FAMILY ENVIRONMENT, LIFESTYLE, AND CONTROL FACTORS
OF DEPRESSED ADOLESCENTS AND
THEIR PARENTS

DISSERTATION

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By

Jayne Warlick, B.A., M.Ed.
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The problem of this study was to identify variables in the family environment that may describe depressed adolescents' families. This study was based on Adlerian theory. The Family Environment Scale (FES) was used to measure the family atmosphere. The Lifestyle Scale (LS) was used to examine the adolescent's unique system of beliefs, values, and attitudes. The Internal-External Locus of Control Scale (IE) was used to measure the extent of external control exhibited by the adolescents and their parents.

The subjects of this study were 31 depressed adolescents from 2 suburban psychiatric hospitals and one of each of the adolescent's parents. The subjects were from a homogeneous socioeconomic population showing no significant variation in the demographic categories of sex, race, chronological birth order, or marital status of the parents.

Scores were compared with normative data. Product moment correlations were calculated between the results of the subscales on the 3 instruments. A principal components factor analysis was performed to determine if any patterns existed.
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CHAPTER I

INTRODUCTION

The incidence of adolescent depression is rapidly increasing (National Institute of Mental Health, 1985), and one of the more serious symptoms of depression in adolescents may be expressed in the form of suicide. More than 500,000 American young people between the ages of 15 and 24 attempt to kill themselves each year. The increasing incidence of teen depression has gained national attention recently as the adolescent suicide rate has risen nearly 33% higher than that of the overall population's rate and is the second leading cause of adolescent death (National Institute of Mental Health, 1985).

Depression in adolescents is considered to be the major descriptor in suicide and suicide attempts (Greuling & DeBlassie, 1980; Landau-Stanton & Stanton, 1985; Ray & Johnson, 1983; Rosenkrantz, 1978; Rosenstock & Vincent, 1979). Recent research (Chabrol & Moron, 1988) reported that 91 of 100 adolescents hospitalized in an adolescent psychiatric ward after attempting suicide met Diagnostic and Statistical Manual of Mental Disorders (DSM-III) criteria for depressive disorders. Chabrol and Moron (1988) supported findings that there was a strong relationship
between depression and adolescent suicide attempts (1988). Shafii (1986) reported that 95% of adolescent suicide victims studied had associated psychiatric depressive disorders by DSM-III criteria.

Adolescents are particularly vulnerable to depression due to the many physical and emotional changes that are taking place in their lives. During adolescence, the rate of physical growth is second only to that of infancy, and this rapid development carries with it changing expectations of others and of one's self. Rapid environmental and social changes that accompany contemporary life serve to further confuse and isolate the newly emerging young adult. All of these changes may foster a sense of loss of control and depression for adolescents (Choron, 1972; Hals, 1985; Landau-Stanton & Stanton, 1985).

Depressed adolescents often keep their depression concealed and the depressed condition may be misjudged as a normal developmental stage by the adolescent's family (Landau-Stanton & Stanton, 1985). Adolescence is a tumultuous stage in the life cycle of the family in which the tasks of adolescence challenge the stability of the family by posing new expectations and demands. Family patterns experience abrupt changes as the adolescent rejects values and defies rules while attempting to become independent. Yet the need to be protected and nurtured is
as authentic as the need to be independent. It is this constant struggle between dependence and independence that confuses and challenges adolescents and their families.

Mental health workers long have recognized the importance of the family members in the development of depression in adolescents (Landau-Stanton & Stanton, 1985). Many families work very diligently to meet their adolescents' emotional needs. Unfortunately, the increasing number of depressed adolescents indicates that families are not always successful in their attempts to ameliorate depression in their teenagers. As a result, one of the most pervasive and destructive problems confronting families today is adolescent depression (Blumenthal & Kupfer, 1987; Pouschine, 1985).

To assist families in their quest for help for this pervasive problem of adolescent depression, the families of depressed adolescents need guidelines with which to approach the problem. The basic concepts of Individual Psychology, as developed by Alfred Adler (1929a; 1929b; 1931), provide a framework for examining the depressed adolescent's family environment. Alfred Adler explained that depression develops "in individuals whose method of living, from early childhood on, has been dependent upon the achievements and the support of others" (Ansbacher & Ansbacher, 1956, p. 319). Adolescents often learn to believe their very worth is dependent upon meeting some achievement standard in the
family or upon the approval of parents, peers, or others. When they fail to meet these objectives, adolescents may become depressed. The link between dependency and depression has been verified in studies which have shown that depressed adolescents are different from the general population because they are very dependent upon others, particularly parents, and most often upon their mothers (Kanoy & Miller, 1980; McDonald, 1980). Adlerians believe that dependency can be created by parenting styles that deprive children of their sense of self-reliance that can be developed when children have the opportunity to make decisions and experience the consequences of those decisions (Croake, 1982; Walton, 1980).

A. Adler has stated that all mental health problems including depression result from a deficiency in social interest. According to A. Adler (1929c) and others, social interest is defined as the willingness to cooperate with others for the common good and the awareness of the universal interrelatedness of all human beings (Dinkmeyer, Dinkmeyer, Jr., & Sperry, 1987).

Faulty parenting can contribute to lack of social interest on the part of the adolescent. In Adlerian theory, a pampered child is defined as one who leans on others for success thus making social interest less likely to develop (Ansbacher & Ansbacher, 1956). As the pampered child moves into adolescence, gaining independence from parents becomes
a challenge. Pampered children have been protected from experiencing life's hardships by their overprotective parents and may not have developed the necessary skills to approach life tasks. The pampered child can thus become the depressed adolescent as a result of the development of self-defeating behaviors (Ansbacher & Ansbacher, 1956).

Investigations by child suicidologist Mary Giffen (1983) could be compared to A. Adler's concept of the depressed adolescent as a pampered child. Her findings showed that a likely candidate for depression could be a young person from the middle- or upper middle-socioeconomic class. Giffen contended that many middle to upper middle-class parents provide their children with a life where few difficulties are faced and, when children are excluded from reasonable opportunities to solve the problems that life presents them, their sense of worth and confidence is weakened.

Dependency and discouragement can be seen clearly and consistently in the pampered teenager according to Adlerians F. X. Walton (1988) and J. W. Croake (1982). Walton suggested that it is not the desire for high achievement that is troublesome to discouraged teens, but rather the hopelessness that is generated when adolescents are dependent on their parents (Walton, 1980; 1988). Croake (1982) contended that depressed adolescents are different from the general population in that they are still very
dependent on their parents' achievements rather than on their own. No research has been reported to substantiate this concept of dependency of the pampered child (F. X. Walton, personal communication, July 19, 1988).

Statement of Problem

Although much research exists utilizing Adlerian concepts, few studies have been reported that viewed adolescent depression from an Adlerian viewpoint; therefore, this exploratory study investigated selected variables advocated by Individual Psychology that might contribute to depression in adolescents. The association between the family environment, the resulting lifestyle choices, and the locus of control of the depressed adolescent was explored. The scores of the depressed adolescents in this study also were compared to data from adolescents and families used as population norms on certain of the testing instruments utilized.

Synthesis of Related Literature

There are several views regarding the etiology of depression in adolescence. One view is that depression can be caused by biochemical imbalances in the brain (Hipple & Cimbolic, 1979). Some studies suggest a deficiency in serotonin, a neurotransmitter, in people who commit suicide while other studies have isolated other biological abnormalities associated with suicidal behavior (Department of Health and Human Services, 1984). Amelioration of
symptoms of depression by the use of tricyclic anti-depressants in conjunction with psychotherapy has been indicated (Karasu, 1982; Weissman, 1981).

Another view of depression presented by Rosenblatt (1981), is that genetic factors play a part in adolescent depression. Other researchers, Bertelson, Harvald, and Hauge (1977), however, have presented the view that there is inconclusive evidence of a genetic factor in depression. Clark (1964) has insisted that genetics is not involved, but that depression is the result of identifying with family members who are depressed.

Although biochemical or genetic factors are acknowledged as possible etiologies of depression, this research investigated only possible environmental influences on depression. An environmental approach to adolescent depression has been taken by investigators such as K. Adler (1983), Pancner (1985), Klerman and Weissman (1981), and Miller (1975).

This review of the literature focuses on three important components of an adolescent's environment explored in this study: the family environment, the adolescent's choice of lifestyle, and the degree of control adolescents perceive that they have in their environment.

Family Environment

'According to A. Adler (1931), the family is the first social reality, a reality from which individuals interpret,
perceive, conclude, and generalize to the rest of the world.

In fact, both A. Adler (1931) and Sweeney (1981) assert that the most influential and contiguous part of the adolescent's environment is the family. The family atmosphere reflects mutual family values and is determined by parenting types such as pampering, rejective, authoritarian, inconsistent, or overprotective (Dinkmeyer, Pew, & Dinkmeyer, 1979; Nikelly, 1971).

As a result of a recent research study of how the atmosphere of families influences the child's development, clinicians at the Houston Child Guidance Center implemented a different type of treatment that utilized extended family members (Gutstein & Rudd, 1988). The study involved 47 adolescents hospitalized because of suicidal ideation or depression. Pre-testing involved 3 parent ratings and 2 measures of patient behavior in the family. Problem episodes were monitored using an extensive 46-item problem checklist. This checklist included depressive episodes, severe anxiety, psychotic behavior, conduct violations, violent actions, substance abuse, running away, and sexual promiscuity. The treatment model involved mobilizing extended family members to become involved and restructuring the kin system relationship to provide successful long-term solutions to the current crisis. Only 12% of patients and parents indicated that the problem remained severe more than 12 months after treatment. The repeated measures design
demonstrated that the program yielded stable change over 3, 6, and 12 months.

Simons and Murphy (1985) studied social, environmental, and psychological factors in an attempt to explain adolescent depression. A sample of 407 high school students who had indicated suicidal ideation were administered a self-report questionnaire of 200 closed-ended items pertaining to youth attitudes, feelings, and behaviors. The only psychological-behavioral factor that showed direct effect upon suicidal ideation was emotional problems, and the effect was for males only.

Stivers (1988) investigated the communication level between selected adolescents and their parents. The Parent-Adolescent Communication Inventory (PACI) was used to measure communication, and the Suicide-Depression Inventory (SDI) was utilized to measure depression and suicide proneness in 53 adolescents and their parents. The sample ranged in age from 12 to 18 years. The research sought to find to what extent the parents' PACI scores predicted an adolescents' depression. Simple correlation coefficients showed significant relationships between the mothers' and adolescents' scores but not between the fathers' and adolescents' scores. However, when controlling for other independent variables such as the ages of father, mother, and adolescent, and socioeconomic status, neither parents'
scores were significantly related to the adolescents' SDI scores.

Burbach and Borduin (1986) critiqued earlier investigations of the potential role of parent-child relations in depression. Their extensive review examined the parent-child relations of depressed adults only, and the studies varied with respect to control groups, sample characteristics, depression measures, and parent-child relations measures. Five authors cited in the review believed an etiological link existed between parent-child relations and childhood depressive disorders. Four studies conducted by Parker (1979a, 1979b, 1981, 1982) and cited in the review supported a link between low maternal care and high maternal, but not paternal overprotection and depression in adults. In the same review article, Burbach and Borduin noted that few attempts had been made to investigate the parent-child relations in depressed children. Only six published studies with children as the subjects met the criteria established for inclusion in the review. In contrast to the results of studies of adult depression, these authors reported that there was a scarcity of paternal overprotection in the families of depressed children.

