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PSYCHOLOGICAL, SOCIAL, BIOGRAPHIC, AND BEHAVIORAL PREDICTORS OF MALE ADOLESCENT DRUG ABUSERS' ADAPTATION TO A RESIDENTIAL DRUG TREATMENT PROGRAM AND OF THE OUTCOME OF THEIR TREATMENT

The Ohio State University

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PSYCHOLOGICAL, SOCIAL, BIOGRAPHIC, AND BEHAVIORAL PREDICTORS OF MALE ADOLESCENT DRUG ABUSERS' ADAPTATION TO A RESIDENTIAL DRUG TREATMENT PROGRAM AND OF THE OUTCOME OF THEIR TREATMENT

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Barbara J. Reardon, B.S.W., M.S.
1985

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ACKNOWLEDGMENTS

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My high school in Brisbane, Australia, whose motto "plus ultra" (ever higher) has been an inspiration throughout my life.
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iv
VITA (cont'd)

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CHAPTER I
INTRODUCTION

The transition from adolescence to adulthood is a complex process involving myriad physiological, psychological, behavioral, and interpersonal changes. According to Sutker (1982) this transition is also a period of "vulnerability for the emergence of nonconformity, including drug abuse" (p. 356). Based on information from the media, most people would agree that drug abuse is a serious problem in our country. Although precise figures of adolescent drug abusers are difficult to obtain, available statistics and results of many studies of the past twenty years substantiate these informal impressions (Beschner & Friedman, 1979; Fishburne, Abelson, & Clsin, 1980; The National Institute on Drug Abuse, 1980).

The Bureau of Census determined that in the United States there were 39,541,346 adolescents in the United States (U.S. Department of Commerce, 1980, p. 3 & 7). According to recent statistics of the National Institute on Drug Abuse (1980, p. 4) 51,452 adolescents were admitted to drug treatment programs in the United States in 1980. Figures from that same source (p. 257) indicate that 2,904 of these adolescents were admitted to drug treatment programs in Ohio in 1980. These figures probably underrepresent the incidence and prevalence of actual drug abuse since there is no way of knowing how many...
adolescents who abuse drugs are not participating in drug treatment programs.

The National Institute on Drug Abuse (1980) also reported that the number of adolescents being treated for drug abuse has risen considerably since 1975. However, this increase may be due to a greater accessibility and/or use of those services rather than to increased adolescent drug abuse. Despite the difficulties in estimating the numbers of adolescents who abuse drugs (Sutker, 1982), it is clear that adolescent drug abuse continues to be a serious problem in the United States and that the need for effective drug treatment programs continues to be imperative.

Although the vast majority of research in the area of drug abuse has focused on the correlates and potential causes of adolescent drug abuse (Levine, 1977; Stanton, 1979a; Sutker, 1982), the etiology of drug abuse remains unknown (Peele, 1983; Sutker, 1982). In fact, Sutker (1982) criticizes researchers for their "singular perspectives" (p. 359) and for using primarily cross-sectional designs and univariate models in their attempt to explain drug abuse. While Sutker does not believe that researchers should abandon their search for the causes of drug abuse, she is pointing out that the etiology of drug abuse is probably very complex and involves the interaction of biological, intra-personal, interpersonal, and environmental components. Therefore, at least several of these components need to be examined together rather than looking for single causes.
Given the elusive nature of the etiology of drug abuse, the increasing number of adolescents in drug treatment programs, and the popular belief and research evidence that drug treatment programs have high failure rates (Craig, 1984a; Einstein, 1984a, 1984b), it is important that the primary focus of future research be directed toward empirically evaluating the effectiveness of these programs (Kaufman, 1983; Stanton, 1983). This is no easy task given the many different types of programs (e.g., detoxification, outpatient, inpatient) of varying lengths (thirty days to several years) and also the varying theoretical models on which the programs are based (e.g., Alcoholics Anonymous, Behavioral Modification, Family Systems Model, Psychoanalysis). However, as Nathan (1983) points out, drug treatment is more cost-effective in the long run than is society's having to cope with the problems related to substance abuse (crime, medical costs, loss of people in the work force, and cost of prison care). Therefore, searching for variables which will accurately and reliably predict successful therapeutic intervention is a meaningful and valuable goal.

Numerous researchers have attempted to determine demographic and psychological predictors of treatment outcome (Baekland & Lundwall, 1975; Craig, Rogalski, & Veltri, 1982; Craig, 1984a, 1984b; Keegan & Lechar, 1979; Ward & Hemsley, 1981). However, difficulties have existed in replicating these studies and in generalizing results of these studies to other programs and drug abusers. Results are often not cross-validated with independent samples from the same program and variables which predict treatment outcome (completion versus
dropping out of the program) may change over time (Craig, 1984a). In addition, there is evidence that differences exist among persons who abuse different types of drugs (Penk & Robinowitz, 1982; Sutker, 1982) and these differences may affect treatment outcome. Finally, other factors which could affect treatment outcome (age, education levels, race, voluntary versus forced referral, type of intervention, etc.) need to be taken into consideration. Thus, Sutker's (1982) conclusion about the multidimensionality of the causes of substance abuse is also likely to apply to the predictors of successful completion of drug treatment programs.

A review of some of the outcome studies confirmed Sutker's (1982) observation that researchers tend to have singular perspectives. For example, Craig (1984a, 1984b) and Keegan and Lechar (1979) examined only personality predictors of treatment outcome (using the M.M.P.I. to assess personality dimensions). Other researchers (Craig, et al., 1982; Ward & Hemsley, 1981) looked at demographic or biographic predictors of treatment outcome. What is needed are studies which examine a combination of demographic, psychological, social, behavioral, and program-related predictors of successful completion of drug treatment programs. In addition, researchers need to obtain feedback from drug abusers about how they cope with the requirements of the program as well as their evaluation of the benefits and deficits of these programs.
UNANSWERED QUESTIONS

Craig (1984a) contends that the most important question which future researchers should ask is "Which factors predict treatment dropout, on what type of patient, in which type of program, at which stage of the treatment process?" (p. 352). The present study used this question as a guide and added several important components:

1. Is our view of treatment outcome too narrow?

   Most of the studies discussed earlier had unidimensional criteria for treatment outcome (successful completion versus dropping out of the program). The present study used this criteria but also examined predictors of the drug abusers' adaptation to the drug treatment program over time. This longitudinal perspective filled an existing gap in the literature and also helped determine whether there were critical periods in this program when the drug abusers were likely to drop out of treatment.

2. Will a combination of variables representing different dimensions of drug abusers' lives predict treatment outcome and their adaptation to the drug treatment program better than if only one or two dimensions are examined?

   This study took a holistic approach by examining a combination of psychological, social, personal background, behavioral, and program-related predictors of treatment outcome and the adaptation of drug abusers to the program over time. This approach expands what Sutker (1982) calls the "singular perspectives" (p. 359) of previous researchers.
3. Can drug abusers themselves shed light on the question of why many drug abusers seem to drop out of treatment prior to completion?

Researchers frequently gather data without interviewing the subjects and then form conclusions about why drug abusers fail to successfully complete the program. The subjects of this study were asked to give their feedback about the program and also provided their own estimates of whether or not they were likely to complete the program successfully. This data should be helpful to the clinicians and administrators of the program and this feedback also assisted greatly in interpreting results of this research.

4. Do quantitative outcome studies provide us with enough information to accurately and adequately explain the results obtained?

While traditional, quantitative data analytic strategies are useful for testing research hypotheses, they frequently provide a superficial understanding of the results obtained. The present study used a combination of quantitative and qualitative data to provide a richer and deeper understanding of both treatment outcome and drug abusers' adaptation to this particular drug treatment program. While such an approach is difficult when a larger sample size than the one in this study is used, the qualitative dimension is a necessary one in directing researchers through the maze of potentially reliable
predictors of treatment outcome and adaptation to drug treatment programs.

**Statement of the Problem**

The purpose of this exploratory study is to examine some of the psychological, social, behavioral, biographic, and program-related predictors of adolescent drug abusers' adaptation to a residential drug treatment program over time and also of the outcome of their treatment: successful versus unsuccessful completion of the program.

**Objectives**

1. The primary objective of this study is to examine some of the psychological predictors (self-esteem and coping strategies) of adolescent drug abusers' adaptation to a residential drug treatment program over time and also to the outcome of their treatment.

2. The second objective of this study is to determine how the types and dependability of the subjects' sources of social support are related to their adaptation to the program over time and also to the outcome of their treatment.

3. The third objective of this study is to examine the relationship between specific behavioral, program-related variables and subjects' adaptation to the program over time and also to the outcome of their treatment.
Variables

Dependent Variables
1. Subject's adaptation to a residential drug treatment program over time.
2. Subjects' outcome of treatment: successful or unsuccessful completion of the program.

Primary Independent Variables
1. Self-esteem
2. Coping strategies
3. Social support

Secondary Independent Variables
1. Age of subject
2. Education level of subject
3. Subject's primary drug of abuse
4. Subject's probability estimate that he will complete the program successfully
5. Clinicians' probability estimate that the subject will complete the program successfully
6. Amount of jail time served by the subject prior to his admission to the program
7. Amount of jail time faced by the subject if he fails to complete the program successfully
8. Total number of major violations of rules
Research Hypotheses

1. The psychological independent variables (self-esteem and the average frequency of use of six types of coping strategies) will significantly discriminate between subjects who complete the program and subjects who do not complete the program.

2. Subjects' levels of self-esteem and the average frequency of their use of the types of coping strategies for dealing with daily problems at the program will account for a significant proportion of the variance in their adaptation to the program over time.

3. There will be a significant positive relationship between subjects' levels of self-esteem and both their adaptation to the program over time and their completion of the drug treatment program (see Appendix A).

4. Subjects' reported use of coping strategies for dealing with daily problems at the program will be significantly related to both their adaptation to the program over time and to the outcome of their treatment (see Appendix B).

   a. There will be a significant positive relationship between the average frequency of the subjects' use of positive coping strategies (optimistic comparisons, negotiation, positive-avoidance, and selective-ignoring) and both their adaptation to the program over time and to the outcome of their treatment.

   b. There will be a significant negative relationship between the average frequency of subjects' use of negative coping
strategies (negative-avoidance, acting-out, and resignation) and both their adaptation to the program over time and the outcome of their treatment.

5. Subjects' sources of social support will be significantly related to their adaptation to the program over time and to the outcome of their treatment (see Appendix D).
   a. Subjects who use non-substance-using sources of social support will be significantly more likely than will subjects who use substance-using sources of social support to both adapt well to the program and to complete the program successfully.
   b. Subjects who perceive their sources of support as more dependable will be significantly more likely to adapt well to the program and to successfully complete the program than will subjects who perceive their sources of social support as less dependable.

6. There will be a significant positive relationship between the amount of pass time (hours in the community each week) received by subjects and their successful completion of the program (see Appendix E).

7. The types of major violations of program rules will significantly discriminate between subjects who complete the program and subjects who fail to complete the program (see Appendix E).

8. The types of major violations of program rules will account for a significant proportion of the variance in subjects' adaptation to the program over time.
There will be a significant negative relationship between subjects' frequency of violations of program rules and their completion of the program (see Appendix E).

**Additional Research Questions**

The interrelationship between the independent variables and the dependent variables was examined in more depth once the testing of the research hypotheses was completed. Additional analyses were conducted to determine whether the types of coping strategies generated by the subjects for dealing with hypothetical, yet realistic situations were related to either their adaptation to the program over time or to the outcome of their treatment. Various aspects of the relationship between subjects' sources of social support and the dependent variables were also examined in more depth. For example, analyses were completed to determine whether subjects' perceptions of their parents' supportiveness for subjects' completion of the program were significantly related to the dependent variables.

Finally, specific questions about the program were addressed (e.g., Are there critical times during the program when subjects are likely to be terminated unsuccessfully from the program?). These additional research questions were exploratory in nature. However, the results should be beneficial both to the clinicians at this program and to researchers who will conduct future outcome research on drug treatment programs.
Assumptions

1. Human behavior is complex and therefore, multiple factors covering many dimensions of persons' lives are better than are single factors in predicting both adaptation to drug treatment programs over time and also the outcome of treatment.

2. Types of coping strategies used in a given situation are relatively stable over time and can be used to predict future behavior in similar situations.

3. Self-esteem increases in stability with age and is fairly resistant to change.

Definitions

Adolescence

Newman and Newman (1979) define adolescence as the period of life from puberty through the early twenties. Subjects who are between the ages of 15 and 24 will be referred to as adolescents since this is the age range for adolescents who were treated in the drug treatment program which was used for this study.

Drug Abuse

Drug abuse will be defined as "taking drugs in a manner that is organically or psychologically destructive, either because of the nature of the drug used or the quantity consumed (Levine, 1977, p. 284). Adolescents at the drug treatment program which was used in this study all fit this criteria and therefore will be called drug abusers."
Adaptation

Coulter and Morrow (1978) define adaptation as "the manner in which persons perform the tasks expected of their particular age group" (p. 3). Adaptation to the residential drug treatment will be defined as behavioral ways in which the subjects perform (or fail to perform) the tasks expected of them in order to progress through the levels of the program within the time periods specified for each level. Higher levels of adaptation over time will be evidenced by a greater amount of pass time (hours in the community) over time. The number of hours of pass time received by subjects each week is inversely related to the number of minor and major violations of program rules. Accumulated totals for the amount of pass time received by subjects at the end of five weeks, fifteen weeks, twenty-five weeks, and thirty-five weeks were used to operationalize adaptation over time.

Self Esteem

Self-esteem is the degree to which individuals evaluate themselves positively (Rosenberg, 1979). Persons with high levels of self-esteem tend to evaluate themselves positively overall, while persons with low self-esteem tend to feel inadequate and tend to rate themselves negatively overall. The total score on the Rosenberg Self-Esteem Scale was used to operationalize self-esteem in this study (Rosenberg, 1979).

Coping

Coping will be defined as "any response to external life strains that serves to prevent, avoid, or control emotional distress"
Subjects’ perceptions of the frequency of which they use various coping strategies to deal with daily problems at the program were used to operationalize coping.

Social Support

Social support is defined as the giving of "support, advice, or assistance in times of distress" (Gourash, 1978). In this study the definition was expanded to include sources of social support who would be sought by subjects not only when they have personal problems or are depressed, but also when they have very good news.

Limitations

Several threats to the external validity of the study exist:

1. The sample was limited to 30 white, single, male, adolescent drug abusers who had been referred to the program by the criminal justice system. Since this is not a representative sample of adolescent drug abusers (subjects are taken from an established group instead of being randomly selected), the results may not be generalizable to non-caucasian, female, or married adolescent drug abusers who are not referred by the criminal justice system. In addition, results may not be generalizable to adolescent drug abusers who receive either outpatient treatment or no treatment. However, the small sample size and the inability to randomly select subjects are products of the setting since the program can only treat forty drug abusers at a given time.
2. No control groups were used in this study because the purpose of the study was to determine which factors predict adaptation to the program and treatment outcome at one specific program with a specific type of drug abuser (Craig, 1984a).

3. The subjects who volunteered for the study may be different from those adolescent drug abusers who did not volunteer for the study and this may also affect the generalizability of the results. Several threats to the internal validity of this study exist:

1. The facts that subjects varied in age (16-24) and were at different stages of the program when the interviews were conducted represent threats to the internal validity of the study. It is likely that older subjects will be different than younger subjects and that subjects who have been in the program longer will be different from subjects who are in the earlier stages of the program. The effects of age and stage in the program were tested as part of the analyses of the data.

2. Other extraneous variables which cannot be controlled may affect the subjects' levels of adaptation to the program over time and the outcome of their treatment (e.g., individual differences among clinicians at the program). However, the highly structured nature of the program increases the control of these extraneous variables. In addition, all of the interviews were conducted in as short a time as possible to decrease the influence of extraneous variables.

3. Differential mortality was not a threat to the internal validity of this study because none of the subjects who volunteered
dropped out of the study. One subject did not give his permission for us to obtain information about his criminal background, but complete data sets exist for all other subjects.

4. Measurement error which represents a threat to the internal validity of this study was reduced because all of the instruments were pretested in a pilot study and also because the instruments were administered in the same order for all subjects.

**Summary**

This introductory chapter focused on the need for further research in examining which psychological, social, behavioral, biographic, and program-related variables predict adolescent drug abusers' adaptation to and completion of specific drug treatment programs. The present study provides quantitative and qualitative data to help fill this existing gap in the literature. The two dependent variables include 'adaptation to the program over time' and 'outcome of treatment (successful or unsuccessful completion of the program)'. The primary independent variables are self-esteem, coping strategies, and social support. Additional secondary independent variables related to the subjects' personal background and their behavioral performance in the program were presented. Finally, the objectives of the study, the research hypotheses, additional research questions, the assumptions, definitions of terms, and limitations of the study were discussed.
CHAPTER II
REVIEW OF LITERATURE

Adolescent Drug Abusers

Most of the research in the area of adolescent drug abuse has focused on the correlates and potential causes of drug abuse (Levine, 1977; Stanton, 1979a; Sutker, 1982). Other related areas of researchers' focus have included a description of demographic characteristics of adolescent drug abusers (Green, 1979; Sutker, Archer, & Allain, 1978; the National Institute on Drug Abuse, 1982), personality characteristics of adolescent drug abusers (Brook, Whiteman, & Gordon, 1983; Burke, Zilberg, Amini, Salsnek, & Farkin, 1978; Craig, 1984a; Sutker, et al., 1978; Winstead, Whitworth, & Lawson, 1981; Wright, 1977), families of drug abusers (Alexander & Dibb, 1977; Burke & Amini, 1981; Harbin & Mazlar, 1975; Kaufman, 1981; Klagsbrun & Davis, 1977; Stanton, 1979a, 1979b), and treatment of adolescent drug abusers (Burke & Amini, 1981; Craig, 1984a; Kllinge, Vaziri, & Lennox, 1976; Smith, Levy, & Stilar, 1979). In the following section, a brief summary of the research related to the demographic, personality, and family-related characteristics of adolescent drug abusers will be presented. Studies related to the treatment of adolescent drug abusers will be examined in more depth in a separate section.
Characteristics of Adolescent Drug Abusers

While studies in the 1970's indicated that more male than female adolescents were likely to abuse drugs (Smart & Fejer, 1972) and that more white than black adolescents were likely to abuse drugs (Sutker, et al., 1978), more recent studies indicate that race and sex differences may be subsiding (Green, 1979; Smart & Blair, 1980, Sutker, 1982). The National Institute on Drug Abuse (1982) reported that adolescent drug abusers are more likely to come from higher than from lower socioeconomic brackets. Results of this national study and a study conducted by Slobody (1982) indicated that significantly more youngest children have been found to use drugs than have either oldest or middle children. The process of compiling accurate demographic statistics is likely to be hampered by varying delineations of which ages are included in the adolescence period, failure on the part of researchers in specifying how they operationalized "drug abuse", and an understandable reluctance on the part of adolescents in admitting to abuse (or even use) of drugs.

A review of the literature revealed that adolescent drug abusers and their families are typically viewed very negatively by researchers (Einstein, 1981). Adolescent drug abusers are usually described in pathological terms. For example, drug use has been related to adolescents' "depression, Interpersonal maladjustment, sociopathy, and other disorders" (Sutker, 1982, p. 362); low self-esteem (Ahlgren & Norem-Hebelsen, 1979; Cohen, 1977; Reardon & Griffing, 1983; Wishnie, 1977) and extreme dependence on their
parents (Alexander & Dibb, 1977; Burke & Amini, 1981; Stanton, 1979a; Stanton, et al., 1978). While these descriptions may be accurate, the paucity of descriptions of these adolescents' positive characteristics is glaring.

Researchers' emphases on negative attributes also extends to their descriptions of the families and family interaction patterns of adolescent drug abusers. For example, numerous researchers have described adolescent drug abusers' relationships with their parents and other family members as being significantly impaired (Alexander & Dibb, 1977; Ben-Yehuda & Schindell, 1981; Burke & Amini, 1981; Kaufman, 1981; Klagsbrun & Davis, 1977; Lassey & Carlson, 1980; Stanton, et al., 1978; Stanton, 1979a, 1979b). Parents (particularly mothers) of adolescent drug abusers have been consistently described in negative terms. Kaufman (1981), Klagsbrun and Davis (1977), Stanton, et al. (1978), and Stanton (1979a) have described these mothers as very dominant, very over-protective of, and over-involved with their drug-abusing children. Fathers of adolescent drug abusers have been consistently viewed as weak, emotionally distant, minimally involved with the adolescent drug abusers, or are physically absent from the home (Harbin & Mazlar, 1975; Kaufman, 1981; Stanton, 1979a). Rarely, if ever do researchers attempt to focus on positive qualities of these parents.

The implication of these negative descriptions of adolescent drug abusers and their parents is that somehow their inter-personal and intra-personal pathology causes the drug abuse. In reality, the etiology of drug abuse is unknown (Hatterer, 1982; Peele, 1983;
Sutker, 1982). Sutker (1982) contends that the causes of substance abuse are likely to be very complex, involving the interaction of biological, intra-personal, inter-personal, and environmental components. In addition, the generalizability of these negative results is limited since most the research on drug abusers has been conducted with narcotic abusers in clinical settings (Goldstein, Surber, & Wilner, 1984). According to Sutker (1982) abusers of narcotics (e.g., heroin) represent only a small percentage of the drug abusing population. Hetterer (1982) cautions that there is no single addictive personality and Einstein (1982) contends that drug abusers are not a homogeneous group. Nevertheless, many researchers assume that these negative results hold true for all types of drug abusers.

Einstein (1981, 1984a) argues that the current undifferentiated picture of drug abusers as having predominantly pathological characteristics has influenced clinicians in believing that the prognosis for successful therapeutic intervention will be very poor. Einstein (1984a) further contends that the reported high failure rates of drug treatment programs may be a product, at least in part, of clinicians' sabotaging (perhaps unconsciously) the treatment process because they fear that "they (drug abusers) would become like us" (p. vi). Cohen, Griffen, and Wiltz (1982) provide empirical support for Einstein's speculations. These researchers found that non-drug-using subjects in their sample grossly overestimated drug-using subjects' levels of pathology. Cohen, et al. (1982) suggested that negative stereotyping of drug abusers may "act as a
negative influence in establishing a positive therapist-client relationship" (p. 375).

The present study adds to the existing literature in two important ways: (1) It focuses on variables which represent several different dimensions rather than only one dimension (e.g., personality characteristics) of adolescent drug abusers. (2) It examines the potential strengths as well as the potential weaknesses of adolescent drug abusers. For example, the frequency of use of both positive and negative coping strategies was examined.

**Outcome of Treatment**

An increasing number of researchers have attempted to find reliable predictors of drug abusers' successful completion of drug treatment programs (Baekland & Lundwall, 1975; Craig, 1984a; Goldstein, et al., 1984; Keegan & Lacher, 1979; Ward & Hemsley, 1981). However, few outcome studies have been done using adolescent subjects, particularly those below age eighteen (Goldstein, et al., 1984; Sutker, 1982). For example, in their review of 2,231 substance abuse treatment outcome studies Goldstein, et al. (1984) found only ten studies which focused specifically on subjects between ages 1-18. These researchers point out that part of the difficulty lies in researchers' tendencies to either fail to specify ages of their subjects or to broadly describe their subjects as adults or youth.

There are other factors which account for the underrepresentation of outcome studies on adolescent drug abusers. Smith, et al. (1979) and Sutker (1982) reported that most drug treatment programs provide
services for adult rather than for adolescent substance abusers. According to Winslow (1976), by the time adolescent drug abusers do receive treatment their drug problems are likely to be chronic and they are likely to have criminal records. Therefore, fewer opportunities exist for studying adolescent drug abusers in treatment programs. In addition, when they are studied, the prognosis for successful intervention is likely to be poorer than if treatment had been available before the drug problem became chronic. An additional problem which was not cited by Goldstein, et al. (1984) or Sutker (1982), but which was a factor in the present study is that researchers may have difficulty obtaining parental consent for adolescents under age eighteen to participate in research. Nevertheless, researchers need to find ways to combat the problem of underrepresentation of adolescents in drug treatment outcome studies.

According to Craig (1984a) and Goldstein, et al. (1984), drug abuse outcome studies have been plagued with methodological difficulties. Goldstein, et al. (1984, p. 479) cite "lack of control groups, prospective designs, adequate outcome measures, and insufficient follow-up" as the major problems which existed in the outcome studies they reviewed. Craig (1984a) adds that drug abuse outcome research results frequently and consistently fail to be replicated in other studies with other programs. While similarities exist among drug abusers' personalities and family interaction patterns (Craig, 1984a; Kaufman, 1983; Peele, 1983), there is also evidence that significant differences exist among persons who abuse different types of drugs (Penk & Robinowitz, 1982; Reardon &
Griffing, 1983). Craig (1984a) suggests that the replication difficulties could be resolved if researchers would compare results of studies which use programs with similar models of drug treatment and comparable average lengths of stay, and which treat persons who abuse the same types of drugs. Therefore, results of outcome studies of thirty-day detoxification programs for heroin abusers would not be compared with results of outcome studies of six-month behavior modification residential programs for polydrug abusers.

The present study contained some of the methodological flaws cited by Craig (1984a) and Goldstein, et al. (1984): no control group, use of a retrospective design, lack of focus on follow-up, and no cross-validation on independent samples. However, use of a residential drug treatment program (which allows for greater control over subjects than do outpatient programs) fills a gap in the literature since less than half of the studies reviewed by Goldstein, et al. (1984) were conducted in inpatient settings. Goldstein, et al. (1984) also reported that over 60% of these studies used narcotic abusing subjects. Therefore, the use of a polydrug abusing sample (excluding heroin) in this study is an important addition to the existing drug treatment literature.

Another difficulty with existing outcome research lies in the tendency of researchers and clinicians to use a uni-dimensional criterion for success: abstinence from drugs. For example, in Goldstein, et al.'s (1984) review of the outcome research, 62.5% of the studies used abstinence from drugs or alcohol as the only indicator of successful therapeutic intervention. While abstinence
should remain an important goal of treatment, Goldstein, et al.'s criticism of these studies is an important one because it reminds researchers and clinicians that there are many other dimensions of drug abusers' lives which may be positively affected by treatment. When people receive therapy for depression, clinicians do not insist that those persons remain depression-free for the rest of their lives in order for therapy to be considered successful. However, few researchers or clinicians view decreasing drug use so that it does not interfere with individuals' personal and/or interpersonal functioning (i.e., their adaptive behavior - Leland, 1978) as a worthwhile goal. Such a perspective would mean viewing success on a continuum rather than as a dichotomy. The drug treatment program used in this study uses abstinence from drugs as a major criterion for successful completion of the program. However, the drug abusers must also demonstrate sufficient adaptive functioning in the work or school, therapeutic, and interpersonal areas of their lives before they can achieve successful completion of the program.

Researchers who have examined the outcome of treatment of drug abusers have generally focused on demographic, biographic, or personality predictors of outcome (Baekland & Lundwall, 1975; Craig, 1984a, 1984b; Craig, et al., 1982; Fourman, Parks, & Gardin, 1981; Keegan & Lachar, 1979; Ward & Hemsley, 1981; Zuckerman, Sola, Masters, & Angelone, 1981). Boor (1981) found that adult drug abusers were more likely to complete a long-term residential program if they had higher educational levels and if they had received prior drug treatment. Most of these studies found that persons who had
higher scores on personality tests which measured psychopathology were less likely to complete drug treatment programs. Lin (1975) found that higher degrees of both psychopathology and of sociopathic traits were predictive of dropping out of treatment. However, Craig (1984b) found no significant differences on personality tests between persons who completed drug treatment and persons who dropped out of treatment. He suggests that environmental predictors of treatment outcome may be more reliable than are scores on personality tests, particularly since the latter do not maintain their predictive accuracy over time and across samples. Interestingly, in a separate study, Craig, et al. (1982) were able to predict 75% of the time who would drop out of a drug treatment program by knowing how often the primary therapist was present.

The review of this literature pointed to the need for further research to find accurate and reliable predictors of treatment outcome, particularly for adolescent drug abusers who are underrepresented in both treatment programs and outcome studies. Research in this area is valuable and meaningful since drug treatment is more cost-effective in the long run than society's having to cope with drug abuse-related problems of medical costs, absenteeism at work, and crime (Nathan, 1983). In the present study, the quantitative and qualitative data generated by in-depth interviews with the subjects went beyond the work of previous researchers who used primarily factual data without interviewing the subjects. In addition, the data provided valuable direction for future researchers.
as they struggle through the maze of potential predictors of drug treatment outcome.

**Adaptation**

**Conceptual Issues**

Coulter and Morrow (1978) use a developmental perspective to broadly define adaptive behavior as "the manner in which persons perform the tasks expected of their particular age group" (p. 3). Other researchers link adaptive behavior with the degree of effectiveness of individual's coping strategies (Hamburg, Coelho, & Adams, 1974; Lazarus, Averill, & Opton, 1974; Leland, 1978; Menaghan, 1982, 1983; Newman, 1979; Pearlman & Schooler, 1978). While Mechanic (1974) clearly specifies the components of adaptation for his model, he uses adaptation interchangeably with mastery and coping without adequately differentiating among the concepts. Such a distinction is necessary when researchers try to operationalize and measure adaptation. White (1974) provides a theoretical solution to this ambiguity by specifying that adaptation is the "master concept" with coping and mastery being "strategies of adaptation" (p. 47).

Another area of focus has been on the adequacy of the person-environment fit as a very important component of adaptation (Leland, 1978; Mechanic, 1974; Walsh, 1973). Leland (1978) and Mechanic (1974) emphasize the importance of determining the degree to which individuals have the necessary coping skills, capabilities, and motivation for successful adaptation to environmental demands. According to Leland (1978), individuals who are not adapting
successfully according to these criteria are typically more visible to the public.

Adaptation of Adolescent Drug Abusers

Adolescent drug abusers become visible when they do not have the ability or skills to adapt to societal standards for appropriate behavior (e.g., when they are "high") and also when their low motivation to adapt to societal demands results in visible behavior which, as Leland (1978, p. 33) puts it "falls outside the range of social tolerance" (e.g., when they engage in illegal activities). In some cases (e.g., first offenders) individuals who fall outside this range are allowed to remain in their environment, while in other cases (e.g., the subjects of this study) they are placed in institutions (jails, residential drug treatment programs, etc.) for specified time periods. In the case of residential drug treatment programs, adolescent drug abusers successfully complete the program when they have been able to consistently demonstrate that their visible behavior now falls within the socially acceptable range of adaptation.

In the drug abuse literature, adaptation is often referred to directly or indirectly, but is seldom defined, operationalized, or measured. Einstein (1980) points out that many clinicians view drug use "as a natural consequence of coping and adaptation" (p. 111), but he fails to delineate what those concepts mean. However, like the researchers mentioned above, Einstein does emphasize that future research on adaptation should focus on the relationship between drug
abusers and their environments rather than just on individual drug abusers.

Stanton (1979a) concludes that "drug use is concomitant of adaptation to stages of the family developmental life cycle" (p. 6), but he does not define adaptation. Kaufman (1981), Klagsbrun and Davis (1977) and Stanton (1979a) also contend that drug abuse can serve the adaptive function of distracting all family members from both intra-personal and inter-personal conflicts. Finally, Charlesworth and Dempsey (1982) contend that "it has been possible to specify the lack of adaptive resources to manage life stress and subjective distress as a prominent personality deficit in many substance abusers" (p. 765). Although the concept of adaptation is central to all of these analyses, it is never adequately defined.

Coulter and Morrow's (1978) description of adaptation was used as a basis for defining adaptation in this study (see page 26). Adaptation to the residential drug treatment program was conceptually defined as the manner in which adolescent drug abusers perform the tasks expected of them in order to progress through the various stages of the program. Adaptation was operationalized as "the number of hours adolescents are allowed to spend in the community each week" throughout the course of treatment. Higher levels of adaptation over time are evidenced by a greater amount of pass time in the community. However, based on the manner in which the program is structured, the amount of pass time received by adolescent drug abusers each week is negatively related to the frequency with which they violated major and minor program rules. A positive measure of adaptation was used
In order to respond to the previously discussed criticism that researchers tend to only focus on pathological components of drug abusers' lives (Einstein, 1981).

**Factors Related to Adaptation to Treatment**

**Self-Esteem**

**Conceptual Issues:** Researchers and theorists generally agree that one of the primary tasks in adolescence is the process of revising and solidifying adolescents' self-concepts (Newman & Newman, 1979; Randolf & Dye, 1981). According to Rosenberg (1979) the self-concept is broadly defined as "the totality of an individual's thoughts and feelings having relevance to himself as an object" (p. 7). Rosenberg (1979) and other researchers (Epstein, 1980; Newman & Newman, 1979; Pearlin, Lieberman, Menaghan, & Mullan, 1981) consider self-esteem to be a very important component of the self-concept. However, Rosenberg (1979) contends that most researchers and clinicians use the term "self-concept" when they are actually talking about self-esteem (individuals' positive or negative evaluations of themselves).

