistakes that I have made), the alpha reliability would be .5, which leads to a significant
increase. This item will be deleted from the scale in this study. The alpha reliability of .5 for the locus of control is low and the value of correlation between this scale and other variables should be interpreted with caution.

Table 2. Reliability analysis of locus of control scale (N=514) Alpha= .44

<table>
<thead>
<tr>
<th>Items</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Responsible for my own success</td>
<td>.3792</td>
</tr>
<tr>
<td>2) I can do just about anything I really set my mind to.</td>
<td>.3990</td>
</tr>
<tr>
<td>3) Things that happen to me mostly luck</td>
<td>.3647</td>
</tr>
<tr>
<td>4) Problems due to bad breaks</td>
<td>.3742</td>
</tr>
<tr>
<td>5) Little control over bad things</td>
<td>.3569</td>
</tr>
<tr>
<td>6) I am responsible for my failures</td>
<td>.3743</td>
</tr>
<tr>
<td>7) Bad luck due to my mistakes</td>
<td>.5003</td>
</tr>
<tr>
<td>8) No sense planning a lot</td>
<td>.3429</td>
</tr>
</tbody>
</table>

Social Support

Social support was measured by eight items. These items are:

1) Do you feel your teachers understand you?
2) Do you feel your teachers are interested in you?
3) Do you feel your counselor understand you?
4) Do you feel your principal understand you?
5) Do you feel your parents understand your problems?
6) Do you feel your parents are interested in you?
7) I have someone I can really talk to.
8) I have someone I can turn to for support and understanding when things get rough.

The first four items measure school support and items 5 and 6 measure parental support. The responses were coded:
1) none of the time;
2) some of the time;
3) most of the time;
4) all of the time.

Item 7 and 8 measure perceived social support and the responses are coded:

(1) strongly disagree;
(2) disagree;
(3) neither agree or disagree;
(4) agree;
(5) strongly agree.

Responses were summed to produce an index of social support scored 8 to 34. As shown in Table 3 The alpha reliability for social support scale is .62.

Table 3. Reliability analysis of social support scale.
(N=514) Alpha= .62

<table>
<thead>
<tr>
<th>Items</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Do you feel your teachers understand you?</td>
<td>.591</td>
</tr>
<tr>
<td>2) Do you feel your teachers are interested you?</td>
<td>.593</td>
</tr>
<tr>
<td>3) Do you feel your counselor understand you?</td>
<td>.607</td>
</tr>
<tr>
<td>4) Do you feel your principal understand you?</td>
<td>.614</td>
</tr>
<tr>
<td>5) Do you feel your parents understand your problems?</td>
<td>.593</td>
</tr>
<tr>
<td>6) Do you feel your parents are interested in you?</td>
<td>.609</td>
</tr>
<tr>
<td>7) I have someone I can really talk to.</td>
<td>.636</td>
</tr>
<tr>
<td>8) I have someone I can turn to for support and understanding when things get tough.</td>
<td>.633</td>
</tr>
</tbody>
</table>
Social Stressors

Social stressors are measured single indicators. Lack of job opportunity is measured by asking the respondents the following question: Have you had problems finding a job?.

Gender discrimination is measured by asking the respondents the following question: Have experienced boy/girl discrimination or favoritism in school courses? Competition in school is measured by asking the respondents: Have you ever experienced too much pressure and competition in school?.

Physical abuse is measured by asking the respondents the following questions:
1) Have you been physically hurt by teachers?
2) Have you been physically hurt by other kids?
3) Have your parents physically hurt you?.

The responses are: No (0) and Yes (1). The index of physical abuse has low reliability (alpha = .39). The low reliability might be a result of some respondents were hurt by teachers for an example but not by parents or other kids which lead to low correlation between the measure.
CHAPTER IV. FINDINGS

Findings in this study will be discussed in three sections. The first section presents frequencies and percents of the characteristics of the sample and the means and standard deviations of the responses of scales' items. The second section, discusses the degree of associations among the variables as shown by a polychoric correlation matrix. Finally, the last section reports results relating to hypotheses and model testing.

Descriptive Findings

The 545 subjects in the sample of Iowa Youth Poll were adolescents from across the state. Table 4 shows that 55 percent of the sample were male while about 46 percent were female. They were in grades six to twelve. Table 5 shows that the largest proportion (21 percent) of respondents were in the eighth grade and the smallest was in the sixth grade (1.1 percent). Table 6 shows that the largest age group was 14 years of age (22 percent) while the smallest was 18 years of age (6.8 percent).

Most of the respondents (75 percent) lived in towns or cites, the least number of respondents (11 percent) lived outside of town, but not on farms (Table 7).
Table 4. Gender of participants (N=545)

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>Male</td>
<td>301</td>
<td>55.2</td>
</tr>
<tr>
<td>Female</td>
<td>243</td>
<td>44.6</td>
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<td>Missing</td>
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<td>.2</td>
</tr>
<tr>
<td>Total</td>
<td>545</td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Grade of participants (N=545)

<table>
<thead>
<tr>
<th>Grade</th>
<th>N</th>
<th>%</th>
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</thead>
<tbody>
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<td>6</td>
<td>6</td>
<td>1.1</td>
</tr>
<tr>
<td>7</td>
<td>48</td>
<td>8.8</td>
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<tr>
<td>8</td>
<td>115</td>
<td>21.1</td>
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<tr>
<td>9</td>
<td>101</td>
<td>18.5</td>
</tr>
<tr>
<td>10</td>
<td>95</td>
<td>17.4</td>
</tr>
<tr>
<td>11</td>
<td>93</td>
<td>17.1</td>
</tr>
<tr>
<td>12</td>
<td>81</td>
<td>14.9</td>
</tr>
<tr>
<td>Missing</td>
<td>6</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>545</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 6. Age of participants (N=545)

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>101</td>
<td>18.6</td>
</tr>
<tr>
<td>14</td>
<td>122</td>
<td>22.4</td>
</tr>
<tr>
<td>15</td>
<td>85</td>
<td>15.6</td>
</tr>
<tr>
<td>16</td>
<td>102</td>
<td>18.8</td>
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<tr>
<td>17</td>
<td>97</td>
<td>17.8</td>
</tr>
<tr>
<td>18</td>
<td>37</td>
<td>6.8</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Total</td>
<td>545</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Twelve items in the survey questionnaire measured depression (items 97 to 108 in Appendix B). Table 8 reports means and standard deviations for the twelve items that measured depression. The score of the items cluster around
Table 7. Type of participants' residence (N=545)

<table>
<thead>
<tr>
<th>Residence</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm</td>
<td>78</td>
<td>14.3</td>
</tr>
<tr>
<td>Outside of town, not farm</td>
<td>60</td>
<td>11.0</td>
</tr>
<tr>
<td>Town or city</td>
<td>406</td>
<td>74.5</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>545</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The means as the standard deviations indicate. Respondents scored high on items 8, 12, 10, 1, 5 respectively as the grand mean indicates.

Eight items in the survey questionnaire measured social support (Items 57 to 62 110 111 in Appendix B). Four items measured social support, two items measured parents' support and two items measured perception of actual support. As shown in Table 9, the scores of all the items clustered around their means as the standard deviations indicate. Respondents scored high on the items of actual support and parental support as the grand mean indicates (items 5 to 8).

Eight items measured locus of control. Four of the items measured internal locus of control and an equal number of items assessed external locus of control.

Table 10 reports means and standard deviations of the eight items that measured locus of control.
Table 8. Means and standard deviations of the scale of depression

<table>
<thead>
<tr>
<th>Items</th>
<th>Means</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) In the past week, how many days have you felt depressed?</td>
<td>1.50</td>
<td>1.45</td>
</tr>
<tr>
<td>2) In the past week, how many days have you been bothered by things?</td>
<td>1.17</td>
<td>1.37</td>
</tr>
<tr>
<td>3) In the past week, how many days have you felt lonely?</td>
<td>.89</td>
<td>1.43</td>
</tr>
<tr>
<td>4) In the past week, how many days have you felt fearful?</td>
<td>.67</td>
<td>1.19</td>
</tr>
<tr>
<td>5) In the past week, how many days have you felt sad?</td>
<td>1.33</td>
<td>1.50</td>
</tr>
<tr>
<td>6) In the past week, how many days have you felt like you can't shake blues?</td>
<td>.97</td>
<td>1.45</td>
</tr>
<tr>
<td>7) In the past week, how many days have you felt like not eating?</td>
<td>.76</td>
<td>1.42</td>
</tr>
<tr>
<td>8) In the past week, how many days have you had trouble concentrating?</td>
<td>2.20</td>
<td>1.86</td>
</tr>
<tr>
<td>9) In the past week, how many days have you felt like everything is an effort?</td>
<td>1.74</td>
<td>1.76</td>
</tr>
<tr>
<td>10) In the past week, how many days have you had trouble sleeping?</td>
<td>1.12</td>
<td>1.65</td>
</tr>
<tr>
<td>11) In the past week, how many days have you talked less then usual?</td>
<td>.93</td>
<td>1.24</td>
</tr>
<tr>
<td>12) In the past week, how many days have you felt that you could not get going?</td>
<td>1.98</td>
<td>1.93</td>
</tr>
</tbody>
</table>

Mean of the means 1.28
Table 9. Means and standard deviations of the items of social support scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Means</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Do you feel your teachers understand you?</td>
<td>2.66</td>
<td>.66</td>
</tr>
<tr>
<td>2) Do you feel your teachers are interested you?</td>
<td>2.72</td>
<td>.68</td>
</tr>
<tr>
<td>3) Do you feel your counselor understand you?</td>
<td>2.82</td>
<td>.83</td>
</tr>
<tr>
<td>4) Do you feel your principal understand you?</td>
<td>2.51</td>
<td>.89</td>
</tr>
<tr>
<td>5) Do you feel your parents understand your problems?</td>
<td>2.51</td>
<td>.77</td>
</tr>
<tr>
<td>6) Do you feel your parents are interested in you?</td>
<td>3.47</td>
<td></td>
</tr>
<tr>
<td>7) I have someone I can really talk to.</td>
<td>4.26</td>
<td>.68</td>
</tr>
<tr>
<td>8) I have someone I can turn to for support and understanding when things get tough.</td>
<td>4.28</td>
<td>.64</td>
</tr>
<tr>
<td>Mean of means</td>
<td>3.21</td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 10, respondents scored high on the internal measures as the grand mean of 3.92 shows. The scores for the first three items of internal control clustered near the means as the standard deviations shows. The scores for the fourth item were more dispersed.