In a study by Kaslow and Rohm (1985), the parent-child relations of 23 depressed and 85 nondepressed children were examined. The sample contained first, fourth, and eighth-
grade students ages 6 to 14. The instrument used to assess depression was the Children's Depression Inventory and the family relations measure used was the Family Questionnaire. The authors found that depressed children perceived their family relations as significantly more dysfunctional than nondepressed children.

Poznamski and Zrull (1970) studied 14 psychiatric outpatients aged 3 through 12 years. No control group was used and the information was obtained in parental interview form. The researchers found that parents of depressed children were often detached, angry, punitive, and belittling in their relations with their children. In contrast with the studies of adult depression, these authors discovered there was a scarcity of parental overprotection in the families of depressed children. A follow-up study of 6 of the 14 children from their original sample revealed that 5 of the children were still depressed and that problems with the parent-child relations continued (Poznamski & Zrull, 1970).

Loss of the intact family, whether from death of a parent or parents, divorce, separation, or the family's changing status, has been identified as an important variable in the family environment of adolescents who are depressed. Hendin (1975) found that a significantly high proportion of seriously depressed and suicidal students had lost a parent. Many researchers have stated that such a
loss plays a major role in suicide (Greer, 1964; Hendin, 1975; Moss & Hamilton, 1956). In a study of suicidal behavior in 84 adolescents admitted to Kings County Hospital in Brooklyn, researchers found the biological father had usually lost contact with the family, and although the biological mother remained, her attitude was one of distance or neglect (Schneer, Kay, & Brozovsky, 1961). Moss and Hamilton (1956) in a study of 50 depressed adolescent patients found that in 95% of the cases the adolescents had experienced the death or loss of a parent. In these cases, adolescents often experienced hostility, turning their hostility at the parent who died or left inward on themselves.

Friedrich, Reams, and Jacobs (1982) investigated the extent to which depression in young adolescents could be predicted by a variety of demographic and personality measures. A sample of 132 adolescents enrolled in junior high school completed a biographical data sheet, short forms of the Beck Depression Inventory (BDI), the Family Environment Scale (FES), and a life stress inventory. The nondepressed group differed from the depressed group on a variety of variables, and a stepwise multiple regression suggested a significant positive relationship between depression and life stress and an inverse relationship between depression and family cohesion. Increasing severity of suicidal ideation was related to family social climate
variables, namely, less cohesion, independence, and organization, and a greater achievement orientation.

Ollendick, La Berteaux, and Horne (1978) used the Family Environment Scale with 25 mothers of nursery school children to determine the family atmosphere. Other instruments measuring general attitude, child-rearing attitude, and a behavior-rating were also used. The intercorrelational results between the Family Environment Scale and the parental attitude scale yielded significant findings. Democratic-egalitarian child-rearing attitudes were negatively correlated with the amount of conflict expressed in the family. The mothers' perceived attitudes of their family environments were significantly correlated to their behavioral ratings of their children. Mothers' perceptions of the importance of moral-religious issues were negatively and significantly correlated to the behavioral adjustment sub-scores. Mothers with democratic, egalitarian child-rearing attitudes reported more recreational orientation and cohesion and less family conflict and control, whereas mothers with hostile, rejecting, and authoritarian attitudes reported less emphasis on expressiveness and more on achievement.

**Lifestyle**

The term lifestyle, in Adlerian psychology, refers to an individual's basic orientation toward life. A. Adler (1929a) proposed that an individual's perception of the
family environment or atmosphere influences his or her choice of lifestyle. Through the individual's experiences in the family, the individual's unique system of beliefs, values, and attitudes regarding self, others, and their relationships is developed. That system of beliefs is called an individual's lifestyle (Ansbacher & Ansbacher, 1956).

The idiosyncratic nature of lifestyles and the lack of instruments to measure the Adlerian lifestyles have contributed to the sparsity of research in this area. Magner-Harris, Riordan, Kern, and Curlette (1982) assessed the reliability of the interpretations of three trained Adlerian judges of subject lifestyles based on information contained in the Lifestyle Questionnaire Inventory (LSQI) (Kern, 1986). The inter-judge reliability of the written LSQI was .59 (moderately high), supporting the Adlerian contention that certain traits tend to cohere because of the basic unity and self-consistency of personality. Data from the LSQI identified patterns of behavior associated with particular lifestyles.

Chandler and Willingham (1986) attempted to determine the relationship between perceptions of early childhood family influence and the established lifestyle. In a study of 681 subjects enrolled in undergraduate psychology and speech communication classes, subjects with perceptions of more positive early childhood family influence showed a
tendency to follow a conforming lifestyle. Subjects with perceptions of less positive early childhood family influence showed a tendency toward aggressive-domineering and defensive-withdrawal behaviors. Subjects with more positive early childhood family influence showed a higher degree of social interest than did those adolescents who perceived a more negative early childhood influence.

Highlander (1984) provided additional information on the Wheeler-Kern-Curlette Life Style Personality Inventory by researching validity issues related to social interest, depression, and the five lifestyle factors. The sample consisted of 150 parents from 3 suburban churches who had never been in special treatment for severe emotional or psychological problems. Participation was voluntary. The subjects completed the Life Style Personality Inventory, Crandall's Social Interest Scale, and Lubin's Depression Adjective Checklist. Statistically significant results showed no positive correlation between social interest and the other factors as measured by Crandall's Social Interest Scale; however, a negative correlation was found between depression and social interest. A negative correlation was shown between social interest and the themes "controlling active" and "exploiting active." A direct relationship was evidenced for depression and the lifestyle themes of "conforming active" and "exploiting passive."
No research was found that investigated whether depressed adolescents or their parents could be grouped into a specific topology. However, research in lifestyle has been linked to some psychopathologies such as the battered woman syndrome. Hader (1983) studied lifestyle topologies of 30 battered women and 30 women who had never been battered. The women were between the ages of 19 and 56 years. Using Kern's Lifestyle Scale, Hader found that women who scored high in the category of "need to please" were most often involved in battering situations. Women who scored high in the category of "controller" were not as likely to be victims of abuse.

Newlon and Mansager (1984) investigated whether particular Adlerian lifestyles were more prevalent among Catholic priests. Participants were chosen from the Diocese of Tucson which includes eight counties of southern Arizona. The Lifestyle Questionnaire Inventory was mailed to 47 priests. A panel of three judges concurred on the priests' dominant lifestyles with 66% of the priests categorized as exhibiting a lifestyle of "control." The authors concluded that future studies might determine some generalizations about the personality of particular groups.

Barrett (1984) investigated whether anorexic patients had a lifestyle characterized by use of external control by their parents. Brief case histories using early recollections of three patients were presented to show that
autonomy-deprived young adolescent girls may act out their lifestyle through anorexia using food and weight to regain this lost control. No lifestyle questionnaire was used, and therefore no particular lifestyle was found, but a tendency toward overt pleasing behaviors was noted. Investigation of the parents' lifestyles was suggested as important for further research.

O'Connell (1980) attempted to determine variables that influenced the choice of lifestyle for 87 women aged 30 to 58 years. The women were college graduates and leading traditional, neotraditional, and nontraditional lifestyles. The variables of personality, role concepts, attitudes, choices of college majors and occupations, motivation, quality of employment experiences, parents' lifestyles, male/female roles, education, and family size were investigated. The California Psychological Inventory, the Inventory of Women's Lifestyles, and the Inventory of Women's Role Concept and Attitude were used to collect data on the subjects. The single most potent variable, influence of parents' lifestyle, contributed 64% of the variance in the daughters' choice of lifestyle. Personal and professional variables that remained significant when the influence of parents' lifestyle was controlled were attitude towards college training, educational level, and choice of occupation.
Locus of Control

The adolescent's struggle for autonomy and personal independence from parents is another important variable believed to be linked to depression. A. Adler (1931) stated that many of the expressions and struggles of adolescence are the outcome of the desire to show independence and equality with adults. According to A. Adler (1931) the assumption is that adolescence is a social invention and hence a learned process, wherein a generation of adults seeks to manage the lives of a younger generation of adults. This social invention in society today has placed the adolescent at risk because the adolescent is required to stay in a prolonged dependency role. If children grow up in a family environment where control exists solely with the parents, the adolescent may feel dependent and discouraged at facing impending separation from parents.

Just as A. Adler postulated that depression involved dependency, many other authorities in the area of depression have postulated that dependency issues are involved. Dependency and an external locus of control are equated by Rotter (1966) and A. Adler (1929b). A person who scores high on external locus of control will rely on external sources for definition of attitudes, judgment, and views of self. Meyers (1980) concluded that rebellious youths as well as depressed adolescents may be emotionally dependent
on parents. Giffen (1983) also emphasized the same dependency descriptor in her book on adolescent suicide.

One way researchers have attempted to determine whether control exists within individuals is to measure a personality construct called locus of control. The locus of control construct has been established as a solid predictor of mental health. Individuals who accept responsibility for most events in their lives are more likely to be healthy and productive than individuals who believe that external factors control those events (Corsini & Marsella, 1983; Lefcourt, Martin, Fick, & Saleh, 1985).

Locus of control is a personality construct developed from the research of Julian B. Rotter (1954) with strong influence from the theory of A. Adler. A. Adler believed that if children were overindulged or pampered, they were equally likely to develop misguided fictions about life and that these fictions were frequently in the form of exaggerated feelings of inferiority and helplessness. Pampered children were said to be thwarted in their development in that they were deprived of the opportunity to learn how to act so as to cause the occurrence of desired outcomes. Pampered children may fail to explore and discover the relationship between acts and outcomes from which beliefs in the order of causal sequences develop. These beliefs may result in feelings of helplessness, or an extreme external locus of control. This perceived locus of
causality was the basis for Rotter's locus of control concept.

Within the context of his social learning theory, Rotter (1966) defined locus of control as "the degree to which the individual perceives that a reward follows from or is contingent upon his attributes or behavior versus the degree to which the individual feels the reward is controlled by forces outside of himself" (p. 1). Rotter distinguished between two different locus of control orientations. Internally-oriented individuals believe events in their lives are determined by their own behavior and effort. Externally-oriented individuals believe events in their lives are determined by fate, chance, or other forces over which they have no control. Both of these orientations refer to an individual's perceived locus of causality.