In general, persons with high levels of self-esteem feel worthwhile and tend to evaluate themselves positively overall, while persons with low levels of self-esteem feel inadequate and tend to evaluate themselves negatively overall (Rosenberg, 1979). Epstein (1980), Rosenberg (1979) and Pearlin, et al. (1981) contend that many of individuals' daily activities center around protecting and enhancing their levels of self-esteem. In addition, Epstein (1980),
Rosenberg (1979), and Wylie (1974) cite evidence which demonstrates a strong relationship between positive levels of self-esteem and effective personal adaptation. Finally, Hamburg, et al. (1974) and White (1974) emphasize the importance of maintaining high levels of self-esteem if any adaptive strategies are to be effective.

**Self-esteem of Adolescent Drug Abusers:** One of the most consistent results of drug abuse research is that adolescent drug abusers have significantly lower levels of self-esteem than do adolescent non-drug users (Ahlgren & Norøm-Hebelsen, 1979; Reardon & Griffing, 1983; Rees & Wilborn, 1983; Sutker, 1982; Svobodny, 1982; Wishnie, 1977; Wright, 1977). Stanton's (1979a) review of the drug abuse literature supports this result. Lund and Salary (1980) found that the adjudicated juvenile offenders in their study had significantly lower self-esteem scores than did the adolescents who had no prior criminal records. Since the adolescents in the present study have prior criminal records (they are referred to the drug treatment program by the criminal justice system) and are also drug abusers, it is expected that their levels of self-esteem will be consistent with these research results.

Clinicians at the residential drug treatment program under current investigation reported in a pilot study that many of the adolescents in their program have low levels of self-esteem. They also reported that these low levels of self-esteem appear to frequently be associated with certain behaviors (e.g., drug use, running away from the program, etc.) on the part of the adolescents.
which may further exacerbate those low levels of self-esteem and may result in their being reincarcerated. Burke and Amini (1981) observed this self-fulfilling prophecy (which they called "Jailification") in their sample of adolescents who were receiving residential drug treatment. These results appear to confirm Epstein's (1980) contention that self-esteem is very resistant to change and "tends to function as a self-fulfilling prophecy" (p. 106). This stability of self-esteem appears to increase with age (Kawash, 1982; Rosenberg, 1979).

Kaplan (1978, 1980) would disagree with the above researchers' and clinicians' beliefs that additional deviant behavior (e.g., substance abuse) inevitably further reduces the adolescents' levels of self-esteem. Kaplan (1978) cites evidence which supports his theory that under certain circumstances (e.g., males from higher SES categories) deviant behavior enhances rather than decreases adolescents' self-esteem. He contends that self-esteem will be enhanced if the deviant behavior is perceived by those adolescents as valued rather than devalued by persons in their social group. Thus, according to Kaplan, even if adolescents initially had high levels of self-derogation (which presumably are a result of receiving consistent devaluing messages from significant others), their present valued involvement in a group which condones deviance may prevent their levels of self-esteem from deteriorating further.

Research which was cited earlier emphasized the importance of maintaining high levels of self-esteem if adaptive strategies are to be effective (Hamburg, et al., 1974; White, 1974). In Kaplan's
(1978) study it is unclear whether the enhanced levels of self-esteem contributed to or were a product of adaptation to the group which valued deviant behavior. However, Kaplan does conclude that involvement in that group may have helped protect the adolescents' self-esteem from further deterioration by society's devaluation of deviant behavior. Zieman and Benson (1983) found support in the results of their study for Kaplan's theory.

Since Epstein (1980) and Rosenberg (1979) believe that changes in individuals' levels of self-esteem can have a significant impact (either positive or negative) on their self-concepts and since Kaplan (1980) found that low self-esteem preceded delinquency and Ahlgren and Norem-Hebelsen (1979) concluded that low self-esteem preceded drug use in their sample, it is imperative that clinicians focus on helping adolescent drug abusers improve their levels of self-esteem. The relationship between adolescent drug abusers' levels of self-esteem and their degree of success in adapting to a residential drug treatment program has not been investigated by previous researchers and was an important focus of the present investigation.

Coping

Conceptual Issues: Coping is a concept which clinicians and researchers use frequently, but which has been described as being very difficult to define, operationalize, and measure (Fleming, et al., 1984; Menaghan, 1982, 1983; Pearl in, et al., 1981; Stone & Neale, 1984). Numerous researchers describe coping as having behavioral and intra-psychic components (Folkman & Lazarus, 1980;
Lazarus, 1966; Lazarus, et al., 1974; Lazarus & Launler, 1978; Menaghan, 1983; Pearl In, et al., 1981; Pearl In & Schooler, 1978). In addition, these researchers and others (Billings & Moos, 1984; Fleming, et al., 1984; Folkman, 1984) contend that cognitive appraisal of the stressful situation, the meaning of that situation to the individual, and the potential effectiveness of various coping strategies is an essential component of the coping process. However, part of the difficulty in researching this concept lies not only in the lack of consensus about how to define coping, but also the presence of a diverse array of terms and foci (e.g., coping styles, types, strategies, efforts, responses, resources, functions, effectiveness). Some of these definitions and terms will be briefly presented.

Pearlin and Schooler (1978) broadly define coping as "any response to external life strains that serves to protect, avoid, or control emotional distress" (p. 3). These researchers further contend that self-esteem, mastery, and social support are resources which are "available to people in developing their coping repertoire" (p. 5). Menaghan (1983) describes generalized coping resources as including psychological, interpersonal, and intellectual components. Thus, her way of defining coping resources is similar to that of Pearlin and Schooler. Menaghan (1983) also distinguishes between situation-specific coping efforts and habitual coping strategies. Lazarus, et al. (1974), on the other hand, describe coping as "problem-solving efforts" (p. 250), while Cohen and Lazarus (1979) discuss coping tasks which are designed to control many facets of
Individuals' lives. Coping is a complex and multidimensional concept, but the different definitions and terms used make interpretation of and generalization of research results even more difficult. In addition, research has been hampered by the paucity of instruments for measuring coping (Moos & Billings, 1982). Various research focuses in this area will now be examined.

**Coping Effectiveness:** Menaghan (1983) contends that "Implicit in the concept of coping...Is the notion of effectiveness" (p. 3), while Folkman (1984) argues that "the effectiveness of any given coping strategy Is not inherent In the strategy" (p. 843). Thus, Folkman (1984) views effectiveness as an outcome of using a given coping strategy. These disagreements between researchers further emphasize the complexity of the concept of coping.

Pearlin and Schooler (1978) state that the efficacy of coping responses must be based on how well those responses prevent 'hardships from resulting In emotional distress" (p. 8) and not just on how well they modify or eliminate stressful situations. Therefore, Pearlin & Schooler (1978) and Pearlin, et al. (1981) judged coping to be effective if it directly or indirectly alleviated intra-psychic symptoms of distress (anxiety, depression, etc.). Billings and Moos (1984) also determined that certain coping strategies were effective if they reduced depression. In addition, Pearlin and Schooler (1978) found that individual's efforts to use negotiation as a coping strategy were most effective In the areas of parenthood and marriage and were least effective In dealing with
occupation-related problems. Thus, the effectiveness of coping may vary depending on the situation, the role area, and individuals' cognitive appraisal regarding how much control they believe they have in a given situation (Folkman, 1984). Finally, Pearlin and Schooler (1978) found that more effective copers in their sample had both a variety of coping strategies and a "reservoir of (psychological and social) resources" (p. 12).

Menaghan (1982, 1983) contends that the effectiveness of coping can only be adequately assessed via longitudinal rather than cross-sectional designs. Many researchers appear to rely on subjects' reports about the effectiveness of their coping strategies (e.g., Billings & Moos, 1984; Horowitz, 1978; McCubbin, et al., 1976). However, Menaghan (1982) contends that researchers should confirm subjects' self-reports by using observational methods or by interviewing significant others in the subjects' environment. In addition, Menaghan (1983) points out that the more frequently used coping strategies may not necessarily be perceived by subjects to be the most effective ones. This suggests that habitual coping strategies are difficult to change even if subjects recognize that other strategies are more effective.

The present study examined the relationship between the frequency with which both positive and negative coping strategies are used by the adolescents in this sample and their levels of adaptation to the residential drug treatment program over time. In addition, the relationship between the frequency of use of coping strategies which were perceived by the subjects to be most (and least) effective in
dealing with daily problems at the program and their levels of adaptation to the program over time was investigated. However, the subjects' criteria for effective coping may be different from the program's criteria for effective coping (e.g., drug use may be considered effective coping by adolescent drug abusers, but would not be considered effective coping by clinicians at the program or by society). Menaghan (1983) points out that coping effectiveness and maturity of coping styles appear to be positively related, but this may not always be the case as this example demonstrates. Although the subjects' perceptions of effective coping strategies were assessed, higher levels of adaptation to the program should be found with those subjects whose use of coping strategies more closely approximates the criteria for effective coping which is used at the program.

Coping and Adaptation: As discussed earlier, numerous researchers link coping and adaptation in some way (Fleming, et al., 1984; Folkman, 1984; Hamburg, et al., 1974; Lazarus, et al., 1974; Leland, 1978; Mechanic, 1974; Newman, 1979, White, 1974). In addition, the emphasis of researchers on coping effectiveness (discussed in the previous section) is clearly linked to successful personal adaptation in a variety of role areas.

White (1974) considers coping to be an adaptive strategy which is used with "a fairly drastic change or problem that defies familiar ways of behaving..." (p. 48). Lazarus (1966) and his colleagues have examined the "adaptational outcomes" of the coping process (Folkman,
1984, p. 839). Unlike White (1974) and Billings and Moos (1984), Pearlin and Schooler (1978) do not look at coping with drastic events or problems, but instead focus on "normative coping responses to normative life problems" (p. 2) in the areas of parenthood, marriage, and occupation. Stone and Neale (1984) focused on how individuals cope with problems on a daily basis. Thus, Pearlin and Schooler and Stone and Neale (1984) appear to use coping in a similar way to White's broader definition of adaptation (as the "master concept") which was discussed earlier. In the present investigation, the focus will be on how adolescent drug abusers cope with daily problems at the program rather than with more drastic events (e.g., death of a loved one).

Types of coping have been implicated in affecting successful adaptation to problems in various role areas. Pearlin and Schooler (1978) contend that various types of coping strategies are associated with three different functions of coping: (1) the modification of the stress-producing situation (e.g., negotiation in marriage), (2) the modification of the meaning of problems in an attempt to reduce their threat (e.g., optimistic comparisons), and (3) the management of stressful intra-psychic symptoms (e.g., resignation). Pearlin and Schooler (1978) determined that avoidance and withdrawal were the types of coping strategies which were least effective in dealing with marital and parenting problems.

Menaghan (1982), identified four types of coping (optimistic comparisons, negotiation, selective ignoring, and resignation) in her study of marital coping efforts. Her results indicated that only
optimistic comparisons were positively related to current low levels of distress and also fewer problems four years later; selective ignoring and resignation increased levels of distress at Time One and were related to greater problems later; and negotiation did not reduce initial levels of distress, but was associated with fewer problems four years later. Billings and Moos (1984) found that subjects who used problem-solving and affective-regulation types of coping strategies were less depressed than were subjects who used emotional-discharge and avoidance coping strategies. Thus, the type of coping strategy used can affect both intra-personal and inter-personal adaptation in a variety of role areas and with different problems.

This review of the literature indicates that there appear to be theoretical and empirical bases for examining the relationship between coping and adaptation to this study. The items on one of the coping measures (see Appendix B) which were used in this study reflect the following six types of coping strategies: (1) optimistic comparisons, (2) negotiation, (3) selective-ignoring, (4) resignation, (5) acting-out, and (6) avoidance. The last type of coping strategy was further divided into positive-avoidance strategies and negative-avoidance strategies. These types were selected based on both data generated in the pilot study and also results of studies conducted by previous researchers (Pearlin & Schooler, 1978). Both the subjects who participated in the pilot study and the clinicians at the program indicated that the items on
this scale are representative of the types of coping strategies which are used most frequently in this setting.

**Coping Strategies of Adolescent Drug Abusers:** Like the concept of adaptation, coping is used frequently by researchers and clinicians in the field of adolescent drug abuse, but is seldom defined or measured (Einstein, 1980 & 1984a). In fact, Einstein (1984) contends that coping "has become yet another one of the shibboleths in the ongoing ritual of drug use intervention" (p. III). For example, Segal, Cromer, Hobfall, and Wasserman (1982) examined detained and adjudicated adolescents' stated reasons for their use of drugs. One of these researchers' conclusions was that the adolescents' drug use may be a strategy for coping with stressful situations. Charlesworth and Dempsey (1982) also view drug use as frequently the only resource used by drug abusers to alleviate various consequences of stress (tension, anxiety). In fact, the description of drug use as "a chemical coping mechanism" (Einstein, 1984a, p. III) for both intra-personal and inter-personal problems is the most frequent way in which the concept of coping has been used by researchers in this field (e.g., Kaufman, 1981; Klagsbrun & Davis, 1977; Stanton, 1979a). While this emphasis is an important one, rarely, if ever, have other coping strategies of adolescent drug abusers been investigated.

It is evident that researchers and clinicians in the field of adolescent drug abuse have ignored the complexity and multi-dimensionality of the concept of coping. Given these
criticisms and the contention by Newman (1979, p. 260) that "adolescence may well be a period for the consolidation of one's coping style", there is obviously a crying need for empirical data about both the variety and the effectiveness of coping strategies used by adolescent drug abusers. Only then, according to Einstein (1984a) will clinicians be able to use the concept of coping effectively in the intervention process.

In addition to the Coping Scale (which was presented in the previous section) the present study used an additional measure of coping. This involved presenting subjects with four different situations which were judged in the pilot study to be realistic and which occur frequently at the program (see Appendix C). Pearlin and Schooler (1978) concluded that "the greater the scope and variety of the individual's coping repertoire, the more protection coping affords" (p. 18). Therefore, subjects, when presented with each situation were asked to state the variety of ways that they could cope with the situation, how they have coped with the situation in the past (if applicable), and how they would be likely to cope with the situation now. It was expected that the quantitative and qualitative data generated about the coping area alone would be a significant contribution to the outcome research on drug treatment programs. In addition, this study attempted to broaden the meaning and use of coping, which is very limited as it is currently used in both treatment of and research with drug abusers.
Social Support

Conceptual Issues: Many researchers have examined the role of individuals' seeking and using sources of social support in their adaptation to stress (Gottlieb, 1983; Gourash, 1978; House, 1981; Kahn & Antonucci, 1980; Lieberman, 1982; Lieberman & Mullan, 1978; Menaghan, 1978). However, these researchers also acknowledge that the concept of social support has been difficult to define and measure.

Gourash (1978) defines social support as the giving of "support, advice, or assistance in times of distress" (p. 414). According to House (1981), social support may be emotional, instrumental, or informational and may also involve appraisal of others in order to evaluate oneself. This description is somewhat similar to Kahn and Antonucci's (1980) definition of social support as "Interpersonal transactions that include...effect, information, and/or aid" (p. 267). Lieberman (1982) contends that most definitions of social support "include emotional concern, instrumental aid (and) informational exchanges." Finally, Pearl In, et al. (1981) argue that social support involves more than having family and friends, but also "comes when people's engagement with one another extends to a level of involvement and concern" (p. 340). The emotional component which deals with the perceived quality of support, seems to be the common denominator in all of these definitions and House (1981) contends that it is the most important component of social support.

Although Gourash (1978) in her view of the literature on "help-seeking" did not distinguish between social network and social
support, other researchers are currently doing so (Kahn & Antonucci, 1980; Lieberman, 1982). For example, Kahn and Antonucci (1980) define the social network or "convoy" as "the structure within which social support is given and received" (p. 253). Lieberman (1982), on the other hand, defines social network as "the context in which social resources (support) are contained" (p. 766). It is evident that the outcome of research is going to be different depending on whether the focus is on the structure (size, frequency of contact, etc.) or on the context (specific problems in specific situations) of social networks.

Another area of debate in this field has been whether social support directly affects (main effect) levels of adaptation to stress or whether it buffers (interaction effect) the impact of stress (Gottlieb, 1983; Gourash, 1978; House, 1981; Kahn & Antonucci, 1980; Lieberman, 1982). The buffering concept means that social support does not directly reduce stress levels or improve health, but instead "modifies the relation between them" (House, 1981, p. 32).

Gottlieb (1983) cites evidence that social support can act as "a buttress" (p. 284) for use of those coping strategies which focus on decreasing negative thinking, affect, and behavior. House (1981) contends that evidence for buffering is seen when social support is found to have little benefit for persons who are experiencing low levels of stress, but has beneficial effects for persons who are experiencing higher levels of stress. Lieberman (1982) agrees that some evidence exists for the buffering effect of social support when individuals are experiencing a high degree of role strain or are
experiencing economic or occupational strains. However, Billings and Moos (1984) suggest that "social resources among depressed persons may lack the stress-buffering potential enjoyed by normal persons" (p. 888). Therefore, researchers seem to disagree about whether the buffering effect is present in persons experiencing high versus low levels of stress.

Lieberman and Mullan (1978) examined perceived stress levels in marital, economic, and occupational areas, but found no evidence that seeking help modified levels of distress. Billings and Moos (1984) also found little empirical support for a buffering effect of social support. It is evident that further research needs to be done to determine the conditions under which social support directly affects levels of adaptation to stress and those under which it buffers the impact of stress.

**Social Support and Coping:** A review of the literature indicated that researchers view the use of social support as a potential coping strategy or as a support for use of coping strategies (Gottlieb, 1983; Gourash, 1978; House, 1981; Lieberman, 1982; Pearl & Schooler, 1978; Stone & Neale, 1984). For example, Gottlieb (1983) contends that researchers need to examine how sources of social support may "either complement the individual's coping style or undermine modes of defense that (may) appear debilitating" (p. 284). In another example, the seeking of help is viewed as "an effective strategy for coping with stress" (Gourash, 1978, p. 417). The link between social support and coping is also evident in some of the
questions asked of subjects by researchers. For example, Stone and Neale (1984) included "seeking of social support" in their measure of daily coping. Pearl In and Schooler (1978) used the following item on one of their coping scales: How often do you find someone to talk to who is not involved in the conflict? Thus, the examination of both social support and coping in the present study is justified both theoretically and empirically.

The Quality of Social Support: Researchers in this field seem to disagree to a certain extent about which components of social support are most salient in terms of reducing personal distress and/or facilitating adaptation. As House (1981) puts it, "...what are the differences that make a difference?" (p. 14).

Numerous researchers argue that the quality of social support is the difference that makes a difference. Lieberman (1982) contends that what matters is not the total amount of help, but rather being able to effectively match an available source of social support for a given problem. This again focuses on the "context" issue which was discussed earlier but also includes a qualitative dimension. Conner, Powers, and Buttena (1979) suggest that for older persons the number of supports and the frequency of contact with those social supports may be less crucial than is the quality of social support. Pearl In, et al. (1981) also emphasized the importance of the quality of sources of social support (involvement and concern) in their study. Finally, Gottlieb (1983) contends that "the qualitative aspects of the (social network) relationships...(i.e., intimacy and
dependability)...illuminate the very substance of social support" (p. 281).

The notion of "quality of social support" is also related to Kahn and Antonucci's (1980) emphasis on the adequacy of social support and Lieberman's (1982) contention that the dependability of social support sources is crucial in assessing the effectiveness of social support. Examining the quality of social support means that researchers will need to focus on the perceptions of subjects rather than on data gathered from external frames of reference (Lieberman, 1982). House (1981) agrees with Lieberman, but contends that researchers will have to eventually include objective measures of social support in their research designs. In the present investigation, the qualitative dimension of social support was assessed by asking subjects to rate the dependability of the sources of social support whom they would seek under specific conditions (when they have very good news, a very personal problem, or when they are depressed).

**Support vs. No Support:** Kahn and Antonucci (1980) contend that while the number of available support sources does not seem to matter, having no sources of social support is correlated with a number of personal adaptation difficulties. Interestingly, Brown (1978) found one group in his sample who did not seek help and had the least effective coping strategies, while another small group did not seek help, but had the best personal resources and the lowest levels of distress. A similar result was found by Pearlin and
Schooler (1978) who reported that in marriage and parenthood, self-reliance was more effective than was seeking of help from others in reducing levels of distress. Lieberman (1982) concludes that help-seeking probably depends on the availability and reliability of sources of social support as well as on the individual's levels of personal reservations about seeking help. The present study investigated some of the differences between subjects who seek help and those who do not seek help.

**Formal vs. Informal Support:** Another area of focus in the social support literature is whether individuals seek formal (mental health professionals) or informal (family, friends, etc.) sources of support under specific circumstances (Cowen, 1982; Gottlieb, 1983; Gourash, 1978; House, 1981; Lieberman, 1982; Lieberman & Mullan, 1978; Menaghan, 1978). Researchers have consistently found that people tend to seek help from family and friends first and only seek formal source of support as a last resort (Cowen, 1982; Gottlieb, 1978; Lieberman, 1982). These researchers suggest a number of explanations for this finding: (1) the values and norms of the person's social network may not condone the use of formal sources of support; (2) the unavailability of nearby mental health services and the cost of those services may contribute to the decision to use informal sources of support first; (3) many persons find it easier to trust informal sources of support with whom they have already established reciprocal relationships. The present study examined whether subjects are more likely to seek formal or informal sources of support, both when they
are at the program and when they are away from the program visiting family and friends.

Social Support for Adolescent Drug Abusers: This section will focus on three main sources of social support for the adolescent drug abusers in this study: their parents, their peers, and the clinicians who work in drug treatment programs.

One of the most consistent findings in the drug abuse literature is that significantly more drug abusers than non-drug abusers come from families where one parent was absent from the home during the abuser's childhood and/or early adolescence (Brook, Szandorowska, & Whitehead, 1976; Harbin & Mazlar, 1975; The National Institute on Drug Abuse, 1982; Stanton, 1979a). According to a recent national survey (The National Institute on Drug Abuse, 1982), in approximately two thirds of the sample of 2,750 adolescents, the family disruption occurred prior to the adolescents' regular drug use. However, these studies fail to indicate whether the adolescents had any contact with the parent who left (in cases of abandonment or divorce) and, if so, what was the frequency and the quality of those interactions.

Nevertheless, it is apparent that this result suggests that adolescent drug abusers may have either temporarily or permanently lost a significant source of regular social support. One of the objectives of the present study was to examine whether family disruption occurred and what the type of disruption was (death of a parent, abandonment, or divorce). Additional data were gathered which explored the impact of this family disruption on the subjects.
Analyses of this data in more depth was beyond the scope of this investigation, but will be conducted in a separate study.

Another consistent result of research in this field has been that in comparison to other dysfunctional and non-drug using families, drug abusers' families have a significantly higher incidence of multi-generational drug and/or alcohol abuse (Beschner & Friedman, 1979; Klagsbrun & Davis, 1977; Stanton, et al., 1978). While many of the studies focus on parental substance use, Kaufman (1981) pointed out that the siblings in his sample were either fellow drug abusers or were "good" overachievers. In addition, the National Institute on Drug Abuse (1982) reported that adolescents whose older siblings use drugs are more likely to use drugs themselves.

Clinicians at the drug treatment program reported in the pilot study that ideological (and sometimes physical) conflicts have arisen between adolescent drug abusers and their parents as each party attempts to justify his/her own intoxicated state. These clinicians also reported that in some cases, parents will use drugs with their adolescents in apparent attempts to reduce intra-familial conflict, to be accepted by their adolescent, and/or to find some common ground on which they can communicate with their adolescent. Thus, researchers and clinicians contend that parental and sibling modeling of substance use has a significant impact on the maintenance (and potentially on the onset) of adolescent drug abuse.

Orlive and Gerard (1980) and Sutker (1982) cite numerous results which indicate that peers may also have a significant influence on the maintenance (and perhaps the onset) of adolescent drug abuse.
However, Klagsbrun and Davis (1977) contend that the parental modeling effect is very evident even when peer-influence on drug use is significant. Although it cannot be concluded, as Klagsbrun and Davis imply, that family and peer drug use "causes" adolescent drug abuse, it is clear that if adolescents' parents, siblings, and/or peers are using/abusing drugs, it would be very difficult for those adolescents to become and remain drug-free. Since abstaining from drug use is one of the criteria used for successful adaptation to and completion of the drug treatment program, adolescents in this study who have more drug-using sources of support should have lower levels of adaptation to the program over time than will adolescents who have more non-drug-using sources of social support. This was one of the components of social support which was examined in this study.

There is one final area related to parental support that warrants some discussion. Kaufman (1981) and Stanton, et al. (1978) believe that the parents of adolescent drug abusers often unwittingly prevent their children from becoming drug-free by consistently rescuing their children when the latter repeatedly become involved in legal, medical, or financial difficulties. According to Reilly (1976), some parents either consciously or unconsciously encourage their adolescents' drug use in order to obtain vicarious satisfaction from the "risque" aspects of their adolescents' lives.

Clinicians at the drug treatment program which will be used for this study, reported in a pilot study that although most parents want their adolescent to become drug-free, they often sabotage the treatment processes, by either lying to the clinicians in order to
protect their adolescent from receiving negative consequences for breaking program rules or by verbally attacking the clinicians when their adolescent incurs negative consequences. For example, parents have insisted that their adolescent could not have possibly ingested any drugs (as the urinalysis results indicated) even though the parents know that their adolescent has abused that drug for many years.

The present study determined whether there was support for these clinical informal impressions and research results by examining the degree of parental support (as perceived by both the adolescents and the clinicians) for the adolescents' successful completion of the program. In addition, both subjects and the clinicians were asked what the subjects' parents would say or do if their adolescents complained about receiving negative consequences for breaking program rules.

Most of the discussion so far has been on non-professional sources of support for adolescent drug abusers. However, clinicians' perceptions of and attitudes towards adolescent drug abusers are also likely to affect treatment outcomes. As discussed in an earlier section of this chapter, Cohen, et al. (1982) found that non-drug-using subjects in their study grossly overestimated drug-using subjects' levels of pathology. These researchers suggest that the negative stereotyping of drug abusers may "act as a negative influence in establishing a positive therapist-client relationship" (p. 375). Einstein (1981) also agrees that clinicians' tendency to focus primarily on pathological characteristics and very little on
positive characteristics negatively affects clinicians' expectations about the prognosis for successful intervention. One of the ways in which clinicians' expectations were measured in the present study was by asking them to provide their probability estimate (percentage) of whether each adolescent drug abuser would complete the program. An evaluation of the clinicians' perceptions of each subject's strengths and weaknesses was also obtained. However, these latter results were not analyzed in this study but were discussed in a separate report (Reardon, 1984).

Age

Many physiological, psychological, and social changes take place as adolescents move from puberty to late adolescence (Newman & Newman, 1979). Coulter and Morrow (1978) and Leland (1978) contend that age and adaptation are related because a measure of adaptation is how well individuals "perform tasks expected of their particular age group" (Coulter & Morrow, 1978, p. 3). Because of the close relationship between adaptation and coping, a similar relationship between coping and age is likely to exist (i.e., adults are expected to use different, more "mature" coping strategies than are adolescents). Although there appears to be an unknown relationship between levels of self-esteem and age (i.e., whether self-esteem increases or decreases with age), researchers have provided evidence that both self-esteem and self-concepts become increasingly stable with age (Epstein, 1980; Rosenberg, 1979; Newman, 1979). Thus, individuals tend to perceive and behave in ways that maintain their
present levels of self-esteem. Some researchers contend that the seeking of sources of social support decreases with age (e.g., Gourash, 1978). However, the decrease seems to occur in the later years of life when individuals are losing their sources of support because of death. Therefore, the relationship between age and social support in adolescence is unclear.

The relationship between age and treatment outcome is uncertain since, according to Goldstein, et al.'s (1984) review of the outcome literature, few studies report data regarding socioeconomic variables. Lueger and Cadman (1982) found that older age at admission was related to completion of a residential program for delinquents. However, a similar relationship has not been reported in studies of drug abusers.

At the drug treatment program where the present study was conducted, there appears to be an age factor which may be related to both subjects' levels of adaptation to the program over time and also the outcome of their treatment. Results of a pilot study indicated that drug abusers who are eighteen years of age or older face significantly more jail time should they fail to complete the program successfully than do adolescent drug abusers who are seventeen years of age or younger. The implication of this finding is that the younger adolescent drug abusers may be more likely to violate program rules since the potential legal consequences are less severe than they would be if older adolescents violated those same rules. In fact, the older subjects who were interviewed for the pilot study described the younger adolescents as facing "kiddle jail time."
Thus, older subjects may be more likely than younger subjects to adapt well to the program because the older subjects generally face longer jail sentences.

In the pilot study, both older subjects and clinicians at the program described younger adolescents as more likely to "get high", more likely to run away from the program either temporarily or permanently, more likely to initiate the name-calling behavior which is described in the third and fourth coping situations (see Appendix C), and more likely to ask their parents to intervene when the younger subjects receive negative consequences for breaking program rules.

There is a theoretical basis for the relationships between age and adaptation since according to Piaget (1972), older adolescents should be able to think about the long-term consequences of their behavior more effectively than will younger adolescents because of the former's higher levels of cognitive development. In this study, age was used in the preliminary analyses of adolescent drug abusers' adaptation to the program and to the outcome of their treatment. No formal hypotheses were tested because (1) there was little variability in the ages of subjects (only one subject was below 18), and (2) all adolescents at the program have the same expectations and rules regardless of age. However, future researchers may want to examine this variable in more depth.
Summary

This review of the literature revealed that researchers and clinicians tend to view adolescent drug abusers and their families in predominantly negative terms. Therefore, the present study took a more holistic approach by looking at the strengths as well as the weaknesses of adolescent drug abusers who are currently in a residential drug treatment program. In addition, while researchers and clinicians in this field frequently use the concepts of adaptation and coping, they are not adequately defined and tend to be used in a limited number (e.g., drug use as a coping or adaptive strategy). The present study broadened the meaning and scope of these concepts as they relate to adolescent drug abusers. While some researchers have focused on adolescent drug abusers' sources of social support, the data generated appears to be primarily factual in nature (e.g., a large percentage of abusers had one parent absent from the home during their childhood and early adolescence) and the results are often not explored in more detail (e.g., examining whether alternate sources of social support were available for the abusers). This study provided quantitative and qualitative data to explore some of the characteristics and dependability of adolescent drug abusers' sources of social support while they are in the treatment program. Finally, while researchers have examined the relationship between self-esteem and adolescent drug use, this variable has not been viewed in relation to adolescent drug abusers' adaptation to residential drug treatment programs over time. The review of the literature demonstrated that there are theoretical and
empirical bases for the hypothesized relationships between the independent variables (self-esteem, coping, and social support) and adolescent drug abusers' adaptation to the program over time.
CHAPTER III
METHODOLOGY

In this chapter the methodology of the study will be discussed. In the first section the population from which the sample was drawn and the drug treatment program at which the subjects were receiving treatment will be described. In the second section a description of the sample will be provided. The third section involves a description of and rationale for the procedures used in the study. The remaining two sections will involve a discussion of the instruments and the data analyses respectively.

Population and Setting

Subjects for this study were selected from a group of adolescents who were participating in a long-term (six to twelve months), residential, drug treatment program in a large midwestern city. All of the adolescents at this program (with the exception of several self-referrals) are ordered by the criminal justice system to successfully complete the program. Clinicians at the program provide regular reports to the adolescents' parole or probation officers regarding their progress in the program. The reports include the results of random, regular urinalysis tests for drug and alcohol use, progress in therapeutic and employment or education components of the
program, the frequency and type of violations of program rules (see Appendix E), and the number of hours of "pass time" the adolescents receive each week to spend with family or friends.

Adolescents in the program receive treatment from a multidisciplinary team which includes a psychiatrist, a psychologist, a social worker, therapists (who conduct individual, group, and family therapy), case workers (who ensure that program rules and procedures are followed), a nurse, an employment counselor (who assists with the obtaining and maintaining of employment), cooks, and maintenance staff. This highly structured residential treatment program consists of six levels of varying lengths (one to six weeks each) through which the adolescents have to pass in order to complete the program (see Appendix E). In the initial phases of the program the adolescents are expected to learn the rules of the program, participate in the therapeutic components of the program (individual, group, and family therapy), and either obtain a job or begin to attend school. The remaining phases of the program are designed to help the adolescents maintain steady employment or school attendance and to begin to prepare them for their eventual return to the community.

Specific behavioral criteria must be met before adolescents can advance to the next phase of the program:

1. The adolescents must be drug/alcohol-free for at least thirty days as indicated by the results of the urinalysis testing.
2. Adolescents must not have any major violations or multiple minor violations of program rules for at least two weeks. (See
Appendix E for a description of what constitutes a major and a minor violation).

3. Adolescents must be consistently participating in the therapeutic, employment, and/or school requirements of the program (i.e., individual and group therapy once per week, one family therapy session prior to the advancement to the next phase of the program, and either working or going to school at least 20 hours per week).

As adolescents advance to the next phase of the program, they are given larger amounts of 'pass time' which they can use to visit family or friends. The number of hours of pass time received by adolescents each week is determined by the amount of pass time allotted for a given phase of the program (see Appendix E) minus hours for any violations of program rules which have occurred that week. Major violations of program rules (e.g., using drugs, running away from the program and then returning) result in a minimum of one week's restriction to the program. This means that the adolescent loses all his pass time for that period but can still go to work or school. Acts of physical assault usually result in immediate unsuccessful termination from the program. However, violation of other major rules usually does not result in immediate termination because the clinicians realize that persons with histories of drug abuse and other acting out behaviors are likely to have difficulty making changes in a short period of time.