Table 11 shows the distributions of respondents' scores
Table 10. Means and standard deviations of locus of control

<table>
<thead>
<tr>
<th>Items</th>
<th>Means</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal locus of control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) I am responsible for my own success.</td>
<td>4.28</td>
<td>0.68</td>
</tr>
<tr>
<td>2) I can do just about anything I really set my mind to.</td>
<td>4.31</td>
<td>0.69</td>
</tr>
<tr>
<td>3) I am responsible for my failures.</td>
<td>3.79</td>
<td>0.83</td>
</tr>
<tr>
<td>4) Bad luck due to my mistakes</td>
<td>3.31</td>
<td>1.09</td>
</tr>
<tr>
<td>Mean of means</td>
<td>3.92</td>
<td></td>
</tr>
<tr>
<td>5) Things that happen to me mostly luck.</td>
<td>2.21</td>
<td>0.83</td>
</tr>
<tr>
<td>6) Problems due to bad breaks.</td>
<td>2.55</td>
<td>0.99</td>
</tr>
<tr>
<td>7) Little control over bad things.</td>
<td>2.483</td>
<td>1.02</td>
</tr>
<tr>
<td>8) No sense planning a lot, if something is going to happen, it will.</td>
<td>2.71</td>
<td>1.09</td>
</tr>
<tr>
<td>Mean of means</td>
<td>2.49</td>
<td></td>
</tr>
</tbody>
</table>

on depression scale (CES-D). As shown in Table 11, about 73 percent scored low in the scale. The scores of about 23 percent of the respondents ranged in the middle of the scale. Only about 4 percent of the respondents reported high scores on symptoms of depression. Therefore, it could be concluded that about 27 percent of the respondents experienced depression.
Table 11. Frequencies of respondents' scores on CES-D

<table>
<thead>
<tr>
<th>Value</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Cumulative Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00</td>
<td>10</td>
<td>1.8</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>1.00</td>
<td>6</td>
<td>1.1</td>
<td>1.1</td>
<td>3.0</td>
</tr>
<tr>
<td>2.00</td>
<td>13</td>
<td>2.4</td>
<td>2.4</td>
<td>5.4</td>
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<tr>
<td>3.00</td>
<td>15</td>
<td>2.8</td>
<td>2.8</td>
<td>8.1</td>
</tr>
<tr>
<td>4.00</td>
<td>11</td>
<td>2.0</td>
<td>2.0</td>
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<tr>
<td>5.00</td>
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<td>6.00</td>
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<td>23</td>
<td>4.2</td>
<td>4.3</td>
<td>22.0</td>
</tr>
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<td>8.00</td>
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<td>6.1</td>
<td>28.1</td>
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<td>9.00</td>
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<td>10.00</td>
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<tr>
<td>14.00</td>
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</tr>
<tr>
<td>43.00</td>
<td>3</td>
<td>.6</td>
<td>.6</td>
<td>97.8</td>
</tr>
<tr>
<td>44.00</td>
<td>1</td>
<td>.2</td>
<td>.2</td>
<td>98.0</td>
</tr>
<tr>
<td>45.00</td>
<td>2</td>
<td>.4</td>
<td>.4</td>
<td>98.3</td>
</tr>
<tr>
<td>50.00</td>
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<td>98.7</td>
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</tr>
<tr>
<td>55.00</td>
<td>3</td>
<td>.6</td>
<td>.6</td>
<td>99.6</td>
</tr>
<tr>
<td>58.00</td>
<td>1</td>
<td>.2</td>
<td>.2</td>
<td>99.8</td>
</tr>
<tr>
<td>59.00</td>
<td>1</td>
<td>.2</td>
<td>.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Total 545 100.0 100.0

Mean 15.324
Std dev 10.571
Correlation Among Variables

The correlation coefficients for all pairs of variables used in the proposed model were computed (Pearson product moment for continuous variables, polychoric for ordinal and continuous, and polyserial for dichotomous and continuous variables).

In the analysis (Table 12), depression, the dependent variable, was significantly correlated with all the dependent variables. Lack of a job was positively correlated with depression ($r=.261, p<.000$). Those who reported they had problems finding jobs and finding jobs available were more likely to experience depressive symptoms.

Gender discrimination was positively correlated with depression ($r=.196, p<.000$). Respondents who reported having experienced gender discrimination in school reported higher levels of depressive symptoms than those who did not.

Competition was found to be positively correlated with depression ($r=.239, p<.000$). Respondents who experienced competition in school were more likely to experience depressive symptoms.

Physical abuse also was positively correlated with depression ($r=.161, p<.000$). Respondents who experienced physical abuse were more likely to experience depressive symptoms.
Table 12. Correlation matrix of dependent and independent variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Lack of job opportunities.</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Gender discrimination.</td>
<td>0.132*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Competetion.</td>
<td>0.184*</td>
<td>0.627*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Physical abuse</td>
<td>0.179*</td>
<td>0.095</td>
<td>0.287*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Social support</td>
<td>-0.216*</td>
<td>-0.080</td>
<td>-0.104*</td>
<td>-0.100*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Locus of control.</td>
<td>-0.099*</td>
<td>-0.107*</td>
<td>-0.009</td>
<td>0.028</td>
<td>0.184*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Depression.</td>
<td>0.261*</td>
<td>0.189*</td>
<td>0.235*</td>
<td>0.162*</td>
<td>-0.182*</td>
<td>-0.170*</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) Age.</td>
<td>0.161*</td>
<td>-0.030</td>
<td>0.087</td>
<td>0.019</td>
<td>-0.089</td>
<td>0.113*</td>
<td>0.138*</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>9) Gender.</td>
<td>0.099*</td>
<td>0.214*</td>
<td>0.160*</td>
<td>-0.268*</td>
<td>-0.112*</td>
<td>-0.012</td>
<td>0.202*</td>
<td>-0.030</td>
<td>1.000</td>
</tr>
</tbody>
</table>

* Significant at p=value < .05
Social support and locus of control were found to be negatively correlated with depression. The more respondents report having high levels of locus of control, the less likely it was that they experienced depressive symptoms \( r = -0.167, p < 0.000 \). Also, the more respondents reported high levels of social support, the less likely it was that they experienced depressive symptoms \( r = -0.203, p < 0.000 \).

Finally, girls experienced more depressive symptoms than boys \( r = 0.202, p < 0.000 \).

There are also significant inter-correlations among the independent variables. Lack of job opportunities was positively correlated with competition \( r = 0.184, p < 0.000 \), gender discrimination \( r = 0.135, p < 0.003 \), and physical abuse \( r = 0.177, p < 0.000 \). Lack of job opportunities, however, was negatively correlated with locus of control \( r = -0.101, p < 0.027 \) and social support \( r = -0.197, p < 0.000 \).

Competition was positively correlated with gender discrimination \( r = 0.609, p < 0.000 \), and physical abuse \( r = 0.295, p < 0.000 \). Also girls were more likely to experience competition in school than boys \( r = 0.160, p < 0.000 \). Furthermore, competition was found to be negatively correlated with social support \( r = -0.142, p < 0.002 \). No significant correlation was found between competition and locus of control.
Gender discrimination was positively correlated with physical abuse ($r = .100$, $p < .027$). Those who experienced physical abuse were significantly more likely to experience gender discrimination. Also respondents who experienced more gender discrimination were more likely to have less social support ($r = -.106$, $p < .020$). Furthermore, respondents who experienced gender discrimination were more likely to have low score of locus of control ($r = -.111$, $p < .014$). Gender discrimination was correlated with gender ($r = .214$, $p < .000$). Girls were more likely to experience gender discrimination than boys.

Physical abuse was not found to have a significant correlation with either social support or locus of control. Physical abuse however; was significantly related to gender ($r = -.286$, $p < .000$). Boys were more likely to experience physical abuse than girls.

Path Analysis

Hypothesis testing was conducted by statistics produced by a generalized least squares estimates of the causal model presented in Figure 1 (p. 38). LISREL 7 statistical procedures were used to estimate the model. Estimating a path analysis model for directly observed variables with LISREL is straight-forward. Rather than estimating each equation separately, LISREL considers the model as a system of
equations and estimates all structural coefficients directly (Joreskog and Sorbom, 1989).

The full model was tested and the parameter estimates (path coefficients) were examined. Because there are no prior fixed elements among the beta and gamma, the model is just identified and fits the data perfectly. The standardized values of the generalized least squares estimate of coefficients for the model are shown on the model path in Figure 2. Statistically significant gamma and beta estimates are marked by asterisks. The criterion for statistical significance of the parameters at the .05 level one tail test was a t-value of 1.658 or greater.

The following hypothesized relationships were confirmed by the presence of a statistically significant t-values:

1. Hypothesis 1: There is a negative relationship between lack of job opportunities and depression.
2. Hypothesis 2: There is a negative relationship between competition and depression.
3. Hypothesis 4: There is a negative relationship between physical abuse and depression.
4. Hypothesis 5: There is a negative relationship between lack of job opportunities and social support.
5. Hypothesis 6: There is a negative relationship between competition and social support.
Figure 2. Standardized coefficients of LISREL analysis of the fully recursive model
* Significant at p-value < .05
6. Hypothesis 9: There is a negative relationship between lack of job opportunities and locus of control.