Rotter has been instrumental in the development of tests to measure the locus of control construct. The Rotter Internal-External Locus of Control is the most frequently used scale. Research has been prolific in the area of locus of control since the concept was first advanced in the late 1950s. Studies measuring locus of control have been conducted in relation to academic development (Long, Williams, Gaynor, & Clark, 1988) and to determine areas of personal psychological activity (Witkin, 1950; Witkin, Dyk, Faterson, Goodenough, & Karp, 1962).
Lefcourt (1982) linked depression to an external locus of control. An important, though relatively neglected, aspect of locus of control research involves the delineation of possible antecedents of an external locus of control. Lefcourt presents a theoretical approach describing the kind of parental behavior associated with the development of a particular locus of control orientation. Like Rotter, Lefcourt also referred to the Adlerian construct that both pampered and neglected children will fail to learn the consequences of their behavior. As Lefcourt concluded, internal locus of control develops when the child is protected in his early years but not squelched, and where he is sheltered from the "excessive frustrations that can easily occur when a child is young and relatively helpless which, in turn, can engender a more fearful approach to life's challenges" (Lefcourt, 1976, p. 102). Support for this theoretical position comes from both self-report studies (Chance, 1972; Loeb, 1975; Wichern & Nowicki, 1976) and observational studies of the antecedents and correlates of locus of control orientation (Katkovsky, Crandall, & Good, 1967). Wichern and Nowicki (1976) suggested that parental behavior and attitudes characterized by warmth, protectiveness, consistency in the use of discipline, lack of overt control, and encouragement of autonomy are positively associated with an internal locus of control orientation.
Gordon, Nowicki, and Wichern (1981) provided more recent research data supporting Lefcourt's thesis. They studied 30 male and 30 female second-grade children and their mothers who attended 2 suburban elementary schools in Atlanta, Georgia. To assess locus of control orientation, the children completed the Pre-School and Primary Locus of Control Scale (PPNS-IE). To assess the dependent variables, the frequencies and types of maternal and child behaviors were recorded by 2 observers using pre-coded behavior categories such as contacting, cooperation, interactive play, performing tasks, criticism, teaching, directing, suggesting, and warmth. The mother and her child were put in an observation room and the child was given a difficult puzzle to complete. It was expected and found that mothers of internal children provided more warmth, nurturing, and supportive behavior than did mothers of external children. It was concluded that if a child's performance of certain behaviors was rewarded by the parents, the child expected reinforcement for these behaviors. This study supports the importance of contingency learning experiences within an overall atmosphere of positive parental interaction for development of an internal orientation.

Other researchers also have linked depression to external locus of control (Abramowitz, 1969; Williams & Nickels, 1969). Miller and Seligman (1973) presented a theory of learned helplessness and argued that depression
results from learning that reinforcement is independent of voluntary responses. They hypothesized that a depressive individual would perceive goal attainment as independent of any personal response. Their learned helplessness model of depression predicted a significant relationship between an external locus of control and depression. The Rotter Internal-External Locus of Control Scale and the Beck Depression Inventory were administered to groups of undergraduates. Expectancy changes for success following reinforcement in skill and chance tasks were assessed in 4 groups—depressed high external, depressed low external, nondepressed high external, and nondepressed low external. The nondepressed subjects manifested greater expectancy changes than did depressed subjects in skill tasks, while the changes of depressed and nondepressed subjects were similar in chance situations. The results supported the hypothesis that externally controlled individuals are more susceptible to learned helplessness than are internally controlled individuals.

Brown and Siegel (1988) sought to extend the generality of earlier helplessness research to the study of adolescent populations. The subjects were 364 females in grades 7 through 11 attending a private secondary school in the greater Los Angeles area. The sample was predominantly white and of high socioeconomic standing. The subjects completed a measure of life stress developed by Sarason,
Johnson, and Siegel (1978) which assessed the occurrence of major life events as well as the presence of ongoing sources of strain. Depression was concurrently measured by the Center for Epidemiologic Studies Depression Scale. The findings attributing upsetting life events to a controllable, internal cause were negatively related to elevations in depressed affect.

Burger (1984) suggested that the extent to which the individual desires to control events has an important effect upon depression. Locus of control and desire for control measures were taken for 71 undergraduate students. The students were administered the Beck Depression Inventory (BDI), the Desirability to Control Scale, and the Levenson Locus of Control Scales during the first month of the school year. Six months later, subjects were contacted with a second questionnaire which asked them to report on their experiences with depression during the period. Subjects were asked to answer a modified BDI and to list the number of times they sought professional help for depression, the number of times they sought help from others, and the number of times they had thought about the possibility of committing suicide. The relation between current depression levels and personality scale scores and the relation between those personality scale scores and the subjects' reported experiences over the following six months were examined. The latter examined the stability of the personality-
depression relation. The correlational data indicated that the personality indices were highly related to depression both at the time of original testing and during the six months following the testing. The extent to which subjects perceived their lives as controlled by chance was strongly related to depression levels with high beliefs in chance associated with greater depression. Higher levels of depression also were related to beliefs in powerful others controlling the subjects' lives. Whether or not subjects sought help from non-professionals for their depression was significantly related to the earlier belief that the subjects' lives were controlled by chance.

Dyk and Witkin (1965) also investigated the concept that family experiences were related to the development of differentiation of internal/external control in children. Forty-eight mothers were given overall ratings on mother-child interactions as fostering or interfering with the development of locus of control. The results indicated that mothers who had achieved a sense of self-realization themselves were better able to let their children separate and develop as individuals. The correlation between ratings of interviews with mothers and children was .82 on the Embedded Figures Test.

Seder (1956), in an attempt to find specific family experiences related to development of locus of control, used a detailed questionnaire for mothers of children whose
external locus of control had been assessed with the Group Embedded Figures Test. Seder hypothesized that parents of children with external locus of control would be coercive in parenting, would not permit assertive mastering of the environment, and that the mothers would be anxious and emotional in dealing with their children. Seder's findings showed that boys with external locus of control had mothers who were severe and punitive and were pushed to standards set by parents rather than being allowed to set their own standards. The boys were disciplined in an authoritative manner and protected from attacks by others. Punishment of these children with external locus of control was shown to be at the whim of parents and the mothers tended to be emotional. Results of Seder's study indicated a need for a longitudinal study of children. Dyk and Witkin (1965) followed these recommendations six years later and, in a restudy of 72 of the original subjects, confirmed the earlier findings.

Clapp (1966) investigated the relationship between locus of control and parental variables in a population of 116 four-year-old boys observed for six months. Parents of children who had an external locus of control, when compared to parents of children who had an internal locus of control, treated their sons more as a child and less as an adult. Parents of internally motivated children were judged to be
significantly more permissive, less restrictive, warmer, less hostile, and more independent.

Moore (1965) presented similar data concerning parental contributors to dependency or external locus of control. This sample consisted of 29 boys and 24 girls and their parents. Nursery school teachers rated the children independently on two occasions about four months apart on a 7-point scale in regard to 25 aspects of behavior. The results indicated that the use of physical punishment by mothers was positively correlated with external locus of control in boys but not in girls. External locus of control scores for girls were found to be significantly higher than the scores for boys. The more severe the demands and restrictions placed on girls for mature behavior by their mothers, the more dependent or externally motivated were those girls. Low dependency in children and high maternal permissiveness were jointly predicted to be related to high autonomy. This was confirmed for girls but not for boys. Availability and lack of hostility in fathers plus a low level of demands on children by fathers were found to be related to high autonomy in boys.

Cofer (1972) hypothesized that 48 women who had been previously hospitalized with depressive symptoms would have more dependent attitudes than a control group of women who had never been clinically depressed. A 154-item inventory consisting of statements reflecting the subjects' self-
perceptions and perceptions of paternal and maternal attitudes and feelings was administered to both groups. Independent analysis of each of the 154 items, comparing the depression-prone and the control groups, indicated that 43 items distinguished between the groups at the .05 level. Results indicated that depression-prone women, more than women who had never been clinically depressed, experienced a gamut of negative self-feelings including low self-esteem, sensitive dependency, negative self-evaluation, and a perception of being different from other people. Cofer's results also showed that these depressed women tended to adopt the perceived judgments, awareness, and interpretations of their parents indicating an external orientation. Depression-prone women tended to see their fathers as fostering dependency.

Morin (1983) investigated the influence of sex, birth order, family size, and family level of interaction on locus of control. A cluster sample of 238 students chosen from 6 randomly selected schools responded to a self-report questionnaire measuring locus of control and students' perceptions of their family environment. Analysis of variance indicated no significant difference in locus of control with respect to sex, birth order, family size, and their interactions. The extreme (more unhealthy) families contained more children with an external locus of control. Means and standard deviations indicated that the most
external respondents came from family systems described as rigid and that the most internal come from chaotic and enmeshed family systems.

Ollendick, La Berteaux, and Horne's 1978 study presented intercorrelational results between locus of control and parental attitudes. Internal locus of control mothers reported significantly lower authoritarian-controlling attitudes than external mothers. Maternal internality was related positively to democratic-egalitarian attitudes, although internality was unrelated to hostility-rejection attitudes. Internal locus of control scores for mothers were correlated positively with high family "cohesion" scores.

Harris and Nathan's work (1973) supported the hypothesis that parental attitudes are an extension of parents' locus of control. Their hypothesis was that parents who view their child's behavior problems as outside of parental control will have a more external orientation than those parents who see their child's behavior problems as consequences of their own behavior toward the child. Subjects were 24 children and their parents who applied for services at a psychological clinic. The children's ages ranged from 4 to 15 years. The parents completed Rotter's Locus of Control and the Source of Problem Questionnaire. Results showed that parents who rated their children's problems as arising from external sources scored
significantly higher (more external) locus of control scores than did subjects who rated their children's problems as coming from internal sources.

The relationship between parental attitudes and internal-external locus of control was investigated by Johnson and Kilmann (1975). Subjects were 40 males and 40 females who were university undergraduates selected on the basis of their extreme scores on the Rotter Internal-External Locus of Control Scale (IE). Both the Rotter scale and the Family Relations Inventory were administered to investigate the relationship between recalled maternal and paternal attitudes and locus of control. An analysis of variance showed that external subjects rated their mothers as more restricting and demanding than did internal subjects. The analysis of variance also revealed a non-significant tendency for externals to recall their fathers as more controlling, restricting, and demanding. Male externals tended to rate their fathers as more rejecting than did male internals and female internals. Maternal child-rearing attitudes of over-protectiveness and restrictiveness were related to an external orientation.

Summary

Although biological, chemical, and genetic factors have been isolated or proposed by researchers as related to adolescent depression, there is strong support for an environmental factor approach in any study of depression.
An Adlerian perspective was developed for this study with three areas of focus—family environment, lifestyle choice, and locus of control.

Many variables in the family environment have been found to be related to adolescent depression. Parenting styles, communication patterns, parent-child relations, an absent parent, and the significant role of the mother have been isolated and studied in relationship to depression in children and adolescents. The synthesis of findings pointed to a consistent relationship between authoritarian, controlling, and pampering family patterns and incidence of depression in adolescents from such families.

Results of studies on lifestyle choice also have shown a relationship between a lifestyle of "control" in parents or adolescents and the occurrence of depression in adolescents. Studies have found that perceptions of early childhood are significantly related to the lifestyle choice made as adolescents and adults. No specific research investigations were found that grouped depressed adolescents or their parents into a specific lifestyle but studies of lifestyle choice of target groups of battered women, anorexics, and occupational groups suggested that some generalizations about the lifestyle choice of particular groups could be determined.

In studies that focused directly on locus of control, a higher incidence of depression occurred in children with an
external locus of control orientation. Investigations of the antecedents of control were reported for all age groups with consistent results for children, adolescents, and adults that linked depressive disorders to external locus of control. Differentiation of locus of control was shown to be determined by the type of parenting. In family atmosphere, in lifestyle choice, and in studies of autonomy and independence, the issue of control repeatedly emerged as a principal component of the environmental factors under consideration.