During the final phase of the program the adolescents must be meeting program requirements (as previously discussed), must have
places in the community where they can live, are encouraged to have saved enough money to meet their basic needs for at least several months, and will gradually be spending increasing amounts of time in the community with their families and friends. In essence, as the adolescents demonstrate that their behavior is consistently falling within a socially acceptable range (Leland, 1978), they are given more freedom to spend time in the community.

Adolescents who are unsuccessful in completing the program generally leave in one of two ways:

1. They run away from the program (AWOL) and do not return on their own initiative to face the consequences (which include restriction to the program, but in some cases may mean rearrest and return to jail). If those who do not return to the program are arrested by their parole or probation officers, they may be returned to the program after spending several days in jail or they may be returned to jail to complete the sentences for the crimes they committed prior to being admitted to the program. The length of jail time served is usually positively related to the seriousness of the crime committed.

2. The clinicians at the program make a decision to ask the adolescents' parole or probation officers to remove them from the program because the adolescents have consistently violated major program or societal rules for socially acceptable behavior.

Most adolescents who complete the residential component of the program successfully usually participate in a six to twelve month outpatient after-care program. This may be a requirement of the
legal system, but in many cases it is a voluntary decision. From the
description of the program it should be apparent that successful
completion of the program is not an easy task and in fact is a major
accomplishment. This fact alone is rarely taken into consideration
in outcome studies of residential drug treatment programs which treat
'forced referrals'.

Sample

The sample for this study consisted of thirty Caucasian, single,
males, adolescent drug abusers who were receiving treatment at this
program and who volunteered to participate in the study. Unfortunately,
females, non-Caucasians, self-referrals, and adolescents who were married were not included in this study because they were underrepresented in this setting. The underrepresentation will be discussed in more detail.

Although studies in the early 1970's indicated that more male
than female adolescents were likely to use drugs and alcohol (Smart &
Fejer, 1972), more recent studies indicate that these gender
differences are diminishing (Smart & Blair, 1980). However, fewer
females than males are sent to prison (Uniform Crime Report, 1980)
which may account for the low number of females in the program.

It is unclear why non-Caucasians are underrepresented in this
program. Sutker, Archer, and Allain (1978) found that blacks in
their study tended to become involved in drug abuse at older ages
than did Caucasians of similar intelligence, education, and
background. However, Green (1979) suggested that the gap between
blacks and whites is narrowing considerably regarding the frequency
and severity of drug use. An adult residential drug treatment
program (which is managed by the same organization which manages the
program used in this study) reported approximately equal numbers of
caucasians and non-caucasians in their program. Thus, Sutker, et
al.'s, (1978) results may be accurate for the population from which
subjects were drawn for this study.

Clinicians at the program used in this study contend that
self-referrals typically come to the program when they are in crisis
and then leave prior to successful completion of the program.
Rinella's (1976) study comparing court-referred and self-referred
substance abusers provides support for these clinical impressions.
In his study, he found that the court-referred abusers stayed as long
or longer than the self-referred abusers. In addition, the court
referrals did as well or better than the self-referrals in abstaining
from substance use for between 6-24 months after entering treatment.
Future larger scale studies will need to examine some of these sex,
race, and type of referral differences in more depth.

Procedures

One year prior to the collection of the data, a pilot study was
conducted in order to test the instruments and procedures which were
used for this study. Ten adolescents and numerous staff at the
program were interviewed. They provided insightful feedback about
the face validity of the instruments, suggestions for procedural
changes, and confirmed that the data generated by the study would be
meaningful and useful. The pilot study will be discussed further in the section on Instrumentation.

Prior to the beginning of the data collection, the investigators (a graduate student in a Doctoral program and a trained undergraduate student who used part of the data for her Honors project) met with the adolescents as a group in order to explain the purpose of the study, the risks involved, the amount of time involved in participating in the study (approximately 1 1/2 - 2 hours), the content covered by the instruments, and the procedures involved for completing the interview. It was stressed that confidentiality would be strictly maintained, that participation in the study would be entirely voluntary, that those who did not wish to participate in the study would not receive any negative consequences for their decision, and that those who agreed to participate in the study could withdraw at any point of the interview process without incurring any negative consequences. In order to provide an incentive for participation in the study, the subjects were given three extra hours of free time which they could use to visit family or friends during the week following their participation. (All of these procedures were also explained to the clinicians at the program in order to both obtain their cooperation and to stress the voluntary nature of this study).

Subjects who agreed to participate in this study were then scheduled for an interview with one of the two investigators. The interviews were conducted in a private office at the drug treatment program in order to ensure that the interviews would not be overheard by either clinicians or other adolescents. The purpose of the study,
the content of the material which would be covered, and the procedures involved were again explained to each subject and the subject's parent(s) if he was under the age of eighteen. Subjects were again advised that they could withdraw from the study at any time without receiving any negative consequences. If the subject wished to proceed, consent forms were then signed by the subject (and his parents if he was a minor) and a copy was given to the subject (or his parents).

Subjects were also informed that a numerical coding system would be used and that their names would not appear on any of the instruments. Only the investigators had access to the coding system and the matching names. In addition, subjects were assured that under no circumstances would any information from the interview that could result in their being identified be shared with any clinician at the program or with anyone outside the program. However, they were told that summary data about the sample as a whole would be discussed in this dissertation and in a master's thesis of another student who used part of the data. They were also told that a summary of the main findings would be shared with the clinicians at the program in order to help improve the treatment processes and that individual comments would only be used in both this report and the dissertation if the subject could not be identified.

Finally, since some of the questions were very personal in nature, subjects were told that they would be given time for debriefing after the interview. In addition, subjects were encouraged to talk with their therapists if there were areas which
needed to be processed further (Staff are available 24 hours a day at the program).

While most of the data were gathered directly from the subjects, some information (criminal background information, the amount of pass time received, and the number of violations of program rules) was obtained from the adolescent's charts. However, in order to further protect the subjects' confidentiality, the investigators did not have access to the subjects' charts at the program, but instead obtained the information from a designated staff member. (Subjects signed a release of information form which is used by the program before this information was released to the investigators.)

The Instruments were administered in the same order for each subject. The order of administration of the Instruments was as follows:

1. Subject Information Sheet
2. Family Information Questionnaire
3. Initial Open-ended Questions About the Program
4. Rosenberg Self-Esteem Scale
5. Social Support Scale
6. Presentation of Four Situations
7. General Coping Scale
8. Final Open-ended Questions About the Program

Clinicians at the program responded separately in written form to questions about each subject. At no time was the content of the subjects' interview communicated to any of the clinicians. In fact, the investigators tried to keep any conversations with the clinicians
to a minimum in order to allay any concerns that the subjects might have about the confidentiality issue.

The data were collected over a two month period in the summer of 1984. Subjects signed up for interview times on their own initiative. The subjects were extremely cooperative and open in answering questions. The interviews lasted an average of one and one-half hours. Although each subject was encouraged to take a break halfway through the interview, very few chose to do so. Subjects were at various stages of the program when the interviews were conducted. Six months later additional data were collected from the adolescents' charts regarding the outcome of their treatment (completion versus non-completion of the program), the amount, frequency, and types of violations of minor and major program rules, and the amount of pass time received by the subjects each week. Complete weekly statistics regarding violations and pass time were compiled for each subject. All subjects had either completed the program successfully or had been terminated unsuccessfully from the program for a variety of reasons.

Instrumentation

Pilot Study

A pilot study was conducted in order to test the instruments which were used for this study. Ten adolescents who were in the final phases of the drug treatment program agreed to be interviewed. Clinicians at the program examined the instruments and were interviewed regarding their feedback. Both subjects and clinicians
provided extremely useful feedback about the content, phrasing, and organization of the Instruments. Modifications of the content of some of the Instruments were made in order to more accurately represent the types of situations and problems which the adolescents have to face on a daily basis at the program. For example, one subject informed me that I was missing an 'obvious' coping strategy which is used frequently at the program: manipulation of staff. Input from the subjects in the pilot study also influenced the decision to use all Instruments in an Interview format rather than having subjects fill out some of the Instruments themselves. There were two reasons for this decision. First, several of the subjects in the pilot study admitted that they could not read and would have randomly answered questions had they not been concerned about helping with the study. Second, many subjects made spontaneous comments which would have been lost in the actual study had they answered the questions in written format alone. These spontaneous comments helped to explain some of the results obtained in this study. Finally, the order of administration of the Instruments was modified in order to improve subjects' adaptation to both the Interviewer and the Interviewing process.

Operational Definitions of Study Variables

The next section describes the Instruments used in this study. Although a great deal of family background information was collected as part of the Interview process, most of that data were analyzed in a separate study (Wuebbens, 1984). However, some of the data that
pertained to the social support analyses of this study were included (See Appendix F). In addition, as part of the interview the subjects were asked to provide feedback about the program. This feedback was compiled and organized and a separate report was presented to the administrators of the drug treatment program (Reardon, 1984). However, some of these data were used in this study to help explain the results of the analyses.

Adaptation

Adaptation to the program over time was measured by examining a positive behavioral indicator (i.e., hours of pass time in the community each week) of how well subjects were performing the tasks expected of them in order to progress through the phases of the program. These specific tasks (which were discussed in greater detail earlier) include:

1. Consistency in following the rules of the program (including abstinence from drug and alcohol use).
2. Consistent behavioral and verbal involvement in the therapeutic components of the program.
3. A minimum of twenty hours per week of involvement in either employment or education components of the program.

Adaptation to the program was examined at four different time periods: Accumulated pass time was examined at the end of five weeks, fifteen weeks, twenty-five weeks, and thirty-five weeks respectively. At each time period some subjects had been terminated unsuccessfully from the program.
Violations of program rules would contribute to lower levels of adaptation to the program because pass hours would either be reduced (if the subject violates minor rules) or eliminated for a specified period of time (if the subject violates major rules). For purpose of this study, the number of violations of program rules was treated as an independent variable, while the amount of pass time was treated as one of the dependent variables. Weekly statistics regarding the subjects' minor and major violations of program rules and their allotted pass hours for each week are kept in their charts.

There may be some inconsistency among staff regarding whether or not the breaking of a minor rule will result in a written report which is then used to determine how much pass time is deducted that week (i.e., for a variety of reasons some of the staff may overlook the breaking of minor rules). However, the breaking of major rules of the program is rarely overlooked and consequently, the statistics for these should be more reliable than are those for violations of minor rules.

Self-Esteem

The Rosenberg Self Esteem Scale (Rosenberg, 1979) was used to assess subjects' levels of self-esteem. This scale is composed of ten items which describe different aspects of self-esteem. Subjects were asked whether they strongly agree, agree, disagree, or strongly disagree with each item (see Appendix A).

According to Wylie (1974) this scale's reliability coefficient is .92 and Rosenberg (1979) cites evidence that the test-retest
reliability of the scale over a two week period is at least .85. Rosenberg further contends that the scale has adequate face validity. In addition, both Rosenberg (1979) and Wylie (1974) believe that the scale has adequate construct validity (e.g., high self-esteem scores were found to be negatively correlated with depression and anxiety and positively correlated with ratings by peers). Finally, Rosenberg (1979) cites research evidence which indicates that this scale has adequate convergent and divergent validity. Wylie (1974), however, criticizes the scale as containing transparent socially desirable items. Despite this limitation, the use of this scale is justified given the adequate levels of reliability and validity.

Coping

Two instruments were used to measure coping: A Coping Scale and subjects' coping responses to four hypothetical situations which occur frequently at the program. These two instruments will be discussed in greater detail.

1. The Coping Scale (see Appendix B) is composed of 22 items which represent six different types of coping strategies: optimistic comparisons, negotiation, selective-ignoring, resignation (Menaghan, 1982; Pearlin & Schooler, 1978), avoidance (Pearlin & Schooler, 1978), and acting-out (developed based on results of the pilot study). For analysis purposes, the avoidance type of coping strategy was further divided according to items which reflected positive avoidance strategies and items which reflected negative avoidance strategies. Subjects were asked to state how often they use a given
coping strategy for dealing with daily problems at the drug treatment
program. They were then asked to identify the coping strategy which
has been most effective and the coping strategy which has been least
effective in helping them deal with those daily problems.

The first six items on this scale were adapted from PearlIn and
Schooler's (1978) coping scale which was designed to examine parental
coping behaviors. For example, in their optimistic comparison item,
"How often do you look around at other parents and see how much
better off you are they?" the word "residents" (i.e., adolescents In
the program) was substituted for "parents". Seven additional coping
items were adapted from another of PearlIn and Schooler's (1978)
coping scales which was designed to examine the frequency of coping
strategies used by couples for solving marital problems. The
remaining items were developed specifically for this study based on
data generated by the pilot study (e.g., How often do you get high?;
How often do you manipulate the staff?). All of the items on this
scale fit under one of the six types of coping listed above.

PearlIn and Schooler (1978) in their cross-sectional study
determined that their measures of adults' coping efforts In the
marital, parental, and occupational role areas were reliable.
PearlIn, et al., (1981) provided additional evidence that the coping
scales used by PearlIn and Schooler (1978) had adequate reliability
over time. Since the scale used in this study Is a modification of
the two subscales used by PearlIn and Schooler (1978) and also
contains some new items and because the scale Is being used with
adolescents rather than adults, further tests of reliability were
conducted. The Interrater reliability for rating the coping strategies according to the six types was .92. In addition, feedback from subjects and from the staff at the drug treatment program indicated that the coping strategies were realistic and comprehensive (i.e., evidence of face validity). However, there is evidence that this scale may not be reliably measuring the same constructs (e.g., negotiation) when used with these subjects as the items did with adults in Pearlin and Schooler's (1978) sample. This will be discussed in greater detail in chapter IV.

2. Situations: Pearlin and Schooler (1978) argue that the greater variety of coping responses people have, the higher are their levels of adaptation to problems in different role areas in life. In order to assess the subjects' repertoire of coping strategies and to obtain additional qualitative and quantitative data regarding their coping strategies, subjects were asked to respond to four hypothetical situations. In the pilot study clinicians and adolescents at the drug program which was used for this study were asked to identify four potentially problematic situations which occur fairly often throughout the course of treatment. These hypothetical situations (see Appendix C) were then presented in the pilot study and all subjects agreed that the situations were both realistic and occurred regularly at the program (i.e., evidence of face validity). In the present study, additional quantitative and qualitative data were generated by asking subjects to state the variety of ways that they could cope, how they have coped in the past (if applicable), and how they would cope now with these four situations. Analyses were
conducted to determine if the responses given were related to the subjects' adaptation to the program over time and to the outcome of their treatment.

Social Support

**Social Support Questionnaire (see Appendix D):** This scale is composed of three items which were adapted for this study from a scale used as part of a large study on "The Problems of Every Day Life" which was conducted by the National Institute of Mental Health (1972). In the present study subjects were asked which sources of social support they would first seek: (1) when they have very good news; (2) when they have a very personal problem; and (3) when they are feeling generally depressed or down. These questions were each asked twice in order to determine whether the sources of social support sought by the subjects differ when they are at the program from when they are away from the program visiting family or friends.

Subjects were also asked to report whether any of these sources of social support use drugs or alcohol since it was hypothesized (based on a review of the literature) that adolescents who have fewer non-substance-using sources of social support will have higher levels of adaptation to the program over time. Finally, since a review of the literature revealed that the quality of social support is positively related to adaptation, the subjects were asked to rate the dependability of the chosen sources of social support. Analyses were conducted to determine if the various components of social support
are predictive of the subjects' adaptation to the program over time or the outcome of their treatment.

Personal Background Questionnaires

Two questionnaires were developed by Wuebbens (1984) and this researcher to gather background data about the subjects and their families. As previously discussed, most of the data generated by the Family Information Questionnaire were analyzed in a separate study (Wuebbens, 1984). These two Instruments will be discussed in more detail.

1. **Subject Information Questionnaire**: This questionnaire which consisted of 23 items, was designed to gather demographic data, drug and chemical background information, and information about subjects' current status in the program (level in the program, amount of pass time, number of minor and major violations, etc.). Some of the questions were asked of the subject in order to help establish rapport with the interviewer. The remaining information was obtained from the subject's chart (via a designated staff member) with the subject's written consent.

2. **Family Information Questionnaire**: The thirty-one items on this questionnaire were designed to provide qualitative and quantitative data in order to explore in more depth some of the consistent results in the drug abuse literature (the type of family disruption, the quality of parent/adolescent relationships, stepparent/adolescent relationships, etc.). Several items from this questionnaire were
used in this study (see Appendix F) to help analyze results of the social support data.

Program-Related Questions

Subjects who participated in the pilot study indicated that other adolescents would be likely to participate in the study because they would welcome the opportunity to provide feedback about the program. Therefore, a series of open-ended questions were developed in order to provide this opportunity. Results of this feedback were presented to the administrators of the program in a separate report (Reardon, 1984) and some of these findings were used to help interpret results of the present study. Two sets of open-ended questions were asked at different times during the interview (see Appendix F):

1. Initial Open-Ended Questions: These seven questions were asked about the program and had several purposes. First, the questions were deliberately asked approximately one third of the way through the interview in order to provide subjects with a short recovery period following the completion of the Family Information Questionnaire. Second, the subjects were given an opportunity to provide some general feedback about the program and were told that they would be given an opportunity later in the interview to provide more specific feedback. For example, subjects were asked to describe some of the typical problems they have had to face at the program. Third, some of the questions were also designed to provide additional qualitative information about the subjects' sources of social support (see Appendix F, 2).
2. **Final Open-Ended Questions**: These sixteen questions had several purposes. The first purpose was to provide subjects with an opportunity to provide more specific feedback about the various components of the program and also about the staff. For example, subjects were asked, "If you were the Director of this program, what would you change and what would you keep the same?" Some of these questions were also designed to generate additional qualitative information about the subjects' coping strategies and sources of social support (see Appendix F, 2 & 3). Finally, subjects were asked to provide a probability estimate for their chances of completing the program successfully and remaining drug-free once they completed the program.

**Staff Questionnaire**: This questionnaire contains a series of quantitative and qualitative questions to which clinicians at the program were asked to respond (see Appendix G). The clinicians were asked to provide feedback about the subjects' sources of social support. They were also asked to provide a probability estimate for subjects' chances of successfully completing the program. Additional questions were asked regarding subjects' strengths and weaknesses, but these data are not reported in the present study.

**Data Analysis**

The data for this study were analyzed primarily with Stepwise Multiple Regression and Stepwise Discriminant Analysis. According to Pedhazur (1982), Multiple Regression is superior to Analysis of
Variance when both categorical and continuous variables are used in a study. Since this is the case in the present investigation, the use of Multiple Regression is justified. Stepwise Multiple Regression was used to determine which categorical and continuous variables accounted for a significant proportion of variance in subjects' adaptation to the program over time. Stepwise Discriminant Analysis is a procedure which is used to maximally differentiate between two or more distinct groups of subjects (Pedhazur, 1982). In the present study, Stepwise Discriminant Analysis was used to find predictors which accurately classified subjects into one of two treatment outcome groups: those who completed the program and those who did not complete the program.

A review of the literature in this field revealed that there is a theoretical and an empirical basis for the hypothesized relationships between the independent variables and the dependent variable under current investigation. The variables sex, marital status, and race, which could potentially confound the results were controlled in this analysis since only white, single males participated in this study. However, given the non-experimental design of this study, the independent variables are likely to be correlated to varying degrees. Therefore, multicollinearity was examined as part of the analysis of this data.

Since subjects were at various phases of the program when the data were collected, using the total number of minor and major violations accumulated at the time of the interviews would be an inaccurate indicator of adaptation over time to the program (i.e.,
adolescents who had been in the program for longer periods of time would be likely to have more violations than would adolescents who had been in the program for shorter periods of time). Therefore, the accumulated totals of minor and major violations of program rules were examined at intervals of five weeks, fifteen weeks, twenty-five weeks, and thirty-five weeks to determine if those totals predict adaptation (amount of pass time) to the program at those points in the program.

Where applicable, the qualitative data were dummy coded in order to enter the data into the regression equation. In addition, without revealing the subjects' identities, material from the in-depth interviews was integrated into the results and discussion sections in order to help clarify the research results. Additional analyses (t-tests, Pearson's Correlations) were conducted once the primary analyses had been completed. Because of the small sample size, a .10 level of significance was set to test the hypotheses.

Summary

In this chapter the sample, population, and setting were described. The sample consisted of thirty white, single, male, adolescent drug abusers between the ages of 16-23 who were participating in a long-term residential drug treatment program. All of the subjects were court ordered to complete the program, but participation in this study was strictly voluntary. The procedures and instruments which were pretested in a pilot study were described and the use of Multiple Regression and Discriminant Analysis as the primary statistical analyses was discussed.
CHAPTER IV
RESULTS

The results will be reported in four sections. With the exception of the first section, the results are organized according to the research hypotheses which address each of the three objectives of this study. The first section will include a description of the subjects, including demographic characteristics, drug histories, criminal background information, and family background information. Secondary analysis of the relationship between these variables and the dependent variables will also be presented. In addition, a general description of the data regarding "outcome of treatment" (successful or unsuccessful completion of the program) will be presented. In the second section results of analyses of the first two research hypotheses, which are related to self-esteem and coping strategies, will be presented. The results of the third hypothesis (social support) will be discussed in the third section and the final section focuses on results of the last two hypotheses (program-related variables). Examples of relevant qualitative data will be presented in this chapter and also in Chapter V to aid in the interpretation of these results. In all the analyses, a .10 level of significance was set.
Description of Subjects

In this section subjects' personal background characteristics will be presented (i.e., age and education, drug history, criminal background and some family background). In addition, results of analyses regarding "outcome of treatment" will be discussed. Each characteristic will initially be discussed separately and then results of a preliminary analyses using these variables and the two dependent variables ('outcome of treatment' and 'adaptation to the program over time') will be presented.

Age and Education Levels

The subjects' ages and education levels were included as part of the preliminary analyses. The subjects were thirty, single, caucasian, male, adolescent drug abusers whose average educational level was 10.7 (range = 7 to 14) and whose average age was 20.6 (range = 16 to 24). Only one subject was 16 years of age, while the remaining subjects were between 19 and 24 years of age. Therefore, the sample is primarily one of late adolescence.

There are several explanations which may account for the underrepresentation of adolescents below the age of 18 in this study. The major reason was that the younger adolescents needed to have written parental consent to participate in the study and only one was able to obtain that permission. Other younger adolescents verbalized interest in participating in the study, but either did not want to take the time to obtain parental consent (e.g., one subject said, "It's too much of a hassle") or did not believe their parent(s) would
give consent (e.g., "They don't even come to see me so I doubt if they'll sign it."). A second reason was the program administrators made a decision half-way through the data collection to reduce the number of adolescents below the age of 18 and to focus instead on treating late adolescents and adults. While part of this decision appeared to be based on funding changes, the administrators cited poor support for program rules and consequences by both parents of younger adolescents and juvenile probation officers as a major reason for their decision.

The 16 year old subject was included in the study for several reasons. First, no significant differences were noted in the results of separate analyses, one of which included his data and the other of which omitted his data. Second, the rules and expectations of the program were the same for all subjects regardless of age. Therefore, inclusion of his data appeared to be justified.

Drug History

Twenty-two (73.3%) of the subjects reported that their primary drug of abuse was a depressant drug (e.g., Quaaludes, barbiturates). Four subjects (13.3%) reported that a non-depressant drug (e.g., amphetamines, cocaine) was their primary drug of abuse. Finally, four subjects (13.3%) cited hallucinogens (e.g., L.S.D.) as their primary drug of abuse. While this program does not provide treatment for subjects who either use alcohol only or marijuana only, all subjects in this study reported a history of using these two substances to varying degrees in addition to their primary drug of
abuse. Therefore, the sample is one of poly-drug abusers. The average age at which subjects reported first using any substance was 11.6 (median = 12.0; range = 6 to 17). The average age at which subjects reported using drugs on a regular basis was 14.5 (median = 15; range = 9 to 18). Subjects' reported primary drug of abuse (depressants, non-depressants, or hallucinogens) were used as independent variables in the preliminary data analyses.

Criminal Background

As part of the interview process, data regarding the subjects' number of prior status offenses (e.g., truancy, running away from home) and non-status offenses (e.g., robbery, breaking and entering) were collected. Only one subject refused to give his permission for data about his criminal background to be released for use in this study. While several other subjects were initially reluctant to disclose that information, they readily granted permission once they realized that only total numbers of status and non-status offenses rather than the nature of the offenses (e.g., burglary) would be used in the study.

The average number of status offenses for which subjects were arrested prior to their admission to the drug treatment program was 0.89 (range = 0 to 5), while the average number of prior non-status offenses was 3.6 (range = 0 to 13). The figures for both status and non-status offenses may not be accurate since the criminal justice system may not have provided the clinicians with complete records of subjects' criminal background. In addition, figures for several
different charges may actually represent one arrest and one sentence (e.g., an adolescent may be arrested for 'drug abuse' and 'resisting arrest' at the same time). Because these results are misleading, they were not included in any of the data analyses.

The average amount of reported jail time served by the subjects prior to their admission to this drug treatment program was 8.7 months (range = 1 to 29 months). Finally, the average amount of jail time faced by subjects if they did not complete the program successfully was 29 months (range = 3 to 96 months). Most subjects reported a range for the potential sentence (e.g., 2 to 5 years). In all cases, the lower figure was used in the study because most prisoners are eligible for parole or probation after serving the minimum sentence. The amount of prior jail time and the amount of jail faced by subjects if they didn't complete the program were used in the preliminary analyses of the data.

Family Background Information

A great deal of the family background data was analyzed in a separate study (Wuebbens, 1984), but a general description of the subjects' family background is provided here in order to assist with a description of the subjects. Data about the subjects' family background which pertained to their sources of social support were used in the testing of the social support hypotheses which will be presented later in this chapter.

Researchers have consistently reported some type of family disruption in adolescent drug abusers' childhood or early adolescence
(Brook, et al., 1976; Harbin and Mazlar, 1975; Stanton, 1979; The National Institute on Drug Abuse, 1982). In the sample used in this study, twelve subjects' parents were divorced (40%), seventeen subjects' parents were married (56.7%), and one subjects' biological parents had never married (3.3%). The parental divorce rate for this sample is lower than that of national statistics (52% - U.S. Bureau of the Census, 1982). Seventy-six percent of the mothers remarried (average age of subject was 9 years when this occurred). Seventy-one percent of the fathers remarried (average age of subject was 11 years when this occurred). The remarriage figures include mothers who remarried after the deaths of their spouses.

The parental marital status figures are more complicated than this quantitative data indicates. For example, one subject's parents had divorced each other twice and had remarried each other for the third time. Another subject found out when he was 15 years old that the person who he thought was his biological father was in fact his stepfather. This subject's biological father had abandoned the family and when the subject's mother remarried, her new husband adopted the subject. Of those subjects whose parents remarried, 55% of the fathers redivorced and 27% of the mothers redivorced at least once. Two subjects' fathers redivorced two times following the divorce from the subjects' biological mothers. One subject's mother redivorced three times following the divorce from the subject's biological father. To say the least, the complexity of some of the subjects' family histories was a research coding nightmare.
Other types of family disruption were present in this sample. Five of the subjects (16.7%) lost their father through death, but none of the subjects' mothers died. Of the subjects whose fathers died, the subjects were ages 9, 17(2), 20, and 22 years of age when the death occurred. The subject who was 9 years old when his father died reported little memory of how his father's death affected him. The other four subjects reported experiencing a great deal of emotional pain following their fathers' deaths. One subject said, "I can't blame his dying for my drug use, but after he died it seemed like I stepped it up some every day."

Five subjects reported that their fathers abandoned the family (i.e., the abandonment was not related to parental divorce), while two other subjects reported that their mothers abandoned the family. Abandonment by fathers occurred when four of the subjects were between infancy and six years of age, while the fifth subject was 15 years old when his father left. These data are also complex in that two subjects reported that their fathers abandoned the family, returned to the home, and then abandoned the family a second time. One additional subject reported that his father frequently abandoned the family, but also returned many times: "It seems like he'd come back long enough to get my mother pregnant and then he left again."

In both cases of maternal abandonment, the subjects were five years old when it occurred. The implications of parental abandonment will be discussed in Chapter V because they relate to these subjects' loss of potentially significant sources of social support.
Additional data were gathered regarding subjects' perceptions of the quality of their relationship with their biological parents and (if applicable) their stepparents. Although an in-depth analysis of the family background data is beyond the scope of this study, the complexity of this data provides support for the use of qualitative data in explaining quantitative results of studies of drug abusers.

Outcome of Treatment

At the time of the interviews, the subjects were in different phases of the program, with nineteen (63%) of the subjects being in the first three phases of the program and eleven (37%) of the subjects being in the final three phases of the program (see Appendix E). Six months after the interviews were conducted, eighteen subjects (60%) had failed to complete the program successfully and twelve subjects (40%) had successfully completed the program. This is a higher completion rate than was reported by this drug treatment program for 1984 \( (n = 241, \text{30 persons} - 12\% - \text{completed this program successfully}) \). The implications of this result will be discussed in the next chapter.

The range of stay at the drug treatment program for these subjects was 5 to 44 weeks. For the twelve subjects who successfully completed the program, the average length of stay in the program was 28.25 weeks (range = 30 to 44 weeks). Finally, for the eighteen subjects who did not complete the program, the average length of stay in the program was 19.4 weeks (range = 5 to 36 weeks).
Subjects left the program in one of three ways: successful completion of the program, running away, or by administrative termination (i.e., the clinicians decided to return the subjects to the custody of their parole or probation officers because the subjects were consistently breaking major program rules and/or demonstrated consistent lack of progress in treatment). The earliest that any subjects completed the program successfully was at the end of thirty weeks. These subjects were closest to the minimum time in which any subject could have completed the program, which was twenty-six weeks (see Appendix E).

In order to assess the subjects' adaptation to the program, the data were examined at four different time periods throughout the course of treatment:

1) At the end of five weeks, three subjects had left the program and twenty-seven remained in treatment. Of the three who left, two ran away and one returned to jail after receiving an administrative termination.

2) At the end of fifteen weeks, three more subjects had departed (n = 6 for failure to complete) and twenty-four subjects remained in treatment. Of the three who left, two ran away and one was terminated by administrative decision.

3) At the end of twenty-five weeks, six additional subjects had run away from the program (n = 12 for failure to complete) and eighteen subjects remained in the program.

4) Finally, at the end of thirty-five weeks, ten additional subjects had left the program and eight subjects remained in
treatment. Of the ten subjects who left, five completed the program successfully, four ran away, and one was terminated unsuccessfully by administrative decision. Of the eight subjects who remained in treatment after the thirty-fifth week, one was terminated unsuccessfully by administrative decision in the thirty-sixth week and the remaining seven subjects completed the program successfully.

In summary, in this sample, twelve subjects completed the program successfully and eighteen subjects did not complete the program. Of the eighteen subjects who did not complete the program, thirteen ran away from the program and five were returned to jail after the clinicians at the program decided that those adolescents were demonstrating consistent lack of progress in the program. Interestingly, one subject who completed the program successfully had to return to jail for six months because of charges for an arrest which had occurred prior to his admission to the program. Successful completion of the program apparently did not influence the judge in dropping the charges.

Preliminary Analyses of the Data

Stepwise Discriminant Analysis was used in the preliminary data analyses to determine whether some of the personal background variables (age, education levels, primary drug of abuse, amount of past time spent in jail, and amount of jail time faced by subjects if they did not complete the program) differentiated between subjects who complete the program and those who fail to complete the program.
A minimum tolerance level of .10 was set in order for variables to be entered into the discriminant function. None of these variables qualified for the analysis. Therefore, these personal background variables did not significantly differentiate between those subjects who completed the program and those subjects who failed to complete the program.

Stepwise Multiple Progression was used to determine whether those same personal background variables accounted for any of the variance in subjects' adaptation to the program over time. This analysis was conducted using subjects' cumulative pass time in the community at the end of five weeks, fifteen weeks, twenty-five weeks, and thirty-five weeks as a measure of adaptation to the program over time. A criteria of .10 was set for variables to be entered in the regression equation. At all four time periods none of the variables qualified for the analysis. Therefore, these personal background variables did not account for a significant amount of variance in subjects' adaptation to the program over time.

**Primary Analyses of the Data**

The remainder of this chapter will be organized in the following manner:

1) Descriptive data related to subjects' levels of self-esteem (see Appendix A) and coping strategies (see Appendix B) will be presented. Then, results of the hypotheses testing of these variables in relation to both subjects' adaptation to the program over time and to their treatment outcome will be
provided. Finally, analyses of additional data regarding subjects' use of coping strategies in response to four hypothetical situations (see Appendix C) will be presented.

2) Descriptive data related to subjects' sources of social support (see Appendix D) will be provided initially in this section. Next, results of the hypotheses testing of this variable in relation to both subjects' adaptation to the program over time and their treatment outcome will be presented. Finally, results of additional analyses related to subjects' and clinicians' perceptions of the degree of parents' supportiveness for subjects' completion of the program will be provided.