7. Hypothesis 11: There is a negative relationship between gender discrimination and locus of control.

8. Hypothesis 13: There is a negative relationship between social support and depression.

9. Hypothesis 14: There is a negative relationship between locus of control and depression.

The following hypothesized relationships were not statistically confirmed and therefore we can conclude that they are not significantly different than zero:

1. Hypothesis 12: There is a negative relationship between physical abuse and social support.

2. Hypothesis 8: There is a negative relationship between physical abuse and locus of support.

3. Hypothesis 7: There is a negative relationship between gender discrimination and social support.

4. Hypothesis 3: There is a negative relationship between gender discrimination and depression.

5. Hypothesis 10: There is a negative relationship between competition and locus of control.

The squared multiple correlations of the structural equation for social support, locus of control, and depression are respectively: .051, .035, and .163. These low values of
R's indicate there is a large percentage of variance in each of the dependent variables that is not explained by the independent variables.

The value of the coefficient of determination for structural equation, which is .173 means that 17 percent of the variance of the dependent variable (depression) is explained by the model.

**Decomposition of Effects**

The total and direct effects of the model in Figure 2 are shown in Tables 13 and 14.

As shown in Table 13, the total effects of the independent variables on the dependent variables are significant except for the effects of gender discrimination and physical abuse on social support, the effect of physical abuse on locus of control, and the effect of gender discrimination on depression.

As shown in Table 14, the indirect effects of the independent variables on the dependent variable are not significantly different from zero.

**Model Revision**

The t-ratios for the solution of the fully recursive model as shown in Figure 2 reveal that the effects of gender discrimination on locus of control and depression, of physical
Table 13. The total effect of independent variables on the dependent variables.

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Job opportunities</th>
<th>Competition</th>
<th>Gender discrimination</th>
<th>Physical abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social support</td>
<td>-.176*</td>
<td>-.093*</td>
<td>-.026</td>
<td>-.003</td>
</tr>
<tr>
<td>Locus of control</td>
<td>-.103*</td>
<td>.093*</td>
<td>-.157*</td>
<td>.033</td>
</tr>
<tr>
<td>Depression</td>
<td>.221*</td>
<td>.166*</td>
<td>.068</td>
<td>.071*</td>
</tr>
</tbody>
</table>

* Significant at p-value <.05.

Table 14. Indirect effects of independent variables on the dependent variables.

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Job opportunities</th>
<th>Competition</th>
<th>Gender discrimination</th>
<th>Physical abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social support</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Locus of control</td>
<td>-.015</td>
<td>-.008</td>
<td>-.002</td>
<td>.000</td>
</tr>
<tr>
<td>Depression</td>
<td>.035</td>
<td>.001</td>
<td>.022</td>
<td>-.004</td>
</tr>
</tbody>
</table>
abuse on social support may not be significantly different from zero. A formal test of the hypothesis that there are no relationships between these variables should be based on independent sample (Joreskog and Sorbom, 1989).

An informal test has been conducted and the insignificant path coefficients were set to be equal zero. The new model has been found to fit the data based on chi-square (chi-square= 4.95; p=.292; adjusted goodness of fit index= .982) as shown in Figure 3.

Group Comparison

In the study the researcher is interested to find out the moderating effects of gender, social support and locus of control. Therefore, to test hypotheses 15, 16, and 17, it must be determined whether girls have the same parameter values as that of boys, and whether adolescents who reported low social support have the same parameters values as that of adolescents who reported high social support, and finally whether adolescents who reported low locus of control have the same parameters as that of adolescents who reported high locus of control.

For each group the measurement model is specified exactly and the researcher tested the similarity (invariance) of the parameters of Beta, Gamma, and Psi matrices.
Figure 3. Standardized coefficients of LISREL analysis of the revised model
* Significant at p-value < .05
1. Comparing the measurement model between boys and girls

Table 15 reports the values of testing the invariance hypothesis. The base line model shows an adequate match to the data with chi-square of 10.98. The next model, which sets Beta identical across groups, shows an adequate fit to the data with chi-square estimate of 19.65 (10 df). The chi-square difference of model 1 and model 2 is 3.67 (2 df), which is not statistically significant. This result means that the effects of social support and locus of control on depression are not statistically different between boys and girls. Model 3 sets Beta and Gamma identical for boys and girls and has a chi-square of 58.08 (19 df) which shows lack of fit to the data. The chi-square difference between model 2 and model 3 is 43.43 (9 df) which indicates a significant difference of Gamma coefficients between boys and girls. This result means that Gamma matrix is not identical for boys and girls.

Figures 4 and 5 (p. 73-74) reveal the location and magnitude of these differences. Figures 4 and 5 show that job opportunity and competition are more important in predicting depression for boys than for girls. Job opportunities and gender discrimination are more important in predicting locus of control for girls than for boys. Physical abuse has more of an effect on depression for girls but not for boys.
Figure 4. Standardized coefficients of LISREL analysis of the revised model for boys
* Significant at p-value < .05
Figure 5. Standardized coefficients of LISREL analysis of the revised model for girls
* Significant at p-value < .05
Table 15. Examining the path coefficients between boys and girls

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi-square</th>
<th>(df)</th>
<th>Chi-square difference</th>
<th>(df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>model 1^a</td>
<td>10.98</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2^b</td>
<td>14.65</td>
<td>10</td>
<td>3.67</td>
<td>2</td>
</tr>
<tr>
<td>Model 3^c</td>
<td>58.08</td>
<td>19</td>
<td>43.43</td>
<td>9</td>
</tr>
<tr>
<td>Model 4^d</td>
<td>60.13</td>
<td>22</td>
<td>2.05</td>
<td>3</td>
</tr>
</tbody>
</table>

^a Beta, Gamma, and Psi coefficients are different for both groups.
^b Beta path coefficients are identical for both boys and girls.
^c Beta, and Gamma coefficients are identical for both boys and girls.
^d Beta, Gamma, and Psi coefficients are identical for both boys and girls.

Competition and physical abuse have positive significant effects on locus of control for girls but not for boys which is contradictory to the hypothesis of this study.

Model 4 sets Beta, Gamma, and Psi identical for boys and girls and has a chi-square of 60.13 (22 df). The chi-square difference between model 3 and model 4 is 2.05 (3 df) which is not statistically significant. This result means that Psi matrix is identical for both girls and boys.

2. Social support as mediating and moderating variable.

To examine the mediating effect of social support between social stressors (lack of job opportunities and competition), the paths between these variables and social support were set to be equal zero. The estimated value of chi-square (29.93,
df=5) was compared to the value of chi-square of the base line model (the reduced model Figure 3) which was (1.06, df=3). The chi-square difference was 28.87 with (7 df). This difference is significant at p-value of .05 and it can be concluded that social support mediates the effects of lack of job opportunities and competition on depression.

Table 16 reports the values of testing the moderating effects of social support.

Table 16. Examining the path coefficients between groups of low and high social support

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi-square (df)</th>
<th>Chi-square difference (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.89 (2)</td>
<td></td>
</tr>
<tr>
<td>Model 2&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.02 (3)</td>
<td>.13 (1)</td>
</tr>
<tr>
<td>Model 3&lt;sup&gt;c&lt;/sup&gt;</td>
<td>23.33 (10)</td>
<td>22.31 (7)</td>
</tr>
<tr>
<td>Model 4&lt;sup&gt;d&lt;/sup&gt;</td>
<td>23.88 (12)</td>
<td>.55 (2)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Beta, Gamma, and Psi coefficients are different for both groups.
<sup>b</sup> Beta path coefficients are identical for both groups.
<sup>c</sup> Beta, and Gamma coefficients are identical for both groups.
<sup>d</sup> Beta, Gamma, and Psi coefficients are identical for both groups.

The invariance hypotheses of Beta, Gamma, and Psi matrices were compared to the base line model. The base line model shows an excellent match to the data with chi-square of .89 (2 df). The next model which sets Beta identical across group shows an adequate fit to the data with chi-square estimate of 1.02 (3 df). The chi-square difference of model 1 and model 2
is .13 (1 df) which is not statistically significant. This result means that the effect of locus of control on depression is not statistically different between low and high social support groups. Model 3 sets Beta and Gamma identical for each group of low and high social support and has a chi-square of 23.33 (10 df) which shows lack of fit to the data. The chi-square difference between model 2 and model 3 is 22.31 (7 df), which indicates a significant difference of Gamma coefficients between the two groups of low and high social support. This means that Gamma matrix is not identical for the two groups. Figures 6 and 7 reveal the location and magnitude of these differences. Figures 6 and 7 (p. 78-79) show that job opportunity is more important in predicting locus of control and depression for the group of low social support than for the group of high social support. Competition is more important in predicting depression for the group of low social support than for the group of high social support. Physical abuse and gender discrimination have more effects on locus of control for the group of high social support.

Model 4 sets Beta, Gamma, and Psi identical for the two groups and has a chi-square of 23.88 (12 df). The chi-square difference between model 3 and model 4 is .55 (2 df) which is not statistically significant. This result means
Figure 6. Standardized coefficients of LISREL analysis of the revised model for group of low social support

* Significant at p-value < .05
Figure 7. Standardized coefficients of LISREL analysis of the revised model for the group of high social support

* Significant at p-value < .05
that Psi matrix is identical for both low and high social support groups. Furthermore, the total coefficient of determination for structural equations is .263 for the low social support group comparing to .144 for the high social support group.

The squared multiple correlations for the group of low social support are .054 (for locus of control) and .175 (for depression). For the group of high social support, the squared multiple correlations are .074, .098 for locus of control, and depression respectively. The model explains more variance in the dependent variables of the group of low social support, thus it can be concluded that lack of social support increases the effects of the independent variables on depression.