Based on this review, it was expected that adolescents in this study would demonstrate an external locus of control. High levels of conflict and control within the family environments were also anticipated.
CHAPTER II

PROCEDURES

This chapter describes the research questions, the selection of subjects, the instruments used, and the procedures for the collection and treatment of data.

Research Questions

Limited research has been conducted concerning the combination of the three variables of family environment, lifestyle, and control factors; therefore, this research was exploratory in nature. The following research questions were addressed:

1. Is there a difference between the scores obtained for the depressed adolescents and the norms established for the Family Environment Scale (FES)?

2. Is there a difference between the scores obtained for the depressed adolescents and the norms established for the Internal-External Locus of Control Scale (IE)?

3. Is there a difference between the scores of depressed adolescents and the scores of their parents as measured by the family incongruence score on the FES?

4. Is there a difference between the scores of depressed adolescents and the scores of their parents on the Lifestyle Scale (LS)?
5. Is there a difference between the degree of external control of depressed adolescents and the degree of external control of their parents on the IE?

6. What is the correlation between the FES subscale scores, the LS subscale scores, and the IE scores of depressed adolescents as calculated by product moment correlation coefficients?

7. Are any patterns determined by a principal components factor analysis of the subscale scores of depressed adolescents on the FES, LS, and IE measures?

Procedures and Collection of Data

Subjects

The subjects for this study were 31 hospitalized adolescents from 2 suburban mental health facilities. Only those patients who were classified as depressed according to the Diagnostic and Statistical Manual of Mental Disorder (DSM-III) or who presented suicidal ideation upon admittance to the hospital were included (Appendix A). Twenty-five adolescents in the study were diagnosed with Major Depression (296.2x and 296.3x), 3 adolescents were classified as having Depressed Mood Adjustment Disorder (309.00), 2 adolescents were classified as having Atypical Depression (296.82), and 1 adolescent was diagnosed with Depressed Bipolar Disorder (296.5x).

The adolescent subjects were admitted as residential patients at 2 suburban psychiatric facilities over a period
of three months. They ranged in age from 13 to 17 years, with a mean age of 15.2 years. Eighteen of the adolescents were males and 13 females. The majority of the adolescents were white (24); 5 were Mexican-American; 1 was black; and 1 was Oriental. Nineteen of the adolescents studied were first-born children, 10 were second-born, and 2 were third-born children. Of the presenting parents who participated in the study, 27 were mothers and 4 were fathers. The marital status of the parents who participated was evenly divided, with 48% married and 48% divorced. One parent was widowed.

 Procedures

 Permission for this study was obtained from the administration of each hospital from which subjects were selected (Appendix B). Permission from the Institutional Review Board of the University of North Texas also was obtained (Appendix C). Subjects were selected from those depressed adolescents who had been hospitalized more than one week and not more than three weeks. Each adolescent who was admitted to the adolescent unit and who met the diagnostic criteria was included in the study provided parental permission was obtained. For each child, the parent chosen to participate in this study was the parent who answered the questions necessary for the hospital's social history. Within one week of admittance, both hospitals required one of the parents to come to the
hospital to provide this social history for their adolescent. A stipulation was made that the person answering the social history must be one of the biological parents of the hospitalized adolescent.

Permission (Appendix D) was obtained from the adolescent's parent at the time of the first parents' meeting or at the time the parent came for the social history within the first week of hospitalization. All parents were recommended to a parent education group by the admitting hospital staff. At the end of the first meeting of this parent group, the group leader introduced the researcher for a brief appeal for subjects for the study. The only information shared at this time was that the research was for families of depressed adolescents. Those parents whose adolescent was classified as depressed according to the DSM-III (Appendix A) were asked to participate. The informed consent form was then distributed to the parents and their help was solicited. A convenient testing time was agreed upon by the parent and the researcher.

Upon arrival at the hospital, the parent was made comfortable in the conference room. Many of the parents, upon being seated in the conference room, were eager to know of their adolescent's progress at the hospital. The researcher assured the parents that after the testing, one of the hospital staff would answer any questions concerning
their adolescent's progress. The researcher checked verbally with the parent to see if he or she had any reading disability and offered to read aloud the instruments for those who had a problem. The parents were asked to sign permission forms for the results of the instruments to be sent to the hospital staff. Further explanation was given about the confidentiality of the answers and assurance was given that the adolescents would not see the parent's answers. The parents were then assigned a number for their family. An assignment of the letter "F" was added to the number for the father, a letter "M" for the mother, and a letter "A" for the adolescent. As each instrument was administered, the parent was asked to write his or her family number on the answer sheet and the appropriate letter to assure confidentiality.

The parent was administered the following battery of instruments: Family Environment Scale (FES), Lifestyle Scale (LS), and the Rotter Internal-External Locus of Control Scale (IE). The order for completion of the FES, LS, and IE was alternated in the sessions to avoid bias in response. A short break was given after the first two instruments were administered. Each parent was tested separately.

The adolescent was contacted after permission had been granted by the parent. The adolescent was asked to join the researcher in one of the conference rooms during a period of
free time during the hospital routine. Care was taken not to interrupt any schooling, counseling, or community time during the adolescent's day. Upon arrival in the conference room, the adolescent was asked to participate in the research and was told only that the research concerned depressed adolescents and their families. The adolescent was told also that his or her parent had previously agreed to participate. The adolescent was then asked to read and sign the adolescent permission sheet (Appendix E). The researcher determined if there was any reading disability or if the adolescent had been in a resource class in school in order to judge whether the questions should be read aloud to the adolescent.

To assure the adolescent of the confidentiality of his or her responses, several precautions were taken. Only one adolescent was tested at a time. The adolescent was also assigned a family number and letter prior to testing. The adolescent was informed that the parents would not know the adolescent's answers or scores. The adolescent was also asked if he or she wanted to give permission to the hospital staff for use of the results. If a discrepancy occurred on granting of permission, the information was not released to the hospital.

Administration of each instrument to both the adolescent and the parents followed the guidelines recommended in the respective manuals. Subjects were given
time to read instructions silently and then instructions were read aloud. Simple clarifications of word meanings were given on request, but care was taken not to influence the direction of the subject's response. Timing also followed recommended guidelines in the manuals. No time limits restricted the respondents.

The instructions and monitoring for the three instruments were given by the researcher to ensure consistent administration. Upon completion of these instruments, the parents or the adolescents were offered the opportunity to receive by mail a summary of the results. The answer sheets were hand-scored by the researcher and the data were entered into a computer at the University of North Texas for analysis.

Instruments

The Family Environment Scale (FES) (Moos, 1986) was used to measure the social-environmental characteristics of all types of families. This instrument was selected because the family environment is considered similar to the family atmosphere by Adlerians (Adlerian Research Bureau, personal communication, July 19, 1988). Adlerians describe the family atmosphere as the attributes and values a family shares which are measured on the FES scales of Achievement Orientation, Intellectual-Cultural Orientation, Active-Recreational Orientation, and Moral-Religious Emphasis. According to A. Adler (1931) and Sweeney (1981), family
atmosphere is also determined by the type of parenting, and
the following subscales of the FES define different factors
involved in parenting, including Cohesion, Expressiveness,
Conflict, Independence, Organization, and Control.

Raw scores on the FES for each subscale range from 0 to
9, with a score of 9 meaning the highest degree possible on
that concept. For example, a score of 1 on the subscale of
Conflict indicates that there is little conflict in the
family. A dichotomous format is used, with respondents
being able to choose true or false. The 10 FES subscales
assess three underlying domains, or sets of dimensions: the
Relationship dimensions, the Personal Growth dimensions,
and the System Maintenance dimensions. The Relationship
dimensions are measured by the Cohesion, Expressiveness, and
Conflict subscales. The Personal Growth, or
goal-orientation, dimensions are measured by the
Independence, Achievement Orientation, Intellectual-Cultural
Orientation, Active-Recreational Orientation, and
Moral-Religious Emphasis subscales. The System Maintenance
dimensions are measured by the Organization and Control
subscales.

To derive a score for the parent's and adolescent's
view of the environment, an average score was calculated for
both for each subscale. This Family Incongruence score was
the extent of disagreement among parent and adolescent with
regard to each's perceptions of family atmosphere.
Individual subscale scores or family averages were converted into standard scores, and individual and family profiles were generated. Incongruence scores may vary from a low of 0 (all possible pairs of family members show perfect agreement on all 10 FES subscale scores) to a theoretical high of 90 (such as in a two-person family in which one family member scores 9 on all 10 subscales and the other family member scores 0 on all 10 subscales).

Families were grouped into specific topologies based on data drawn from the representative sample. Billings and Moos (1982) identified seven family types: independence-oriented; achievement-oriented; intellectual-cultural-oriented; moral-religious-oriented; support-oriented; conflict-oriented; and disorganized. The classification rules group families whose T-scores or greater than or equal to 60 in one or more of the subscales in each dimension (Billings & Moos, 1982). Of the 267 family profiles computed by the FES researchers, 90.2% were classified into 1 of the 7 types.

The norms for the FES were established by administering the test to a sample of over 1,000 people in 285 families. The sample included many different types of families to ensure that the FES would be applicable to a variety of family settings. Families were recruited from church groups, from a newspaper advertisement, and from contact with students at a local high school. An ethnic minority
sub-sample was recruited in part from these sources and in part by research assistants. A group of distressed families that were undergoing treatment was obtained from a psychiatric family clinic and from a probation and parole department affiliated with a local correctional facility.

The reliability was measured by showing the internal consistencies for each of the 10 FES subscales to be from .61 to .78. The 10 subscale scores were intercorrelated separately on samples of 1,468 husbands and wives and 621 sons and daughters drawn from 534 normal and 266 distressed families. The intercorrelations indicated that the subscales measure distinct though somewhat related aspects of family social environments.

Test-retest reliabilities of individual scores for the 10 subscales were calculated for 47 family members in 9 families who took the test twice with an 8-week interval between testings. The test-retest reliabilities were all in an acceptable range, varying from a low of .68 for the Independence Subscale to a high of .86 for the Cohesion Subscale. Several studies support the construct validity of the FES subscales (Abbott & Brody, 1985; Sandler & Barrera, 1984; Swindle, 1983).

The Lifestyle Scale (LS) (Kern, 1986) was developed to assist in interpreting the lifestyle of the individual and presents data in quantifiable form. Kern based this instrument on Adlerian concepts. The scale is a 35-item
instrument utilizing a 5-point Likert scale related to 5 lifestyle themes: Control, Perfectionism, Need to Please, Victim, and Martyr. The scores are found by summing the responses of the 7 items in each of the subscales.

The Lifestyle Scale was selected to be used in this study because one premise of the research was that to understand why an adolescent is depressed, one must examine the unique system of beliefs, values, and attitudes regarding the adolescent and his or her relationships with others. This system is the individual's lifestyle (Ansbacher & Ansbacher, 1956). The LS, a brief therapy tool for eliciting lifestyle data, can determine a person's lifestyle when longer investigations into a person's lifestyle type are prohibited. The scale was chosen because the process of interpretation can provide quick information involving relationships with other family members (Kern, 1986).