3) In the initial part of this final section, descriptive data related to the amount of pass time in the community received by subjects and the total number and types of subjects' major violations of program rules will be presented. Next, subjects' and clinicians' probability estimates of whether the subjects will complete the program successfully will be provided. The results of the hypotheses testing of these variables in relation to subjects' adaptation to the program over time and the outcome of their treatment will then be presented.

Description of Psychological Variables

The total self-esteem score of the Rosenberg Self-Esteem Scale was used to assess the subjects' self-esteem (see Appendix A). The
maximum score which can be obtained on this ten item test is 40. The mean self-esteem score for this sample was 31.4 (median = 32.5; range = 16 to 40).

On the General Coping Scale (see Appendix B), subjects were asked how often they use each of the twenty-one coping strategies for dealing with daily problems at the program. Each coping strategy was categorized according to one of the following six types of coping strategies: optimistic comparisons, selective-ignoring, resignation, acting-out, avoidance, and negotiation. The avoidance coping strategies were divided into two subcategories of "positive-avoidance strategies" and "negative-avoidance strategies". For example, "watching T.V. to help take your mind off the problem" was considered to be a positive avoidance coping strategy. An example of a negative avoidance coping strategy was "getting high". Averages for the frequency of use of each type of coping strategy were obtained (see Table 1).

In addition, these types of coping strategies were divided into two major categories: (1) positive coping strategies (optimistic comparisons, selective-ignoring, negotiation, and positive avoidance), and (2) negative coping strategies (acting-out, resignation, and negative avoidance). Averages of the frequency of use of positive and negative coping strategies were also obtained (see Table 1).

According to the data listed in this table, positive coping strategies were reportedly used by subjects more frequently than were negative coping strategies for dealing with daily problems at the
Table 1
Type of Coping Strategies
(Average Frequencies of Use)

<table>
<thead>
<tr>
<th>Type</th>
<th>mean</th>
<th>mode</th>
<th>median</th>
<th>st.dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Avoidance</td>
<td>1.8</td>
<td>1.7</td>
<td>1.7</td>
<td>.44</td>
</tr>
<tr>
<td>Acting-Out</td>
<td>1.9</td>
<td>1.7</td>
<td>1.7</td>
<td>.64</td>
</tr>
<tr>
<td>Resignation</td>
<td>2.1</td>
<td>2.0</td>
<td>2.0</td>
<td>.60</td>
</tr>
<tr>
<td>Selective-Ignoring</td>
<td>2.6</td>
<td>2.5</td>
<td>2.5</td>
<td>.65</td>
</tr>
<tr>
<td>Negotiation</td>
<td>2.6</td>
<td>2.3</td>
<td>2.3</td>
<td>.65</td>
</tr>
<tr>
<td>Positive Avoidance</td>
<td>2.7</td>
<td>3.3</td>
<td>2.7</td>
<td>.68</td>
</tr>
<tr>
<td>Optimistic Comparisons</td>
<td>3.1</td>
<td>3.5</td>
<td>3.3</td>
<td>.59</td>
</tr>
<tr>
<td>Positive Coping Strategies</td>
<td>2.8</td>
<td>3.1</td>
<td>2.8</td>
<td>.39</td>
</tr>
<tr>
<td>Negative Coping Strategies</td>
<td>1.9</td>
<td>2.2</td>
<td>2.0</td>
<td>.38</td>
</tr>
</tbody>
</table>

Coding: 1 - never  2 - once in a while  3 - fairly often  4 - very often
program. An examination of the types of coping strategies revealed that optimistic comparisons were reportedly used the most often by subjects for coping with daily problems at the drug treatment program, while negative avoidance strategies were reportedly used the least often by subjects.

Individual coping strategies were examined to determine which strategies were reportedly used most often by subjects and which strategies were reportedly used least often by most subjects. Two optimistic comparison coping strategies (Nos. 20 & 21 of Appendix B) were each reportedly used either 'fairly often' or 'very often' by twenty-five subjects (83%). The coping strategy which was reportedly used least often by all 30 subjects was 'AWOL - leave the program for a while' (a negative-avoidance coping strategy). Data from agency records regarding subjects' violations of major rules up to the time of the interviews indicated that four subjects who reported they had not run away from the program since admission, had in fact done so.

Twenty-nine subjects (96%) reported that they either 'never' get high or get high 'once in a while' (a negative-avoidance strategy). An examination of data from subjects' files revealed that nine subjects who responded "never" to the item, "How often do you get high?" had in fact used drugs or alcohol since their admission to the program. Interestingly, several subjects were honest about using substances but not about running away from the program and vice versa. In two cases, subjects admitted to using drugs or alcohol since admission, but had not been caught by the program's drug and alcohol screening procedures. It is noteworthy that seventeen
subjects' self-reports matched the program's records. Future studies may need to obtain verification of subjects' self-report, particularly regarding their violations of major rules of the program. Lying about using drugs/alcohol or running away is understandable given society's disapproval of those behaviors. However, just because a subject lied about one of these behaviors does not necessarily mean he was dishonest about other components of the interview.

Subjects were also asked to cite both the individual coping strategy which works best for them and the individual coping strategy which works the least well for them in dealing with daily problems at the program (see Table 2). As can be seen from this table, twenty subjects (67%) cited a negotiation coping strategy as being the most effective for dealing with problems at the program. Of those twenty subjects, only nine completed the program successfully. The next most frequently cited most effective type of coping strategy was positive-avoidance (n = 5). Two of those five subjects completed the program successfully. Eleven subjects (37%) cited an acting-out coping strategy as being the least effective for dealing with daily problems at the program. Four of those eleven subjects completed the program successfully. The next most frequently cited least effective type of coping strategy was negative-avoidance (n = 9). Five of these nine subjects completed the program successfully. Interestingly, none of the subjects identified "getting high" as being either the most effective or least effective coping strategy for dealing with daily problems at the program. The implications of all these results will be discussed in Chapter V.
Table 2
Effectiveness of Coping Strategies

<table>
<thead>
<tr>
<th>Strategy*</th>
<th>Works Best</th>
<th>Percent- age</th>
<th>Works Worst</th>
<th>Percent- age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Just try to ignore what's going on (S.I.)</td>
<td>1(0)</td>
<td>3.3</td>
<td>4(0)</td>
<td>13.3</td>
</tr>
<tr>
<td>2. Remind yourself that things could be worse (O.C.)</td>
<td>2(1)</td>
<td>6.7</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>3. Tell yourself it's not really important (R)</td>
<td>1(0)</td>
<td>3.3</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>4. Decide there's nothing you can do to change things (R)</td>
<td>0</td>
<td>0.0</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
<tr>
<td>5. Yell or shout to let off steam (A.O.)</td>
<td>0</td>
<td>0.0</td>
<td>6(2)</td>
<td>20.0</td>
</tr>
<tr>
<td>6. Keep out of that person's way for a while (AV.P)</td>
<td>3(2)</td>
<td>10.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>7. Sit down and talk things out with that person (N)</td>
<td>7(2)</td>
<td>23.3</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
<tr>
<td>8. Keep so busy that you don't have time to think about the problem(s) (AV.P)</td>
<td>2(0)</td>
<td>6.7</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>9. Tell yourself the problems are not important (R)</td>
<td>0</td>
<td>0.0</td>
<td>2(2)</td>
<td>6.7</td>
</tr>
<tr>
<td>10. Hit or kick an object (A.O)</td>
<td>0</td>
<td>0.0</td>
<td>3(1)</td>
<td>10.0</td>
</tr>
<tr>
<td>11. Try to find someone at the program to talk to who is not involved in the conflict (N)</td>
<td>12(7)</td>
<td>40.0</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
<tr>
<td>12. Just keep the hurt or angry feelings to yourself (AV.N.)</td>
<td>0</td>
<td>0.0</td>
<td>9(5)</td>
<td>30.0</td>
</tr>
<tr>
<td>13. Try to find a fair compromise (N)</td>
<td>1(0)</td>
<td>3.3</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>14. Watch TV or read a book to help take you mind off the problems (AV.P)</td>
<td>0</td>
<td>0.0</td>
<td>1(1)</td>
<td>3.3</td>
</tr>
<tr>
<td>15. Try to manipulate staff (A.O)</td>
<td>1(0)</td>
<td>3.3</td>
<td>2(1)</td>
<td>6.7</td>
</tr>
</tbody>
</table>

n = 30

*Codes:  S.I. - selective-ignoring  A.O. - acting-out
O.C. - optimistic comparisons  AV.P. - positive avoidance
R - resignation  Av.N. - negative avoidance
N - negotiation

(The number in brackets indicates the number of subjects who chose this coping strategy and who completed the program.)
Analyses of Psychological Data

Objective 1: To examine some of the psychological predictors (self-esteem and coping strategies) of adolescent drug abusers' adaptation to a residential drug treatment program over time and also to the outcome of their treatment.

Hypothesis 1: The psychological independent variables (self-esteem and the average frequency of use of types of coping strategies) will significantly discriminate between subjects who complete the program and subjects who do not complete the program.

Stepwise Discriminant Analysis was used to test this hypothesis, and a .10 minimum tolerance level was set in order for variables to be entered in the discriminant function. The individual coping strategies were placed in categories according to six different types of coping strategies (see Appendix B). Subjects' Rosenberg self-esteem scores and the average frequency of their reported use of each type of coping strategy were included in this analysis. The results of this analysis partially supported hypothesis one. The following variables were included in the discriminant function in the order of their discriminating importance: self-esteem, negotiation, resignation, and negative-avoidance. Table 3 provides a summary of the steps and variables included in this function as well as a classification table regarding the accuracy of prediction of treatment outcome.
Table 3

Psychological Variables in Relation to Treatment Outcome: Stepwise Discriminant Analysis

Summary Table

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step Entered</th>
<th>Step Removed</th>
<th>Wilks' Lambda</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>1</td>
<td></td>
<td>0.90</td>
<td>0.09</td>
</tr>
<tr>
<td>Negotiation</td>
<td>2</td>
<td></td>
<td>0.81</td>
<td>0.05</td>
</tr>
<tr>
<td>Positive-Avoidance</td>
<td>3</td>
<td></td>
<td>0.74</td>
<td>0.04</td>
</tr>
<tr>
<td>Resignation</td>
<td>4</td>
<td></td>
<td>0.70</td>
<td>0.06</td>
</tr>
<tr>
<td>Negative-Avoidance</td>
<td>5</td>
<td></td>
<td>0.65</td>
<td>0.05</td>
</tr>
<tr>
<td>Positive-Avoidance</td>
<td>6</td>
<td></td>
<td>0.67</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Classification Table

Predicted Group Membership

did not complete program | 13 | 5 | 72.2% | 27.8%
(n=18)                  |    | 8.3% | 91.7%
completed program       | 11 | 11 |
(n=12)                  |    |    |

predictive accuracy = 80%

Group Means

<table>
<thead>
<tr>
<th></th>
<th>Self-Esteem</th>
<th>Coping Strategies</th>
<th>Negative-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosenberg</td>
<td></td>
<td></td>
<td>Rosenberg</td>
</tr>
<tr>
<td>unsuccessful</td>
<td></td>
<td></td>
<td>Negotiation</td>
</tr>
<tr>
<td>completion</td>
<td>30.0</td>
<td>2.72</td>
<td>2.04</td>
</tr>
<tr>
<td>successful</td>
<td>33.6</td>
<td>2.44</td>
<td>2.14</td>
</tr>
</tbody>
</table>

Coding for Coping Strategies: 1-never, 2-once in a while, 3-fairly often, 4-very often
As can be seen from the summary table, positive-avoidance was entered in the third step and was removed in the sixth step. The four remaining variables in this function correctly classified 80% of the sample into their respective treatment outcome groups (successful versus unsuccessful completion of the program). These variables correctly classified 72% of the subjects in the "unsuccessful completion" group and 91.7% of the "successful completion" group. Thus, these variables significantly discriminate between subjects who completed the program and subjects who did not complete the program.

An examination of the variables in the discriminant function revealed that subjects with higher scores on the Rosenberg Self-Esteem Scale were more likely to complete the program than were subjects with lower self-esteem scores. In addition, completion of the program was associated with lower average frequencies of use of negotiation and negative-avoidance strategies and higher average frequencies of use of resignation (see group means, Table 3).

Hypothesis 2: Subjects' levels of self-esteem and the average frequency of their use of types of coping strategies for dealing with daily problems at the program will account for a significant proportion of the variance in their adaptation to the program over time.

Adaptation was operationalized as the total amount of pass time received by subjects at the end of five weeks, fifteen weeks, twenty-five weeks, and thirty-five weeks. Stepwise Multiple Regression was used to test this hypothesis, using a criteria of .10
for entry into the regression equation. Separate analyses were conducted using the cumulative amounts of pass time at each of the four time periods. The results of these analyses partially supported hypothesis two (see Table 4).

These results revealed that at the end of five weeks, fifteen weeks, and twenty-five weeks of treatment respectively, only positive-avoidance entered the regression equation. This type of coping strategy accounted for 12% of the variance in adaptation to the program at the end of five weeks (p = .06), 11% of the variance in adaptation to the program at the end of fifteen weeks (p = .07), and 14% of the variance in adaptation to the program at the end of twenty-five weeks (p = .04). At the end of thirty-five weeks only self-esteem entered the regression equation and accounted for 11% of the variance in adaptation to the program (p = .07).

Although specific hypotheses were not tested, the types of coping strategies were reorganized into positive and negative coping strategies and these two variables along with self-esteem were reanalyzed using Stepwise Discriminant Analysis and Stepwise Multiple Regression. The positive coping strategies included negotiation, selective-ignoring, optimistic comparisons, and positive-avoidance. The negative coping strategies included acting-out, resignation, and negative-avoidance. The classification of the types of coping strategies into these two categories was based on results of studies using adult subjects (e.g., Pearlman & Schooler, 1978) and based on ratings made by clinicians at this drug treatment program during the pilot study.
<table>
<thead>
<tr>
<th>Cumulative Pass Time</th>
<th>Factors</th>
<th>R2</th>
<th>B</th>
<th>Beta</th>
<th>P-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 5 weeks</td>
<td>positive avoidance</td>
<td>.12</td>
<td>6.5</td>
<td>.35</td>
<td>.06</td>
</tr>
<tr>
<td>at 15 weeks</td>
<td>positive avoidance</td>
<td>.11</td>
<td>43.2</td>
<td>.34</td>
<td>.07</td>
</tr>
<tr>
<td>at 25 weeks</td>
<td>positive avoidance</td>
<td>.14</td>
<td>130.4</td>
<td>.38</td>
<td>.07</td>
</tr>
<tr>
<td>at 35 weeks</td>
<td>Rosenberg self-esteem score</td>
<td>.11</td>
<td>25.9</td>
<td>.33</td>
<td>.07</td>
</tr>
</tbody>
</table>
Stepwise Discriminant Analysis, using a .10 criteria for entry into the discriminant function revealed that only self-esteem was included in the discriminant function (Wilks' lambda = .90; p = .09). Self-esteem correctly classified 53.3% of the sample into their respective treatment outcome groups. The classification accuracy was higher for the "successful completion" group (66.7%) than it was for the "unsuccessful completion" group (44.4%). It appears that the discrimination analysis of self-esteem and each type of coping strategy provided more meaningful results than when the types of coping strategies were placed into the "positive" and "negative" categories.

Stepwise Multiple Regression, using a criteria of .10 for entry into the regression equation revealed that only self-esteem entered the regression equation at five weeks and accounted for 11% of the variance in adaptation to the program (p = .07). Self-esteem was positively related to adaptation to the program at five weeks. At the end of fifteen weeks, none of the variables accounted for adaptation to the program. At the end of both twenty-five weeks and thirty-five weeks self-esteem was again the only variable to enter the regression equation. Self-esteem accounted for 12% of the variance in adaptation to the program at twenty-five weeks (p = .06) and 11% of the variance in adaptation to the program at thirty-five weeks (p = .07). At both time periods, self-esteem was positively related to adaptation to the program. Therefore, as with the previous analysis, placing the types of coping strategies into the positive
and negative categories provided less meaningful results than when each type of coping strategy was used in the analysis.

Further examination of the results of this analysis revealed the frequency of use of positive-avoidance coping strategies was positively related to the subjects' adaptation to the program at the end of five, fifteen, and twenty-five weeks respectively. At the end of thirty-five weeks self-esteem was positively related to subjects' adaptation to the program.

**Hypothesis 3:** There will be a significant positive relationship between subjects' levels of self-esteem and both their adaptation to the program over time and their completion of the program.

Results of previously cited analyses supported this hypotheses for the relationship between subjects' self-esteem and their treatment outcome and also for the relationship between subjects' self-esteem and their adaptation to the program at five, twenty-five, and thirty-five weeks respectively. The hypothesized relationship between self-esteem and adaptation to the program at fifteen weeks was positive, but was nonsignificant.

**Hypothesis 4a:** There will be a significant positive relationship between the subjects' average use of positive coping strategies (optimistic comparisons, negotiation, positive-avoidance, and selective-ignoring) and both their adaptation to the program over time and the outcome of their treatment.
Results of previously cited analyses indicated that when the positive coping strategies were placed into one category (positive coping strategies), the relationship between this new variable and both treatment outcome and adaptation to the program over time was positive, but was nonsignificant. In fact, as cited earlier, the combined positive coping strategies did not significantly discriminate between subjects based on treatment outcome, nor did they account for a significant amount of variance in subjects' adaptation to the program over time. Therefore, this hypothesis is rejected.

These positive coping strategies were analyzed separately, using Pearson Correlation to test the hypothesis. With the exception of a significant positive relationship between positive avoidance and both treatment outcome and adaptation to the program over time, this hypothesis was still rejected. Positive avoidance achieved a correlation of .28 with treatment outcome ($p = .06$) and achieved the following correlations with adaptation to the program over time: (1) at 5 weeks, $r = .35$ ($p = .03$); (2) at 15 weeks, $r = .34$ ($p = .03$); (3) at 25 weeks, $r = .38$ ($p = .02$); and (4) at 35 weeks, $r = .28$ ($p = .07$).

**Hypothesis 4b:** There will be a significant negative relationship between the subjects' average frequency of use of negative coping strategies (negative-avoidance, acting-out, and resignation) and both their adaptation to the program over time and the outcome of their treatment.
As cited in previous analyses, when these three negative coping strategies were placed into one category (negative coping strategies), this new variable did not significantly differentiate between subjects based on treatment outcome, nor did this new variable account for a significant amount of variance in subjects' adaptation to the program over time. Therefore, this hypothesis was rejected.

Pearson Correlation was used to test this hypothesis when these three types of coping strategies were analyzed separately in relation to treatment outcome and subjects' adaptation to the program over time. There was a significant negative relationship between the average frequency of use of negative-avoidance and adaptation at twenty-five weeks ($r = -0.29$, $p = .06$) and thirty-five weeks ($r = -0.26$, $p = .08$) respectively. However, the hypothesized relationship between all other negative-coping strategies and adaptation to the program over time was not significant (including the relationship between negative-avoidance and adaptation at both five and fifteen weeks of treatment). The correlations between these three types of coping strategies and treatment outcome were also nonsignificant. Therefore, with the exception of the two cases described above, this hypothesis was still rejected.

**Additional Analyses of Coping Strategies**

Because some of the results of the coping data were contrary to what was expected, additional analyses were conducted. For example, when the coping items were combined into two groups of positive and
negative coping strategies, their predictive accuracy should have
improved rather than diminished, as was the case. In addition, use
of negotiation was not expected to be significantly negatively
correlated with treatment outcome. Therefore, Pearson Correlational
Analyses were conducted in order to (1) examine the intercorrelations
among items on the General Coping Scale and (2) examine the
correlations between each item and subjects' self-esteem, the outcome
of their treatment, and their adaptation to the program over time.

The results of the first analysis (see Appendix H) revealed that
the items within each type of coping strategy do not correlate with
one another in quite the same way that they did for adults in the
community (e.g., Pearlman & Schooler, 1978). For example, one
negotiation item ("Try to find a fair compromise") was not
significantly correlated with other two negotiation items. In
addition, none of the negative-avoidance items were significantly
correlated with one another and the two selective-ignoring items were
not correlated with each other. The correlations within the
remaining types of coping strategies were mixed, with some items
being significantly positively correlated with each other and some
items being uncorrelated with each other.

The intercorrelations among all the items were examined in order
to test for multicollinearity. Since many significant correlations
were found, only the two highest correlations for each type of coping
strategy will be presented (see Appendix I). Future researchers who
use this scale may need to omit certain items or reorganize items
which may have been misclassified in this study. For example, one of
the designated negative-coping items ("Just keep the hurt or angry feelings to yourself") was positively correlated with two of the resignation items and consequently, should probably be reclassified as a resignation coping strategy. In addition, some items may be too general, which may have affected the results. For example, the negotiation coping strategy, "Sit down and talk things out with that person," was positively correlated with "getting high" (r = .41, p < .01). This correlation and the relationship between negotiation and treatment outcome might have been different if this item had specified whether the person was another resident or a clinician. Thus, reorganization of the items and increasing the specificity of the content of the items may improve the reliability of this scale.

The second analysis (see Appendix J) examined the correlations between each coping strategy and subjects' self-esteem, treatment outcome, and adaptation to the program over time. The only item which was significantly correlated with self-esteem, treatment outcome, and adaptation was "keep out of that person's way for a while." This item was also significantly correlated with only two other items on the Coping Scale (see Appendix H and I), which indicates that multicollinearity is likely to be minimized for correlations involving this coping strategy. The results of this analysis also indicate that (1) some coping strategies (e.g., "try to find a fair compromise") do not appear to be salient in affecting subjects' self-esteem or their adaptation to the program or the outcome of their treatment; (2) some coping strategies (e.g., "Tell yourself that the problems are not important") are significantly
related to subjects' adaptation to the program at certain phases of the program, but not at others; (3) some coping strategies are significantly associated with treatment outcome, while others are not. The implications of these results, particularly for treatment recommendations will be discussed in Chapter V. In summary, while these additional analyses of the Coping Scale helped to clarify results of previous analyses, they also revealed that more work needs to be done in improving the reliability of this scale for use with this population in this drug treatment program.

**Descriptive Coping Data Related to Hypothetical Situations**

In order to explore a different dimension of coping, subjects were asked to respond to questions about how they could potentially cope with four hypothetical situations, how they have coped with each situation in the past (if applicable), and how they would cope with each situation in the future (see Appendix C). During the planning stages of this study, it was hoped that the data generated by these questions could be coded according to the six types of coping strategies which were used in the General Coping Scale (see Appendix B). However, this was not possible as will be evident from the description of the data. Coding was also difficult in cases where only one response was allowed but two were given. For example, when asked how they had responded to situation three when it occurred, one subject said, "At first I got mad; then I just ignored him." In this study, only the first coping strategy was used in the analyses.
Subsequent studies may want to investigate these responses further in order to more accurately explain drug abusers' coping strategies in response to these situations. Nevertheless, the data generated provided meaningful information regarding the subjects' coping strategies.

Since some data were missing (i.e., because not all subjects provided responses to all questions) quantitative analyses using all components of these data were impossible. Therefore, only data for which complete sets existed for all thirty subjects were analyzed. These included the following for all four situations (see Appendix C):

1. Each subject's first response to the first question (what are all the possible ways the person could respond to this situation?).
2. The total number of coping strategies provided by subjects in response to the first question.
3. The total number of different coping strategies provided by subjects in response to the first question.
4. Each subject's response to the third question (How would you respond to this situation now?).

Each response was recorded into positive and negative coping strategies for all four situations. In the third and fourth situations, an additional category was added since some responses could be construed as either positive or negative. For example, telling staff that another adolescent is calling names may be perceived by staff as a more positive strategy than is either hitting that adolescent or calling names back. However, telling staff may be...
perceived negatively by other adolescent in the program because it represents "snitching" or "tattle-tailing".

The first two hypothetical situations were designed to evaluate subjects' coping strategies for dealing with events in which they could potentially perceive themselves as being rejected by their parents. The third hypothetical situation was designed to evaluate how subjects cope when they are called names by other adolescents in the program. Finally, the fourth situation was designed to evaluate how subjects cope when their mothers' are called names by other adolescents in the program. As is evident in Tables 8-11, more subjects reported actually having had to cope with the second (n = 17) and third (n = 23) hypothetical situations than with the first (n = 6) and fourth (n = 9) hypothetical situations. The examples of qualitative data which contain profanity are not cited for their shock value. Most of the subjects used profanity frequently and one subject explained, "We all talk like that around here. I guess it's partly a habit and partly to be 'bad' (i.e., "cool")."

**Situation 1:** The adolescent's parents are telling him that he cannot come home for the weekend even though it is his first opportunity for doing so since his admission to the program.

In the first question subjects were asked to list all the possible ways the hypothetical person could use to cope with this situation. The maximum number of coping strategies provided by subjects was four (n = 4) and the maximum number of different types of coping strategies provided by subjects was also four (n = 3). Only
six subjects reported that this situation had actually happened to them. The repertoire of strategies generated by subjects might have been larger if some of the subjects who were in the very early stages of the program had been asked this question when they were in the later stages of the program. All thirty subjects provided a coping strategy which they thought they would use if the situation occurred now. Appendix K provides a summary of the descriptive data regarding the types of coping strategies generated by the subjects about this situation.

An examination of this data revealed that twelve subjects cited some type of expression of anger as their first response to the first question. For example, one subject said, "He would probably say angry things he didn't mean because passes are important." Most of these subjects simply said, "Get mad" as their first response. Six of these twelve subjects completed the program. Of the six subjects to whom this situation had occurred, two subjects said they expressed anger. For example, one subject said, "I hung up on them after I told them to 'get _____' and told them, 'Don't come and visit me ever!' Then I cussed around the program for a while." One subject said he felt hurt and rejected and said to his parents, "I ain't been home in months. Ain't I more important than were you're going?"

When asked how they would cope with the situation now, the two most frequently cited coping strategies were 'make alternative plans' (n = 11, 4 of which completed the program) and 'negotiate with parents for an alternate weekend' (n = 7, 3 of which completed the program). In these cases, the emotional tone was generally one of
acceptance of their parents' decision despite some feelings of
disappointment. In those cases where the person described feeling
very upset or angry, but would be likely to make other plans, the
response was put in the "express anger" or "express hurt" categories
rather than the "alternative plans" or "alternative weekend" coping
strategies. One subject couldn't imagine his parents ever telling
him he couldn't come home. However, if that did happen he said, "I'd
lose it, fall apart on the phone, and cry my eyes out. I'd feel very
rejected." The response for the subject who said he'd go home anyway
was coded as a negative coping strategy because he said, "I'd rebel
and go home anyway; I know where they keep the key."

Situation 2: The adolescent's parents are asking him to leave
their home if he is not going to stop using drugs.

In response to the first question, the maximum number of coping
strategies provided by subjects was four (n = 2) and the maximum
number of different types of coping strategies provided by subjects
was also four (n = 1). Seventeen subjects said that this situation
had happened to them in the past. All subjects provided a coping
strategy which they thought they would use if this situation occurred
now. Appendix K provides a summary of the descriptive data regarding
the types of coping strategies generated by subjects about this
situation.

An examination of this data revealed that as a first response to
the first question, the most frequently cited coping strategy was
"Get angry and leave" (n = 13). Five of these thirteen subjects
completed the program. These subjects stated that the person in this hypothetical situation would probably continue to get high after leaving. Of the seventeen subjects for whom this situation had occurred, the most frequently cited strategy for coping was "Got angry and left" (n = 11, 4 of whom completed the program). For example, one subject said he left angrily and "used even more drugs". Two other subjects added, "When you're high you're not thinking right so you say and do stupid/crazy things". For the three subjects who argued but stayed at home, all three went to their rooms after the argument and resumed the conversation once they were no longer high. One other subject left and stayed with friends or relatives (but didn't continue to get high) and returned when he was sober. Of the two subjects who used the "placation" approach, one justified it by saying, "Most people would put on a facade and still do drugs."

When asked how they would cope with this situation if it occurred now the most frequently cited response was "leave" (n = 13). Only four of these subjects completed the program. One subject reported that his mother always argues with him about his doing drugs but said, "She can't do nothin' about it; so when she tells me to leave I'll just go get high with my buddies." The other twelve subjects expressed a wish that this situation will not occur again. Most subjects reported that their parents have never condoned their drug use. However, one subject said, "My mom always let me smoke pot (marijuana) at home so she'd never tell me to leave." The four subjects who would use negotiation as their coping strategy, focused
on an acceptance that they have a drug problem. For example, one subject said he'd tell his parents, "I need your help to quit because I'm too far into drugs to stop."

Situation 3: The adolescent is at the drug treatment program and is being called a derogatory name by another adolescent who is also at the program.

In response to the first question, the maximum number of types of coping strategies provided by subjects was five (n = 2) and the maximum number of different types of coping strategies provided by subjects was also five (n = 1). Twenty-three subjects reported that this situation had happened to them since they'd been at the program. As one subject said, "Name calling is a regular occurrence around here." All thirty subjects provided a coping strategy which they thought they would use if the situation occurred now. Appendix K provides a summary of the descriptive data regarding the types of coping strategies generated by subjects about this situation.

An examination of this data revealed that as an initial response to the first question, the most frequently cited coping strategy was "ignoring." Of the twelve subjects who generated this coping strategy, two completed the program. Included in this category were both "no verbal response - a conscious attempt to ignore the name calling" and "laughing it off - not taking the name calling seriously." Many subjects explained their use of this strategy. For example, one subject said, "The person could walk away because names ain't nothing; it's how you feel about yourself that's important."
Another subject said, "The guy could ignore it if he's strong in character and can keep his mouth shut." The next most frequently cited response was "call him a name back" (n = 9, 6 of which completed the program) and the third most frequently cited coping strategy was "physical violence" (n = 5, 3 of which completed the program).

Of the twenty-three subjects for whom this situation had occurred, the most frequently cited coping strategy used was "Ignored him" (n = 10). Only three of these subjects completed the program. One of these subjects said, "There's no name that can affect me. I've been called them all and can walk away from it and he felt worse because he couldn't get to me." Seven subjects said they called the person names back. As one subject put it, "I upped the ante. I'm good with words and chew at their weak spots." Four subjects said they got in a physical fight with the name-caller. One subject described the fight graphically: "He got his a__ whipped and I got put on restriction."

When subjects were asked how they would cope with this situation in the future, the most frequently cited coping response was "I'd Ignore him" (n = 18). Six of these subjects completed the program. One subject said, "I'd say something funny to make him laugh. The goal is to decrease the tension." Another said, "Talk's cheaper than the one talking. They can say what they want as long as they don't lay their hands on me." The second most frequent response was "name calling in return" (n = 5) and the third most frequent coping strategy cited for future use was "rational talk" (n = 4).
latter involved attempts to calmly discuss the situation. For example, one subject said, "I'd ask him why he's calling me names because I've always treated him right." Only one subject said he'd physically fight the person.

**Situation 4:** The adolescent's mother is called a derogatory name by another adolescent who has been bothering the former adolescent for several days.

In response to the first question, the maximum number of coping strategies given by subjects was five (n = 2) and the maximum number of different types of coping strategies provided by subjects was also five (n = 1). Nine subjects said this situation had happened to them since their admission to the program. All thirty subjects cited a coping strategy which they thought they would use if this situation occurred now. Appendix K provides a summary of the descriptive data regarding the types of coping strategies generated by the subjects about this situation.

An examination of this data revealed that as the initial response to the first question, the most frequently cited coping strategy was "physical violence" (n = 14). Six of these subjects completed the program. The following are examples of this coping strategy:

1. "He could crack him on the f____ nose! I don't think anyone has the right to call your mother names."

2. "He could just grab a hold of him with a firm grip and throw him against the wall - not to fight but to let him know you won't take no sh____."


3. "He could pull the guy's arm and yank him down the steps."

4. "Tell him to meet you outside and proceed to beat the sh—out of him."

The second most frequent initial response to the first question was "Ignore him" (n = 6), while the next two most frequent initial responses were "name calling (of mothers) back" (n = 4) and "talking rationally" (n = 4).

For the nine subjects for whom this situation had occurred, the most frequently cited coping strategy used was "ignoring" (n = 4). Two of these subjects completed the program. One subject said, "My mom didn't love me and we aren't close so I don't feel a need to defend the word 'mom'." Another subject said, "It's not true so I didn't worry about it." Three subjects said they used physical violence (and all three subjects did not complete the program), one subject used "rational talk" and another subjects called the person's mother a name back.

When subjects were asked how they would cope with the situation in the future, the most frequently cited coping strategy was "Ignore him" (n = 12). Five of these subjects completed the program. One subject said, "I would ignore it because if I got mad I'm afraid I'd really deck him." The remaining subjects did not provide reasons for their choice of coping. Six subjects said they would call the person's mother a name back (only one of these subjects completed the program). For example:

1. "I'd come back with something like, 'Your mama wears knee pads' and it could go on and on."
2. "I'd say 'Well, your mama, and your daddy, and your grannie are ___,' and call them worse names."

3. "I'd say, 'Well your mama's my mama so let's talk about the dirty b___.' That gets under their skin."