3. Locus of control as mediating and moderating variable.

To examine the mediating effect of locus of control between social stressors (lack of job opportunities and competition, gender discrimination and physical abuse), the paths between these variables and locus of control were set to be equal zero. The estimated value of chi-square (14.65 df=7) was compared to the value of chi-square of the base line model (the reduced model Figure 3) which was (1.06, df=3). The chi-square difference was 13.59 with (4 df). This difference is significant at p-value of .05 and it can be concluded that
social support mediates the effects of social stressors on depression.

Table 17 reports the values of testing the moderating effect of locus of control. The estimated chi-square values

Table 17. Examining the path coefficients between groups of low and high locus of control

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi-square</th>
<th>(df)</th>
<th>Chi-square difference</th>
<th>(df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5.18</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2&lt;sup&gt;b&lt;/sup&gt;</td>
<td>6.07</td>
<td>5</td>
<td>.89</td>
<td>1</td>
</tr>
<tr>
<td>Model 3&lt;sup&gt;c&lt;/sup&gt;</td>
<td>24.22</td>
<td>11</td>
<td>18.15</td>
<td>6</td>
</tr>
<tr>
<td>Model 4&lt;sup&gt;d&lt;/sup&gt;</td>
<td>25.26</td>
<td>13</td>
<td>1.04</td>
<td>2</td>
</tr>
</tbody>
</table>

<sup>a</sup> Beta, Gamma, and Psi coefficients are different for both groups.
<sup>b</sup> Beta path coefficients are identical for both groups.
<sup>c</sup> Beta, and Gamma coefficients are identical for both groups.
<sup>d</sup> Beta, Gamma, and Psi coefficients are identical for both groups.

of the invariance hypotheses of Beta, Gamma, and Psi matrices were compared to the base line model. The base line model shows a good fit to the data with chi-square of 5.18 (4 df). The next model which sets Beta identical across group also shows an adequate fit to the data with chi-square estimate of 6.07 (5 df). The chi-square difference of model 1 and model 2 is .89 (1 df) which is not statistically significant. This result means that the effects of social support on depression is not statistically different between low and high locus of control groups. Model 3 sets Beta and Gamma identical for
each group of low and high locus of control and has a chi-square of 24.22 (11 df), which shows lack of fit to the data. The chi-square difference between model 2 and model 3 is 18.15 (7 df) is statistically significant, which indicates significant difference of Gamma coefficients between the two groups of low and high locus of control. As shown in Figures 8 and 9, the path coefficients between lack of job opportunities competition, and physical abuse and depression are twice higher for the group of low locus of control.

Model 4 sets Beta, Gamma, and Psi identical for the two groups and has a chi-square of 34.21 (22 df). The chi-square difference between model 3 and model 4 is 1.12 (3 df) which is not statistically significant. This result means that Psi matrix is identical for the two groups of low and high locus of control. Figures 8 and 9 (p. 83, 84) show the path coefficients for the two groups.
Figure 8. Standardized coefficients of LISREL analysis of the revised model for the group of low locus of control
* Significant at p-value < .05
Figure 9. Standardized coefficients of LISREL analysis of the revised model for the group of high locus of control
* Significant at p-value < .05
CHAPTER V. DISCUSSION, RECOMMENDATIONS, AND SUMMARY

This chapter is divided into four sections. The first section discusses the reliability and validity of variables' measures and the limitations of the generalizability of this research findings. The second section discusses the important findings and results. The third section reports the implications of this study's findings and provides general recommendations for future research and policy makers. Finally, the last section provides a summary of the study findings.

Study Limitations

In this section some cautions and reservations are reported about the validity and reliability of measures, and about the specification of the theoretical model that may affect the generalization of the findings.

1. Measurement

The data of this study were collected as a part of a general community survey and later on used by the researcher. The goals and objectives of this study differs from the goals of the original survey and thus the researcher of the current study found it difficult to examine and scrutinize the validity and reliability of variables' measures. Therefore, the validity and reliability of variables' measures are discussed and examined, so readers can be cautious and aware
of the limitations of the variables' measures and the significance of their relationships.

First, the data were collected by telephone interview, which has some disadvantages compared to mailed questionnaire and face-to-face interviews. For example, Groves and Kahn (1979) reported that the telephone survey respondents consistently said that they disliked the interaction much more than did the personal interview respondents. Telephone respondents were initially more suspicious, showed less interest in the interview, and more often felt uneasy about discussing certain topics. Furthermore, Jordan, Marcus, and Reeder (1980) reported that the telephone respondents have more missing data on family income, more consent and ambiguous answers (including more contradictory answers) to checklist items. In this study, it is very difficult to determine how much the interview methods (telephone interview) affected the reliability and validity of the responses.

Second, two variables (competition and gender discrimination) were measured by single indicators and they may have face validity. But the reliability of these two measures cannot be determined because they were measured by single indicators.

Third, locus of control and physical abuse variables have low reliability coefficients. Physical abuse was measured by
three items and have a reliability coefficient of .39. The low reliability could be a result of some respondents experiencing physical abuse by fathers but not by teachers which may lead to low correlations between the item measuring abuse by teachers and the item measuring abuse by parents.

The locus of control scale was measured by eight items and has a reliability coefficient of .43. The reliability analysis of the Cornbach coefficient alpha indicated that one of the items did not factor in well (e.g., My bad luck is the result of mistakes that I have made) (Berkland, 1992). When the item was deleted the alpha reliability increased substantially to about .50. Thus, this item was deleted from the scale in this study and was not used the analysis. The low reliability coefficients of the locus of control scale and of the physical abuse composite indicate the presence of random errors in these measures. The presence of random errors in any measurement leads to low correlation and regression coefficients (Carmines and Zeller, 1991). Because the researcher did not correct for correlation of unreliability due to random measurement errors, the correlations and path coefficients of this study could be higher in the populations than those obtained in this study. Furthermore, the failure to confirm some of the hypotheses might be a consequence of using such low reliable measures.
Therefore, the researcher recommends readers to be cautious and carefully consider whether to generalize findings to the populations.

Third, social support was measured by eight items and has an alpha reliability of .62. This level of reliability is unsatisfactory. Carmines and Zeller (1991) believe that reliability should not be below .80 for widely used scales. The low reliability of social support may affect the path coefficient of the effect of social support on depression to be lower than that in the population. Moreover, the items that measure social support only measure the subjective perception of family and school supports and can not be generalized to other types of social support (e.g., intimate confiding relationship of boyfriend or girlfriend, friendship, close relatives other than parents, or community network).

Forth, when the correlations among variables were examined, a high correlation between two of the independent variables was found. The correlation between gender discrimination in school and competition was found to be .609. When such high correlation between independent variables exists, multi-collinearity among them is said to exist. Multi-collinearity between two independent variables affects the estimated regression coefficient to have large sampling variability. As a result, only imprecise information may be
available about the individual true regression coefficient (Neter et al., 1989).

Finally, the data were collected from a single source and may reflect only the subjective reality as understood by the respondents. Data which are obtained from a single source may yield misleading results because of the respondents' overarching judgments about conceptually distinct ideas (e.g., attitudes about self versus attitudes about others) which may lead to inflate correlations among these ideas (Lorenz et al 1991).

2. Model Specification

As mentioned in the first chapter, social support and locus of control are believed to mediate the effect of social stressors on depression. Locus of control is a personality characteristic that mediates the effect of depression by increasing the use of coping mechanisms and problem solving during periods of stressful experiences. Social support, especially emotional support involves the exchange of intimate communication and increases personal coping with stress. In this study it was proposed that stress caused by lack of job opportunities, gender discrimination, competition, and physical abuse predicts depression among adolescents. The effect of stress is mediated by social support and locus of control. Because the data here were collected on a cross
sectional survey, the causal priority of the predictors and the directions of effects are solely based on the theoretical assumptions of the relationships. Additionally, the reciprocal relationships between the dependent and independent variables are theoretically plausible. For example, some studies show there is a reciprocal relationship between depression and social support. Balzer (1983) in his longitudinal study, found that depressed persons are more likely to improve in social support than non-depressed persons which suggests that depression increases the level of social support. Therefore, readers should understand that the directions of effects are assumed and can not be empirically verified in this study. Finally, some important sociological variables (e.g., parental education and occupation, living standard, income, family status) were not included in the model because they were not measured adequately (too many missing cases), or because they were not available. The exclusion of these variables from the model can be considered a weakness and shortcoming of the model power to predict depression.

Discussion

This study examined a number of pieces of research literature to develop a model of the process influencing adolescent depression. The main objective has been to
consider a range of sociological variables which have not been brought together before in a single analysis plan. Lack of job opportunities, competition in school, gender discrimination in school, and physical abuse are sociological variables which have never been employed to predict depression among adolescents in one single study.

In this section, findings in the previous chapter will be examined. Figures 2 and 3 show the results of the proposed model, and the results of the reduced model. Statistically significant gamma (the effect of exogenous variables on the endogenous variables) and beta (the effects of endogenous variables on the endogenous variables) are denoted by asterisks. Gender discrimination in school was found to be less important in predicting depression and social support than has been previously thought. Additionally, physical abuse was found to have an insignificant relationship with locus of control and social support.

Hypothesis testing was conducted within the context of a causal model. The first hypothesis was that there is a negative relationship between lack of job opportunities and depression. The data supported this hypothesis, and the results agree with previous studies (Olafasson et al., 1986; Winefield et al., 1993). Most of the subjects (over 98%) were enrolled in school during the time of data collection. If
lack of job opportunities affected the adolescents mental health while they were still in school, it may have had more devastating effects if they were out of school. Likewise, the negative effect of the lack job opportunities on the mental health of adolescents could be more damaging for those who lack the economic resources to meet their basic necessities.