The Control scale describes one who likes to take charge and is a problem solver. This person has little difficulty confronting others and may often be rational, logical, and more cognitive than feeling. A person scoring high on this scale usually takes a leadership role. The Perfectionist scale score describes a person who desires orderliness and fears making mistakes. An individual scoring high on this scale likes detail, is a list maker, and functions best in highly structured environments. The
Need-to-Please scale refers to people who feel significant when they are pleasing others and need positive feedback to survive. This person will avoid conflict at all costs and will use pleasing as a form of control. The Victim scale describes people who gain their worth by portraying the victim in relationships. They may feel like they really try hard but can never succeed. They usually blame others for their misfortunes and generally possess characteristics of individuals with low self-esteem. The Martyr scale relates to individuals who have a cause and struggle to fight for it. They usually set their sights high and blame others for keeping them from succeeding in doing good deeds.

For use in this study, respondents were classified into one or more of Kern's 5 topologies if their score was three or more points above the mean (one standard deviation). The types of lifestyles correspond to the subscales of the LS (Dinkmeyer, Dinkmeyer, Jr., & Sperry, 1987; Kern, 1982, 1986). While every individual exhibits aspects of each of the topologies, only those whose scores are elevated one standard deviation above the mean are classified as possessing a faulty lifestyle.

The LS scale was normed on 629 undergraduates, graduates, and civil service employees. Means and standard deviations were computed for each individual scale. The instrument's reliability was established on a small sample of 26 graduate students. The overall inventory yielded a
coefficient of .43 with a probability of less than .05 (Kern, 1986).

The Internal-External Locus of Control Scale (IE) (Rotter, 1966) was used in this study to measure the extent of external control existing within the adolescents and their parents. The test was selected as a viable tool to determine to what extent the adolescent or the parent was dependent on someone or something other than himself or herself.

The IE scale consists of 23 question-pairs using a forced-choice format plus 6 filler questions. The scale was chosen over other available scales because of its emphasis on family orientation of control versus school-related questions on other popular scales. The majority of internal-external locus of control investigations have employed the Rotter IE scale (Robinson & Shaver, 1975). The scale is concise and requires less than fifteen minutes to complete. Internal statements are paired with external statements and the subject chooses between alternatives that reflect a fatalistic, external control viewpoint and those that reflect a belief in one’s own ability to affect and control the events in one's life. Rotter described the IE scale as an additive scale wherein items represent an attempt to sample IE beliefs across a range of interpersonal situations.
The test-retest reliability for the IE scale has varied from .49 to .83 depending on the time interval and the sample involved. The correlations were first reported by Rotter (1966) for a sample of 400 subjects, 200 of each sex. An internal consistency coefficient of .70 was obtained from this sample of college students. Normative data were collected from 4,433 subjects from various populations consisting of inmates of correctional institutions, high school students, addict patients, student nurses, male soldiers, administrators, and psychiatric patients. The norms provide means and standard deviations for breakdowns by gender and ethnicity.

For two subgroups of Rotter’s sample, test-retest reliability coefficients were computed with a value of .72 for 60 college students after one month (for males, r = .60; for females, r = .83). The correlation, r = .55, was obtained for 117 college students after two months (for males, r = .49; for females, r = .61).

Reported correlations between the Marlowe-Crowne Social Desirability Scale and the IE scale range from -.20 to -.42. The Edwards Social Desirability Scale also has been correlated with the IE scale with coefficients ranging from -.23 to -.70 (Berzins, Ross, & Cohen, 1979; Cone, 1971).

Most studies using the Rotter IE have shown no significant differences in scores with respect to gender, race, or social class. Variations in IE scores can be
related to sex differences (because of the achievement behavior and defensive externality of males), to differences in access to power, or to the presence of social barriers or group mobility. Those groups with the least access to power have shown relatively more externality in their beliefs (Battle & Rotter, 1963; Feather, 1967).

Treatment of Data

Descriptive statistics of means, frequencies, and percentages were calculated for each subscale of each of the instruments used to measure family incongruence, lifestyles, and locus of control of the depressed adolescents and their parents. A cross tabulation by sex, ethnicity, birth order, and marital status of parent further described the study sample.

After scores from each of the individual instruments were tabulated, they were compared with the normative data provided by the instrument manuals. Adolescent norms are published for the FES and the IE. No specific adolescent norms are available for the LS instrument; however, the means and standard deviations are provided for classification. The adolescent scores on the LS were compared to these published means. Research Questions 1 and 2 were addressed by a single sample t-test of significance conducted between the means of the study sample and the published norms to determine whether any significant
differences occurred. Significant probability levels were reported.

Comparisons were made between the scores obtained on the various instruments for the depressed adolescents and for their parents. Family topologies were identified for the sample as described by the family incongruence score of the FES scale to address Research Question 3. Research Questions 4 and 5 were answered through correlation coefficients calculated for the LS and IE scores from the depressed adolescents and from their parents.

Product moment correlations were calculated between the results of each of the subscales of the FES, LS, and IE instruments measuring family incongruence, lifestyles, and locus of control for the depressed adolescents in the study sample. The correlation matrix generated was used to address Research Question 6 and as a preliminary step in the factor analysis that followed. Coefficients significantly different from zero were reported.

A principal components factor analysis was performed addressing Research Question 7 to determine if any patterns existed within the subscale scores on each instrument administered to the depressed adolescents. The initial extraction of factors was rotated using a varimax rotation procedure to clarify the results. This procedure was designed to explore the reduction of the data into clusters of variables that were categorized as manifestations of
underlying dimensions or factors. A priori it was anticipated that the category of control was one of the underlying dimensions that would be discerned by the factor analysis as it was a function of the construct of each of the instruments. The four factors, or weighted combinations of input variables, which were determined by this analysis to account for the majority of the variation in scores were given descriptive names by the researcher representing the common elements or abstractions of the individual subscales which correlated highly with the extracted factor.
CHAPTER III

RESULTS AND DISCUSSION

This chapter presents the results of the data analysis and includes a discussion of the research questions which the study addressed. Recommendations based upon the findings and examination of the subject case files are also presented.

Analysis of Data

Research Question 1 asked if there is a difference between the scores obtained for the depressed adolescents and the norms established for the Family Environment Scale. The means and standard deviations of the subscales for the FES for depressed adolescents are listed in Table 1 as are the t-tests of significance between the depressed adolescent means and the general adolescent population means. The t-tests utilized 30 degrees of freedom, and probability statistics are reported for two-tailed (nondirectional) tests. When compared to the general population norms of the FES, the depressed adolescents in this study scored significantly lower (p < .01) in the Relationship dimension subscales of Cohesion and Expressiveness and significantly higher (p < .01) in the Conflict subscale (see Table 1).
Table 1

T-Tests of Significance for Means of Depressed Adolescents and Norm Means for Family Environment Scale (n=31)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Adolescent</th>
<th>Norm</th>
<th>M</th>
<th>SD</th>
<th>Mean</th>
<th>SE</th>
<th>T-Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relationship Maintenance</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohesion</td>
<td>3.61</td>
<td>2.85</td>
<td>6.61</td>
<td>0.51</td>
<td>5.835</td>
<td>0.000**</td>
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<tr>
<td>Expressive</td>
<td>3.93</td>
<td>1.89</td>
<td>5.45</td>
<td>0.34</td>
<td>4.447</td>
<td>0.000**</td>
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</tr>
<tr>
<td>Conflict</td>
<td>5.48</td>
<td>2.71</td>
<td>3.31</td>
<td>0.48</td>
<td>4.472</td>
<td>0.000**</td>
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<tr>
<td><strong>Personal Growth</strong></td>
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<tr>
<td>Independence</td>
<td>5.45</td>
<td>1.63</td>
<td>6.61</td>
<td>0.29</td>
<td>3.957</td>
<td>0.000**</td>
<td></td>
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</tr>
<tr>
<td>Achievement</td>
<td>5.51</td>
<td>1.84</td>
<td>5.47</td>
<td>0.33</td>
<td>0.139</td>
<td>0.890</td>
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<tr>
<td>Intellectual</td>
<td>3.41</td>
<td>1.84</td>
<td>5.63</td>
<td>0.33</td>
<td>6.689</td>
<td>0.000**</td>
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<tr>
<td>Active</td>
<td>4.29</td>
<td>2.33</td>
<td>5.35</td>
<td>0.42</td>
<td>2.536</td>
<td>0.017*</td>
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<td>Moral</td>
<td>4.83</td>
<td>2.34</td>
<td>4.72</td>
<td>0.42</td>
<td>0.283</td>
<td>0.779</td>
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<tr>
<td><strong>System Maintenance</strong></td>
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<td></td>
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<tr>
<td>Organization</td>
<td>4.58</td>
<td>2.13</td>
<td>5.41</td>
<td>0.38</td>
<td>2.172</td>
<td>0.038*</td>
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</tr>
<tr>
<td>Control</td>
<td>5.42</td>
<td>2.41</td>
<td>4.34</td>
<td>0.43</td>
<td>2.498</td>
<td>0.018*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05.  ** p < .01, two-tailed.
There are statistically significant differences for the scores on the Personal Growth dimension subscales in which the depressed adolescents scored lower on the Independence, Active, and Intellectual subscales. The System Maintenance dimension was significantly different for the depressed adolescents who showed less organization and higher family control than the norms. The large standard deviations for the FES scale may weaken interpretation of the results.

Research Question 2 asked if there is a difference between the scores obtained for the depressed adolescents and the norms established for the Internal-External Locus of Control Scale. Table 2 shows the mean of the IE Scale for the depressed adolescents. A t-test of significance was conducted between the means of external locus of control for the depressed adolescents in this study as compared to the high school student norms established for the IE Scale. The standard error was used in calculating the t-value. The difference between the means was not statistically significant.

Research Question 3 asked whether a relationship exists between the scores of depressed adolescent and the scores of their parents as measured by the family incongruence score on the FES. The family incongruence score is derived by calculating the absolute difference between the scores of the depressed adolescents and their parents on each of the subscales and summing the differences over the 10 subscales.
Table 2

T-Tests of Significance for Means of Depressed Adolescents and Norms for Internal-External Locus of Control Scale (n=31)

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>Norm</th>
<th>SE</th>
<th>T-Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE</td>
<td>9.45</td>
<td>8.58</td>
<td>2.98</td>
<td>1.620</td>
<td>0.115</td>
</tr>
</tbody>
</table>

* p < .05. ** p < .01, two-tailed.

The resulting incongruence score indicates the extent to which the parent and adolescent disagree about their family climate. As shown in Table 3, the difference between the means for the depressed adolescents' families and the normal adolescent population was statistically significant (p < .001), indicating that the depressed adolescents' families showed less incongruence than the normal adolescent population.

Research Question 4 asked if there is a difference between the scores of depressed adolescents and the scores of their parents on the Lifestyle Scale. The scores for each lifestyle scale are calculated by summing the values for each of 7 questions in the lifestyle scales of Control, Perfectionist, Need to Please, Victim, and Martyr. The means, standard deviations, and t-values of the means
Table 3

T-Tests of Significance for Means of Depressed Adolescents and Norms for Family Incongruence Score (n=31)

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>Norm</th>
<th>SE</th>
<th>T-Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>FES</td>
<td>9.64</td>
<td>15.34</td>
<td>1.37</td>
<td>-4.150</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

* p < .001, two-tailed.