Five subjects said they would use physical violence to cope with the situation (and only one of these five subjects completed the program). For example:

1. "I'd have to hurt the man - whip his a__!"

2. "I can't tolerate anyone calling my mom names so I'd probably go off on the guy (i.e., hit him)."

3. "Deck him; ain't nothin' else you can do."

Four subjects said they'd talk rationally to the person (e.g., "You don't know my mother so you can't hurt me by saying that"). The remaining three subjects said they would tell staff, warn staff that the name caller would be hurt if he continued, and warn the name caller that he would be hurt if he continued this behavior. One subject added, "I wouldn't ever call someone's mom a name because you don't know if their mother is dead; it would be too cruel."

Analyses of Data: Hypothetical Situations

Two general questions were posed as a basis for the analysis of this data:

1. Does knowledge of how subjects did or would cope with these situations accurately predict the outcome of their treatment?
2. How is the repertoire of coping strategies generated by subjects related to the outcome of their treatment?

Because use of these hypothetical situations was for exploratory purposes, no formal hypotheses were tested. As discussed earlier the data used in these analyses were from those categories for which full data sets were available (see p. 107). Data from the first two situations were analyzed together since both situations had a common theme of "potential rejection." Data from the final two situations were analyzed in a separate analyses since both situations dealt with name-calling behavior. Data from all four situations were categorized into positive and negative coping strategies. Data from the third and fourth situations contained an additional category for those coping strategies which could be classified as either positive or negative.

Stepwise Discriminant Analysis was used to determine whether subjects initial responses to the first question and their responses to the third question (see Appendix C) for situations one and two significantly discriminated between subjects who completed the program and subjects who did not complete the program. A .10 minimum tolerance level was set for variables to be entered into the discriminant function. None of the variables were included in the discriminant function. Therefore, these coping strategies did not significantly discriminate between subjects who completed the program and subjects who failed to complete the program.
Stepwise Discriminant Analysis was also used to analyze the data from the third and fourth situations, using subjects' initial responses to the first question and their responses to the third question (see Appendix C). A .10 minimum tolerance level was also set for this analysis. None of the variables were included in the discriminant function. Therefore, these coping strategies did not significantly discriminate between subjects who completed the program and subjects who failed to complete the program.

Finally, Stepwise Discriminant Analysis was conducted (using a minimum tolerance level of .10 for entry into the discriminant function) to determine if the number of types of coping strategies and the number of different types of coping strategies generated by the subjects in response to each situation would significantly discriminate between subjects based on treatment outcome. Six variables were included in the discriminant function. Table 5 provides a summary of this analysis.

Results of this analysis indicate that the variables included in this function significantly discriminated between subjects who completed the program and subjects who failed to complete the program (predictive accuracy = 70%). These variables correctly classified 66.7% of the subjects who completed the program and 72.2% of the subjects who failed to complete the program. The number of different coping strategies generated by subjects in response to situation one maximally discriminated between treatment groups.

An examination of the means of those variables for the two treatment outcome groups revealed the following:
Table 5

Hypothetical Situations
Number of Coping Strategies and Number of Different Coping Strategies: Stepwise Discriminant Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Entered</th>
<th>Wilks</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. #Different Coping Strategies</td>
<td></td>
<td>.80</td>
<td>.01</td>
</tr>
<tr>
<td>(Situation 1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. #Coping Strategies</td>
<td></td>
<td>.77</td>
<td>.03</td>
</tr>
<tr>
<td>(Situation 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. #Different Coping Strategies</td>
<td></td>
<td>.71</td>
<td>.03</td>
</tr>
<tr>
<td>(Situation 4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. #Coping Strategies</td>
<td></td>
<td>.65</td>
<td>.02</td>
</tr>
<tr>
<td>(Situation 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. #Coping Strategies</td>
<td></td>
<td>.59</td>
<td>.02</td>
</tr>
<tr>
<td>(Situation 1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. #Coping Strategies</td>
<td></td>
<td>.56</td>
<td>.02</td>
</tr>
<tr>
<td>(Situation 4)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N.B. The data used in this analysis were generated from subjects' first responses only to the first question asked about each situation.

Classification Results

<table>
<thead>
<tr>
<th>Predicted Group Membership</th>
<th>did not complete program</th>
<th>completed program</th>
</tr>
</thead>
<tbody>
<tr>
<td>did not complete program</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Actual Group Membership</td>
<td>(n=18)</td>
<td></td>
</tr>
<tr>
<td>completed program</td>
<td>72.2%</td>
<td>27.8%</td>
</tr>
</tbody>
</table>

Predictive Accuracy = 70%

Group Means

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>unsuccessful completion</td>
<td>1.9</td>
<td>2.9</td>
<td>1.0</td>
<td>.73</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td>successful completion</td>
<td>2.8</td>
<td>2.7</td>
<td>.9</td>
<td>.65</td>
<td>2.8</td>
<td>.9</td>
</tr>
</tbody>
</table>
1. In comparison with subjects who did not complete the program, subjects who completed the program generated fewer coping strategies for potentially dealing with situations two, three, and four, but generated more potential coping strategies for dealing with situation one.

2. In comparison with subjects who did not complete the program, subjects who completed the program generated (on the average) a greater variety of types of coping strategies for dealing with situation one and (on the average) fewer different types of coping strategies for dealing with situation four.

Description of Social Support Variables

Subjects were asked which sources of social support they would seek under three different conditions: When they have very good news, when they have very personal problems about which they want to talk, and when they are feeling depressed. These three questions were asked twice in order to determine whom they would seek at the program and whom they would seek when they are away from the program on pass (see Appendix D).

Sources of Social Support

The results of the descriptive data for those persons whom subjects would seek when they have very good news, both when they are at the program and when they are away from the program on pass time are presented in Table 6. These results indicate that the person at the program who would be sought by the highest number of subjects was the subject's roommate (n = 7), with other male residents, case
Table 6

Sources of Social Support When Subjects Have Very Good News
(Frequencies)*

<table>
<thead>
<tr>
<th>Source of Social Support</th>
<th>At the program</th>
<th>Percent</th>
<th>Away from the program</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Father</td>
<td>-</td>
<td>0.0</td>
<td>4(2)</td>
<td>13.3</td>
</tr>
<tr>
<td>2. Mother</td>
<td>-</td>
<td>0.0</td>
<td>8(3)</td>
<td>26.7</td>
</tr>
<tr>
<td>3. Stepparent</td>
<td>-</td>
<td>0.0</td>
<td>2(0)</td>
<td>6.7</td>
</tr>
<tr>
<td>4. Sibling</td>
<td>-</td>
<td>0.0</td>
<td>3(1)</td>
<td>10.0</td>
</tr>
<tr>
<td>5. Male friend outside program</td>
<td>-</td>
<td>0.0</td>
<td>2(0)</td>
<td>6.7</td>
</tr>
<tr>
<td>6. Female friend outside program</td>
<td>-</td>
<td>0.0</td>
<td>6(4)</td>
<td>20.0</td>
</tr>
<tr>
<td>7. Case manager (therapist)</td>
<td>6(3)</td>
<td>20.0</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>8. Case worker</td>
<td>6(2)</td>
<td>20.0</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>9. Other program staff</td>
<td>2(1)</td>
<td>26.7</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
<tr>
<td>10. Roommate</td>
<td>7(4)</td>
<td>23.3</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>11. Other male resident</td>
<td>6(1)</td>
<td>20.0</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>12. Female resident</td>
<td>1(1)</td>
<td>3.3</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>13. Other adult outside program</td>
<td>-</td>
<td>0.0</td>
<td>3(2)</td>
<td>10.0</td>
</tr>
<tr>
<td>14. No One</td>
<td>2(0)</td>
<td>6.7</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
</tbody>
</table>

n=30  n=30

*The number in brackets indicates the number of subjects who would choose this source of social support and who completed the program.
managers, and caseworkers tying for the second highest frequency (n = 6). Two subjects said they would tell other staff at the program and one subject said he would tell a female resident. The data in this table also indicate that only a small percentage of subjects who would seek other male or female residents when they have very good news completed the program. Subjects who would choose their roommates or therapists fared better regarding treatment outcome.

Equal numbers of subjects said they would choose formal (staff) and informal (e.g., roommate) sources of support when they are at the program and have very good news.

When subjects are away from the program and have very good news, the person who would be sought by the highest number of subjects was the subject's mother (n = 8). However, only three of these subjects completed the program successfully. Female friends would be sought the next most frequently (n = 6, 4 of whom completed the program) and fathers would be sought the third most frequently (n = 4, 2 of whom completed the program). Interestingly, when subjects had very good news, two subjects said they would tell no one when they were at the program and one subject said he would tell no one when he was away from the program. In all three cases, the subjects involved did not complete the program. Finally, one subject said that even if he was away from the program, if he had very good news he would call back to the program and tell any staff who answered the phone. These results also indicate that when subjects are away from the program and have very good news, they are likely to seek informal (family, friends) rather than formal (staff at the program) sources of social support.
The results of the descriptive data for those persons whom subjects would seek when they have a very personal problem, both when they are at the program and when they are away from the program on pass are presented in Table 7. These results indicate that the person who would be sought by the highest percentage of subjects \((n = 11)\) when they have a personal problem was the subject's case manager. (Five of these subjects completed the program successfully). Case workers were the persons who would be sought by the next highest percentage of subjects \((n = 6, 2 \text{ of whom completed the program})\). The remaining subjects said they would seek other male residents \((n = 4)\), their roommates \((n = 3)\), and other program staff \((n = 2)\). In each case, one subject completed the program. Four people said they would not seek anyone and two of these subjects completed the program. Nineteen subjects said they would seek a staff member and seven subjects said they would seek informal sources of social support when they are at the program and have very personal problems.

When subjects are away from the program and have a very personal problem, the highest percentage \((n = 7)\) of subjects said they would tell no one. Only two of these subjects completed the program. The person who would be sought by the next highest percentage of subjects \((n = 5)\) was a female friend, with male friends being the next most frequently sought source of support \((n = 4)\). None of the subjects who would choose a male friend and three subjects who would choose a female friend completed the program. Fathers and mothers would be sought by three subjects respectively, one subject said he would talk to his stepparent, one subject said he would talk to a sibling, and
Table 7

Sources of Social Support When Subjects Have A Very Personal Problem (Frequencies)*

<table>
<thead>
<tr>
<th>Source of Social Support</th>
<th>At the program</th>
<th>Percent</th>
<th>Away from the program</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Father</td>
<td>-</td>
<td>0.0</td>
<td>3(1)</td>
<td>10.0</td>
</tr>
<tr>
<td>2. Mother</td>
<td>-</td>
<td>0.0</td>
<td>3(2)</td>
<td>10.0</td>
</tr>
<tr>
<td>3. Stepparent</td>
<td>-</td>
<td>0.0</td>
<td>1(1)</td>
<td>3.3</td>
</tr>
<tr>
<td>4. Sibling</td>
<td>-</td>
<td>0.0</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
<tr>
<td>5. Male friend outside program</td>
<td>-</td>
<td>0.0</td>
<td>4(0)</td>
<td>13.3</td>
</tr>
<tr>
<td>6. Female friend outside program</td>
<td>-</td>
<td>0.0</td>
<td>5(3)</td>
<td>16.7</td>
</tr>
<tr>
<td>7. Case manager (therapist)</td>
<td>11(5)</td>
<td>36.7</td>
<td>2(0)</td>
<td>6.7</td>
</tr>
<tr>
<td>8. Case worker</td>
<td>6(2)</td>
<td>20.0</td>
<td>2(1)</td>
<td>6.7</td>
</tr>
<tr>
<td>9. Other program staff</td>
<td>2(1)</td>
<td>6.7</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>10. Roommate</td>
<td>3(1)</td>
<td>10.0</td>
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<td>0.0</td>
</tr>
<tr>
<td>11. Other male resident</td>
<td>4(1)</td>
<td>13.3</td>
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<td>0.0</td>
</tr>
<tr>
<td>12. Other adult outside program</td>
<td>-</td>
<td>0.0</td>
<td>2(2)</td>
<td>6.7</td>
</tr>
<tr>
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<td>4(2)</td>
<td>13.3</td>
<td>7(2)</td>
<td>23.3</td>
</tr>
</tbody>
</table>

n=30 n=30

*The number in brackets indicates the number of subjects who would choose this source of social support and who completed the program.
two subjects would choose to talk to another adult outside the program. (See Table 7 for outcome statistics). Interestingly, two subjects said they would talk to their case managers and two subjects said they would talk to their case workers, even if they were away from the program on pass (i.e., they would either call those staff members or return to the program to talk with them). However, most of the subjects would still choose informal rather than formal sources of social support when they have a very personal problem and are away from the program on pass.

The results of the descriptive data for those persons whom subjects would seek when they are feeling depressed, both when they are at the program and when they are away from the program on pass are presented in Table 8. These results indicate that 40 percent of the subjects (n = 12) would not seek out anyone if they were depressed while they were at the program. (Five of these twelve subjects completed the program). Of those subjects who reported that they would seek someone, five said they would talk to their roommates, four said they would talk to their case managers, and four reported they would talk to their case workers. The remaining subjects said they would talk to another male resident (n = 2), a female resident (n = 2), and another staff member (n = 1). None of the subjects who would choose to be with a caseworker or another staff member completed the program, while two subjects who would talk to their therapists and three subjects who would talk to their roommates completed the program. Equal numbers of subjects said they
Table 8
Sources of Social Support When Subjects Are Feeling Depressed
(Frequencies)*

<table>
<thead>
<tr>
<th>Source of Social Support</th>
<th>At the program</th>
<th>Percent</th>
<th>Away from the program</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Father</td>
<td>-</td>
<td>0.0</td>
<td>3(2)</td>
<td>10.0</td>
</tr>
<tr>
<td>2. Mother</td>
<td>-</td>
<td>0.0</td>
<td>4(4)</td>
<td>13.3</td>
</tr>
<tr>
<td>3. Stepparent</td>
<td>-</td>
<td>0.0</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
<tr>
<td>4. Sibling</td>
<td>-</td>
<td>0.0</td>
<td>1(1)</td>
<td>3.3</td>
</tr>
<tr>
<td>5. Other relative</td>
<td>-</td>
<td>0.0</td>
<td>1(0)</td>
<td>3.3</td>
</tr>
<tr>
<td>6. Male friend outside program</td>
<td>-</td>
<td>0.0</td>
<td>3(0)</td>
<td>10.0</td>
</tr>
<tr>
<td>7. Female friend outside program</td>
<td>-</td>
<td>0.0</td>
<td>5(3)</td>
<td>16.7</td>
</tr>
<tr>
<td>8. Case manager (therapist)</td>
<td>4(2)</td>
<td>13.3</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>9. Case worker</td>
<td>4(0)</td>
<td>13.3</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>10. Other program staff</td>
<td>1(0)</td>
<td>3.3</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>11. Roommate</td>
<td>5(3)</td>
<td>16.7</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>12. Other male resident</td>
<td>2(1)</td>
<td>6.7</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>13. Female resident</td>
<td>2(1)</td>
<td>6.7</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>14. Other adult outside program</td>
<td>-</td>
<td>0.0</td>
<td>2(2)</td>
<td>6.7</td>
</tr>
<tr>
<td>15. No One</td>
<td>12(5)</td>
<td>40.0</td>
<td>10(0)</td>
<td>33.3</td>
</tr>
</tbody>
</table>

*n=30

*The number in brackets indicates the number of subjects who would choose this source of social support and who completed the program.
would choose formal and informal sources of social support when they are at the program and are feeling depressed.

When subjects are away from the program and are feeling depressed, 33.3 percent of the subjects (n = 10) said they would not seek out anyone. None of these ten subjects completed the program successfully. Of those subjects who reported that they would seek out someone, five said they would talk to a female friend outside the program, four said they would talk to their mothers, and three said they would talk to their fathers. The remaining subjects reported that they would talk to another adult outside the program (n = 2), a stepparent (n = 1), a sibling (n = 1), and another relative (n = 1). The frequencies for completion of the program are presented in Table 8. It is noteworthy that all four subjects who would choose to be with their mothers when they are away from the program and are feeling depressed completed the program. Interestingly, none of the subjects reported that they would choose a formal source of social support when they are away from the program and are depressed.

**Substance Use of Sources of Social Support**

All subjects were asked to report whether the persons whom they would seek under the different conditions (good news, personal problems, and depression) currently use drugs or alcohol. The degree of the substance use was not requested, but would probably be useful data to gather in future studies. In all cases, subjects who said they would not seek anyone under any of the conditions did not admit to using drugs or alcohol.
For these sources of social support whom subjects would seek when they are at the program and have very good news, ten were reported by subjects as currently using drugs and alcohol. For those sources of social support whom subjects would seek when they are away from the program on pass and have very good news, nine were reported by subjects as currently using drugs or alcohol.

For those sources of social support whom subjects would seek when they are at the program and have a very personal problem, six were reported by subjects as currently using drugs or alcohol. For those sources of social support whom subjects would seek when they are away from the program on pass and have a very personal problem, six were reported by subjects as currently using drugs or alcohol.

Finally, for those subjects of social support whom subjects would seek when they are at the program and are feeling depressed, eight were reported by subjects as currently using drugs or alcohol. For those sources of social support whom subjects would seek when they are away from the program on pass and are feeling depressed, eight were reported by subjects as currently using drugs or alcohol.

Dependability of Sources of Support

Subjects were asked to rate the dependability of the sources of social support whom they would seek (see Appendix D). For those subjects who would not seek anyone, no rating for dependability was provided.

For those sources of social support who would be sought when subjects are at the program and have very good news, twenty-one (70%)
rated those persons as very dependable and six subjects (20.0%) rated those persons as somewhat dependable. Two subjects received no rating because they reported that they would seek no one. One person did not supply a rating because his choice of a social support would be "any staff member who's available" and he stated that the dependability rating would vary depending on the staff member present. For those sources of social support who would be sought when subjects are away from the program and have very good news, twenty-one (70.0%) rated those persons as very dependable and eight subjects (26.6%) rated those persons as somewhat dependable. One person provided no dependability rating since he reported that he would seek no one.

For those sources of social support who would be sought when subjects are at the program and have a very personal problem, twenty-five subjects (83.3%) rated those persons as very dependable and one person (3.3%) rated those persons as somewhat dependable. Four subjects did not choose a source of social support and therefore, did not receive a rating. For those sources of social support who would be sought when subjects are away from the program and have a very personal problem, nineteen subjects (63.3%) rated those persons as very dependable, three subjects (10%) rated those persons as somewhat dependable, and one person (3.3%) rated his choice as somewhat undependable. Seven subjects did not choose a source of support and therefore received no dependability ratings.

Finally, for those sources of social support who would be sought when subjects are at the program and are feeling depressed, seventeen
subjects (56.6%) rated those persons as very dependable and one person (3.3%) rated his choice as somewhat dependable. Twelve subjects decided they would not seek anyone and therefore, received no rating for dependability. For those sources of social support who would be sought when subjects are away from the program and are feeling depressed, seventeen subjects (56.7%) rated those persons as very dependable and three subjects (10%) rated those persons as somewhat dependable. Ten subjects reported they would not seek anyone and therefore, received no rating for dependability.

In summary, with the exception of one case, in which the subject rated his choice of social support as somewhat undependable, all other subjects who chose sources of social support rated those persons as either very dependable or somewhat dependable. None of the subjects rated his source of social support as very undependable.

**Analyses of Social Support Data**

**Objective 2:** To determine how the types and dependability of the subjects' sources of social support are related to their adaptation to the program over time and also to the outcome of their treatment.

**Hypothesis 5a:** Subjects who use non-substance-using sources of social support will be significantly more likely than will subjects who use substance-using sources of social support to both adapt well to the program and to complete the program successfully.

Stepwise Discriminant Analysis was conducted to determine if substance-use by social supports discriminated between treatment
outcome groups. None of the variables qualified for the analysis. In order to test this hypothesis as it relates to subjects' adaptation to the program over time, Stepwise Multiple Regression was used (with a .10 criteria for entry into the regression equation). None of the variables qualified for the regression equations at any point in the program. Therefore, social support's current substance use does not account for a significant amount of variance in subjects' adaptation to the program over time. This result held regardless of the condition under which social support was sought and also regardless of whether subjects were at the program or away from the program. Therefore, hypothesis 5a is rejected.

**Hypothesis 5b:** Subjects who perceive their sources of social support as more dependable will be significantly more likely to both adapt well to the program and to successfully complete the program than will subjects who perceive their sources of social support as less dependable.

In order to test this hypothesis in relation to treatment outcome, Stepwise Discriminant Analysis was conducted. Two variables significantly discriminated between subjects who completed the program and subjects who failed to complete the program: The dependability rating of sources of social support who would be chosen (1) when subjects are feeling depressed and are away from the program and (2) when subjects have a very personal problem and are away from the program. Table 9 provides a summary of this analysis. These results indicated that knowing the dependability rating of subjects'
Table 9
Dependability of Social Supports and Treatment Outcome:
Stepwise Discriminant Analysis

Summary Table

<table>
<thead>
<tr>
<th>Source of Social Support</th>
<th>Wilks Lambda</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When subjects are feeling depressed and are away from the program</td>
<td>.68</td>
<td>.001</td>
</tr>
<tr>
<td>2. When subjects have a very personal problem and are away from the program</td>
<td>.65</td>
<td>.003</td>
</tr>
</tbody>
</table>

Classification Results

<table>
<thead>
<tr>
<th>Predicted Group Membership</th>
<th>Did not complete program</th>
<th>Completed program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not complete program</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>(n=18)</td>
<td>61.1%</td>
<td>38.9%</td>
</tr>
</tbody>
</table>

Predictive Accuracy = 76.6%

Group Means

<table>
<thead>
<tr>
<th></th>
<th>Depressed/out</th>
<th>Personal problem/out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuccessful</td>
<td>3.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Successful</td>
<td>1.2</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Dependability Codes: 1-very dependable, 2-somewhat dependable, 3-somewhat undependable, 4-very undependable
sources of support when subjects are away from the program and are both depressed and have a very personal problem results in a 76.6% degree of accuracy in predicting treatment outcome. Interestingly, knowledge of those two variables correctly classified 100% of the subjects who completed the program and 61.1% of the subjects who did not complete the program. With both variables, the relationship between dependability and treatment outcome was in the expected direction. Therefore, hypothesis 5b is supported for the results specified here.

In order to test this hypothesis as it relates to subjects' adaptation to the program over time, Stepwise Multiple Regression was conducted. At five, fifteen, twenty-five, and thirty-five weeks respectively, the dependability of subjects' sources of support for those persons whom subjects would seek when subjects are feeling depressed and are away from the program was the only variable which entered the regression equations. This dependability variable accounted for 29% of the variance in adaptation to the program at five weeks (p = .002), 21% of the variance in adaptation to the program at fifteen weeks (p = .01), 21% of the variance in adaptation to the program at twenty-five weeks (p = .01), and 29% of the variance to adaptation to the program at thirty-five weeks (p = .002). Therefore, hypothesis 5b is supported for this variable.

Sources of Social Support

No formal hypotheses were tested regarding subjects' sources of social support and either their adaptation to the program and the
outcome of their treatment. However, in order to determine if the persons whom subjects would seek under the three different conditions (both when subjects were at the program and away from the program) would differentiate between subjects based on the treatment outcome, Stepwise Discriminant Analysis was conducted (using a .10 level of significance). The results are reported in Table 10. Knowing whom subjects would seek when subjects are away from the program and are both feeling depressed and have very good news accurately classified the subjects 66.7% of the time in their treatment outcome groups. As with previous Discriminant Analyses, the predictive accuracy was higher for the completion group (83.3%) than it was for the non-completion group.

Additional Measures of Social Support

Subjects were asked to rate their parents on their degree of supportiveness for subjects' completion of the program. The therapists at the program were also asked to rate subjects' parents on the latter's supportiveness for subjects' completion of the program. The results indicated that twenty-three subjects (76.7%) rated their parents as very supportive and six subjects (20.0%) rated their parents as somewhat supportive of subjects' completion of the program. No subjects rated their parents as not supportive and one subject who was recently admitted to the program did not have enough information to make a decision. The therapists rated nine subjects' parents as very supportive, sixteen subjects' parents as somewhat supportive, and three subjects' parents as not supportive of their
Table 10

**Subjects Sources of Social Support: Stepwise Discriminant Analysis**

**Summary Table**

<table>
<thead>
<tr>
<th>Source of Social Support</th>
<th>Wilks lambda</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When subjects are feeling depressed and are away from the program</td>
<td>.79</td>
<td>.01</td>
</tr>
<tr>
<td>2. When subjects have very good news and are away from the program</td>
<td>.74</td>
<td>.02</td>
</tr>
</tbody>
</table>

**Classification Results**

<table>
<thead>
<tr>
<th>Predicted Group Membership</th>
<th>Did not complete program</th>
<th>Did not complete program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Group Membership</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>(n=18)</td>
<td>55.6%</td>
<td>44.4%</td>
</tr>
<tr>
<td>completed program</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>(n=12)</td>
<td>16.7%</td>
<td>83.3%</td>
</tr>
</tbody>
</table>

Predictive Accuracy = 66.7%
sons' completion of the program. In two cases, one therapist did not provide a rating.

No formal hypotheses were tested. However, a two-tailed t-test was conducted to determine whether the average ratings for supportiveness of subjects who completed the program were different from the average ratings of supportiveness for subjects who did not complete the program. The results were nonsignificant both for subjects' ratings of their parents' supportiveness in their completion of the program and for the therapists' ratings of the parents' supportiveness.

When the pilot study was conducted, the clinicians at the program stated that the parents of the adolescent drug abusers often sabotage treatment processes (e.g., by lying to protect their children from receiving negative consequences). However, further analysis of the qualitative data provided more evidence of parental supportiveness for treatment efforts. For example, when subjects were asked what their parents would be likely to say if the subjects complained about receiving unfair consequences for violations of rules, thirteen subjects (43.3%) said their parents would say, "You must have done something to deserve it, so stay there and deal with it." In addition, nine subjects (30%) said their parents might be sympathetic to their complaint but would encourage their sons to resolve the conflict with staff. Finally, six subjects (20%) said their parents would side with them against the program and one subject did not have enough information to make a decision. Therefore, subjects in this sample not only generally perceive their parents as supportive of
subjects' completion of the program, but they also perceive their parents as generally supportive of the clinicians' decisions.

When clinicians at the program were asked how subjects' parents would be likely to respond if the adolescent complained about the consequences received for breaking rules, the results were slightly different. Ten subjects' parents (33.3%) were rated as "probably would not respond in any way to their son's complaints", five subjects' parents (16.7%) were rated as "sympathetic of the complaint, but would encourage him to deal with it", and eight subjects' parents (26.7%) were rated as "would tell him he must have deserved the consequences and he should stay there and deal with it". Thus, parents' responses would be either neutral or supportive of the program. In summary, results of both additional measures of social support provided far more evidence of parental supportiveness for their adolescents' completion of the program and for following program rules than of parental sabotaging of treatment processes.

Description of Behavioral Program-Related Data

As discussed in Chapter III adolescents at the drug treatment program receive a certain number of "pass" hours in the community each week. The number of hours received depends on both the phase of the program in which the subjects are currently involved and deductions in pass hours because of violations in minor or major program rules during a given week.

The average number of hours of pass hours received by subjects at the end of week five was 15.3 hours (median = 10.5; range = 0 to 44
hours). The average number of pass hours received by subjects at the end of fifteen weeks was 96.1 (median = 79.5; range = 3 to 310 hours). Finally, by the end of the thirty-fifth week, subjects had received an average of 457.3 pass hours (median = 291.5; range = 9 to 1288). These figures are difficult to interpret since they reflect both the consequences for subjects' violations of program rules and also missing data for subjects who left the program.

The average number of violations of minor rules incurred by subjects throughout the entire course of their treatment was 26.4 (median = 22; range = 3 to 67). The average number of violations of major rules incurred by subjects throughout the entire course of their treatment was 10.5 (median = 9; range = 0 to 33). The average number of total violations of both minor and major program rules incurred by subjects throughout the entire course of their treatment was 36.1 (median = 33.5; range = 3 to 80). Descriptive data regarding the types of violations of major rules are presented in Table 1.

Analyses of Program-Related Data

Objective 3: To examine the relationship between specific behavioral program-related variables and both subjects' adaptation to the program over time and to the outcome of their treatment.

Hypothesis 6: There will be a significant positive relationship between the amount of community (pass) time received by subjects and their successful completion of the program.
<table>
<thead>
<tr>
<th>Type of Violation</th>
<th>mean</th>
<th>median</th>
<th>mode</th>
<th>std. dev.</th>
<th>range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Drug Use</td>
<td>1.60</td>
<td>1.0</td>
<td>.00</td>
<td>1.85</td>
<td>6</td>
</tr>
<tr>
<td>2. Alcohol Use</td>
<td>.47</td>
<td>0.0</td>
<td>.00</td>
<td>.97</td>
<td>4</td>
</tr>
<tr>
<td>3. A.W.O.L.</td>
<td>.87</td>
<td>1.0</td>
<td>.00</td>
<td>1.14</td>
<td>5</td>
</tr>
<tr>
<td>4. Missed Therapy</td>
<td>1.13</td>
<td>1.0</td>
<td>1.00</td>
<td>.82</td>
<td>3</td>
</tr>
<tr>
<td>5. Destruction of Property</td>
<td>.17</td>
<td>0.0</td>
<td>.00</td>
<td>.38</td>
<td>1</td>
</tr>
<tr>
<td>6. Physical Abuse/ Resident</td>
<td>.03</td>
<td>0.0</td>
<td>.00</td>
<td>.18</td>
<td>1</td>
</tr>
<tr>
<td>7. Verbal Abuse/Staff</td>
<td>1.20</td>
<td>0.0</td>
<td>.00</td>
<td>2.80</td>
<td>15</td>
</tr>
<tr>
<td>8. Unverified (0-4 hrs)</td>
<td>1.17</td>
<td>1.0</td>
<td>.00</td>
<td>1.68</td>
<td>8</td>
</tr>
<tr>
<td>9. Miscellaneous</td>
<td>3.83</td>
<td>3.0</td>
<td>.00</td>
<td>4.61</td>
<td>22</td>
</tr>
</tbody>
</table>
In order to test this hypothesis, Pearson's Correlation Analyses were conducted (using a .10 level of significance) using accumulated totals of pass hours at five, fifteen, twenty-five, and thirty-five weeks. In all cases, the number of hours of pass time received was positively correlated with treatment outcome (see Table 12). Therefore, this hypothesis was accepted.

Hypothesis 7: The types of major violations of program rules will significantly discriminate between subjects who complete the program and subjects who fail to complete the program.

In order to test this hypothesis, Stepwise Discriminant Analysis was conducted, using a minimum tolerance level of .10 for entry of variables into the discriminant function. The following types of violations of major rules were included in the discriminant function: drug use, running away from the program (AWOL), and physical abuse of other residents. These results are presented in Table 13. These variables correctly classified subjects into their respective treatment outcome groups 76.7% of the time. As with previous Discriminant Analyses, subjects in the "completion" group received a higher classification accuracy (91.7%) than did subjects in the "non-completion" group (66.7%). With all three types of violations of major rules, subjects who completed the program received an average of fewer violations of program rules than did subjects who did not complete the program.

Since only one resident physically abused another resident in the program, Discriminant Analysis was conducted again with this variable
Table 12

Treatment Outcome* and Pass Time: Pearson's Correlation Analyses

<table>
<thead>
<tr>
<th>Week</th>
<th>r</th>
<th>sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>.54</td>
<td>.001</td>
</tr>
<tr>
<td>15</td>
<td>.54</td>
<td>.001</td>
</tr>
<tr>
<td>25</td>
<td>.75</td>
<td>.0001</td>
</tr>
<tr>
<td>35</td>
<td>.88</td>
<td>.0001</td>
</tr>
</tbody>
</table>

*Coding for Treatment Outcome 1 = non-completion
2 = completion
Table 13

Treatment Outcome and Violations of Major Rules:
Stepwise Discriminant Analysis

Summary Table

<table>
<thead>
<tr>
<th>Type of Violation</th>
<th>Wilks Lambda</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Drug Use</td>
<td>.76</td>
<td>.005</td>
</tr>
<tr>
<td>2. AWOL</td>
<td>.70</td>
<td>.008</td>
</tr>
<tr>
<td>3. Physical abuse of resident(s)</td>
<td>.66</td>
<td>.01</td>
</tr>
</tbody>
</table>

Classification Results

<table>
<thead>
<tr>
<th>Predicted Group Membership</th>
<th>did not complete program</th>
<th>completed program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Group Membership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not complete program</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>(n=18)</td>
<td>66.7%</td>
<td>33.3%</td>
</tr>
<tr>
<td>completed program</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>(n=12)</td>
<td>8.3</td>
<td>91.7%</td>
</tr>
</tbody>
</table>

Predictive Accuracy = 76.7%

Group Means

<table>
<thead>
<tr>
<th>non-completion of program</th>
<th>Drug Use</th>
<th>AWOL</th>
<th>Abuse/Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>completion of program</td>
<td>.50</td>
<td>.41</td>
<td>.00</td>
</tr>
</tbody>
</table>
excluded. These results indicated that drug use and A.W.O.L. were the two variables included in the discriminant function. These two variables correctly classified 73.3% of the subjects into their respective treatment outcome groups. Therefore, excluding "physical abuse of other residents" reduced the overall predictive accuracy of treatment outcome. This new discriminant function still correctly classified subjects in the "completion" group 91.7% of the time, but the predictive accuracy for the "non-completion" group was reduced (61.1%). In summary, these types of violations of major rules (drug use, running away from the program, and physical abuse of other residents) significantly discriminated between subjects based on treatment outcome. Therefore, hypothesis 7 is supported for these three variables.