The data also supported the hypothesis that there is a negative relationship between physical abuse and depression. This finding agrees with previous studies (Jehu, 1989; Ogata, 1990).

Competition and gender discrimination in school have never been studied empirically as predictors of depression. Hill and Lynch (1983) found a relationship between traditional gender role expectations and depression. Merton has observed that individuals in a competitive society who cannot cope with competitive order (because they are shut from means that are both effective and legitimate) become frustrated and eventually drop out. This study found a significant effect of gender discrimination on locus of control but the direct effects on depression and social support was not statistically significant. Competition in school was found to be significantly related to depression and social support in the same direction as has been hypothesized. Because competition and gender discrimination are highly correlated, the specific
effects of each of the dependent variables are difficult to be determined.

The study also found a significant direct effect of social support and locus of control on depression which agrees with previous studies (Windle, 1992; Barrera and Garrison-Jones, 1992; Ross and Mirowsky, 1989).

To test the moderating effect of social support, the sample was divided into two groups, high and low in social support and then the model fit and path coefficients were compared. The same procedures were applied to test the mediating effect of locus of control. In the previous chapter, Table 15 shows the results of comparing the path model for the two groups. The effects of the independent variables were significantly different for the two groups. When examining the path coefficients in Figures 6 and 7, it can be seen that the model of the group of low social support explains more variance in depression ($R^2 = .175$ vis $R^2 = .097$). The effects of the lack of job opportunities on locus of control and depression were higher for the group of low support. The effects of gender discrimination and physical abuse on locus of control were higher for the group of high social support. This contradictory findings could be attributed to gender differences. Girls reported higher in
social support than boys, and reported that they experienced more of gender discrimination.

The moderating effect of locus of control was measured by dividing the sample into two groups, low and high in locus of control. The matrices of beta, gamma and psi were compared between the two groups and significant differences between gamma matrices were found (Table 16). When the path coefficients and $R^2$'s of the two model were compared there were substantial differences. Figures 8 and 9 show that the effect of lack of job opportunities and physical abuse on depression, the effect of job opportunities and competition on social support were much higher for the group of low locus of control. Furthermore, the explained variance in the dependent variable (depression) was twice higher for the group of low locus of control.

These results confirmed the buffering effects hypothesis of locus of control and social support on depression as have been reported by previous studies (Windle, 1992; Barrera and garrison-jones, 1992; Ross and Mirowsky, 1989; Seligman, 1975).

Boys and girls differences were obtained by dividing the sample into two groups: boys and girls. When, the model parameters (beta, gamma, and psi) were compared, very interesting differences were found. First the effects of
social support and locus of control on depression (beta) were compared between boys and girls and the chi-square indicates no statistical differences (Table 14). But when the path coefficients in Figures 4 and 5, were examined, the effect of social support was found to be significant for girls while not significant for boys. Additionally, the path coefficients of the effects of locus of control and social support were about twice higher for girls than for boys. This agrees with previous research which shows that girls tend to be more intimate than boys (Buchmester and Furman, 1987), seek more help and support from peers than boys, and the support they utilize tends to be more emotion-focused in nature than the support boys gain (Belle, 1988).

The invariance hypothesis of gamma matrices between boys and girls was rejected based on significant chi-square (Table 14) which indicate there were significant differences of the effects of independent variables on dependent variables between the two model of boys and girls. Examining the path coefficients of the effects of independent variables on the dependent variables (Figures 4 and 5) show the following differences: Lack of job opportunities and competition on depression were more important in predicting depression for boys than girls. Physical abuse was found to be significant in predicting depression for girls but not for boys. The
effect of gender discrimination on locus of control was much higher for girls than boys. It seems that gender discrimination does not affect depression directly, but indirectly through its effect on locus of control. While most of the relationships were predicted, another interesting finding was found. The physical abuse and competition were found to be positively related to locus of control. This finding apparently contradict the theoretical proportions of learned helplessness and locus of control theory. The positive relationships between competition and physical abuse and locus of control could be explained by the level of controlability. If the stressful situation is perceived under control, then a person could have the confidence to deal with the situation and reduce its negative effect (Lee, 1992). Lack of job opportunities and gender discrimination are determined by social structure while competition and physical abuse are situational factors (happen in individual interaction). Girls may have more control on situational stressors such as competition and physical abuse which may increase their ability of problem solving and locus of control. Gender discrimination in school is based on biological characteristics which girls can not control and as a result has a negative effect on locus of control.
The model explains more variances in the dependent variables for females than males (social support, locus of control, and depression). \( R^2 \)'s for females are: social support = .078, locus of control = .142, depression = .239 and for males: social support = .046, locus of control = .021, depression = .158. The finding that females have scored higher on the depression scale, does not necessarily imply that females are more distressed than males, but rather both males and females are predisposed or socialized to different sex roles that require different expression of distress. Previous studies support the view that each sex has a distinct style of expressing distress, that is boys tend to express their distress in the form of conduct disorders and delinquency. Kandel and Davies (1982) concluded from studying a community sample of boys and girls that boys are seen as disturbed as girls, but boys tend to externalize rather than internalizing pattern of symptom expression.

Recommendations for Future Studies

As mentioned in the previous sections, this study has very significant limitations. First, the reliability of some of the variables were very low. Locus of control scale has a reliability alpha coefficient of .43 which increased when item 7 was deleted to .50. This low reliability of the scale may
question the appropriateness of the scale to study adolescents. Ross and Mirowsky (1989) established reliability on the instrument when it was administered to individuals 18 to 85 years of age. The participants in this survey were 13 to 18 years of age—people at earlier cognitive development and maturation than average group (Nerkland, 1992). Additionally, the five points rating scale might have confused the respondents. Most of the new developed scales of locus of control that administered to children and adolescents have "yes" and "no" response scale and have more items (Nowicki and Strickland, 1973; Dalhquit and Ottinger, 1983; Connll, 1985). Consequently, it is recommended that future studies use appropriate measure for locus of control that is more suitable for the adolescents.

In measuring social support, the researcher recommends the use of a well established scale of social support such as those developed by Caplan' (1979), House (1981), and Lin et al. (1986).

In order to establish causal priority and validate the findings of this study, it is recommended to apply longitudinal design.

Finally, this study has excluded potentially important variables, such as social economic status of family, living standard, and family status (divorce or single parent family...
vis two parents family). For future research, these variables should be included in the model or be used as controlling variables when comparing groups.

Policy Implications

In many ways, the present study has raised many questions than it has answered. As mentioned in the previous sections, the exclusion of many potentially important variables and the low reliability of some variables included in this study make it difficult to generalize the findings to the general population. The difficulty of drawing any policy implications would remain so even if the results were true in the population. Such difficulty stems from the exclusion of demographic characteristics that related to the independent variables. For example, any recommendations based on the finding that lack of job opportunities has a negative affect on adolescents mental health and well-being, should take many factors in consideration. First, it is important to know whether lack of job opportunities is a result of adolescents' lack of vocational skills, or is it a result of the decrease of available jobs. Second, demographic characteristics should be identified in order to design and deliver the appropriate programs and service. The researcher is very cautious to draw any implications that are not supported by verified facts. For instance, government policy to fight unemployment
emphasizes on improving the skills of the unemployed so to make them employable (Winefield et al, 1990). Such policy is based on the assumption that the labor market can absorb persons whose skills have been improved. But if available jobs are decreasing, the effectiveness of skill-enhancement programs will decline with increasing competition for a decreasing number of available jobs (Dooley and Catalano, 1988). The same cautions should be taking about the policy implications of the rest of the present study findings (the effects of competition in school, of gender discrimination and of physical abuse on depression).

Summary

The objectives of this study were to determine: (1) the effect of social stress as measured by lack of job opportunities, competition in school, gender discrimination in school, and physical abuse on depression, (2) whether social support and locus of control mediate the effects of social stressors and patterns of depression.

The Iowa Youth Poll study was used to provide the data of this study. The instrument, administered by telephone in spring 1990, consisted of 162 questions to assess the behaviors, needs, feeling and desires of 545 Iowa youth. The questions dealt with problems that faced Iowa youth 13 to 18 years of age.
The data from 35 items were analyzed for this study using the statistical treatments included in the Statistical Package for Social Sciences and Lisrel 7.

Findings were described in three sections. The first provided descriptive findings such as means, standard deviations of items used in this study. The second section, analyzed the correlation matrix of the dependent and dependent variables. The third section, focused on hypothesis and model testing.

The important findings are:

1. Social support and locus of control have significant negative effects on depression.

2. Lack of job opportunities, competition and physical abuse have significant positive effects on depression.

3. The moderating effects of social support and locus of control between social stressors and depression was found to be significant.

4. There are significant gender differences between boys and girls. Lack of job opportunities and competition in school are more important in predicting depression for boys. Gender discrimination, physical abuse, and locus of control are more important in predicting depression for girls.

5. The model explains more variance of the dependent variables for girls than for boys.
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ACKNOWLEDGEMENTS

I would like to express my appreciation and thanks to a number of people who provided support, guidance, and inspiration throughout my graduate studies and throughout writing this dissertation. My special thanks goes to Dr. Martin Miller, my advisor, for his support, patience, and guidance.

My appreciation is extended to Dr. Stephen Sapp for his kindness and professional guidance to analyze the data of this study.

I am deeply grateful for the patience and help of my committee: Dr. Stephen Aigner, Dr. Margaret Holmgren, and Dr. Ronald Simons.

I want to acknowledge a special debt to my best friends: Abdallah Badahdah and Frankie Holt for their support and encouragement.