Analysis of the adolescent and parental scores on the LS are presented in Table 4. Paired t-tests of significance were conducted to compare each of the depressed adolescent's scores with the parents' scores on the LS subscales.

The larger standard deviations for the adolescent means indicate more variability among the adolescents in each of the lifestyle categories than among their parents. Only the lifestyle of Perfectionist showed a significant difference (p < .05), with the parents' scores higher than the scores of the depressed adolescents.

To further characterize the subjects of this study, a case-by-case examination of the adolescents' lifestyle choices showed that all but seven of the adolescents could be categorized in the 5 lifestyles. Scores three points or more above the mean (greater than 1 standard deviation) indicate that the individual has tendencies toward that lifestyle. While no specific norms have been published for
Table 4
Means, Standard Deviations, and T-Tests of Significance for Depressed Adolescents and Parents on Lifestyle Scale (n= 31)

<table>
<thead>
<tr>
<th>Lifestyle</th>
<th>Adolescent</th>
<th></th>
<th>Parent</th>
<th></th>
<th></th>
<th>T-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>19.10</td>
<td>3.81</td>
<td>19.61</td>
<td>3.72</td>
<td>-0.55</td>
<td></td>
</tr>
<tr>
<td>Perfectionist</td>
<td>21.48</td>
<td>5.23</td>
<td>24.26</td>
<td>3.22</td>
<td>-2.45*</td>
<td></td>
</tr>
<tr>
<td>Need to Please</td>
<td>23.74</td>
<td>5.74</td>
<td>25.16</td>
<td>3.09</td>
<td>-1.23</td>
<td></td>
</tr>
<tr>
<td>Victim</td>
<td>19.29</td>
<td>4.47</td>
<td>19.32</td>
<td>3.87</td>
<td>-0.03</td>
<td></td>
</tr>
<tr>
<td>Martyr</td>
<td>19.90</td>
<td>4.81</td>
<td>19.03</td>
<td>3.97</td>
<td>0.51</td>
<td></td>
</tr>
</tbody>
</table>

* E < .05, two-tailed.

The LS for adolescents, the general population means have been established for each lifestyle.

Table 5 presents the single sample t-test of significance for each of the lifestyle scales. The standard error of differences, the t-value for 30 degrees of freedom, and the probability of significance for a two-tailed test are listed. The lifestyle of Victim was significantly higher for the depressed adolescents than for the general population, indicating that the depressed adolescents in this study possess characteristics of this lifestyle. The Victim scale describes individuals who gain their worth by portraying the victim in relationships and who feel they
Table 5

T-Tests of Significance for Means of Depressed Adolescents and Population Norms for Lifestyle Scale (n = 31)

<table>
<thead>
<tr>
<th>Lifestyle</th>
<th>M</th>
<th>Norm</th>
<th>SE</th>
<th>T-Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>19.09</td>
<td>19.00</td>
<td>0.68</td>
<td>0.141</td>
<td>0.888</td>
</tr>
<tr>
<td>Perfectionist</td>
<td>21.48</td>
<td>21.00</td>
<td>0.94</td>
<td>0.515</td>
<td>0.610</td>
</tr>
<tr>
<td>Need to Please</td>
<td>23.74</td>
<td>24.00</td>
<td>1.03</td>
<td>-0.250</td>
<td>0.804</td>
</tr>
<tr>
<td>Victim</td>
<td>19.29</td>
<td>17.00</td>
<td>0.80</td>
<td>2.855</td>
<td>0.008**</td>
</tr>
<tr>
<td>Martyr</td>
<td>19.90</td>
<td>19.00</td>
<td>0.86</td>
<td>1.046</td>
<td>0.304</td>
</tr>
</tbody>
</table>

* p < .05. ** p < .01, two-tailed.

really try hard, but can never succeed. They usually blame others for their misfortunes and generally possess characteristics of low self-esteem.

Research Question 5 asked whether a difference exists between the degree of external control of depressed adolescents and the degree of external control of their parents on the Internal-External Locus of Control Scale. The IE scale is scored by calculating the ratio of external-control responses to the total responses. The adolescent scores and parental scores for this sample showed an internal locus of control. The means, standard deviations, and t-values comparing the scores of the depressed adolescents and their parents are listed in Table 6. The
difference between the means was not statistically significant.

Table 6

Means, Standard Deviations, and t-Tests of Significance for Depressed Adolescents and Parents on Internal-External Locus of Control Scale (n= 31)

<table>
<thead>
<tr>
<th>Lifestyle</th>
<th>Adolescent</th>
<th>Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE Scores</td>
<td>M 9.45</td>
<td>SD 2.92</td>
</tr>
</tbody>
</table>

Note. For t-value, p > .05, two-tailed.

Research Question 6 asked what the association is between the FES subscale scores, the LS subscale scores, and the IE scores of depressed adolescents as calculated by product moment correlation coefficients. Intercorrelations were computed for the adolescent scores on each of the subscales of the FES, LS, and IE. The correlation matrix is presented in Table 7. While no coefficients were found to explain more than 45% of the variance, the critical value for those coefficients whose absolute values were significantly greater than zero is noted.

The correlations among the subscales of the FES, LS, and IE for the depressed adolescents were of interest in preparation of the factor analysis. The lifestyle scale
Table 7

**Intercorrelations Between Subscales for Depressed Adolescents for Family Environment, Lifestyle, and Internal-External Locus of Control Scales (n = 31)**

<table>
<thead>
<tr>
<th>Scales/Subscales</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>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifestyle</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1. Control</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perfectionist</td>
<td>.40</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Need to Please</td>
<td>.44</td>
<td>.36</td>
<td>--</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Victim</td>
<td>.33</td>
<td>.12</td>
<td>.46</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. Martyr</td>
<td>.58</td>
<td>.34</td>
<td>.59</td>
<td>.37</td>
<td>--</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Family Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cohesion</td>
<td>-.08</td>
<td>-.01</td>
<td>-.11</td>
<td>-.43</td>
<td>-.01</td>
<td>--</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7. Expressiveness</td>
<td>-.05</td>
<td>-.16</td>
<td>-.02</td>
<td>-.27</td>
<td>-.20</td>
<td>.63</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Conflict</td>
<td>.17</td>
<td>.10</td>
<td>.01</td>
<td>.49</td>
<td>.07</td>
<td>-.67</td>
<td>-.41</td>
<td>--</td>
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<td></td>
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</tr>
<tr>
<td>9. Independence</td>
<td>-.13</td>
<td>-.19</td>
<td>-.22</td>
<td>-.55</td>
<td>-.21</td>
<td>.59</td>
<td>.44</td>
<td>-.39</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Achievement</td>
<td>.31</td>
<td>.43</td>
<td>.22</td>
<td>.06</td>
<td>.41</td>
<td>.22</td>
<td>-.19</td>
<td>-.17</td>
<td>.01</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Intellectual</td>
<td>-.04</td>
<td>-.11</td>
<td>-.04</td>
<td>-.25</td>
<td>-.03</td>
<td>.54</td>
<td>.29</td>
<td>-.49</td>
<td>.52</td>
<td>.19</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Active</td>
<td>-.23</td>
<td>-.19</td>
<td>-.00</td>
<td>-.43</td>
<td>-.24</td>
<td>.36</td>
<td>.24</td>
<td>-.43</td>
<td>.22</td>
<td>-.01</td>
<td>.48</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Moral</td>
<td>-.13</td>
<td>-.04</td>
<td>-.25</td>
<td>-.06</td>
<td>.19</td>
<td>.56</td>
<td>.19</td>
<td>-.43</td>
<td>.13</td>
<td>.22</td>
<td>.41</td>
<td>.33</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Organization</td>
<td>.06</td>
<td>-.06</td>
<td>.28</td>
<td>.02</td>
<td>.13</td>
<td>.12</td>
<td>-.19</td>
<td>-.00</td>
<td>-.16</td>
<td>.24</td>
<td>.00</td>
<td>.16</td>
<td>.19</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>15. Control</td>
<td>.22</td>
<td>-.03</td>
<td>.19</td>
<td>.18</td>
<td>.13</td>
<td>-.26</td>
<td>-.48</td>
<td>.31</td>
<td>-.50</td>
<td>.05</td>
<td>-.26</td>
<td>-.08</td>
<td>-.02</td>
<td>.59</td>
<td>--</td>
</tr>
<tr>
<td>Locus of Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>16. IE External</td>
<td>.28</td>
<td>-.28</td>
<td>.18</td>
<td>.29</td>
<td>.36</td>
<td>-.19</td>
<td>-.15</td>
<td>-.03</td>
<td>-.31</td>
<td>.04</td>
<td>-.04</td>
<td>-.20</td>
<td>-.01</td>
<td>.09</td>
<td>.18</td>
</tr>
</tbody>
</table>

**Note.** For values significantly different from 0, coefficient must be greater than or equal to .36 (p < .05, two-tailed).
Martyr was correlated with the subscale Control ($r = .576$) and the Need to Please lifestyle scale ($r = .588$). The lifestyle scale Victim was negatively correlated with the FES subscale Independence ($r = -.554$). On the FES, the Independence subscale also had a moderately strong correlation with the subscale Intellectual-Cultural ($r = .524$). Among the FES subscales, Organization and Control had the strongest correlation ($r = .593$), accounting for 35% of the variance in these two scores. The largest cluster of significant correlations was with the subscale Cohesion. The subscales Expressiveness, Conflict, Independence, and Moral all had correlations greater than .50 with Cohesion. Conflict and Cohesion were negatively correlated ($r = - .673$), and the other correlations with Cohesion ranged from .62 to .54. The remainder of the correlations were negligible, ranging from 0 to .3 and accounting for less than 10% of the variance in scores. The intercorrelations showed the internal consistency of the FES scale and a commonality among the categories of control. The IE scale was less related to the other scales for the sample studied.

Research Question 7 asked if there are any patterns determined by a principal components factor analysis of the subscale scores of the depressed adolescents on the FES, LS, and IE measures. The correlational data in Table 7 were utilized in the principal components factor analysis. Table 8 presents the data from the factor analysis performed on
the adolescent scores for the subscales of the FES, LS, and IE Scales. The eigenvalues and percentage of variance accounted for are listed for the four extracted factors.

Table 8
Factor Analysis of Subscale Scores for Depressed Adolescents for Lifestyle, Family Environment, and Internal-External Locus of Control Scales

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Percent of Variance</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.41167</td>
<td>27.6</td>
<td>27.6</td>
</tr>
<tr>
<td>2</td>
<td>2.93516</td>
<td>18.3</td>
<td>45.9</td>
</tr>
<tr>
<td>3</td>
<td>1.78380</td>
<td>11.1</td>
<td>57.1</td>
</tr>
<tr>
<td>4</td>
<td>1.38148</td>
<td>8.6</td>
<td>65.7</td>
</tr>
</tbody>
</table>

Those factors with an eigenvalue of less than 1 were not listed in Table 8 and were disregarded in further analysis of the data. The four factors extracted account for 65.7% of the variance in the depressed adolescents' scores.