**Hypothesis 8**: The types of major violations of program rules will account for a significant amount of the variance in subjects' adaptation to the program over time.

In order to test this hypothesis, separate Stepwise Multiple Regression Analyses were conducted (using a .10 criteria for inclusion in the regression equation) at the end of the fifth, fifteenth, twenty-fifth, and thirty-fifth weeks of treatment. The results of this analyses are presented in Table 14. At the end of two weeks of treatment, "miscellaneous" violations of major rules (e.g., smoking cigarettes in restricted areas) accounted for 9% of the variance in adaptation to the program (p = .09). At the end of fifteen weeks, both "physical abuse of other residents" and "alcohol
<table>
<thead>
<tr>
<th>Cumulative Pass Time</th>
<th>Type of Violation</th>
<th>Step Entered</th>
<th>R2</th>
<th>B</th>
<th>Beta</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at 5 weeks</td>
<td>Miscellaneous</td>
<td>1</td>
<td>.09</td>
<td>-2.06</td>
<td>-.31</td>
<td>.09</td>
</tr>
<tr>
<td>at 15 weeks</td>
<td>Physical abuse of resident</td>
<td>1</td>
<td>.13</td>
<td>185.88</td>
<td>.65</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Alcohol use</td>
<td>2</td>
<td>.28</td>
<td>-65.33</td>
<td>-.49</td>
<td>.01</td>
</tr>
<tr>
<td>at 25 weeks</td>
<td>Physical abuse of resident</td>
<td>1</td>
<td>.31</td>
<td>612.16</td>
<td>1.05</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Drug use</td>
<td>2</td>
<td>.54</td>
<td>-78.08</td>
<td>-.46</td>
<td>.00001</td>
</tr>
<tr>
<td></td>
<td>A.W.O.L.</td>
<td>3</td>
<td>.61</td>
<td>-105.22</td>
<td>-.39</td>
<td>.00001</td>
</tr>
<tr>
<td>at 35 weeks</td>
<td>Physical abuse of resident</td>
<td>1</td>
<td>.52</td>
<td>2000.64</td>
<td>2.24</td>
<td>.00001</td>
</tr>
<tr>
<td></td>
<td>Unverified</td>
<td>2</td>
<td>.65</td>
<td>-477.41</td>
<td>-.82</td>
<td>.00001</td>
</tr>
<tr>
<td></td>
<td>Destructing property</td>
<td>3</td>
<td>.72</td>
<td>-683.91</td>
<td>-.85</td>
<td>.00001</td>
</tr>
</tbody>
</table>
use" accounted for 28% of the variance in adaptation to the program (p = .00001). At the end of fifteen weeks, "physical abuse of other residents", "drug use", and "running away from the program" accounted for 61% of the variance in adaptation to the program (p = .00001). Finally, at the end of thirty-five weeks, three violations of major rules (physical abuse of other residents, being unverified at a location where subjects were supposed to be, and destruction of property) accounted for 72% of the variance in adaptation to the program (p = .00001). Thus, hypothesis 8 is supported for these types of violations.

The frequency of times subjects physically abused other residents was positively correlated with their adaptation to the program (i.e., the amount of pass time in the community received). However, this result, as well as the inclusion of this variable must be interpreted with caution because only one subject violated this major rule (and this occurred within the first five weeks of treatment). The frequency of all other violations of major rules which entered the regression equation was negatively correlated with subjects' adaptation to the program. Thus, with the exceptions of the "physical abuse of residents" violation and the variables which were not included in the regression equation, this hypothesis is supported.

In order to explore this data further, an additional Stepwise Multiple Regression Analysis was conducted at each time period, using the same variables but adding the "total number of violations of major rules". At the end of five weeks, the total number of major
violations was the only variable to enter the regression equation. This variable accounted for 23% of the variance in adaptation to the program (p = .09) and was therefore, a better predictor of adaptation than were the frequency of "miscellaneous" violations of rules. At the end of fifteen, twenty-five, and thirty-five weeks, the total number of violations were not included in the regression equations and their inclusion did not change the results listed in Table 14.

**Hypothesis 9:** There will be a significant negative relationship between subjects' frequency of violations of program rules and their completion of the program.

In order to test this hypothesis a Pearson's Correlation Analysis was conducted. The results indicated that the total number of violations of minor rules and major rules and the total number of combined violations of minor and major rules were all positively correlated with treatment outcome. However, only one correlation (between "total violations of major rules" and "treatment outcome") was significant (r = .25, p = .09). Therefore, this hypothesis is rejected. However, as noted in the previous analyses some of the types of major violations of program rules were significantly negatively correlated with both treatment outcome and subjects' adaptation to the program over time.

**Expectations About Treatment Outcome**

One of the exploratory goals of this study was to obtain an objective measure of both subjects' and therapists' expectations
about the likelihood of subjects' completing the program successfully. Subjects were asked to provide their own probability estimates for completing the program. Each therapist (case manager) was also asked to provide a probability estimate about treatment outcome for each subject with whom the therapist was working. Finally, subjects were asked to provide a probability estimate regarding the likelihood that they would remain drug/alcohol free once they complete the program.

The results indicated that the range for subjects' own estimate of their likelihood of completing the program was 1 to 100%. The most frequent estimate given was 100% (n = 15). One subject reported that there was a 1% chance that he'd complete the program. He said, "If you'd asked me this question last week, I would have said 100%." Apparently, he was debating running away from the program because he'd just received consequences for using drugs (which he was denying). This prediction was accurate since this subject did run away from the program. The next lowest percentage cited was 50% (n = 5) with the remaining estimates falling between 50 to 100%. These estimates were positively correlated with subjects' adaptation to the program at week five (r = .36, p = .03), week fifteen (r = .29, p = .06), week twenty-five (r = .37, p = .02), and week thirty-five (r = .45, p = .006).

The range for therapists' estimates of the probability that subjects would complete the program was 25 to 100%, with frequencies for the percentages cited being distributed fairly evenly throughout this range. The most frequent estimates given were 80% (n = 4) and
85% (n = 4). Therapists' estimates were positively correlated with subjects' adaptation to the program at five weeks (r = .37, p = .02), fifteen weeks (r = .27, p = .07), twenty-five weeks (r = .49, p = .003), and thirty-five weeks (r = .56, p = .001).

The range for subjects' estimates that they will remain drug/alcohol-free once they complete the program was 0% (n = 3) to 100% (n = 5). The most frequently cited estimate was 75% (n = 7). These estimates were not significantly correlated with subjects' adaptation to the program at any of the four time periods.

Although no formal hypothesis was tested, Discriminant Analysis was conducted to determine whether these three sets of probability estimates significantly differentiate between subjects who completed the program and subjects who did not complete the program. The results are presented in Table 15. Both subjects' and therapists' probability estimates that subjects would complete the program were included in the discriminant function and accurately classified 73.3% of the sample based on treatment outcome. The predictive accuracy for the "completion" group was 83.3% and the predictive accuracy for the "non-completion" group was 66.7%.

An examination of the group means revealed that (1) subjects who completed the program received higher probability estimates for completion of the program from their therapists than did subjects who did not complete the program and (2) subjects who completed the program had higher average self-predictions for completion of the program than did subjects who did not complete the program.
### Table 15

**Probability Estimates for Completion of the Program by Staff and Therapists: Stepwise Discriminant Analysis**

**Summary Table**

<table>
<thead>
<tr>
<th>Type of Violation</th>
<th>Wilks Lambda</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Therapists' probability estimate for subject's completion of program</td>
<td>.66</td>
<td>.0007</td>
</tr>
<tr>
<td>2. Subject's probability estimate for own completion of program</td>
<td>.62</td>
<td>.002</td>
</tr>
</tbody>
</table>

**Classification Results**

<table>
<thead>
<tr>
<th>Predicted Group Membership</th>
<th>did not complete program</th>
<th>completed program</th>
</tr>
</thead>
<tbody>
<tr>
<td>did not complete program</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>(n=18)</td>
<td>66.7%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

**Actual Group Membership**

<table>
<thead>
<tr>
<th>completed program</th>
<th>2</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=12)</td>
<td>16.7%</td>
<td>83.3%</td>
</tr>
</tbody>
</table>

Predictive Accuracy = 73.3%

**Group Means**

<table>
<thead>
<tr>
<th></th>
<th>Therapists' estimate for completion</th>
<th>Subjects' estimate for completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>unsuccessful completion</td>
<td>61.1%</td>
<td>75.3%</td>
</tr>
<tr>
<td>completion of program</td>
<td>84.6%</td>
<td>98.4%</td>
</tr>
</tbody>
</table>
In summary, knowing subjects' and therapists' probability estimates for subjects' completion of the program significantly discriminated between subjects who completed the program and subjects who did not complete the program. However, knowing subjects' probability estimates for remaining drug-free did not help predict treatment outcome. Interestingly, subjects for both the "completion" and "non-completion" groups provided higher average probability estimates than did therapists for subjects' completion of the program. However, therapists' predictions provided the maximal discriminating power in this analysis.

Summary

In this chapter a description of the quantitative and qualitative data and the results of the analyses of these data were presented. The results indicated that none of the subjects' personal background variables were predictive of either their adaptation to the program or the outcome of their treatment. Results of the primary analyses of the data provided support for the hypotheses related to the psychological variables with some qualifications. For example, the hypothesized positive relationship between subjects' self-esteem and their adaptation to the program over time was supported for the fifth, twenty-fifth, and thirty-fifth weeks of treatment, but was rejected for the fifteenth week. Analyses of the hypothetical situations provided a great deal of information about the types and repertoire of subjects' coping strategies. The hypothesis related to the drug/alcohol use of subjects' sources of social support was
rejected, but the hypothesis related to the dependability of these sources of social support was supported under certain conditions. Finally, regarding analyses of program-related data, hypothesis six was accepted, hypotheses seven and eight were accepted with some qualifications, and hypothesis nine was rejected.
CHAPTER V
DISCUSSION

Review of the Study

The purpose of this exploratory study was to use a holistic perspective in examining some of the psychological, social, behavioral, biographic, and program-related predictors of adolescent drug abusers' adaptation to a residential drug treatment program over time and also of the outcome of their treatment (successful versus unsuccessful completion of the program). Subjects' adaptation to the program was examined at the end of five, fifteen, twenty-five, and thirty-five weeks of treatment and was operationalized as the "accumulated totals of 'pass' hours in the community." The amount of pass time received by subjects each week was inversely related to their violations of major and minor program rules.

Conducting this study was important for several reasons. First, adolescent drug abuse is a serious problem in the United States (Fishburne, et al., 1980; The National Institute on Drug Abuse, 1980), yet most drug treatment programs provide services for adults rather than for adolescents (Smith, et al., 1979; Sutker, 1982). In addition, adolescents have been underrepresented in drug abuse treatment outcome literature (Goldstein, et al., 1984). Therefore, adolescent drug abusers have been neglected both in treatment
programs and research investigations. Given these existing gaps, plus the reputation of drug treatment programs for having poor success rates (Craig, 1984a, 1984b; Einstein, 1984a), outcome studies (such as the present investigation) are sorely needed.

The use of a holistic perspective in the present study was a significant addition to the drug treatment outcome literature which has been characterized by what Sutker (1982, p. 359) calls "singular perspectives." In addition, the focus on "adaptation to the program over time" filled a gap in existing outcome research which has tended to focus on a narrow view of treatment outcome (abstinence). While abstinence from drugs or alcohol is a crucial goal of treatment, use of this criteria alone as a measure of successful intervention ignores other dimensions of drug abusers' lives which may be positively affected by treatment (Goldstein, et al., 1984). Finally, use of in-depth interviews generated a great deal of quantitative and qualitative data which should be helpful not only for the clinicians at the program which was used in this study, but also for guiding future researchers who hope to find reliable predictors of adolescent drug abusers' adaptation to treatment programs over time and also of their completion of drug treatment programs.

The sample consisted of thirty, caucasian, single, male, (late) adolescent polydrug abusers who were receiving treatment at a long term residential drug treatment program in a large midwestern city. All of the adolescents in this study were ordered to complete the program (under the threat of reincarceration) by the criminal justice system. Subjects' average age was 20.6 and their average educational
level was 10.7. Twenty-two subjects reported a depressant drug as their primary drug of abuse, four subjects reported a non-depressant drug as their primary drug of abuse, and four subjects reported a hallucinogenic drug as their primary drug of abuse. All subjects volunteered to participate in in-depth interviews regarding their coping skills, levels of self-esteem, sources of social support, personal and family background, and their feedback about the program. In addition, data regarding subjects' adaptation to the program were collected from their agency records.

The remainder of this chapter will involve a discussion of the major findings, the implications of these results for theory, research, and intervention, the limitations of the study, and recommendations for both future research and drug treatment. Qualitative data will also be provided in order to help explain the results of these analyses. Discussion of the major findings will be organized according to the categories in which they were presented in Chapter IV: (1) Results of the preliminary analyses of the data; (2) Results of the primary analyses of the psychological data (self-esteem and coping strategies); (3) Results of the analyses of social support data; (4) Results of the analyses of program-related data. Finally, a summary will be provided in an attempt to integrate the discussion and implications of these separate sections and to provide recommendations for treatment and research.
Discussion of the Sample and Outcome Data

Ages of Subjects

When this study was designed, one of the purposes was to fill a gap in the literature by studying adolescent drug abusers of all ages. At the time of the pilot study, the age range of adolescents being treated at this drug treatment program was 15-24 years. However, as was discussed in the previous chapter, because of programmatic changes (the number of adolescents below age 18 being treated was reduced) and difficulties encountered in obtaining parental consent for adolescents below age 18 for participation in this study, the sample used was one of late adolescence (18-24 years). Therefore, criticism that drug treatment programs provide services primarily for adults (Smith, et al., 1979; Sutker, 1982) continues to hold. In the case of the drug treatment program used in this study, inpatient services for adolescents were among the first to be reduced when funding difficulties were encountered. The rationale given by clinicians at the program was that both parents and juvenile probation officers of adolescents below age 18 tend to be unsupportive of both treatment decisions and the enforcement of consequences of these adolescents' violations of program rules. This criticism may have some validity since only one adolescent below age 18 was able to obtain parental consent to participate in this study.

Further research needs to be conducted to determine why parents and probation officers of younger adolescents appear to be less supportive of their children's treatment than are parents and probation officers of older adolescents. Seventeen subjects in this
study reported that they perceive younger adolescents as "horseplaying" and breaking rules more frequently because "they don't have much jail time facing them so they can get away with more." However, since primarily older adults were included in this study, this informal hypothesis could not be tested. Given the seriousness of the extent of substance abuse in our nation (Beschner & Friedman, 1979; Fishburne, et al., 1980; The National Institute on Drug Abuse, 1980) and the negative consequences it has on the personal, interpersonal, employment, and educational components of people's lives (Nathan, 1983, Quale, 1983), clinicians and researchers need to find more creative ways of including younger adolescents in both drug treatment and research.

**Outcome of Treatment**

In this sample, the percentage of subjects who successfully completed the program (40%; n = 12) was significantly higher than was the completion rate cited by this drug treatment program for 1984 (12%; n = 30 out of 241). This program's completion rate for 1984 is slightly higher than the national completion rate (10%) for drug treatment intervention (U.S. Department of Health, Education, and Welfare, 1979).

A plausible explanation for the difference between the completion rate for this sample and that of the program for 1984 is that the adolescent drug abusers who volunteered for the study may have been more motivated to complete the program than were adolescents who did not volunteer for the study. If this is an accurate explanation,
then a reliable predictor of completion of residential drug treatment programs might be "adolescents who volunteer to participate in researcher investigations." This high success rate may also be a product of a sampling bias in that eleven of the subjects were in one of the final three phases of the program when they were interviewed for this study. Future studies need to investigate this finding further. Of the eighteen subjects in this study who did not complete the program successfully, thirteen ran away from the program and five were returned to jail when the clinicians at the program decided that these adolescents were demonstrating consistent lack of progress in treatment.

One of the exploratory purposes of this study was to determine whether there were critical periods during the course of treatment when adolescents were more likely to drop out of treatment. The results indicated that subjects who did not complete the program had a significantly lower average length of stay (19.4 weeks) than did subjects who completed the program (28.25 weeks). The overall average length of stay was 26.3 weeks, which is comparable to the minimum number of weeks which any adolescent could take to complete the program (26 weeks).

An examination of when subjects left the program revealed that the first three phases of the program (see Appendix E) were vulnerable periods for subjects' dropping out of treatment. Of the nineteen subjects who were interviewed while they were in one of the first three phases of the program, only four successfully completed the program. In comparison, of the eleven subjects who were
interviewed while they were in the final three phases of the program, eight completed the program.

For purposes of this study, the data were examined at four points in the program. By the end of the fifth week, three persons (10%) had left the program and by the end of the fifteenth week six persons (20%) had departed. It was not until the end of the twenty-fifth week that 40% of the subjects (n = 12) had dropped out of treatment and the end of the thirty-fifth week when 56.6% of the subjects (n = 17) had failed to complete the program. The final subject in this sample who didn't complete the program left during the thirty-sixth week. It is important to note that 50% of the subjects in this sample were in treatment for at least seven months and 80% of the subjects remained at the program for a minimum of four months. Given the highly structured and demanding nature of this program, this appears to be a considerable length of time to remain in treatment. One subject who was in the final phase of the program said, "Making it through this program is a major accomplishment and we deserve recognition for that." However, completion of the program is a meaningless goal of treatment if the adolescents do not benefit psychologically and behaviorally from treatment and if they return to drugs following completion of the program.

When subjects provided feedback about the program, six subjects stated that the first week of the program (orientation) was very stressful. One subject said, "It's very hard when you first come here because you don't know anyone and all these rules are thrown at you and if you don't remember them, you still get consequences."
These subjects recommended that no consequences for violating minor rules be given during this time period in order to give the new residents time to adapt. One subject suggested that adolescents who have been in the program longer should be responsible for helping new residents adjust to the rules. Further research needs to be conducted using all persons in a given residential drug treatment program to obtain a more accurate evaluation of critical periods when persons are likely to drop out of treatment.

Discussion of Preliminary Data Analyses

The results of the preliminary data analyses revealed that subjects' personal background variables (age, educational levels, primary drug of abuse, amount of past time spent in jail, and amount of time in jail faced by subjects if they did not complete the program) did not significantly differentiate between subjects who completed the program and subjects who did not complete the program. Boor (1981) found that those adult drug abusers in her sample who had higher levels of education and who had previous drug treatment were more likely to complete a long-term residential treatment program than were drug abusers with lower educational levels and no previous treatment. Thus, predictors of treatment outcome may be different for adults and adolescents. The personal background variables in this study did not account for a significant amount of variance in subjects' adaptation to the program over time. These results need to be replicated with a broader age range of subjects and with a larger sample. However, it may be that these variables are not the salient
ones in reliably predicting adolescents' adaptation to this drug treatment program and their treatment outcome.

**Discussion of Primary Data Analyses**

**Discussion of Results of Psychological Data**

The first objective of this study was to examine some of the psychological predictors (self-esteem and coping strategies) of adolescent drug abusers' adaptation to this program over time and of the outcome of their treatment. The types of coping strategies were: negotiation, optimistic comparisons, resignation, selective-ignoring, negative-avoidance, positive-avoidance, and acting-out (see Appendix B).

This objective was met with specific qualifications. The psychological variables (self-esteem and coping strategies) did not collectively predict either treatment outcome or subjects' adaptation to the program over time (see Table 3 and 4). However, self-esteem was significantly predictive of treatment outcome and was significantly predictive of adaptation to the program over time (except at the end of fifteen weeks of treatment). In addition, the average frequency of use of some coping strategies (negotiation, resignation, and negative-avoidance) significantly discriminated between subjects based on treatment outcome. Finally, subjects' average frequency of use of positive-avoidance coping strategies accounted for a significant amount of variance in subjects' adaptation to the program at five, fifteen, and twenty-five weeks of treatment, but not at thirty-five weeks of treatment. These results
suggest that researchers are likely to find different salient predictors depending on whether "treatment outcome" or "adaptation to the program over time" is the dependent variable. In addition, use of certain coping strategies appear to be salient at some points in the program, but not at others. Therefore, Craig's (1984a) conclusion that variables which predict treatment outcome change over time appears to also be true for variables which predict adaptation over time.

The variance in these results may be explained, at least in part, by the fact that data regarding subjects' use of coping strategies were collected at one point in time and then used to analyze adaptation to the program at all four time periods: five, fifteen, twenty-five, and thirty-five weeks. This is an obvious limitation to this study, because subjects in the earlier stages of the program may use significantly different types of coping strategies than are used by subjects in the later stages of the program. In the present study, subjects who were interviewed during the first three phases of the program reported using acting-out coping strategies significantly less often than did subjects who were in the later phases of the program. This result makes sense since subjects in the early phases of the program have had fewer opportunities for acting-out. No significant differences were noted between subjects in the first three and last three phases of treatment in terms of their reported use of the other types of coping strategies. However, in order to obtain an accurate longitudinal perspective, future researchers should use the questions on the Rosenberg Self-Esteem Scale (see
Appendix A) and the Coping Scale (see Appendix B) to gather data (via interviews with the drug abusers) at different points throughout the course of treatment. The psychological predictors of treatment outcome and adaptation to the program over time will be discussed in more depth.

**Self-Esteem**

While previous researchers have consistently found lower levels of self-esteem in adolescent drug abusers than in non-drug abusers (Ahlgren & Norem-Hebelsen, 1979; Reardon & Griffing, 1983; Svobodny, 1982; Wishnie, 1977), the relationship between adolescent drug abusers' self-esteem and the outcome of their treatment has rarely been researched. The present study filled this gap and also investigated the relationship between subjects' self-esteem and their adaptation to the program over time. Results of the analyses of the data revealed that subjects' self-esteem was significantly positively related to their completion of the program and also to their adaptation to the program at five, twenty-five, and thirty-five weeks of treatment.

These results related to subjects' levels of self-esteem supported the findings of previous researchers that there is a positive relationship between individuals' self-esteem and effective personal adaptation (Epstein, 1980; Hamburg, 1974; Rosenberg, 1979; White, 1974; Wylle, 1974). Because the self-esteem data were gathered at one point in time, it is unclear whether higher levels of self-esteem contributed to or were a product of subjects' higher
levels of adaptation to the program. Subjects who had higher levels of self-esteem when they were admitted to the program may have had an easier time adapting to the program, which in turn may have further enhanced their levels of self-esteem. On the other hand, subjects who, for a variety of reasons, adapted well during the early stages of the program may have increased their self-esteem as a result of those success experiences and were motivated to continue to adapt well to the program.

Either of these explanations would support Epstein's (1980), Kaplan's (1978, 1980), and Rosenberg's (1979) contention that self-esteem tends to act as a self-fulfilling prophecy. A negative self-fulfilling prophecy is also likely to be present for subjects with low self-esteem who failed to complete the program. However, a longitudinal design is needed to confirm the presence of a self-esteem-related self-fulfilling prophecy at this drug treatment program.

According to Kaplan's (1978, 1980) theory some of the subjects in this study who were involved in violating major rules of the program, may have enhanced their levels of self-esteem despite their involvement in deviant behavior. This enhancement of self-esteem would occur according to Kaplan if the deviant behavior is valued and supported by the adolescent's significant others. Some of these adolescents' peers may have supported their deviant behavior and may in some cases "hero-worship" the deviant adolescents. As one subject bragged, "Staff knew my roommate was up to something but he's cool so they couldn't catch him. Once he got caught with alcohol on his
breath and got a week's restriction, but he hid some drugs and me and him got high anyway."

In the long run, however, because of the controls of this highly structured program, continued violations of major rules of the program are at least occasionally discovered by staff. Adolescents' peers cannot continue to enhance levels of self-esteem for deviant behavior if the adolescents in question are removed from the program. This was the case for both the subject cited above and his roommate who both eventually returned to jail for continued violations of major rules. However, in order to fully test Kaplan's (1978, 1980) theory, a longitudinal design is needed.

The results of this study indicated that self-esteem is an important predictor of both adolescents' adaptation to this drug treatment program and the outcome of their treatment. Therefore, the self-esteem of adolescent drug abusers needs to continue to be a major focus of both researchers in the field and clinicians who treat these adolescents. In addition, in order for clinicians to effectively intervene in helping adolescent drug abusers improve their levels of self-esteem, the sources of higher levels of self-esteem need to be determined. For example, in this sample frequencies of use of all three positive-avoidance strategies were significantly positively related to subjects' self-esteem (see Appendix J). Therefore, clinicians at the program may be able to facilitate the enhancement of adolescent drug abusers' self-esteem by encouraging them to use these strategies more often for dealing with daily problems at the program.
Coping Strategies

A review of the literature revealed that numerous researchers have linked coping effectiveness to successful personal adaptation in various role areas and with both daily problems and crises (Hamburg, et al., 1974; Lazarus, et al., 1974; Leland, 1978; Mechanic, 1974; Newman, 1979; Pearl & Schooler, 1978; Menaghan, 1982). However, in the field of drug abuse, coping is used frequently, but is seldom adequately defined (Einstein, 1980 & 1984a). In fact, the only way in which coping has been examined in this field is the description of drug use as "a chemical coping mechanism" (Einstein, 1984a, p. III). The present study expanded greatly on this limited focus by examining adolescent drug abusers' average frequency of use of six different types of coping strategies for dealing with daily problems at the program (see Appendix B). Additional quantitative and qualitative data about the subjects' coping strategies were generated by asking subjects to respond to four hypothetical, yet realistic situations (see Appendix C).

As presented earlier, the three types of coping strategies used by adolescents to deal with daily problems at the program (Appendix B) and which together with self-esteem predicted treatment outcome were negotiation, resignation, and negative-avoidance (see Table 3). Each coping strategy will now be examined in more depth.

Negotiation: An unexpected finding was that completion of the program was significantly related to less frequent use of negotiation coping strategies. In addition, the average frequency of use of
negotiation did not account for any of the variance in subjects' adaptation to the program over time. Some tentative interpretations of this finding can be made.

Menaghan (1983) pointed out that the most frequently used coping strategies may not be the most effective ones. In the present study, although negotiation was negatively related to treatment outcome, 67% of the subjects (n = 20) reported a negotiation coping strategy as having been the most effective for them in dealing with daily problems at the program (see Table 2). However, only nine of these subjects completed the program. It may be that although negotiation was perceived as effective for dealing with daily problems, this type of coping strategy was not perceived by these subjects as an effective one when they were faced with more serious problems which affected treatment outcome. For example, even if negotiation had been used effectively throughout the course of treatment, if an adolescent used drugs and was afraid that he would be returned to jail, running away from the program may have been perceived as a more viable option than was use of negotiation. The fact that of the eighteen subjects who did not complete the program, thirteen ran away supports this hypothesis. Clarification of this result could be achieved by interviewing those adolescents who did not complete the program.

Pearlin and Schooler (1978) provide support for this hypothesis that certain types of coping strategies may be effective in some role areas or situations but not in others. For example, these researchers found that negotiation (in a reflective, problem-solving
sense) was an effective strategy for coping with marital and parental problems, but was less effective in occupational settings. In both occupational settings and this drug treatment program individuals were faced with the fact that certain decisions are non-negotiable. For adolescents who are caught using drugs, the automatic consequence is a minimum of seven days of restriction to the program (with the exception of continuing employment and education responsibilities) and all of the adolescents' attempts at negotiating a more lenient consequence will be futile.

In cases where the adolescent has already been given several chances to improve his adaptation to the program, getting caught using drugs may be perceived by him as significantly increasing his chances of being reincarcerated and also as significantly decreasing his negotiating power. From the adolescents' point of view, even if he can negotiate with the clinicians at the program to be given another chance, there is no guarantee that his parole or probation officer will agree with that decision. However, some adolescents may not realize that they can use negotiation for coping with more serious problems. One clinician said, "The adolescents who run away don't realize that most of the time we can convince the courts to give them another chance. They may have to spend a few days in jail, but as long as they seem to be trying to work on their problems we'll go to bat for them." These explanations may explain why the negotiation item, "Try to find a fair compromise", was not significantly related to the other two negotiation items, or to
subjects' treatment outcome, or to their adaptation to the program over time (see Appendices I and J).

Several other possible explanations of the negative relationship between the frequency of use of negotiation and treatment outcome exist. It may be that the questions about the coping strategies and their effectiveness are likely to elicit socially desirable responses rather than to accurately reflect how these adolescents actually cope with daily problems at the program. At worst there may be an underlying anti-social element to subjects' responses in that negotiation may be used by some adolescents to manipulate staff. Another possible explanation is that these results may reflect recent insight on the part of subjects that negotiation can be an effective coping strategy. However, less adaptive, habitual ways of coping are difficult to change even when individuals know that more effective coping strategies exist.

Finally, the results regarding subjects' use of negotiation may in fact reflect problems with the items on the Coping Scale. Future researchers may need to specify whether the negotiation is taking place with clinicians or other adolescents in the program and also to explore the nature of the daily problem which is being addressed. Subjects' negotiation with other adolescents about who will take a shower first is very different from their negotiation with clinicians about the consequences of violations of program rules. In addition, the mode of negotiation in this setting needs to be clarified. For example, one adolescent may perceive effective negotiation as "calm conflict-resolution", while another adolescent may view negotiation as "yelling at or criticizing someone".
Although any of these explanations is plausible, the fact that in this study, adolescents' use of negotiation coping strategies was not effective in helping them adapt to or complete the program is cause for concern on the part of researchers and clinicians. In addition, the positive relationship between use of one of the negotiation strategies ("talking with the person with whom you have conflict") and the frequency of subjects' reported drug use (see Appendix 1) suggests that this coping strategy must be examined in more depth. If other studies replicate this finding, there will be important implications for treatment intervention. For example, the program where this study was conducted emphasizes the importance of verbal participation in individual and group therapy. However, two of the negotiation items ("talking with the person with whom you have the conflict" and "try to find a fair compromise") are significantly positively correlated with "manipulation of staff". Therefore, clinicians may need to pay more attention to behavioral evidence of the effectiveness of the adolescents' use of coping strategies than to the adolescents' self-reports or to their expressions of insight about their problems. In addition, since subjects who use negotiation less frequently were more likely to complete the program, clinicians need to identify the coping strategies that these subjects are using which help them to complete the program.

Resignation: In this study resignation had been categorized as a negative coping strategy (see Appendix B) because increased use of it implied a lowered perception of mastery over coping with daily
problems at the program. In addition, resignation has been linked with symptoms of psychological distress (Menaghan, 1982). The results of the Stepwise Discriminant Analysis of the coping data revealed that subjects' average frequency of use of resignation was positively related to their completion of the program (see Table 3). However, it should be noted that the average rating for use of this type of coping strategy was "once in a while." In addition, the average frequency of use of resignation did not account for a significant amount of variance in subjects' adaptation to the program over time.

It may be that resignation was viewed by subjects who completed the program in both a pragmatic way and a negative way. For example, the resignation item "decide there's nothing you can do to change things" was positively correlated with "just keep the hurt or angry feelings to yourself" ($r = .45, p = .006$), with "watch T.V. or read a book to help take your mind off the problem" ($r = .45, p = .006$), with "hit or kick an object" ($r = .34, p = .03$), and with "try to notice only the good things about others" ($r = .25, p = .08$). Thus, cognitive appraisal is likely to influence how these adolescents respond once they become resigned to their inability to change a given situation.

Although use of resignation was significantly positively related to completion of the program, use of this type of coping strategy was negatively related to subjects' levels of self-esteem (see Appendix J). This result is consistent with Menaghan's (1982) findings that use of resignation is related to higher levels of psychological
distress. In the present sample, "keeping hurt or angry feelings to yourself" is also an indicator of psychological problems.

Finally, some of these resignation items may have been misclassified since they are positively correlated with some selective-ignoring and some negative-avoidance coping strategies (see Appendix I). However, these findings also suggest that resignation may have a different meaning for adolescent drug abusers in this program than it does for adults in the community. For example, at least six of the eleven subjects who responded 'never' to the resignation item, "How often do you tell yourself that the problems are not important?" said, "Problems are always important around here so I never say that." Since failure to resolve problems at the program could result in a reduction of adolescents' 'pass time' in the community or could potentially affect their treatment outcome, this explanation makes sense. In summary, resignation appears to be a complex type of coping strategy in this setting. This complexity provides further support for the use of gathering qualitative data in research with adolescent drug abusers.