My special thanks are expressed to my wife, Norah for her support, encouragement, love and prayer during my school years. My son Mohammed and my lovely daughters Mai and Maha deserve my thanks for being so patient with my absence during the last two years.
APPENDIX A. SCREENING INSTRUMENT
SCREENING

I am (your name) calling from the Sociology Department at Iowa State University. We are planning a state wide study of youth in Iowa for the 4-H under the direction of Dr. Miller.

1. May I speak to one of the heads of the household?
   1 Yes Skip to question 4
   2 No
   3 REFUSED

2. Does anyone live in your household who is between the ages of 13 and 18?
   1 Yes
   2 No -- If no thank them for their assistance
   3 REFUSED

3. When would it be a good time to call back and discuss with the parents the possibility of interviewing one of their children?

4. Do you have any children living home between the ages of 13 and 18?
   1 Yes
   2 No ---> Thank them for their assistance and terminate the phone call
   3 REFUSED

We are doing a state wide study looking at the needs and problems of youth. We will be talking to teenagers between the ages of 13 and 18. The information we get will help to develop and improve youth programs. All information received will be kept confidential, no identifying information will be used. Your child's answer will be grouped with the responses of the 600 youth interviewed.

5. Will you give us permission to talk to one of your children?
   1 Yes
   2 No
   3 REFUSED
6. How many teenage daughters do you have?

1. Zero  SKIP TO QUESTION 9
2. One
3. Two  SKIP TO QUESTION 8
4. Three  SKIP TO QUESTION 8
5. Four  SKIP TO QUESTION 8
6. Five  SKIP TO QUESTION 8
7. Six  SKIP TO QUESTION 8
8. REFUSED

7. To help us know how many children from each age we will be talking to. Will you tell me the age of your daughter and her first name?

Name________________________
Age___________

8. For us to get a good understanding of the concerns of youth in Iowa it is important that we talk with girls from each group. To be able to do this we need to select the youth to be talked to using a random process. Would you please tell me the age and name of each of your daughters who are between 13 and 18 years old.

Name________________________
Age___________

Name________________________
Age___________

9. How many teenage sons do you have?

1. Zero  SKIP TO QUESTION 12
2. One
3. Two  SKIP TO QUESTION 11
4. Three  SKIP TO QUESTION 11
5. Four  SKIP TO QUESTION 11
6. Five  SKIP TO QUESTION 11
7. Six  SKIP TO QUESTION 11
8. REFUSED
10. To help us know how many children from each age we will be talking to. Will you tell me the age of your son and his first name?

Name______________________  
Age_________  

Name______________________  
Age_________  

THIS WILL BE REPEATED DEPENDING ON THE NUMBER OF SONS THIS FAMILY HAS

12. May we have your address, so we will be able to send you and your child a letter explaining this survey?
APPENDIX B. IOWA YOUTH POLL SURVEY INSTRUMENT
Hello, this is (your name) calling for Dr. Miller in the Sociology Department at Iowa State University. We are contacting youth in Iowa to get their opinions on the issues and concerns youth face today. Have you received the letter we sent you explaining the project? If the response is no, an explanation of this project will need to be given at this time. We are very interested in your opinions on the problems youth face today. We hope you will assist us by participating in this survey. It will take approximately 20 minutes to complete. If there are any questions you are uncomfortable answering, just tell me and I will continue on with the next question.

1. Respondent's gender: (IF YOU ARE NOT SURE ASK)
   1 Male
   2 Female

We will begin by asking what your age was on your last birthday?

2. What was your age on your last birthday?
   YEARS _____  -----> If age is not between 13 and 18 stop this interview.
   19 Not in any range
   20 REFUSED

3. Are you currently going to school?
   1 Yes
   2 No
   3 REFUSED

4. What grade are you in?
   1 6th grade
   2 7th grade
   3 8th grade
   4 9th grade
   5 10th grade
   6 11th grade (Junior)
   7 12th grade (Senior)
   8 REFUSED
5. Are you a member of any sports teams such as basketball, football, swimming, softball, volleyball, wrestling, tennis, soccer?

1 Yes
2 No
3 Refused

ONLY WANT KIDS WHO ARE MEMBERS OF ORGANIZED TEAMS WITH COACHES

6. Now could you tell me the sporting event you are a member of at your school?

AGAIN ONLY WANT KIDS THAT ARE MEMBERS OF AN ORGANIZED TEAM WITH COACH

7. Now we are interested in school activities other than sports that you are involved in? Could you tell me all the school activities that you are involved in, such as, choir, band, cheerleading, debate, student council, FFA, FHA or math club.

8. What activities are you currently involved in outside of school? Such as scouts, church groups, 4-H, dancing, art, music lessons, volunteer programs, sports.

INTERESTED IN ACTIVITIES SUCH AS BOYS CLUB, YMCA, YWCA, PARK AND RECREATION PROGRAMS, AND AGAIN ORGANIZED SPORTING EVENTS - TEAM MEMBER WITH A COACH.

Now we would like to ask you about problems and needs which individuals your age sometimes have. I will be asking you if it is a problem for you.
9. Have you had problems in finding a job?
   1. Yes
   2. No  SKIP TO QUESTION 11
   3. DON'T KNOW  SKIP TO QUESTION 11
   4. REFUSED  SKIP TO QUESTION 11

10. How often?
    1. Once or twice
    2. Sometimes
    3. Often
    4. DON'T KNOW
    5. REFUSED

11. Have you had any problems finding out what jobs are available?
    1. Yes
    2. No  SKIP TO QUESTION 13
    3. DON'T KNOW  skip to question 13
    4. REFUSED  SKIP TO QUESTION 13

12. How often?
    1. Once or twice
    2. Sometimes
    3. Often
    4. DON'T KNOW
    5. REFUSED

13. Have you been benched for discipline by a coach?
    1. Yes
    2. No  SKIP TO QUESTION 15
    3. DON'T KNOW  SKIP TO QUESTION 15
    4. REFUSED  SKIP TO QUESTION 15

14. How often?
    1. Once or twice
    2. Sometimes
    3. Often
    4. DON'T KNOW
    5. REFUSED
15. Have you experienced boy/girls discrimination or favoritism in sports?

1. Yes
2. No  SKIP TO QUESTION 17
3. DON'T KNOW  SKIP TO QUESTION 17
4. REFUSED  SKIP TO QUESTION 17

16. How often?

1. Once or twice
2. Sometimes
3. Often
4. DON'T KNOW
5. REFUSED

17. Have you experienced boy/girl discrimination or favoritism in school courses?

1. Yes
2. No  SKIP TO QUESTION 19
3. DON'T KNOW  SKIP TO QUESTION 19
4. REFUSED  SKIP TO QUESTION 19

18. How often?

1. Once or twice
2. Sometimes
3. Often
4. DON'T KNOW
5. REFUSED

19. Have you experienced too much pressure and competition with the teams you are on?

1. Yes
2. No  SKIP TO QUESTION 21
3. DON'T KNOW  SKIP TO QUESTION 21
4. REFUSED  SKIP TO QUESTION 21
20. How often?
   1 Once or twice
   2 Sometimes
   3 Often
   4 DON'T KNOW
   5 REFUSED

21. Have you ever experienced too much pressure and competition in school?
   1 Yes
   2 No SKIP TO QUESTION 23
   3 DON'T KNOW SKIP TO QUESTION 23
   4 REFUSED SKIP TO QUESTION 23

22. How often?
   1 Once or twice
   2 Sometimes
   3 Often
   4 DON'T KNOW
   5 REFUSED

23. Have you been physically hurt by coaches?
   1 Yes
   2 No SKIP TO QUESTION 25
   3 DON'T KNOW SKIP TO QUESTION 25
   4 REFUSED SKIP TO QUESTION 25

24. How often?
   1 Once or twice
   2 Sometimes
   3 Often
   4 DON'T KNOW
   5 REFUSED

25. Have you ever been expelled or suspended from school?
   1 Yes
   2 Sometimes
   3 Often
   4 DON'T KNOW
   5 REFUSED
27. Have you been physically hurt by teachers?
   1. Yes
   2. No  SKIP TO QUESTION 29
   3. DON'T KNOW  SKIP TO QUESTION 29
   4. REFUSED  SKIP TO QUESTION 29

28. How often?
   1. Once or twice
   2. Sometimes
   3. Often
   4. DON'T KNOW
   5. REFUSED

29. Have you been physically hurt by other kids?
   1. Yes
   2. No  SKIP TO QUESTION 31
   3. DON'T KNOW  SKIP TO QUESTION 31
   4. REFUSED  SKIP TO QUESTION 31

30. How often?
   1. Once or twice
   2. Sometimes
   3. Often
   4. DON'T KNOW
   5. REFUSED

31. Have your parents physically hurt you?
   1. Yes
   2. No  SKIP TO QUESTION 33
   3. DON'T KNOW  SKIP TO QUESTION 33
   4. REFUSED  SKIP TO QUESTION 33

32. How often?
   1. Once or twice
   2. Sometimes
   3. Often
   4. DON'T KNOW
   5. REFUSED
33. Do you feel that recreational activities such as movies, musical events or sporting events cost too much?

1  Yes
2  No
3  DON'T KNOW
4  REFUSED

34. Do you feel there are enough entertainment and recreation centers available to you?

1  Yes
2  No
3  DON'T KNOW
4  REFUSED

Now we are interested in what you think about problems sometimes experienced by youth. I will read you some problems and ask if you see them as being too serious of a problem, a somewhat serious problem, or a very serious problem for youth?

36. Finding a job, is this...

1  Not too serious
2  A somewhat serious
3  Or a very serious problem for youth
4  DON'T KNOW
5  REFUSED

37. Finding out what jobs are available, is this...

1  Not too serious
2  A somewhat serious
3  Or a very serious problem for youth?
4  DON'T KNOW
5  REFUSED

38. Kids being “benched,” not being allowed to play during the game, is this...

1  Not too serious
2  A somewhat serious
3  Or a very serious problem for youth?
4  DON'T KNOW
5  REFUSED
39. Boy/girl discrimination or favoritism in sports, is this...