To further refine the components, a varimax factor rotation procedure was followed to make a sharper distinction in the meaning of the four extracted factors. Table 9 presents the results of the five iterations of
Table 9

Underlying Factors from Lifestyle, Family Environment, and Internal-External Locus of Control Scales

<table>
<thead>
<tr>
<th>Factor</th>
<th>(Descriptive Name)</th>
<th>Subscale (Scale)</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>(Family Enmeshment)</td>
<td>Cohesion (FES)</td>
<td>.877</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conflict (FES)</td>
<td>-.795</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intellectual (FES)</td>
<td>.739</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moral (FES)</td>
<td>.672</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active (FES)</td>
<td>.622</td>
</tr>
<tr>
<td>Factor 2</td>
<td>(Powerless Lifestyle Roles)</td>
<td>Martyr (LS)</td>
<td>.853</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need to Please (LS)</td>
<td>.747</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control (LS)</td>
<td>.744</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Victim (LS)</td>
<td>.579</td>
</tr>
<tr>
<td>Factor 3</td>
<td>(Authoritarian Parenting)</td>
<td>Organization (FES)</td>
<td>.836</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control (FES)</td>
<td>.825</td>
</tr>
<tr>
<td>Factor 4</td>
<td>(Self-Critical Personalities)</td>
<td>Perfection (FES)</td>
<td>.777</td>
</tr>
<tr>
<td></td>
<td></td>
<td>External (IE)</td>
<td>-.725</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Achievement (FES)</td>
<td>.478</td>
</tr>
</tbody>
</table>
rotation. The factor loadings represent the correlation of each extracted factor with the specific subscales of the FES, LS, and IE. Only the moderate and high loading correlations are listed in the table.

While all of the variables affected each extracted factor to some degree, only the highest loading variables (or subscales) are listed in Table 10. After careful examination of the strong correlations which each accounted for more than 35% of the variance in the data and after consideration of the individual questions in the correlated subscales, descriptive names are tentatively expressed in parentheses. The depressed adolescents could be described as experiencing Family Enmeshment (Factor 1), Powerless Lifestyle Roles (Factor 2), and Authoritarian Parenting (Factor 3), and exhibiting tendencies toward Self-Critical Personalities (Factor 4).

The first factor, which explained 27.6% of the variance in the data, was named Family Enmeshment as suggested by the high loading variables indicating conflict level and involvement in the family (Cohesion, Conflict, Intellectual, Moral, and Active). The variables of Cohesion, Moral, Intellectual, and Active all describe the degree of family involvement and were positively correlated to Factor 1. Conflict was negatively correlated to other variables in this factor.
The second principal factor is listed as Powerless Lifestyle Roles as suggested by the high loadings of the variables of Martyr, Need to Please, and Control. The lifestyles of Martyr and Need to Please both demonstrate obvious tendencies by their titles toward helplessness and powerlessness. The lifestyle of Control on the LS can also indicate an individual's feelings of powerlessness since the questions on the LS scale measure the individual's desire to be in control, which may be motivated by a sense of powerlessness.

The third extracted factor had two high loading variables from the subscales on the FES, Organization and Control. Both of the correlations with this factor, tentatively named Authoritarian Parenting, were very strong, accounting for over 67% of the variance in data.

The final extracted factor is listed as Self-Critical Personalities and accounted for only 8.6% of the variance in data. This factor included a positive correlation with the subscale of Perfectionist and a negative correlation with the degree of external locus of control on the IE. A negative correlation for the IE scale would equate to a high internal locus of control. To a more moderate degree, the subscale Achievement also was a component of this factor. The IE scale was not a strong dimension in any of the other extracted factors because of its relatively low intercorrelations with the other scales for this study.
In addition to the statistical analysis, to answer the research questions, data regarding the subjects were analyzed. The sample consisted of 58% males and 42% females. Table 10 presents the means, standard deviations, and F-values for the one-way analysis of variance conducted for each of the subscales of the LS, FES, and IE Scales by sex and chronological order of birth. No statistically significant differences were found between the means of the male and female adolescents on any of the subscales.

The majority (63%) of the adolescents studied were first-born children, yet analysis of variance tests on each of the variables (Table 10) of the FES, LS, and IE Scales showed no statistically significant differences in the means by chronological order of birth of the depressed adolescents. The average number of children in the 31 families studied (including natural children and stepchildren) was 2.2. Ten of the families contained stepsiblings.

Means and standard deviations were calculated for the depressed adolescents on the FES, LS, and IE scales by race and by marital status of parents. An analysis of variance showed no statistically significant differences among the depressed adolescents by race or by marital status of the parents, indicating the relative homogeneity of the subject population. Data are not presented in tabular form to insure the individual confidentiality of single-case scores.
Table 10

Means, Standard Deviations, and Analysis of Variance for Depressed Adolescents by Sex and Birth Order for Family Environment, Lifestyle, and Locus of Control Scales

<table>
<thead>
<tr>
<th>Scales/Subscales</th>
<th>Male&lt;sup&gt;a&lt;/sup&gt; M</th>
<th>Male&lt;sup&gt;a&lt;/sup&gt; SD</th>
<th>Female&lt;sup&gt;b&lt;/sup&gt; M</th>
<th>Female&lt;sup&gt;b&lt;/sup&gt; SD</th>
<th>F- Value</th>
<th>First&lt;sup&gt;c&lt;/sup&gt; M</th>
<th>First&lt;sup&gt;c&lt;/sup&gt; SD</th>
<th>Second&lt;sup&gt;d&lt;/sup&gt; M</th>
<th>Second&lt;sup&gt;d&lt;/sup&gt; SD</th>
<th>Third&lt;sup&gt;e&lt;/sup&gt; M</th>
<th>Third&lt;sup&gt;e&lt;/sup&gt; SD</th>
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<tr>
<td>Control</td>
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<td></td>
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<td>Cohesion</td>
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<td>3.4 3.1</td>
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<td>0.60</td>
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</table>

<sup>a</sup> 18 males.  <sup>b</sup> 13 females.  <sup>c</sup> 19 first-born.  <sup>d</sup> 10 second-born.  <sup>e</sup> 2 third-born.
Summary of Findings

The 31 depressed adolescents and their parents in this study are from a homogeneous socioeconomic population showing no significant variation in results for the demographic categories of sex, race, chronological birth order, or marital status of the parents.

A descriptive profile of the environment of the depressed adolescents emerges from the findings. Approximately 77% of the depressed adolescents can be described as having victim lifestyles. The adolescents in this study differ significantly from the established norms on the FES on the subscales of Cohesion, Expressiveness, Conflict, Independence, Intellectual, Active, Organization and Control, and on the subscale Victim of the LS. In addition, the depressed adolescents' families showed less incongruence than the normal adolescent population. The results of the locus of control scale indicated that both parents and adolescents were more internal than external although the sample did not differ significantly from the norm population. These data reveal the impact of the dysfunctional family circumstances of the sample and the impact of environmental conditions on adolescents.

No statistically significant differences were found between the scores of depressed adolescents and their parents except in the Perfectionist lifestyle subscale, supporting the low incongruence score and indicating that,
on the average, a common view of the family situation was held. As in all of the data collected, examination of the profile of each individual case would indicate a wide variation and dictate a variety of therapeutic interventions.

A cluster of strong correlations found among the subscales of Cohesion and Conflict led, through a principal components analysis, to four underlying dimensions that contributed to the description of the depressed adolescents. Four factors were found to characterize the depressed adolescents: a family pattern resulting in enmeshment, an immature lifestyle choice bound to powerless lifestyle roles, a highly structured and demanding family system characterized by authoritarian parenting, and traits of perfectionism and high expectations leading to self-critical personalities.

Discussion

The findings of this study appear to lend support to the environmental approach originally proposed by A. Adler and to the understanding of adolescent depression taken by K. Adler (1983), Pancer (1985), Klerman and Weissman (1981), and Miller (1975). This study isolated significant environmental factors of high conflict within the family combined with low family incongruence scores, controlling and authoritarian parenting styles, and the absence of family cooperation as linked to adolescent depression.
The depressed adolescents' families in this sample demonstrate characteristics that differ from the families used in the norm samples for the instruments used in this study. A profile of the depressed adolescents and their families indicates that the adolescents and their parents view their family environments similarly. Thus, the low incongruence score combined with high parental control scores indicates that the adolescent is finding it difficult to conflict with the parents. Also, the family environment is experienced by both the adolescent and the parent as significantly low in cohesion, expressiveness, independence, family involvement, and organization. These findings seem to support those of Friedrich, Reams, and Jacobs (1982), who found increased severity of suicidal ideation related to less cohesion, independence, and organization and to increased achievement orientation in the families. The results of their study and this study depict depressed adolescents as being less independent and coming from families that are less cohesive and more disorganized than the norm population. In addition, findings of this study also suggest that depressed adolescents experience conflict in their families but do not feel free to conflict with their parents because of strong parental control and perfectionistic parents.

The relationship between cohesion and conflict in the families of the depressed adolescent in this study is
explained by the first factor in the factor analysis, Family Enmeshment. This variable describes a condition in the family environment in which conflict and cohesion appear to be related, that is, there is either too little conflict and enmeshment of family members that allows for no individual freedom or too little involvement among family members and increased conflict. Research by Burbach and Bordium (1986) indicated that few attempts have been made to investigate conflicts in parent-child relationships. No research was found related to the balance of cohesion (involvement) and conflict in families. Adlerians believe that dependency can be created by parenting styles that deprive children of the sense of self-reliance that can be developed when children have the opportunity to make decisions and experience the consequences of those decisions.

A unique dimension of the family environment of the depressed adolescents in this study is a lack of balance between conflict and cohesion. A family that shows strong cohesion and involvement yet indicates little conflict may appear more tightly-knit and enmeshed. However, the lack of differentiation in a family may inhibit any separation from the family, which is one of the tasks of adolescence. Adolescents in this study who are experiencing the need for autonomy may be stymied by the family atmosphere established by controlling and authoritarian parents who show a perfectionistic lifestyle. This finding supports the
findings of Walton (1988), who found adolescent depression related to the adolescent's dependence on parents. Conversely, a family that is highly conflicted and with no sense of commonality of purpose may leave an adolescent without the support necessary for maturation. A healthy balance of conflict and cohesion that is illustrated in the Adlerian concept of the democratic family may be the most helpful atmosphere for the developing young adult.

Another significant descriptor emerging in this study's profile of depressed adolescents is the element of control in parent-adolescent relationships. The subscales of Control and Organization on the FES measure the degree to which set rules and procedures are used to organize family life. This factor was the most clearly defined in the factor analysis procedure and has been labeled Authoritarian Parenting. Both of the correlations with this factor were very strong, accounting for over 67% of the variance in the data. The a priori assumption that a factor of control would be isolated in the study is confirmed. A. Adler (1931) postulated that if children grow up in a family environment where control exists solely with the parents, the adolescent may feel dependent and discouraged at facing impending separation from parents. Meyers (1980) and Giffen (1983) also emphasized the same dependency descriptor in their research on adolescent suicide. Walton (1988) suggested that it is not the desire for high achievement
that is troublesome to discouraged teens, but rather the hopelessness that is generated when adolescents are dependent on their parents. Thus the factor of strong parental control isolated in this study substantiates the conclusions of A. Adler (1931), Myers (1980), Giffen (1983), and Walton (1988).