Negative-Avoidance: The results of the Stepwise Discriminant Analysis revealed that subjects who successfully completed the program had a lower average frequency of use of negative-avoidance coping strategies than did subjects who did not complete the program. In addition, use of negative-avoidance did not account for any of the variance in subjects' adaptation to the program over time when it was included with the other psychological variables. Subjects' use
of one of the negative-avoidance items ("Just keep the hurt or angry feelings to yourself") was negatively correlated with subjects' levels of self-esteem ($r = -0.47$, $p = 0.004$). Pearlin and Schooler (1978) concluded that avoidance was one of the least effective strategies in dealing with marital or parental problems. However, these researchers did not distinguish between positive and negative avoidance strategies. Nevertheless, the use of negative-avoidance in this setting and the use of avoidance in Pearlin and Schooler's study are both related to psychological and behavioral difficulties. Billings and Moos (1984) also found that use of avoidance was related to higher levels of depression.

Some problems were noted in the classification of the three negative-avoidance items into this type of coping strategy. For example, the items were not significantly correlated with one another (see Appendix H). These items may have been misclassified because several of the items were positively correlated with certain acting-out strategies (e.g., running away from the program was positively correlated with manipulation of staff: $r = 0.44$, $p = 0.008$). Therefore, reclassification of these items may improve the reliability of this type of coping strategy. Despite these problems, these results are consistent with the guidelines of this program (i.e., that subjects' use of negative-avoidance strategies is significantly negatively related to their completion of the program.)

**Positive-Avoidance:** Although the average frequency of use of positive-avoidance strategies was entered in step three but removed
In step six of the Stepwise Discriminant Analysis (see Table 3), the average frequency of use of this strategy accounted for a significant amount of variance in subjects' adaptation to the program at five, fifteen, and twenty-five weeks of treatment (see Table 4). In addition, all three positive-avoidance items were significantly positively related to subjects' self-esteem (see Appendix J). Finally, one of these strategies ("Keep out of that person's way for a while") was significantly positively related to subjects' completion of the program and also to their adaptation to the program at all four time periods. In fact, when adolescents complain to staff about having conflict with other residents, the best advice staff could give may well be, "Stay out of the person's way for a while". Therefore, positive-avoidance appears to be an important type of coping strategy on which researchers and clinicians need to focus.

It may well be that use of positive-avoidance strategies are both pragmatic and effective methods of coping with the inherent difficulties of living in a residential drug treatment program with 30-40 other adolescent drug abusers. If this is the case, staff at the program may need to offer alternative activities to adolescents to help them temporarily distract themselves from their daily problems. However, when subjects provided feedback about the program, all thirty subjects commented that few structured activities were available since the Activities-Director position had been recently eliminated due to funding cutbacks. The following examples are typical of the comments which were spontaneously provided by subjects:
1. "Having more things to do around here would help prevent arguing, fighting, and maybe even A.W.O.L.'s."

2. "They keep telling us in therapy to find other things to do so we won't get back into drugs when we leave, but then they don't have much for us to do other than watch TV - I don't need a drug program to learn how to do that!"

It is clear from at least the subjects' points of view that having available constructive activities is both an attractive coping alternative and a worthwhile funding priority. Use of this strategy for psychologically and behaviorally distracting oneself from problems has also received empirical support for coping with problems in individual's occupational and economic role areas (Pearlin & Schooler, 1978).

In conclusion, the data generated from this Coping Scale emphasized the complexity of the coping strategies which are used by adolescents at this residential drug treatment program. While some problems were noted regarding the classification of items into the types of coping strategies which were used in this study, reclassification of some items and elimination of others will improve the reliability of this scale. In addition, there is some evidence that the items on this scale may not be measuring the same underlying constructs that they measured when adults in the community were interviewed (e.g., Pearlin & Schooler, 1978). Future researchers should explore the meaning and functions of each strategy for these adolescents since these foci address the "cognitive-appraisal" component of coping which has been emphasized by other researchers.
In order to explore different dimensions of coping, subjects were asked to respond to a series of hypothetical, yet realistic situations. The results, which were presented in Chapter IV, indicated that more subjects reported having actually had to cope with the second (n = 17) and third (n = 23) hypothetical situations than with the first (n = 6) and fourth (n = 9) hypothetical situations. Again, a limitation of this study is that the questions about these situations were only asked at one point in time. Subjects who were in the earlier stages of the program may have responded differently to the questions than did subjects in the later stages of the program.

As presented in Chapter IV, none of the types of coping strategies generated by subjects (using their initial responses to the first question and their responses to the third question - see Appendix C) significantly discriminated between subjects who completed the program and subjects who did not complete the program. These coping strategies had been categorized according to whether they were positive, negative or both positive and negative coping strategies. It may be that alternative methods of classification of these coping strategies may result in types of strategies which significantly discriminate between subjects based on treatment outcome. In addition, the results of the first two hypothetical
situations indicated the presence of some feelings of rejection by those subjects for whom the situation had occurred. However, future studies would need to investigate this further.

Pearlin and Schooler (1978) concluded that with the exception of the occupational area of their subjects' lives, "the greater the scope and variety of the individual's coping repertoire, the more protection (from emotional stress due to role strains) coping affords" (p. 18). Although no formal hypotheses were tested in the present study, analyses were conducted to determine whether both the number of coping strategies and the number of different types of coping strategies significantly discriminated between subjects based on treatment outcome. The results (see Table 5) were mixed for both total numbers of coping strategies and numbers of different types of coping strategies generated by subjects depending on the hypothetical situation.

These results revealed that in comparison with subjects who did not complete the program, subjects who completed the program generated fewer coping strategies for potentially dealing with situations two, three, and four, but generated more potential coping strategies for dealing with situation one. In comparison with subjects who did not complete the program, subjects who completed the program generated on the average a greater variety of types of possible coping strategies for dealing with situation one and an average of fewer different types of coping strategies for dealing with situation four. Therefore, Pearlin and Schooler's (1978) conclusion regarding the variety of individuals' coping repertoire
may be generalizable only to certain situations with which adolescents in residential drug treatment programs may have to cope. However, this result needs to be examined further because data generated by the General Coping Scale demonstrated that these adolescents are using a variety of coping strategies. This suggests that generating coping responses for hypothetical situations may not be a useful or an accurate way of measuring adolescent drug abusers' coping strategies in this setting.

One striking characteristic about this data is the paucity of alternative coping responses generated by subjects in response to these hypothetical situations. The maximum number of both coping strategies and alternative coping strategies generated by subjects in response to the first two situations was four and to the last two situations was five (see Appendix K). If indeed, as Pearlin and Schooler (1978) contend the greater the variety of coping strategies individuals have in their repertoire the less likely they are to experience emotional distress, then improving these adolescents' repertoire of coping strategies would be a worthwhile therapeutic goal.

The fact that thirteen subjects in this sample would leave their parent's home and continue to get high if situation two occurred now, and that fourteen subjects cited "physical violence" as their initial response to the first question regarding situation four (name-calling of mothers) further confirms the importance of their learning alternative coping strategies. However, the fact that "ignoring name-calling" was the most frequently cited coping strategy which
subjects said they would use if situations three and four occurred now indicates that the adolescent drug abusers in this sample are at least aware that certain coping strategies are more socially desirable than others. As one subject said, "Names ain't nothin'; it's how you feel about yourself that's important." The emphasis of this study on identifying more positive dimensions of adolescent drug abusers' coping strategies is a significant addition to existing literature which has tended to focus primarily on negative characteristics of these adolescents (e.g., Ahlgren & Norem-Hebelsen, 1979; Alexander & Dibb, 1977; Burke & Amini, 1961; Stanton, 1979a; Sutker, 1982).

Based on results of data generated by the hypothetical situations, it is evident that researchers and clinicians need to examine both subjects' initial reactions to a situation (e.g., "I'd get mad...") and also their second reactions to that situation (e.g., "...then I'd get over it and make other plans" - in response to situation one). Examination of only the initial response is not a complete representation of how individuals cope. Qualitative data also needs to be examined to help explain quantitative results. For example, when asked how he would cope with name-calling (situation three), a subject said, "It would depend on my own mood, my past relationship with that person, and also how he said it - angrily or in a teasing way." Researchers need to take this into consideration when they design coping instruments.
Summary of Coping Data

In conclusion, despite the limitations of the instruments used, the analysis of the data revealed how complex and multidimensional is the concept of coping. While use of certain coping strategies (e.g., positive-avoidance) are effective in helping adolescents adapt to the program, these same strategies may not accurately predict their treatment outcome. In addition, the wealth of data generated by this study revealed that previous researchers' focus on "drug use as drug abusers' only a coping strategy" (e.g., Kaufman, 1981; Klagsbrun & Davis, 1977; Stanton, 1979a) is not only a very narrow view of coping, but also is unfair to adolescent drug abusers who also use many coping strategies (including positive ones) to cope with daily problems. In order to combat the apparent prevailing cynicism about the prognosis for successful intervention with drug abusers (Cohen, et al., 1982; Einstein, 1981; 1984a) researchers need to continue to look for more positive qualities in adolescent (and adult) drug abusers and also need to investigate these adolescents' coping strategies in more depth.

Finally, Pearlman and Schooler (1978) contend that coping difficulties "do not necessarily reflect the shortcomings of individuals; in a real sense they may represent the failure of social systems in which the individuals are enmeshed" (p. 18). The importance of examining the interaction between individuals and their environments has been stressed by other researchers too (Craig, 1984a; Leland, 1978; Walsh, 1973). Since Newman (1979) has suggested that "adolescence may be a period for the consolidation of one's
coping style" (p. 260), it is imperative that clinicians teach adolescent drug abusers a variety of adaptive strategies for coping with problems at drug treatment programs and also in the community. This means that the goal of intervention cannot just be "completion of treatment" as most of the substance abuse outcome research implies. Instead, the primary goal of treatment must be to help adolescents cope in a complex world in ways which are personally and interpersonally adaptive.

Discussion of Results of Social Support Data

Numerous researchers have viewed the use of sources of social support as a potential coping strategy or as a support for the use of other coping strategies (Gottlieb, 1983; Gourash, 1978; House, 1981; Kahn & Antonucci, 1980; Lieberman, 1982; Pearlin & Schooler, 1978). These researchers and others (e.g., Conner, et al., 1979; Pearlin, et al., 1981) have also emphasized the perceived quality of sources of social support as being the most salient component of social support. In the present study, subjects were asked whom they would seek (1) when they have very good news, (2) when they have a very personal problem, and (3) when they are feeling depressed. All subjects were asked whom they would seek under these three conditions, both when they are at the program and when they are away from the program on pass. Subjects were also asked whether these chosen sources of support use drugs/alcohol and were asked to rate the dependability of these sources of support.
A review of the drug abuse literature revealed that in comparison with families of adolescents who do not use drugs, families of adolescent drug abusers have a higher incidence of multigenerational substance abuse (Beschner & Friedman, 1979; Klagsbrun & Davis, 1977; Stanton, et al., 1978). Therefore, in the present study, it was hypothesized that subjects whose sources of social support use substances would be less likely to both adapt well to the program and to complete the program. However, the results indicated that substance-use by social supports did not significantly discriminate between subjects based on treatment outcome, nor did this variable account for a significant amount of variance in subjects' adaptation to the program over time. It may be that this hypothesis would be supported if the sample size had been larger and also if the percentage of subjects who were self-reliant had been smaller. However, this result may also reflect an understandable reluctance on the part of the subjects to report that their sources of social support use drugs or alcohol. Future studies may want to include a more accurate estimate of both the type and the degree of substance-use by adolescent drug abusers' sources of social support rather than merely focusing on the presence or absence of such use as was done in this study.

Although substance use of the subjects' sources of support was not a significant predictor of subjects' adaptation to the program or of the outcome of their treatment, several subjects did provide feedback about this issue. For example, one adolescent said, "Sometimes I think giving up drugs would be a piece of cake if all my
friends gave them up too, because I feel real weird when I'm around them but can't get high because I'm in the program." Another subject said, "The staff tell use to make new friends, but it ain't that easy and they don't tell us how to do it or where to find new friends." This is an important point because even if they want to remain drug-free most drug abusers like many of their friends' attributes. Therefore, asking them to give up meaningful friendships is not a realistic solution to the problem, particularly if no alternative solutions are provided. Finally, one subject offered the following solution: "The residents need to get more involved in helping the poor, older people, or the handicapped because most of us are too selfish and don't realize how good we have it!" This feedback confirms the need for most in-depth research about the type and degree of substance use by these adolescents' sources of social support.

The results of the data regarding the dependability of subjects' sources of social support provided support for the conclusions of previous researchers that the perceived quality of social support is a crucial component of social support (Conner, et al., 1979; Gottlieb, 1983; House, 1981; Kahn & Antonucci, 1980; Lieberman, 1982; Pearlman, et al., 1981). In the present study, knowing the dependability of subjects' sources of support when subjects are away from the program and are feeling depressed or have a personal problem helped to accurately predict treatment outcome. In addition, knowing the dependability of subjects' sources of social support when subjects are away from the program and are feeling depressed was
significantly predictive of their adaptation to the program. In all of the above cases, higher rates of dependability were significantly related to higher levels of adaptation to the program (at all four time periods) and to subjects' completion of the program.

These results suggest that clinicians may need to examine the dependability ratings of those social supports used by adolescent drug abusers when they are away from rather than at the program. This is important because in the long run adolescents need to have dependable sources of social support not only when they are away from the program on pass but also once they complete the residential drug treatment program and are trying to cope with readjustment in community living. House (1981) asked the question, "What are the differences that make a difference?" (p. 14). In the present study it is evident that the dependability of adolescent drug abusers' sources of social support is at least one important difference "that makes a difference" under certain conditions. Therefore, examining the dependability of subjects' sources of social support also needs to be an important component of future research and drug treatment programming in the drug abuse field.

Additional analyses of the social support data revealed that knowing whom adolescent drug abusers would seek when they are away from the program and are both feeling depressed and have very good news accurately classified subjects 66.7% of the time in their treatment outcome groups. Tables 6, 7, and 8 provide summaries of descriptive data about whom subjects would choose under these three conditions, both when subjects are at the program and when they are
away from the program and are using their pass hours in the community. Formal sources of support (e.g., clinicians) and informal sources of support (e.g., subjects' roommates) would be chosen by equal numbers of subjects when the subjects are at the program and either have very good news or are feeling depressed. However, nineteen reported that they would seek a staff member and seven subjects said they would seek an informal source of support (i.e., roommate, other male or female resident in the program) when they are at the program and have a very personal problem. Therefore, the seeking of formal versus informal sources of support when subjects are at the program may vary under different circumstances.

Most of the subjects reported that they would choose informal sources of social support (e.g., family or friends) rather than formal sources of support (including clinicians at the program) when the subjects are away from the program using their pass hours. This result was consistent regardless of the circumstances under which the sources of social support would be sought. Thus, the conclusion of previous researchers (e.g., Cowan, 1982; Gottlieb, 1978; Lieberman, 1982) that people tend to seek support from family and friends first and only seek formal sources of support as a last resort is also supported in the present study.

A surprisingly high percentage of subjects said they would be self-reliant rather than seek sources of social support under the three different conditions. In general, the results indicated that more subjects who reported they would seek no one did not complete the program than did subjects who reported they would seek someone.
Self-reliance did not significantly discriminate between subjects based on treatment outcome when subjects were at the program and were depressed or had a very personal problem. Because of the program's insistence on the adolescents' participation in the therapeutic components of the program, some adolescents may be able to obtain support for their problems or successes without having to directly seek it.

All ten subjects who would seek no one when they are depressed and are away from the program did not complete the program. In addition, five of the seven subjects who would seek no one when they have a very personal problem and are away from the program did not complete the program. Finally, all subjects who would choose self-reliance when they have very good news when they are at the program (n = 2) and also when they are away from the program (n = 1) did not complete the program. It appears that the adolescents who would seek no one when they are away from the program and are either depressed or have a very personal problem, were particularly vulnerable to either having trouble adapting to the program or to dropping out of the treatment. This confirms Kahn and Antonucci's (1980) conclusion that having no sources of support is related to difficulties in adaptation.

In summary, these results support the findings of other researchers that self-reliance may be more adaptive in certain situations and under certain circumstances than others (Brown, 1978; Pearlin & Schooler, 19789). However, self-reliance results may be different for other drug abusers in other clinical settings. Other
researchers in this area will also need to explore the dynamics of this self-reliance further in order to clarify these results. For example, one subject who would choose to be alone when he has a personal problem, may feel confident that he can resolve the problem on his own, while another subject may choose no one because he perceives himself as having no dependable sources of social support. Nevertheless, given the likelihood that adolescents who would seek no sources of support will drop out of treatment, helping adolescent drug abusers find dependable sources of social support needs to be an important goal for treatment.

Discussion of Additional Social Support Data

Subjects were asked to rate their parents regarding parents' supportiveness for subjects' completion of the program. Twenty-nine subjects rated their parents as either somewhat or very supportive and one subject did not provide a rating. Therapists were also asked to rate subjects' parents' supportiveness for their sons' completion of the program. Therapists rated nine subjects' parents as very supportive, sixteen subjects' parents as somewhat supportive, and three subjects' parents as not supportive of their sons' completion of the program. One therapist did not provide ratings for two subjects. With both subjects' and therapists' ratings of parental supportiveness, no significant differences were found between subjects who completed the program and subjects who failed to complete the program.
When the pilot study was conducted the clinicians at the program had stated that parents of the drug abusers often sabotage treatment processes by either lying to protect their children from receiving negative consequences or by verbally attacking the clinicians when their adolescents incur negative consequences. However, the results of this study found no support for these informal impressions.

On the contrary, further analyses of the qualitative data provided more evidence of parental supportiveness for treatment efforts. For example, when subjects were asked what their parents would be likely to say if the subjects complained about receiving unfair consequences for violations of rules, thirteen subjects (43.3%) said their parents would say, "You must have done something to deserve it, so stay there and deal with it." In addition, nine subjects (30%) said their parents might be sympathetic to their complaint but would encourage their sons to resolve the conflict with the staff. Finally, six subjects (20%) said their parents would side with them against the program and one subject did not have enough information to make a decision. Therefore, not only do subjects generally perceive their parents as supportive of the subjects' completion of the program, but they also perceive their parents as supportive of clinicians' decisions.

Feedback from clinicians at the program also failed to provide evidence that adolescent drug abusers' parents sabotage treatment processes. Clinicians at the program were asked how subjects' parents would be likely to respond if their adolescents complained about the consequences received for breaking rules. The results
revealed that ten subjects' parents (33.3%) were rated as "probably would not respond in any way to their son's complaints," five subjects' parents (16.7%) were rated as "sympathetic of the complaint, but would encourage him to deal with it," and eight subjects' parents (26.7%) were rated as "would tell him he must have deserved the consequence and he should stay there and deal with it." Thus, parents' responses would be either neutral or supportive of the clinicians' decisions.

It may be that in the pilot study, the clinicians' informal impressions were mainly focused on parents of adolescents who were under the age of eighteen. The difficulty encountered in obtaining parental consent for younger adolescents' participation in this study lends support to this hypothesis. More variability in both subjects' and clinicians' ratings of parental supportiveness may have been present if more younger adolescents had participated in the study. Although previous researchers (Kaufman, 1981; Reilly, 1976; Stanton, et al., 1978) have found evidence that parents' of adolescent narcotic abusers either consciously or unconsciously sabotage their adolescents attempts to become drug-free, these results may not generalize to persons who abuse other types of drugs. These results of this study are very significant because they provide additional confirmation that adolescent drug abusers' parents have many positive attributes and, at least in this setting, they are perceived as supportive of their sons' completion of the drug treatment program. These results will also help combat the plethora of negative descriptions of adolescent drug abusers and their families by
previous researchers (e.g., Alexander & Dibb, 1977; Burke & Amlnl, 1981; Kaufman, 1981; Stanton, 1979a, 1979b).

Parental Absence

One of the most consistent findings in the drug abuse literature is that significantly more drug abusers than non-drug abusers come from families where one biological parent was absent from the home during the abuser's childhood or early adolescence (Brook, et al., 1976; Harbin & Maziar, 1975; The National Institute on Drug Abuse, 1982; Stanton, 1979a). The present study investigated whether the subjects had lost a biological parent due to death, parental divorce, or abandonment and these results were analyzed in terms of their predictive accuracy in discriminating between subjects who completed and subjects who did not complete the program. Although additional qualitative data were gathered regarding the impact of the parental absence on the adolescent for whom this occurred, these data were not analyzed in this study.

The results of the analyses of these data indicated that twelve subjects' parents were divorced (40%), five subjects lost their fathers through death (16.7%), five subjects reported that their fathers had abandoned the family (16.7%), and two subjects reported that their mothers abandoned the family. Results of a Discriminant Analysis revealed that parental abandonment was the only parental absence variable to enter the discriminant function. It correctly classified subjects into their respective treatment outcome groups 56.7% of the time. The predictive accuracy of this variable was
higher for subjects who completed the program (91.7%) than it was for subjects who did not complete the program (33.3%). On the average, subjects whose parents had not abandoned the family were more likely than were subjects whose parents had abandoned the family to complete the program. Thus, while other subjects had to cope with the loss of a parent via death or divorce, for some reason the subjects whose parents had abandoned the family had more difficulty completing the program.

An examination of the qualitative data provided information about the impact of parental abandonment on the adolescents' lives. In some cases the adolescents were still experiencing emotional pain as a result of the abandonment (e.g., "I have a grudge against my mom. Her leaving is part of why I ran around more and did drugs"). In other cases the adolescents couldn't remember the parent who left. In one case the adolescent's father abandoned the family when the adolescent was five years old but then returned to the family when the adolescent was fifteen. In this case, the father's return negatively affected the adolescent ("When he came back my life went to hell...and I began using drugs more often. When he was gone, I was the man of the family"). These responses provided no clues regarding the above results related to treatment outcome. However, these results point to the need to explore the complexity of all the family background data in more detail, particularly because parental absence reflects the loss of a significant source of support during the course of these adolescents' lives.
Summary of Social Support Data

Like the coping data, the social support data are very complex and are multidimensional in nature. Various components of social support appear to be salient under different conditions (i.e., when subjects have very good news, have a very personal problem, or are depressed) and in different settings (at the program or away from the program). The importance of clinicians' and researchers' further examination of both who is chosen by subjects and the dependability of those choices was emphasized. It appears that under certain circumstances self-reliance is negatively related to completion of the program. In addition, the type and degree of substance use by these adolescents' sources of social support need to be studied further. Subjects' parents were rated by both subjects and clinicians as generally supportive of both their sons' completion of the program and of clinicians' decisions about the consequences which are administered when the adolescents break program rules. This result fills a gap in previous research which has emphasized primarily negative qualities of drugs abusers' parents. Finally, parental abandonment significantly discriminated between subjects based on treatment outcome. However, interpretations must be tentative since only seven subjects had a parent who had abandoned the family. The complexity of the family data emphasizes the importance of more in-depth investigations of the family background of adolescent drug abusers.
Discussion of Results of Program-Related Data

The analysis of program-related data was largely exploratory since no other outcome studies were found which examined program predictors of either adolescents' adaptation to residential programs or of their completion of those programs. As discussed in Chapter II, adolescents complete this drug treatment program when they have been able to consistently demonstrate that their visible behavior now falls within what Leland (1978) calls "the range of social tolerance" (p. 33). In the present study, a positive measure of adaptation to the program was used (amount of pass time in the community) in order to respond to Einstein's (1981) criticism that researchers tend to focus primarily on the pathological components of drug abusers' lives. However, violations of major and minor rules usually result in a deduction or elimination of pass time for a given week. Results of the analyses of program-related data will be discussed in three sections: pass hours in the community, types of violations of major rules, and expectations about treatment outcome.

Pass Hours and Treatment Outcome

As predicted, the number of 'pass hours' received by subjects was significantly correlated with their completion of the program. This is important because the amount of pass time in the community received by the adolescents each week is a visible sign of their progress in treatment. When an adolescent receives the maximum number of pass hours in a given week it means (1) that he has not broken any major or minor program rules, (2) that he is actively
participating in the therapeutic components of the program, (3) that he has either worked or attended school for a minimum of twenty hours during that week, and (4) that he has not used drugs or alcohol during that week. Therefore, 'pass time' in the community is a behavioral indicator of a number of important components of subjects' adaptation to this residential drug treatment program and also of their adaptation to the community.

Types of Violations of Major Rules

The types of violations of major rules which significantly discriminated between subjects based on treatment outcome were "drug use" and "running away from the program." The frequency of occurrence of both types of violations was negatively associated with the treatment outcome. While "physical abuse of other residents" was included in the original discriminant function, it was removed from subsequent analyses because only one subject violated that rule. Despite removal of this violation, these remaining variables achieved a high degree of accuracy in predicting who completed the program (91.7%), with fewer incidences of these violations being related to successful completion. While these results were not surprising, given the structure of the program and the perception of clinicians that these three violations of major rules are the most serious and have the greatest consequences, it is important to have empirical evidence to support these impressions. In addition, these variables can be used by clinicians to predict, with a high degree of accuracy, which adolescents are likely to complete the program.
The results of a Stepwise Multiple Regression Analysis revealed that different violations of program rules are salient in predicting a significant amount of variance in subjects' adaptation to the program at different time periods throughout the course of treatment (see Table 14). Results of an additional analysis which included the total number of subjects' violations of major rules revealed that this variable accounted for a significant amount of variance in adaptation at the end of the fifth week ($23\%$, $p = .09$). However, inclusion of this variable did not change the results listed in Table 14 for the fifteenth, twenty-fifth, and thirty-fifth weeks of treatment.

With the exception of the "physical abuse of residents" violation, the frequency of all other violations of program rules (in the regression equation), was negatively correlated with subjects' adaptation to the program. One surprising result was that there was a significant positive correlation between the total number of violations of major rules and subjects' completion of the program ($r = .25$, $p = .09$). However, it may be that inclusion of the miscellaneous violations of major rules (e.g., smoking in restricted areas) contributed to this finding. For the specific violations of major rules listed above, the relationship was in the expected direction. These results regarding subjects' violations of major rules should be helpful in assisting clinicians in determining which adolescents are not adapting well to the program and are therefore vulnerable to dropping out of treatment. Focusing on decreasing adolescent drug abusers' violation of these major rules is also
worthwhile from a societal point of view since such behaviors as substance abuse and physical violence are not tolerated in the community.

Expectations About Treatment Outcome

Several researchers have concluded that clinicians (and the public in general) tend to have pessimistic expectations about the likelihood that drug abusers will successfully complete the treatment program (Cohen, et al., 1982; Einstein, 1981, 1984a). However, results of the present study indicated that therapists provided fairly high probability estimates for subjects' completion of the program. Therapists' estimates were significantly predictive of (and positively correlated with) both subjects' treatment outcome and their adaptation to the program over time. Subjects' own probability estimates for their completion of the program were also significantly predictive of (and positively correlated with) treatment outcome and subjects' adaptation to the program. Although subjects had higher probability estimates than did therapists for subjects' completion of the program, therapists' predictions provided maximal discriminating power in predicting treatment outcome. Therefore, therapists' predictions may be more realistic than are subjects' own predictions. Nevertheless, the results are not indicative of pessimism regarding treatment intervention on the part of the therapists at this particular program.

One interesting result was that subjects' own estimates of the chances for their remaining drug-free once they complete the program
were not significantly predictive of either their adaptation to the program or their completion of the program. It may be that these adolescents are focusing primarily on their adaptation to and completion of the program and are not thinking about whether they will remain drug-free once they leave the program. In addition, although these estimates were not predictive of adaptation to the program or treatment outcome, they may be useful in follow-up studies of recidivism rates of drug treatment programs.

Limitations of Results

Few studies have been conducted regarding the outcome of drug treatment for adolescent drug abusers (Goldstein, et al., 1984; Sutker, 1982). Although this present study addressed this gap in the literature, the results may not be generalizable to adolescent drug abusers in other treatment settings (e.g., outpatient, short-term inpatient, and non-criminal justice referred programs). In addition, the fact that only a small sample (n = 30) was used was a limitation of this study. Also, females, non-caucasians, and self-referrals were underrepresented in this program and therefore, were not included in the study. Results may also be very different for those adolescents who did not volunteer for the study. Finally, the facts that subjects were interviewed at one point in time and were at various stages of the program at the time of the interviews represent serious limitations to this study.
Recommendations

Although this study provided a great deal of insight about psychological, social, and program-related predictors of adolescent drug abusers' adaptation to a long-term residential treatment program over time and of the outcome of their treatment, further research is needed to clarify some of these results. The following are recommendations for researchers and clinicians:

1. Although a longitudinal design was used to collect data regarding each subjects' accumulated amounts of both pass time in the community and violations of program rules at four different time periods, the remaining data was collected at only one point in time. Ideally, the psychological and social support data should be obtained at each of the four time periods during the course of treatment. For example, subjects who are in the early stages of the program may use very different coping strategies than are used by subjects who are in the later stages of the program. This design would enable researchers and clinicians to examine both qualitative and quantitative changes in subjects' adaptation to the program over time. In addition, the predictive accuracy of treatment outcome is likely to improve with use of a longitudinal design.

2. The results of this study confirmed the importance of using qualitative data to help explain research results. If future researchers use the General Coping Scale (Appendix B) and the Social Support Questions (Appendix D), asking subjects to
explain their responses will probably help interpret the results of outcome research.

3. This study broadened the focus of outcome research in this field by examining not only predictors of treatment outcome, but also of subjects' adaptation to the program over time. Clinicians need to be aware that certain characteristics of adolescent drug abusers are indicative of adolescents' difficulties in adapting to the program, while other characteristics of these adolescents suggest that they are likely to drop out of treatment. Recognizing these "danger signs" will help with both prevention and intervention processes. However, while "completion of drug treatment programs" is a worthwhile goal, both clinicians and researchers need to remember that the most important goal is to help adolescent drug abusers learn how to cope effectively in their communities without abusing drugs or alcohol.

4. The results of this study confirm that human behavior is both complex and multidimensional. Therefore, researchers need to continue to examine a variety of dimensions in these drug abusers' lives rather than only focusing on one dimension (e.g., biographic data).

5. The results of this study revealed that adolescent drug abusers and their parents have more positive attributes than previous researchers have been willing to recognize. Clinicians who focus on these adolescents' positive qualities may help facilitate higher levels of adaptation to the
program and completion of drug treatment. Focusing on identifying these positive characteristics must be a primary focus of both researchers and clinicians in order to combat what, at least informally, appears to be a prevailing sense of pessimism about the success rates of drug treatment programs.

6. Results of this study confirmed that adolescent drug abusers' levels of self-esteem are positively related to their adaptation to the program and to the outcome of their treatment. Therefore, continuing to focus on improving these adolescents' self-esteem levels (by identifying the sources of higher levels of self-esteem) is a worthwhile therapeutic goal. In addition, researchers need to continue to include this variable in future outcome research.

7. Results of the coping data indicated that in the drug abuse literature researchers need to look at other types of coping strategies than just drug use as a coping strategy. In addition, clinicians at residential drug treatment programs need to not only formally teach adolescents more adaptive coping strategies for dealing with daily and more serious problems, but they also need to provide opportunities to the adolescents to "safely" practice those strategies. For example, if these adolescents are taught to negotiate with staff when problems arise, but are punished in some way when they actually do so, other coping strategies (negative-avoidance, acting-out) may become more viable options for coping with the problems. Finally, the perceived
effectiveness of use of coping strategies by the adolescents needs to be an important focus of researchers and clinicians.

8. Adolescent drug abusers' sources of social support appear to be critical predictors of both adolescents' adaptation to the program and to the outcome of their treatment. This study indicated that clinicians need to be particularly concerned about subjects who would choose to be self-reliant when they are away from the program and are feeling depressed or have a very personal problem. The dimensions of substance-use by subjects' sources of support and the dependability of those persons need to be investigated further by researchers.

9. Finally, all of the results of this study need to be replicated both with other adolescents in this residential drug treatment program and with adolescent drug abusers in other types of treatment programs. Creative ways need to be found to include adolescents below age eighteen in research investigations. In addition, clinicians need to learn how to provide more services for younger adolescents rather than eliminating those services when funding difficulties are encountered.

Summary
The purpose of this study was to examine some of the psychological, social, biographic, and program-related predictors of adolescent drug abusers' adaptation to a residential drug treatment program over time and also of the outcome of their treatment. This
purpose was accomplished. The following variables significantly discriminated between subjects based on treatment outcome:

1. **Psychological Variables:** Subjects' self-esteem and their average frequency of use of negotiation, resignation, and negative-avoidance types of coping strategies (predictive accuracy = 80%)

2. **Hypothetical Coping Situations:** The total number of coping strategies generated by subjects in response to all four hypothetical situations and the number of different types of coping strategies generated by subjects in response to situations one and four (predictive accuracy = 70%).

3. **Social Support Variables:** (a) The dependability of subjects' choices of social support when subjects are away from the program and are both feeling depressed and have very personal problems (predictive accuracy = 76.6%). (b) Sources of social support who would be sought by subjects when they are away from the program and are both depressed and have very good news (predictive accuracy = 66.7%).

4. **Violations of Major Rules:** "Drug use" and "running away from the program" (predictive accuracy = 73.3%). "Physical abuse of residents" was included in the originally discriminant function, but was omitted from subsequent analyses because only one subject had violated this major rule.

5. **Probability estimates:** Therapists' probability estimates for subjects' completion of the program and subjects' probability
estimates for their completion of the program (predictive accuracy = 73.3%).