1 Not too serious
2 A somewhat serious
3 Or a very serious problem for youth?
4 DON'T KNOW
5 REFUSED

40. Boy/girl discrimination or favoritism in school, is this...

1 Not too serious
2 A somewhat serious
3 Or a very serious problem for youth?
4 DON'T KNOW
5 REFUSED

41. Kids experiencing too much competition in the teams they play on, is this...

1 Not too serious
2 A somewhat serious
3 Or a very serious problem for youth?
4 DON'T KNOW
5 REFUSED

42. Kids experiencing too much competition and pressure in school, is this...

1 Not too serious
2 A somewhat serious
3 Or a very serious problem for youth?
4 DON'T KNOW
5 REFUSED

43. Coaches physically hurting their players, is this...

1 Not too serious
2 A somewhat serious
3 Or a very serious problem for youth?
4 DON'T KNOW
5 REFUSED
44. Kids being expelled or suspended from school, is this...
   1 Not too serious
   2 A somewhat serious
   3 Or a very serious problem for youth?
   4 DON'T KNOW
   5 REFUSED

45. Teachers physically hurting their students, is this...
   1 Not too serious
   2 A somewhat serious
   3 Or a very serious problem for youth?
   4 DON'T KNOW
   5 REFUSED

46. Kids being physically hurt by other kids, is this...
   1 Not too serious
   2 A somewhat serious
   3 Or a very serious problem for youth?
   4 DON'T KNOW
   5 REFUSED

47. Kids being physically hurt by their parents, is this...
   1 Not too serious
   2 A somewhat serious
   3 Or a very serious problem for youth?
   4 DON'T KNOW
   5 REFUSED

48. The cost of recreational activities such as movies, sporting events, or musical events, is this...
   1 Not too serious
   2 A somewhat serious
   3 Or a very serious problem for youth?
   4 DON'T KNOW
   5 REFUSED
49. The lack of available recreational activities and facilities for kids, is this...

1  Not too serious
2  A somewhat serious
3  Or a very serious problem for youth?
4  DON'T KNOW
5  REFUSED

Next, I would like to ask you a few questions about how much input or say you have on some things.

50. How much say do you have in the scheduling of school classes? Is it...

1  Too little
2  About right
3  Too much
4  DON'T KNOW
5  REFUSED

51. How much input do you have about your class subjects? Is it

1  Too little
2  About right
3  Too much
4  DON'T KNOW
5  REFUSED

52. How much input do you have about what happens on your sports team(s)? Is it...

1  Too little
2  About right
3  Too much
4  DON'T KNOW
5  REFUSED

53. How much input do you have about decisions made by your family? Is it...

1  Too little
2  About right
3  Too much
4  DON'T KNOW
5  REFUSED
54. How much input do you have about decisions made by your local community? Is it...

1  Too little
2  About right
3  Too much
4  DON'T KNOW
5  REFUSED

Next, I have some questions about how you feel about certain situations.

55. Do you feel your coaches understand you, all of the time, most of the time, some of the time, or none of the time?

1  All of the time
2  Most of the time
3  Some of the time
4  None of the time
5  DON'T KNOW
6  REFUSED

56. Do you feel your coaches are interested in you, all of the time, most of the time, some of the time or none of the time?

1  All of the time
2  Most of the time
3  Some of the time
4  None of the time
5  DON'T KNOW
6  REFUSED

57. Do you feel your teachers understand you, all of the time, most of the time, some of the time or none of the time?

1  All of the time
2  Most of the time
3  Some of the time
4  None of the time
5  DON'T KNOW
6  REFUSED
58. Do you feel your teachers are interested in you, all of the time, most of the time, some of the time or none of the time?

1   All of the time  
2   Most of the time  
3   Some of the time  
4   None of the time  
5   DON'T KNOW  
6   REFUSED

59. Do you feel your counselors understand you, all of the time, most of the time, some of the time or none of the time?

1   All of the time  
2   Most of the time  
3   Some of the time  
4   None of the time  
5   DON'T KNOW  
6   REFUSED

60. Do you feel your principal understands you, all of the time, most of the time, some of the time or none of the time?

1   All of the time  
2   Most of the time  
3   Some of the time  
4   None of the time  
5   DON'T KNOW  
6   REFUSED

61. Do you feel your parents understand your problems, all of the time, most of the time, some of the time or none of the time?

1   All of the time  
2   Most of the time  
3   Some of the time  
4   None of the time  
5   DON'T KNOW  
6   REFUSED
62. Do you feel your parents are interested in you, all of the time, most of the time, some of the time or none of the time?

1 All of the time  
2 Most of the time  
3 Some of the time  
4 None of the time  
5 DON'T KNOW  
6 REFUSED

63. How often do you feel there are times when you don't have enough things to do, all of the time, most of the time, some of the time or none of the time?

1 All of the time  
2 Most of the time  
3 Some of the time  
4 None of the time  
5 DON'T KNOW  
6 REFUSED

64. Do you have enough time to do what you want to do?

1 Yes  
2 No  
3 DON'T KNOW  
4 REFUSED

65. Do you have enough time to do what is expected of you?

1 Yes  
2 No  
3 DON'T KNOW  
4 REFUSED
66. What is the highest level of education you plan to complete?

SUCH AS HIGH SCHOOL DIPLOMA, VOCATIONAL SCHOOL, BEAUTY SCHOOL, AREA COLLEGE, B.S., M.A., PhD., LAW SCHOOL, MEDICAL SCHOOL, NURSING SCHOOL (2 OR 3 YEAR)

67. What do you think your chances are of reaching that level of education? Are they good, fair or poor?

1. Good
2. Fair
3. Poor
4. DON'T KNOW
5. REFUSED

68. What are the chances of you dropping out before completing high school? Are they good, fair or poor?

1. Good
2. Fair
3. Poor
4. DON'T KNOW
5. REFUSED

69. How many of your friends do you think will go on to college? Would you say all, most, some or none of your friends will go on to college?

1. All
2. Most
3. Some
4. None
5. DON'T KNOW
6. REFUSED

70. What job do you want to have as an adult?

PROMPT: WHAT KIND OF JOB SOUNDS GOOD TO YOU
71. What do you think your chances are of getting the job you want? Are they good, fair, or poor?

1  Good
2  Fair
3  Poor
4  DON'T KNOW
5  REFUSED

72. What do you think the chances are of a young person getting this kind of job in your community?

1  Good
2  Fair
3  Poor
4  DON'T KNOW
5  REFUSED

73. How good do you think your chances are of being successful at this kind of job? Are they good, fair or poor?

1  Good
2  Fair
3  Poor
4  DON'T KNOW
5  REFUSED

74. What person influenced you the most in selecting your future job choice? Possible examples being mother, father, teacher, counselor, coach, grandparent, aunt, uncle, brother, sister, etc.

75. Have you ever used cigarettes, cigars or a pipe?

1  Yes
2  No  SKIP TO QUESTION 78
3  DON'T KNOW  SKIP TO QUESTION 78
4  REFUSED
76. How often have you used it, once or twice, 1-3 times a month, 1-3 times a week, or more than 3 times a week?

1. Once or twice
2. 1-3 times a month
3. 1-3 times a week
4. More than 3 times a week
5. DON'T KNOW
6. REFUSED

77. Have you ever used smokeless tobacco, snuff, or chewing tobacco?

1. Yes
2. No SKIP TO QUESTION 80
3. DON'T KNOW SKIP TO QUESTION 80
4. REFUSED SKIP TO QUESTION 80

78. How often have you used it, once or twice, 1-3 times a month, 1-3 times a week, or more than 3 times a week?

1. Once or twice
2. 1-3 times a month
3. 1-3 times a week
4. More than 3 times a week
5. DON'T KNOW
6. REFUSED

Next we are interested in knowing about young peoples' use of drugs and alcohol. I will read to you a list of substances and ask you if you have ever used it. If you have, I will ask you how often.

79. Have you ever drank any kind of alcoholic beverage such as beer, whiskey, vodka, gin, or wine? We are not referring to the drinking of wine as part of a religious ceremony such as communion.

1. Yes
2. No SKIP TO QUESTION 81
3. DON'T KNOW SKIP TO QUESTION 81
4. REFUSED SKIP TO QUESTION 81
80. How often have you used it, once or twice, 1-3 times a month, 1-3 times a week, or more than 3 times a week?

1  Once or twice
2  1-3 times a month
3  1-3 times a week
4  More than 3 times a week
5  DON'T KNOW
6  REFUSED

81. Have you ever used drugs such as pot, marijuana, cocaine, or amphetamines?

1  Yes
2  No  SKIP TO QUESTION 83
3  DON'T KNOW  SKIP TO QUESTION 83
4  REFUSED  SKIP TO QUESTION 83

82. How often have you used it, once or twice, 1-3 times a month, 1-3 times a week, or more than 3 times a week?

1  Once or twice
2  1-3 times a month
3  1-3 times a week
4  More than 3 times a week
5  DON'T KNOW
6  REFUSED

83. Have you ever used steroids?

1  Yes
2  No
3  DON'T KNOW
4  REFUSED

84. Do you feel that drinking is a problem for kids in your community?

1  Yes
2  No
3  DON'T KNOW
4  REFUSED
85. Are you involved in planning programs against drinking?
   1  Yes
   2  No
   3  DON'T KNOW
   4  REFUSED

86. Do you want to be involved in planning programs against drinking?
   1  Yes
   2  No
   3  DON'T KNOW
   4  REFUSED

87. Is there any opportunity for you to be involved in planning programs against drinking?
   1  Yes
   2  No
   3  DON'T KNOW
   4  REFUSED

88. Do you feel that the use of drugs by kids is a problem in your community?
   1  Yes
   2  No
   3  DON'T KNOW
   4  REFUSED

89. Are you involved in planning programs against drug use?
   1  Yes
   2  No
   3  DON'T KNOW
   4  REFUSED

90. Do you want to be involved in planning programs against drug use?
   1  Yes
   2  No
   3  DON'T KNOW
   4  REFUSED
91. Is there any opportunity for you to be involved in planning programs against drug use?