The depressed adolescents in this study possess characteristics of the lifestyle termed Victim (Kern, 1986). No previous literature regarding the lifestyle choices of depressed adolescents was found. However, Highlander (1984), using the Wheeler-Kern-Curlette Lifestyle Personality Inventory, found a direct relationship between depression in adults and the lifestyle themes of "conforming active" and "exploiting passive." The lifestyle of "conforming active" in the Wheeler-Kern-Curlette instrument corresponds to the lifestyle of Victim as defined by Kern's Lifestyle Scale (Highlander, 1984). Thus, the lifestyle of Victim for the depressed adolescents in this study seems to support and extend Highlander's (1984) findings to adolescents.

No significant differences were found between the adolescents' and parents' lifestyles except in the lifestyle category of Perfectionist for subjects in this study. This finding supports the work of O'Connell (1980), who suggested the importance of the parents' lifestyle on their children's behaviors. O'Connell (1980) found the single-most potent
variable on a daughter's choice of lifestyle to be the influence of her parents' lifestyle. The significantly higher score for parents in the lifestyle of Perfectionist in this study may be further evidence of parents' inclination to maintain autonomy over their adolescents. This need to be in control that these parents exhibit may inhibit the development of their children's social interest.

In Adlerian theory, a pampered child is defined as one who leans on others for success, thus making social interest less likely to develop in a child growing up in a family where the adults are authoritarian and controlling. Furthermore, the Adlerian assumption that many of the expressions and struggles of adolescence are the outcome of the desire to show independence and equality with adults is verified.

The lifestyles of Martyr, Need to Please, and Control from the LS scale make up the second factor extracted in the factor analysis of this study. The Martyr lifestyle is evidenced in the person who blames others; the Need to Please lifestyle is apparent in one who depends on positive feedback from others to survive; and the Control lifestyle is found in those who fear being controlled by others. All three of these lifestyles indicate commonality in the powerlessness evident in each lifestyle as illustrated in the results showing the lifestyle choice of Victim. The depressed adolescents in this study feel powerless in the
roles they play in their family and other social relationships. All but seven of the depressed adolescents in this study could be characterized as possessing a powerless lifestyle which further confirms that a powerless lifestyle choice is a significant underlying factor of depressed adolescents in this study.

The construct of locus of control was used in this study with the assumption that depressed adolescents would be externally motivated. However, no significant difference in locus of control was found between adolescents in this study and the high school students used as subjects to norm the IE scale. The mean score of the depressed adolescents indicated more internal than external orientation. Thus, the results of this study differ from the findings of Lefcourt (1982), Abramowitz (1969), Williams and Nickels (1969), and Miller and Seligman (1973), who found depression linked to an external locus of control. The results of this study also differ dramatically from Ollendick, La Berteaux, and Horne's (1978) study which showed that internal locus of control mothers reported significantly lower authoritarian-controlling attitudes than did mothers with external locus of control. The failure to find a significant difference between depressed adolescents and the normal population of adolescents on locus of control and between adolescents and their parents may be attributed to the testing conditions within this study. The adolescents and parents had
difficulty with the completion of the IE Scale and appeared frustrated during the administration of this test; thus the complexity of the test questions may have influenced the attitude of the sample toward the test and impacted the results.

The findings of greater internal locus of control for subjects in this study also appear to be in conflict with the results in this study regarding the significance of the Victim lifestyle. Depressed adolescents in this study have a strong sense of helplessness and powerlessness. In addition, Factor 2 in the factor analysis procedure showed that one of the descriptors of the depressed adolescent is a lifestyle of powerlessness. The finding of an internal locus of control is also contradicted within this study by the finding of a controlling and authoritarian parenting style. These three significant results may outweigh the data obtained from the locus of control scale.

Other possibilities of the significance concerning the internality on the IE scale shown by both parents and adolescents in this study could further delineate the family environment. The perfectionistic controlling parent may have an internal locus of control based upon a narrow, rather conservative view of life. Also, it might be hypothesized that the depressed adolescents demonstrated a more internal locus of control in dealing with peers or school while in the home felt incapable of confronting more
powerful others. The addictive nature of the IE scale may present conflicting data in the different areas measured on the scale.

Conclusions and Recommendations

Based on the findings of this study, which isolated the family system as a significant factor related to adolescent depression, it seems reasonable to conclude that the environmental approach is a viable operational assumption for the study of adolescent depression.

Further research needs to be conducted to address directly the four isolated factors of family enmeshment, powerless roles, authoritarian parenting, self-critical personalities, and locus of control as antecedents of adolescent depression. Specifically, the hypothesis that parenting techniques that involve a less authoritarian atmosphere might prevent adolescent depression deserves critical developmental attention.

While no particular therapy can be inferred from the results of this study, the way depressed adolescents view themselves as powerless and their parents as controlling, conflicted, and authoritarian should be considered in evaluating any course of behavioral change for the family.

Because this research was an exploratory study, recommendations for further study are warranted. Since the three testing instruments used in this study showed a communality in factors, it would be beneficial for a testing
instrument to be designed that would be less cumbersome than administering three separate tests, or a combination of various subtests in specific areas that showed significant results could be employed. Such an instrument could be valuable in the prevention and description of family environments that may produce depressed adolescents.

Further research is recommended with a broader sample of social and racial classes since parental attitudes have been shown to vary with social class. Future research should also include other parents and siblings in the testing to broaden the understanding of the total family environment and its interrelationships.

While no generalizations can be made to the entire population of adolescents, it can be recommended that the factors isolated in this study should be helpful in analyzing appropriate clinical interventions. Preventative and remedial counseling for families could focus on helping the depressed adolescent feel more powerful and capable of making constructive changes in the family environment. Parents of depressed adolescents could be included in the counseling process since the family system has been shown to be significant in the study of depressed adolescents; moreover, parenting skills could emphasize a more democratic and less authoritarian style. Family counseling for depressed adolescents could focus on conflict resolution to provide the adolescent with an acceptable way to express disagreement.
APPENDIX A

DEPRESSIVE DISORDERS CLASSIFICATIONS
DSM-III DEPRESSIVE DISORDERS CLASSIFICATIONS

1. Depressed Mood, Adjustment Disorder
   309.00

2. Bipolar Disorder, Mixed
   296.6x

3. Bipolar Disorder, Manic
   296.4x

4. Bipolar Disorder, Depressed
   296.5x

5. Major Depression, Single Episode
   296.2x

6. Major Depression, Recurrent
   296.3x

7. Cyclothymic Disorder
   301.13

8. Dysthymic Disorder
   300.40

9. Atypical Bipolar Disorder
   296.70

10. Atypical Depression
    296.82
APPENDIX B

PERMISSION TO CONDUCT STUDY
August 24, 1988

Jayne Warlick, M.Ed., L.P.C.
1307 W. Abram, Suite 211
Arlington, TX 76013

Dear Ms. Warlick:

The Human Investigation Committee has received your research proposal and approved your request. You may begin gathering data at your discretion following the research protocol discussed.

Mr. Bill Gyarfus has agreed to serve as your liaison, his telephone extension is 4028. I will be happy to introduce you to him the next time you are at PI.

We will be looking forward to reading your summary of results.

Sincerely,

Vickie Pflueger, R.N.
Staff Development Coordinator

CC: Bill Gyarfus
Debbie Vanston
July 20, 1988

Jayne Warlick, M. Ed.
1307 West Abram, Suite 211
Arlington, Texas 76013

RE: Research Proposal

Dear Jayne,

I am pleased to notify you that your request to do your research for your dissertation to be done at CPC Millwood Hospital has been approved.

The arrangement for collecting the information needs to be coordinated with the Adolescent Unit Staff.

We are hopeful that you can collect the data needed to complete your research. Please advise us if we can be of further assistance with this process.

Sincerely,

Harry G. Harrier
Administrator

HGH/bh
APPENDIX C

INSTITUTIONAL REVIEW BOARD EXEMPTION
July 25, 1988

Jayne G. Warlick
Box 188
Aledo, TX 76008

Dear Ms. Warlick:

Your proposal entitled "Family Environment, Lifestyle, and Control Factors of Depressed Adolescents and their Families" has undergone review by the IRB and is exempt from further review under 45 CFR 46.101.

If you have any questions, please contact me at 817-565-3946.

Good luck on your project.

Sincerely,

Peter Witt, Chair
Institutional Review Board
APPENDIX D

PARENTAL CONSENT FORM
PARENTAL CONSENT FORM

Dear Parent:

My name is Jayne Warlick, and I am a doctoral student at the University of North Texas in Denton. As a part of my dissertation, I am studying families of depressed adolescents. This research project will attempt to provide more information concerning families of depressed adolescents as well as provide insight with regard to specific approaches to intervention.

The study will take less than 45 minutes of your time, during which you and your hospitalized son or daughter will be asked to complete three assessments designed to provide information concerning family environment. This is a voluntary study and your participation is not required by the hospital, physician or anyone involving your adolescent's treatment. There are no medical, psychological, financial, or social risks associated with your family's participation.

The results of these instruments will be totally anonymous and held in the strictest confidence. The results will be made available to assist the hospital staff only by your approval as listed below. The results will be made available to your family in the summary form if you desire as listed below.

If you are willing for your family to participate, please fill out the bottom portion of this form. Your help in advance is appreciated.

Sincerely,

[Signature]

Jayne Warlick, M.Ed.

Permission Provided by ________________________________

Name of son or daughter ________________________________

I wish to be mailed a summary of results: Yes ___ No ___

I give my permission for the results to be used by the hospital staff in assisting my adolescent ______________________

Today's date __________________
APPENDIX E

ADOLESCENT CONSENT FORM
ADOLESCENT CONSENT FORM

Dear Adolescent:

My name is Jayne Warlick, and I am a doctoral student at the University of North Texas in Denton. As a part of my dissertation, I am studying families of depressed adolescents. This research project will attempt to provide more information concerning families of depressed adolescents as well as provide insight with regard to specific approaches to intervention.

The study will take less than 45 minutes of your time during which you will be asked to complete three assessments designed to provide information concerning family environment. This is a voluntary study and your participation is not required by the hospital, physician or anyone involving your treatment. There are no medical, psychological, financial or social risks associated with your participation.

The results of these instruments will be totally anonymous and held in the strictest confidence. The results will be made available to assist the hospital staff only by your approval as listed below. The results will be made available to your family in a summary form if you desire as listed below.

If you are willing to participate, please fill out the bottom portion of this form. Your help in advance is appreciated.

Sincerely,

[Signature]
Jayne Warlick, M.Ed.

Permission Provided by__________________________

I wish to be mailed a summary of results: Yes___ No___

I give my permission for the results to be used by the hospital staff.________________________________

Today's date__________________________
REFERENCES


Meeting of the Southeastern Psychological Association, Atlanta, GA.


behavior therapy with children (pp. 599-657). New York: Dorsey.