With the exception of the hypothetical situations, the results of all the Discriminant Analyses revealed that the predictive accuracy of these variables was higher for subjects who completed the program than for subjects who did not complete the program. For example, the dependability of subjects' sources of social support had a predictive accuracy of 100% for subjects who completed the program (see Table 9). Therefore, knowledge of the psychological, social, and program-related variables in these discriminant functions will help clinicians accurately predict which adolescents are likely to complete the program.

The following variables accounted for a significant amount of variance in subjects' adaptation to the program over time:

1. **Psychological Variables**: Subjects' average frequency of use of the positive-avoidance type of coping strategy accounted for a significant amount of variance in their adaptation to the program at the end of five, fifteen, and twenty-five weeks of treatment. Subjects' levels of self-esteem accounted for a significant amount of variance in their adaptation to the program at the end of thirty-five weeks of treatment.

2. **Social Support**: The dependability ratings of subjects' sources of social support when subjects are away from the program and are feeling depressed accounted for a significant
amount of variance in subjects' adaptation to the program at all four time periods.

3. Types of Major Violations: The following variables accounted for a significant amount of variance in subjects' adaptation to the program: miscellaneous violations and total major violations (at five weeks); physical abuse of residents and alcohol use (at fifteen weeks); physical abuse of residents, drug use, and A.W.O.L. (at twenty-five weeks); physical abuse of residents, being unverified at a location where subjects should have been, and destruction of property (at thirty-five weeks).

With the exception of "physical abuse of residents", the frequency of violations of these major rules was negatively correlated with subjects' adaptation to the program. The "physical abuse" results should be excluded since only one subject had harmed another resident at the program.

In conclusion, this study used a holistic perspective and yielded a number of significant predictors of caucasian, single, male, adolescent drug abusers' adaptation to a residential drug treatment program for criminal justice referrals. Significant predictors of the outcome of these adolescents' treatment were also provided. This study expanded the prevailing narrow use of coping in the drug abuse literature and demonstrated that adolescent drug abusers use myriad coping strategies (including positive ones) other than drug use to deal with daily problems at the program. Use of hypothetical situations provided further rich data regarding these adolescents'
repertoire of coping strategies. This study also demonstrated the importance of focusing on adolescent drug abusers' levels of self-esteem and the various components of their sources of social support when clinicians and researchers attempt to predict these adolescents' adaptation to drug treatment programs and their treatment outcome.

In addition, this study provided support for both the use of qualitative data in explaining research results and the importance of interviewing adolescents themselves rather than relying solely on objective measures of gathering data. (As one subject said, "It's nice to have someone ask our opinions for a change"). Finally, and probably most importantly, results of this study sharply contradicted the work of previous researchers in this field by providing a significant amount of data about the positive qualities of adolescent drug abusers and their parents. This study added a great deal of depth to the existing drug treatment outcome literature. However, much work remains for both researchers in confirming these findings with drug abusers in other drug treatment programs and for clinicians as they face the challenges of helping adolescent drug abusers become and remain drug-free.
APPENDIX A

ROSENBERG SELF-ESTEEM SCALE
How strongly do you agree or disagree with these statements? (READ A) Would you say (READ CODES)? (CONTINUE WITH B THROUGH J)

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>SOMEWHAT AGREE</th>
<th>SOMEWHAT DISAGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. I feel that I'm a person of worth, or at least on an equal plane with others.</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>B. I feel that I have a number of good qualities.</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>C. All in all, I am inclined to feel that I'm a failure.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>D. I am able to do things as well as most other people.</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>E. I feel I do not have much to be proud of.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>F. I take a positive attitude toward myself.</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>G. On the whole, I am satisfied with myself.</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>H. I certainly feel useless at times.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I. I wish I could have more respect for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>J. At times, I think I am no good at all.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Here are some things that residents do when problems come up with staff or other residents at the program. How often do you

<table>
<thead>
<tr>
<th></th>
<th>ONCE IN A WHILE</th>
<th>FAIRLY OFTEN</th>
<th>VERY OFTEN</th>
<th>TYPE OF COPING STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Just try to ignore what’s going on?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Remind yourself that things could be worse?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Look around at other residents and see how much better off you are than they?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Tell yourself it is not really important?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Try to notice only the good things about others?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Decide there’s nothing you can do to change things?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Yell or shout to let of steam?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Keep out of that person’s way for a while?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Sit down and talk things out with that person?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. Keep so busy that you don’t have time to think about the problem(s)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Tell yourself that the problems are not important?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. Hit or kick an object (e.g., wall or furniture)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Leave the program for awhile (AWOL)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. Try to find someone at the program to talk to who is not involved in the conflict?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
15. Get high? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |
| 1     | 2          | 3     | 4     | Av.N.   |

16. Just keep the hurt or angry feelings to yourself? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |
| 1     | 2          | 3     | 4     | Av.N.   |

17. Try to find a fair compromise? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |
| 1     | 2          | 3     | 4     | N       |

18. Watch television or read a book to help take your mind off the problem? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |
| 1     | 2          | 3     | 4     | Av.P.   |

19. Try to manipulate the staff? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |
| 1     | 2          | 3     | 4     | A.O.    |

20. Think that your life is better now than it was during the past six months? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |
| 1     | 2          | 3     | 4     | O.C.    |

21. Think that your life is going to get better during the next six months? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |
| 1     | 2          | 3     | 4     | O.C.    |

22. Which of all of these works the best for you? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |

23. Which of all of these works the least well for you? | NEVER | FAIRLY | VERY | TYPE OF COPING STRATEGY
|       | IN A WHILE | OFTEN | OFTEN |          |

**Codes for Type of Coping Strategy**

- S.I. - Selective Ignoring
- O.C. - Optimistic Comparisons
- N. - Negotiation
- Av.P. - Positive-Avoidance
- Av.N. - Negative-Avoidance
- A.O. - Act Out
- R. - Resignation
APPENDIX C
HYPOTHETICAL COPING SITUATIONS
After each situation is presented:

a) Ask the subject to list all possible ways of responding to the situation;
b) Then ask if this has ever happened to the subject - if so, how did he respond to the situation?
c) How would he respond to the situation now?

1. A male resident is told after staff meeting that he is able to go home on pass this coming weekend. He is excited because it is his first chance to go home since he’s been in the program. He calls to tell his parents. They tell him that he can’t come home because they have plans for the weekend.

2. A male resident comes home at 1:00 in the morning and is obviously high. His parents are still up and are very disappointed and upset when they see him. The resident and his parents argue for a while and then his parents tell him to leave if he is not going to stop using drugs.

3. A male resident is at the program. One day he is in the dining room and is being called an insulting name (subject provides the name) by another male resident.

4. One day a male resident is walking down the stairs to the main floor at the program. Another resident who been teasing him for several days says, "Hey, I hear your mother’s a ________.” (subject provides name.)
a. Ask question; that code goes in first space (see coding below)

b. Drug Use - 1 No Drug Use - 2 (code goes in second space)

c. Dependability code goes in third space (see below)

very dependable-1; somewhat dep.-2; somewhat undep.-3; very undep.-4

70. When you have very good news, whom at the program do you tell first?

   a.         b.         c.         

71. When you have a very personal problem that you want to talk about, whom at the program do you tell first?

   a.         b.         c.         

72. When you are feeling depressed or down, whom at the program do you first choose to be with?

   a.         b.         c.         

73. When you're away from the program on pass and you have very good news, whom do you tell first?

   a.         b.         c.         

74. When you are away from the program on pass and you have a very personal problem that you want to talk about, whom do you tell first?

   a.         b.         c.         

75. When you are away from the program on pass and you are feeling depressed or down, whom do you choose to be with?

   a.         b.         c.         

Coding

Father..................1    Case Manager...............8
Mother...............2      Case Worker.............9
Stepparent............3    Other Staff...............10
Sibling................4    Roommate.............11
Other Relative........5    Other Male Resident....12
Male Friend Outside
   the Program.........6    Female Resident........13
Female Friend Outside
   the Program.........7    Other Adult Outside

Program.............14    Other (specify).........16
No One...............15
APPENDIX E

DESCRIPTION OF THE RESIDENTIAL DRUG TREATMENT PROGRAM
There are six phases of the program. The phases and their respective minimum weeks of duration and maximum amounts of allotted pass time in the community each week are listed below. The minimum number of weeks which a drug abuser can take to complete the program is twenty-six.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Minimum Duration (weeks)</th>
<th>Maximum Allotted Hours of Pass Time per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>one</td>
<td>none</td>
</tr>
<tr>
<td>I</td>
<td>four</td>
<td>12</td>
</tr>
<tr>
<td>II</td>
<td>five</td>
<td>24</td>
</tr>
<tr>
<td>III</td>
<td>six</td>
<td>48</td>
</tr>
<tr>
<td>IV</td>
<td>six</td>
<td>58</td>
</tr>
<tr>
<td>Phase-Out</td>
<td>four</td>
<td>unlimited hours</td>
</tr>
</tbody>
</table>

Violations of Rules

The violations of rules at the program are divided into two categories: major violations and minor violations. Minor violations of rules include: arriving late for therapy, failing to clean one's room prior to beginning of day's activities, and failing to provide correct information on the daily itinerary sheets. These minor rules seem to be linked to those behaviors which are classified as "desirable" social behaviors by Leland (1978, p. 40).

The following are listed as major violations of program rules: (1) possession or use of drugs, (2) possession or use of alcohol, (3)
running away from the program (A.W.O.L.), (4) destruction of property, (5) physical acts or verbal threats of violence, (6) verbally abusive language, (7) missing mandatory therapy meetings, (8) being unverifiable at any location outside the program for up to four hours, (9) miscellaneous major violations (e.g., smoking cigarettes in "off limits" areas; not leaving required urine sample for drug-screening). Most of these major rules appear to be related to what Leland (1978, p. 40) calls "necessary" behaviors for adaptive functioning.

**Consequences of Violations of Rules**

1. Minor violations of rules result in 0-3 hours of pass time being deducted from the adolescent's allotted pass time in the community for the following week. The number of hours subtracted depends on existing circumstances and staff input. This amount is multiplied by the phase of the program in which the adolescent is currently involved (e.g., if the person is in phase II and two hours of pass time are deducted as a consequence for breaking a minor rule, the total amount of pass time deducted will be four hours). The rationale for increasing penalty hours for adolescents who are in higher phases of the program is that they should be demonstrating more evidence of adaptive social behavior than is expected of persons who are in the early phases of the program.

2. Major violations of rules result in immediate loss of all pass time and privileges (restriction) for a specified time period,
depending on the type of major rule which was violated. The possession, use, or distribution of drugs or alcohol, and running away from the program result in a minimum of seven days restriction. For other violations of major program rules, the loss of pass time may not necessarily be immediate and the amount of pass time deducted depends on the type of rule broken, the individual resident, and the circumstances surrounding the event. Continued violation of major rules of the program may result in the person being terminated unsuccessfully from the program and in his/her return to jail.
APPENDIX F

ADDITIONAL SOCIAL SUPPORT QUESTIONS
1. How supportive is/are your parent(s) about your completing the program successfully?

   very supportive .............. 1
   somewhat supportive .......... 2
   not supportive ............... 3

2. In order to further assess parental support for subjects' completion of the program, subjects were asked what their parents would be likely to say/do if subjects complained about the unfairness of consequences for their violations of major program rules.

3. If you decided to go AWOL and went home, what would your parent(s) be likely to say or do?

3. A series of questions were asked which identified whether subjects had lost a significant source of support via death, divorce, or abandonment. For purposes of this study, data regarding whether or not the loss occurred were analyzed in relation to subjects' adaptation to the program and the outcome of their treatment. While additional data were gathered regarding the subjects' ages when the loss occurred and how the loss affected them, these data were not analyzed in this study.
APPENDIX G

QUESTIONS ASKED OF SUBJECTS' THERAPISTS
1. How supportive is/are this subject's parent(s) about his completing the program successfully?

   very supportive .............1
   somewhat supportive ...........2
   not supportive ...............3

2. If this subject complained about the unfairness of consequences of his violation of program rules, what would his parents be likely to say or do?

3. There is a ___ percent chance that this subject will complete the program successfully.
   (Subjects were also asked to complete this question for themselves and, in addition, were asked to provide a probability estimate regarding the likelihood that they will remain drug-free once they complete the program).
APPENDIX H

CORRELATIONS OF ITEMS WITHIN TYPES OF COPING STRATEGIES
NEGOTIATION

1. Sit down and talk things out with that person.
2. Try to find someone at the program to talk to who is not involved in the conflict.
3. Try to find a fair compromise.

\[ \begin{array}{ccc}
1/2 & 1/3 & 2/3 \\
r & .35 & .18 & .08 \\
slg & .03 & N.S. & N.S. \\
\end{array} \]

RESIGNATION

1. Tell yourself it's not really important.
2. Decide there's nothing you can do to change things.
3. Tell yourself that the problems are not important.

\[ \begin{array}{ccc}
1/2 & 1/3 & 2/3 \\
r & .24 & .27 & .06 \\
slg & .10 & .08 & N.S. \\
\end{array} \]

NEGATIVE-AVOIDANCE

1. Leave the program for a while (AWOL).
2. Get high.
3. Just keep hurt or angry feelings to yourself.

\[ \begin{array}{ccc}
1/2 & 1/3 & 2/3 \\
r & -.05 & .01 & .12 \\
slg & N.S. & N.S. & N.S. \\
\end{array} \]

POSITIVE-AVOIDANCE

1. Keep out of that person's way for a while.
2. Keep so busy that you don't have time to think about the problem(s).
3. Watch T.V. or read a book to help take your mind off the problem.

\[ \begin{array}{ccc}
1/2 & 1/3 & 2/3 \\
r & .31 & .21 & .18 \\
slg & .05 & N.S. & N.S. \\
\end{array} \]
SELECTIVE-IGNORING

1. Just try to Ignore what's going on.
2. Try to notice only the good things about others.

r .14
slg N.S.

ACTING-OUT

1. Yell or shout to let off steam.
2. Hit or kick an object.
3. Try to manipulate staff.

\[
\begin{array}{ccc}
1/2 & 1/3 & 2/3 \\
-.08 & .55 & .12 \\
N.S. & .001 & N.S.
\end{array}
\]

OPTIMISTIC COMPARISONS

1. Remind yourself that things could be worse.
2. Look around at other residents and see how much better off you are than they.
3. Think that your life is better now than it was during the last six months.
4. Think that your life is going to get better during the next six months.

\[
\begin{array}{ccccccc}
1/2 & 1/3 & 1/4 & 2/3 & 2/4 & 3/4 \\
.15 & .05 & .17 & .21 & .15 & .45 \\
N.S. & N.S. & N.S. & N.S. & N.S. & .005
\end{array}
\]
APPENDIX I

CORRELATIONS AMONG COPING ITEMS

225
Because many significant correlations exist among items on the General Coping Scale (see Appendix B), only the two highest correlations will be presented for each type of coping strategy. Correlations reported in Appendix H are not included in this appendix.

NEGOTIATION

1. "Sit down and talk things out with that person" was correlated with:
   a. Think that your life is going to get better during the next six months (r = .45, p = .006).
   b. Get high (r = .41, p = .01).

2. "Try to find someone at the program to talk to who's not involved in the conflict" was correlated with:
   a. Keep so busy that you don't have time to think about the problem(s) (r = .51, p = .002).
   b. Think that your life is going to get better during the next six months (r = .42, p = .009).

3. "Try to find a fair compromise" was correlated with:
   a. Look around at other residents and see how much better off you are than they (r = .48, p = .004).
   b. Just keep the hurt and angry feelings to yourself (r = -.32, p = .04).

RESIGNATION

1. "Tell yourself it's not really important" was correlated with:
   a. Just keep the hurt and angry feelings to yourself (r = .47, p = .004).
   b. Keep so busy that you don't have time to think about your problems (r = -.38, p = .02).

2. "Decide there's nothing you can do to change things" was correlated with:
   a. Just keep the hurt and angry feelings to yourself (r = .45, p = .006).
   b. Watch T.V. and read a book to help take your mind off the problem (r = .45, p = .006).

3. "Tell yourself the problems are not important" was correlated with:
   a. Yell or shout to let off steam (r = -.35, p = .03).
   b. Keep out of that person's way for a while (r = -.26, p = .08).
NEGATIVE-AVOIDANCE

1. "Leave the program for a while (AWOL)" was correlated with "try manipulate staff" (r = .44, p = .008).
   (No other correlations were significant).

2. "Get high" was correlated with:
   a. Sit down and talk things out with that person (r = .41, p = .01).
   b. Try to find a fair compromise (r = -.30, p = .05).

3. "Just keep the hurt and angry feelings to yourself" was correlated with:
   a. Tell yourself it's not really important (r = .47, p = .004).
   b. Decide there's nothing you can do to change things (r = .45, p = .006).

POSITIVE-AVOIDANCE

1. "Keep out of that person's way for a while" was correlated with "Tell yourself that the problems are not important" (r = -.26, p = .08).
   (No other correlations other than the one listed in Appendix H were significant).

2. "Keep so busy that you don't have time to think about the problem(s)" was correlated with:
   a. Try to find someone at the program to talk to who's not involved in the conflict (r = .51, p = .002).
   b. Tell yourself it's not really important (r = -.38, p = .02).

3. "Watch TV. or read a book to help take your mind off the problem" was correlated with:
   a. Decide there's nothing you can do to change things (r = .45, p = .006).
   b. Try to find someone at the program to talk to who's not involved in the conflict (r = .35, p = .03).

SELECTIVE-IGNORING

1. "Just try to Ignore what's going on" was correlated with:
   a. Just keep the hurt or angry feelings to yourself (r = .44, p = .008).
   b. Think that your life is going to get better during the next six months (r = -.44, p = .007).

2. "Try to notice only the good things about others" was correlated with:
   a. Try to find a fair compromise (r = -.41, p = .01).
   b. Yell or shout to let off steam (r = -.38, p = .02).
ACTING-OUT

1. "Yell or shout to let off steam" was correlated with:
   a. (above selective-ignoring Item #2).
   b. Tell yourself the problems are not important ($r = -0.35$, $p = .03$).

2. "Hit or kick an object" was correlated with:
   a. Decide there's nothing you can do to change things ($r = 0.34$, $p = .03$).
   b. Just keep the hurt or angry feelings to yourself ($r = 0.29$, $p = .06$).

3. "Try to manipulate staff" was correlated with:
   a. Leave the program for a while (AWOL) ($r = 0.44$, $p = .008$).
   b. Remind yourself that things could be worse ($r = -0.40$, $p = .01$).

OPTIMISTIC COMPARISONS

1. "Remind yourself that things could be worse" was correlated with:
   a. Try to manipulate staff ($r = -0.40$, $p = .01$).
   b. Yell or shout to let off steam ($r = -0.32$, $p = .04$).

2. "Look around at other residents and see how much better off you are than they" was correlated with:
   a. Try to find a fair compromise ($r = 0.48$, $p = .004$).
   b. Just keep the hurt or angry feelings to yourself ($r = -0.44$, $p = .007$).

3. "Think that your life is better now than it was during the last six months" was correlated with:
   a. Just try to ignore what's going on ($r = -0.36$, $p = .02$).
   b. Just try to keep hurt or angry feelings to yourself ($r = -0.33$, $p = .04$).

4. "Think that your life will get better during the next six months" was correlated with:
   a. Sit down and talk things out with that person ($r = 0.45$, $p = .006$).
   b. Just try to ignore what's going on ($r = -0.44$, $p = .007$).
APPENDIX J

CORRELATIONS OF COPING ITEMS WITH
SELF-ESTEEM, TREATMENT OUTCOME, AND ADAPTATION TO THE PROGRAM
Here are some things that residents do when problems come up with staff or other residents at the program. How often do you

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>Self-Esteem</th>
<th>Outcome</th>
<th>Adaptation</th>
<th>Type of Coping Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Just try to ignore what's going on?</td>
<td>-.10</td>
<td>-.11</td>
<td>-.06</td>
<td>-.11</td>
</tr>
<tr>
<td></td>
<td>(p&lt;.03)</td>
<td>(p&lt;.03)</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>2. Remind yourself that things could be worse?</td>
<td>-.11</td>
<td>-.24</td>
<td>-.13</td>
<td>-.36</td>
</tr>
<tr>
<td></td>
<td>N.S.</td>
<td>(p&gt;.10)</td>
<td>N.S.</td>
<td>(p&gt;.03) (p&gt;.04) (p&gt;.03)</td>
</tr>
<tr>
<td>3. Look around at other residents and see how much better off you are than they?</td>
<td>.04</td>
<td>.21</td>
<td>-.16</td>
<td>-.06</td>
</tr>
<tr>
<td></td>
<td>N.S.</td>
<td>(p&gt;.02)</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>4. Tell yourself it is not really important?</td>
<td>-.27</td>
<td>.05</td>
<td>-.05</td>
<td>-.14</td>
</tr>
<tr>
<td></td>
<td>(p&gt;.07)</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>5. Try to notice only the good things about others?</td>
<td>.12</td>
<td>.23</td>
<td>-.01</td>
<td>-.19</td>
</tr>
<tr>
<td></td>
<td>N.S.</td>
<td>(p&gt;.10)</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>6. Decide there's nothing you can do to change things?</td>
<td>-.52</td>
<td>.08</td>
<td>-.09</td>
<td>-.13</td>
</tr>
<tr>
<td></td>
<td>(p&gt;.02)</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>7. Yell or shout to let off steam?</td>
<td>.02</td>
<td>-.16</td>
<td>-.005</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>8. Keep out of that person's way for a while?</td>
<td>.40</td>
<td>.26</td>
<td>.43</td>
<td>.41</td>
</tr>
<tr>
<td></td>
<td>(p&gt;.02)</td>
<td>(p&gt;.09)</td>
<td>(p&gt;.009)</td>
<td>(p&gt;.01) (p&gt;.003) (p&gt;.05)</td>
</tr>
<tr>
<td>9. Sit down and talk things out with that person?</td>
<td>.12</td>
<td>-.27</td>
<td>-.14</td>
<td>-.09</td>
</tr>
<tr>
<td></td>
<td>N.S.</td>
<td>(p&gt;.08)</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>10. Keep so busy that you don't have time to think about the problems?</td>
<td>.31</td>
<td>.05</td>
<td>.15</td>
<td>.11</td>
</tr>
<tr>
<td></td>
<td>(p&gt;.05)</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>11. Tell yourself that the problems are not important?</td>
<td>-.03</td>
<td>.03</td>
<td>.12</td>
<td>-.24</td>
</tr>
<tr>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
<td>(p&gt;.10)</td>
<td>(p&gt;.09)</td>
</tr>
<tr>
<td>12. Hit or kick an object (e.g., wall or furniture)?</td>
<td>-.22</td>
<td>.04</td>
<td>-.21</td>
<td>-.09</td>
</tr>
<tr>
<td></td>
<td>(p&gt;.10)</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>13. Leave the program for awhile (MOL)?</td>
<td>.09</td>
<td>-.28</td>
<td>.08</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>N.S.</td>
<td>(p&gt;.07)</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>14. Try to find someone at the program to talk to who is not involved in the conflict?</td>
<td>.30</td>
<td>.0001</td>
<td>.06</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>(p&gt;.05)</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Coping Strategy</td>
<td>Self-Esteem</td>
<td>Outcome</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-------------</td>
<td>---------</td>
<td>-----</td>
<td>------</td>
</tr>
<tr>
<td>15. Get high?</td>
<td>-.05</td>
<td>N.S.</td>
<td>-.05</td>
<td>-.11</td>
</tr>
<tr>
<td></td>
<td>(p&lt;.05)</td>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>16. Just keep the hurt or angry</td>
<td>-.47</td>
<td>(p&lt;.004)</td>
<td>-.08</td>
<td>-.15</td>
</tr>
<tr>
<td>feelings to yourself?</td>
<td>(p&lt;.05)</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>17. Try to find a fair compromise?</td>
<td>.15</td>
<td>N.S.</td>
<td>-.17</td>
<td>-.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>18. Watch television or read a book to help</td>
<td>.30</td>
<td>(p&lt;.06)</td>
<td>.33</td>
<td>.17</td>
</tr>
<tr>
<td>take your mind off the problem?</td>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>19. Try to manipulate the staff?</td>
<td>-.007</td>
<td>N.S.</td>
<td>-.08</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>20. Think that your life is better now than it was</td>
<td>.01</td>
<td>(p&lt;.06)</td>
<td>.9</td>
<td>.21</td>
</tr>
<tr>
<td>during the past six months?</td>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>21. Think that your life is going to get better</td>
<td>.37</td>
<td>(p&lt;.02)</td>
<td>.12</td>
<td>.03</td>
</tr>
<tr>
<td>during the next six months?</td>
<td></td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

**Codes for Type of Coping Strategy**

S.I. = Selective Ignoring  
O.C. = Optimistic Comparisons  
H. = Negotiation  
Av.P. = Positive-Avoidance  
Av.N. = Negative-Avoidance  
A.O. = Act Out  
R. = Resignation
APPENDIX K

FOUR HYPOTHETICAL COPING SITUATIONS:
FREQUENCY DISTRIBUTIONS
## Hypothetical Situation One
(Frequencies)*

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>First Response</th>
<th>Second Response</th>
<th>Third Response</th>
<th>Fourth Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Make alternative plans (P)</td>
<td>8(2)</td>
<td>7</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>2. Run away from program (N)</td>
<td>2(2)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>3. Negotiate for alternative weekend (P)</td>
<td>2(1)</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. Express anger to parents/others (P)</td>
<td>12(6)</td>
<td>7</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>5. Express hurt to parents/others (N)</td>
<td>6(1)</td>
<td>3</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>6. Get high (N)</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>7. Talk with staff (P)</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>8. Talk with other residents (P)</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>9. Stay at the program (P)</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>10. Go home anyway (N)</td>
<td>n=30</td>
<td>n=25</td>
<td>n=24</td>
<td>n=4</td>
</tr>
</tbody>
</table>

(P = positive coping strategies, N = negative coping strategies)

<table>
<thead>
<tr>
<th>Number of Coping Strategies</th>
<th>Number of Different Coping Strategies</th>
<th>Did This Happen You In The Past? (frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>Frequency</td>
<td>Value</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

### Coping Strategy Used

**In Past (n = 6)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Plan (P)</td>
<td>1(1)</td>
</tr>
<tr>
<td>Alternative Weekend (P)</td>
<td>1(1)</td>
</tr>
<tr>
<td>Expressed Anger (N)</td>
<td>2(0)</td>
</tr>
<tr>
<td>Expressed Hurt (N)</td>
<td>1(1)</td>
</tr>
<tr>
<td>Stayed At Program (P)</td>
<td>1(1)</td>
</tr>
</tbody>
</table>

**In Future (n = 30)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Plan (P)</td>
<td>11(4)</td>
</tr>
<tr>
<td>Run Away (N)</td>
<td>1(1)</td>
</tr>
<tr>
<td>Alternative Weekend (P)</td>
<td>7(3)</td>
</tr>
<tr>
<td>Express Anger (N)</td>
<td>5(2)</td>
</tr>
<tr>
<td>Express Hurt (N)</td>
<td>3(1)</td>
</tr>
<tr>
<td>Stay At Program (P)</td>
<td>2(1)</td>
</tr>
<tr>
<td>Go Home (N)</td>
<td>1(0)</td>
</tr>
</tbody>
</table>

*The number in brackets indicates the number of subjects who chose this strategy and who completed the program.*
### Hypothetical Situation Two

(Frequencies)*

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>First Response</th>
<th>Second Response</th>
<th>Third Response</th>
<th>Fourth Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stop using drugs (P)</td>
<td>6(2)</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Get angry/leave (N)</td>
<td>13(5)</td>
<td>6</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>3. Admit to problem, negotiate (P)</td>
<td>3(2)</td>
<td>11</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>4. Placate, promise to quit (lying) (N)</td>
<td>3(1)</td>
<td>2</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>5. Return to drug program (P)</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>6. Argue, stay at home (N)</td>
<td>4(2)</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Leave, return when not high (N)</td>
<td>1(0)</td>
<td>1</td>
<td>n=8</td>
<td>n=2</td>
</tr>
</tbody>
</table>

(P = positive coping strategies  
N = negative coping strategies)

<table>
<thead>
<tr>
<th>Number of Coping Strategies</th>
<th>Number of Different Coping Strategies</th>
<th>Did This Happen You In The Past?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Frequency</td>
<td>Value Frequency</td>
<td>(frequency)</td>
</tr>
<tr>
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<td></td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Coping Strategy Used  
In Past (n = 17)

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>11(4)</td>
<td>Stop drug use</td>
<td>5(3)</td>
</tr>
<tr>
<td>Placated/ lied</td>
<td>2(1)</td>
<td>Leave</td>
<td>13(4)</td>
</tr>
<tr>
<td>Argued/stayed</td>
<td>3(1)</td>
<td>Negotiate</td>
<td>4(3)</td>
</tr>
<tr>
<td>Left &amp; returned</td>
<td>1(0)</td>
<td>Placate</td>
<td>1(0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Return to program</td>
<td>1(0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Argue and stay</td>
<td>2(1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leave/return</td>
<td>4(1)</td>
</tr>
</tbody>
</table>

Coping Strategy Used  
In Future (n = 30)

*The number in brackets indicates the number of subjects who chose this strategy and who completed the program.*
### Hypothetical Situation Three
(Frequencies)*

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>First Response</th>
<th>Second Response</th>
<th>Third Response</th>
<th>Fourth Response</th>
<th>Fifth Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tell staff (P/N)</td>
<td>3(1)</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>2. Physical violence (N)</td>
<td>5(3)</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>3. Ignore/laugh it off (P)</td>
<td>12(2)</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>4. Rational talk (P)</td>
<td>1(0)</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>5. Call name back (N)</td>
<td>9(6)</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6. Warn-will fight (physically) (P/N)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Feel hurt-no action (N)</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8. Run away (N)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Number of Different Die This Happen You In The Past? (frequency)*

<table>
<thead>
<tr>
<th>Value Frequency</th>
<th>Coping Strategies</th>
<th>Value Frequency</th>
<th>Coping Strategies</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>23</td>
<td>7</td>
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<td>2</td>
<td>5</td>
<td>2</td>
<td>8</td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>3</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Coping Strategy Used
In Past (n = 23)

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell staff</td>
<td>1(0)</td>
</tr>
<tr>
<td>Physical violence</td>
<td>4(3)</td>
</tr>
<tr>
<td>Ignored</td>
<td>10(3)</td>
</tr>
<tr>
<td>Rational talk</td>
<td>1(0)</td>
</tr>
<tr>
<td>Call name back</td>
<td>7(3)</td>
</tr>
</tbody>
</table>

### Coping Strategy Used
In Future (n = 30)

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell staff</td>
<td>1(0)</td>
</tr>
<tr>
<td>Physical violence</td>
<td>4(3)</td>
</tr>
<tr>
<td>Ignored</td>
<td>10(3)</td>
</tr>
<tr>
<td>Rational talk</td>
<td>1(0)</td>
</tr>
<tr>
<td>Call name back</td>
<td>7(3)</td>
</tr>
</tbody>
</table>

*The number in brackets indicates the number of subjects who chose this strategy and who completed the program.*
Hypothetical Situation Four
(Frequencies)*

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>First Response</th>
<th>Second Response</th>
<th>Third Response</th>
<th>Fourth Response</th>
<th>Fifth Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tell staff (P/N)</td>
<td>1(1)</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2. Physical violence (N)</td>
<td>14(6)</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Ignore (P)</td>
<td>6(2)</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4. Rational talk (P)</td>
<td>4(1)</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>5. Cell name back (N)</td>
<td>4(2)</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>6. Warn—will fight (physically) (P/N)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Warn staff (will harm name caller) (P/N)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>8. Run away (N)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9. Feel hurt—no action (N)</td>
<td>1(0)</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

(P = positive coping strategies  N = negative coping strategies)

<table>
<thead>
<tr>
<th>Coping Strategies</th>
<th>Number of Different Coping Strategies</th>
<th>Did This Happen to You In The Past?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Frequency</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>4</td>
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<tr>
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<td>4</td>
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<td>4</td>
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<tr>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Coping Strategy Used In Past (n = 9)

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical violence</td>
<td>3(0)</td>
</tr>
<tr>
<td>Ignored</td>
<td>4(2)</td>
</tr>
<tr>
<td>Rational talk</td>
<td>1(1)</td>
</tr>
<tr>
<td>Cell name back</td>
<td>1(1)</td>
</tr>
</tbody>
</table>

Coping Strategy Used In Future (n = 30)

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell staff</td>
<td>1(1)</td>
</tr>
<tr>
<td>Physical violence</td>
<td>5(1)</td>
</tr>
<tr>
<td>Ignore</td>
<td>12(5)</td>
</tr>
<tr>
<td>Rational talk</td>
<td>4(3)</td>
</tr>
<tr>
<td>Cell name back</td>
<td>6(1)</td>
</tr>
<tr>
<td>Warn—will fight</td>
<td>1(0)</td>
</tr>
<tr>
<td>Warn staff (fight)</td>
<td>1(1)</td>
</tr>
</tbody>
</table>

*The number in brackets indicates the number of subjects who chose this strategy and who completed the program.