1 Yes
2 No
3 DON'T KNOW
4 REFUSED

92. How satisfied are you with the amount of time you have for yourself? Would you say you are very satisfied, satisfied, dissatisfied, very dissatisfied, or neither satisfied nor dissatisfied?

1 Very satisfied
2 Satisfied
3 Dissatisfied
4 Very dissatisfied
5 Neither satisfied nor dissatisfied
6 DON'T KNOW
7 REFUSED

93. How satisfied are you with the choices you have regarding the activities you are in? Would you say you are very satisfied, satisfied, dissatisfied, very dissatisfied, or neither satisfied nor dissatisfied?

1 Very satisfied
2 Satisfied
3 Dissatisfied
4 Very dissatisfied
5 Neither satisfied nor dissatisfied
6 DON'T KNOW
7 REFUSED

94. Do you feel you are in...?

1 Too many activities
2 Too few activities
3 Or in the activities you want to be
4 DON'T KNOW
5 REFUSED

95. If you had a choice, which activities would you stop participating in?
96. If you had a choice, which activities would you start participating in?

---

Now I am going to read you a list of problems and complaints that some kids may have. For each one, I would like you to tell me how many days in the past week you had this feeling.

97. In the past week, how many days have you felt depressed?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

98. In the past week, how many days have you been bothered by things that do not usually bother you?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

99. In the past week, how many days have you felt lonely?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

100. In the past week, how many days have you felt fearful?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

101. In the past week, how many days have you felt sad?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

102. In the past week, how many days have you felt like you can't shake off the blues?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED
103. In the past week, how many days have you felt like not eating?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

104. In the past week, how many days have you had trouble concentrating?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

105. In the past week, how many days have you felt like everything is an effort?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

106. In the past week, how many days have you had trouble sleeping?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

107. In the past week, how many days have you talked less than usual?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED

108. In the past week, how many days have you felt that you could not get going?

NUMBER (0-7) ___
8 DON'T KNOW
9 REFUSED
109. Taking all things together, how would you say you are feeling these days? Would you say you are very happy, pretty happy, or not too happy?

1 Very happy
2 Pretty happy
3 Not too happy
4 DON'T KNOW
5 REFUSED

110. I have someone I can really talk to. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

111. I have someone I can turn to for support and understanding when things get rough. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

112. I am responsible for my own successes. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED
113. I can do just about anything that I really set my mind to. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

114. The really good things that happen to me are mostly luck. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

115. Most of my problems are due to bad breaks. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

116. I have little control over the bad things that happen to me. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED
117. I am responsible for my failures. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

118. My bad luck is the result of mistakes that I have made. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

119. There's no sense planning a lot, if something good is going to happen, it will. Do you...

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree
5 Neither agree nor disagree
6 DON'T KNOW
7 REFUSED

Now I'm going to read you some statements. For each one I would like you to tell me how often it is true for you. Is it true all of the time, some of the time, or none of the time.

120. I have thought of harming myself. I feel this way...

1 All of the time
2 Some of the time
3 Or none of the time
4 DON'T KNOW
5 REFUSED
121. I feel I would be better off if I were dead. I feel this way...?

1  All of the time
2  Some of the time
3  Or none of the time
4  DON'T KNOW
5  REFUSED

122. I have had definite plans about committing suicide. I feel this way...?

1  All of the time
2  Some of the time
3  Or none of the time
4  DON'T KNOW
5  REFUSED

123. I have thought I would like to kill myself. I feel this way...?

1  All of the time
2  Some of the time
3  Or none of the time
4  DON'T KNOW
5  REFUSED

Now I have some questions regarding dating. Dating habits vary among kids, some kids data and some kids don't.

124. Do you date?

1  Yes
2  No  SKIP QUESTIONS 125 126 129 130 131 132 133 134
3  DON'T KNOW
4  REFUSED
125. How often do you date? Do you date less than once a month, once a month, 2 or 3 times a month, once a week, twice a week, or more than twice a week?

1. More than twice a week
2. Twice a week
3. Once a week
4. 2 or 3 times a month
5. Once a month
6. Or less than once a month
7. DON'T KNOW
8. REFUSED

126. Do you have a steady boyfriend or girlfriend?

1. Yes
2. No
3. DON'T KNOW
4. REFUSED

127. How many of your close friends date? Would you say all, most, some or none of your close friends date?

1. All
2. Most
3. Some
4. None
5. DON'T KNOW
6. REFUSED

128. Have you ever known anyone who was involved in a dating relationship in which they were physically hurt or beat up?

1. Yes
2. No
3. DON'T KNOW
4. REFUSED

129. In dating relationships, has your partner ever been physically violent toward you?

1. Yes
2. No
3. DON'T KNOW
4. REFUSED
130. In your dating relationships have you ever been physically violent toward your partner

1 Yes
2 No
3 DON'T KNOW
4 REFUSED

131. Have you ever had sexual intercourse?

1 Yes
2 No  SKIP TO QUESTION 134
3 DON'T KNOW  SKIP TO QUESTION 134
4 REFUSED  SKIP TO QUESTION 134

132. How many times have you had sexual intercourse since the beginning of last summer? Has it been...

1 Once
2 2 or 3 times
3 More than 4 times
4 Or never
5 DON'T KNOW
6 REFUSED

133. When you last had sexual intercourse did you use any kind of birth control?

1 Yes
2 No
3 DON'T KNOW
4 REFUSED

134. Have any of your close friends ever been pregnant?

1 Yes
2 No
3 DON'T KNOW
4 REFUSED

135. Have you ever been pregnant (Female respondents)

1 Yes
2 No
3 DON'T KNOW
4 REFUSED
136. Do you feel people your age need information about methods of birth control?

1 Yes  
2 No  
3 DON'T KNOW  
4 REFUSED

137. Do you feel people your age need counseling regarding sexual activity?

1 Yes  
2 No  
3 DON'T KNOW  
4 REFUSED

138. Do you feel people your age need pregnancy counseling?

1 Yes  
2 No  
3 DON'T KNOW  
4 REFUSED

139. Do you feel people your age need abortion counseling?

1 Yes  
2 No  
3 DON'T KNOW  
4 REFUSED

Now I have a few more background questions before we are finished.

140. Are you living with both of your parents?

1 Yes  SKIP QUESTIONS 141, 148-153  
2 No  
3 REFUSED

141. Are you living with your mother or your father?

1 Mother  
2 Father  
3 Both
142. Which do you spend most of your time with?

1 Mother
2 Father
3 Equal amount of time with both

143. Who are you living with now?

1 Mother
2 Father
3 Equal amount of time with both

144. Is your father currently working full-time, part-time, going to school, or doing something else?

1 Working full time (35 hours or more)
2 Working part time
3 Unemployed, laid off, looking for work
4 Retired
5 In school
6 Keeping house
7 Other
8 DON'T KNOW
9 REFUSED

145. What does your father do at work?

146. Is your mother currently working full-time, part-time, going to school, or doing something else?

1 Working full time (35 hours or more)
2 Working part time
3 Unemployed, laid off, looking for work
4 Retired
5 In school
6 Keeping house
7 Other
8 DON’T KNOW
9 REFUSED

147. What does your mother do at work?
148. Has your mother remarried?

   1. Yes
   2. No  SKIP QUESTIONS 149-153
   3. DON'T KNOW
   4. REFUSED

149. Is your stepfather currently working full-time, part-time, going to school, or doing something else?

   1. Working full time (35 hours or more)
   2. Working part time
   3. Unemployed, laid off, looking for work
   4. Retired
   5. In school
   6. Keeping house
   7. Other
   8. DON'T KNOW
   9. REFUSED

150. What does your stepfather do at work?

151. Has your father remarried?

   1. Yes
   2. No  SKIP QUESTIONS 152-153
   3. DON'T KNOW
   4. REFUSED

152. Is your stepmother currently working full-time, part-time, going to school, or doing something else?

   1. Working full time (35 hours or more)
   2. Working part time
   3. Unemployed, laid off, looking for work
   4. Retired
   5. In school
   6. Keeping house
   7. Other
   8. DON'T KNOW
   9. REFUSED

153. What does your stepmother do at work?
154. What country do you live in?

155. Do you live on a farm, outside of town but not on a farm, town or city?

1 Farm SKIP QUESTION 156
2 Outside of town but not on a farm SKIP QUESTION 156
3 Town or city SKIP TO QUESTION 156
4 DON'T KNOW
5 REFUSED

156. What is the name of the town or city you live in?

157. What town or city do you live closest to?

158. How satisfied are you with your community's interest in youth?

Would you say you are very satisfied, satisfied, dissatisfied, very dissatisfied, or neither satisfied nor dissatisfied?

1 Very satisfied
2 Satisfied
3 Dissatisfied
4 Very dissatisfied
5 Neither satisfied nor dissatisfied
6 DON'T KNOW
7 REFUSED

In what ways would you suggest the community could make improvements for youth?
160. What race do you consider yourself?

1 White/Caucasian
2 Black
3 Hispanic/Chicano
4 Native American
5 Asian
6 Other
7 DON'T KNOW
8 REFUSED

161. How many sisters do you have? _____

162. How many brothers do you have? _____

163. That completes the survey. I do have one more question to ask you. We are interested in calling some people again next year for more information. Would you be willing to talk to us again?

1 YES
2 NO
Street ________________________________
City ________________________________
Zip Code ____________________________