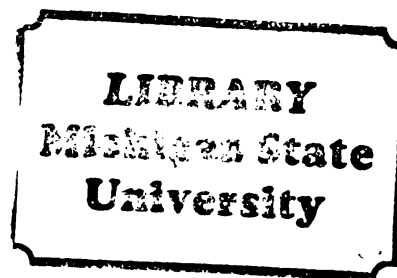






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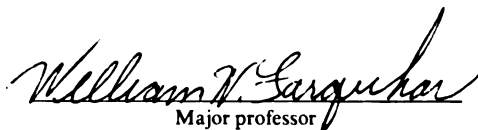
Minnesota Multi-Phasic Personality Inventory  
Differences Between Female Adolescent  
Psychiatric Inpatient Elopers and Non-Elopers

presented by

Charles E. Grayson, Jr.

has been accepted towards fulfillment  
of the requirements for

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MINNESOTA MULTI-PHASIC PERSONALITY INVENTORY DIFFERENCES  
BETWEEN FEMALE ADOLESCENT PSYCHIATRIC  
INPATIENT ELOPERS AND NON-ELOPERS

BY

CHARLES E. GRAYSON, JR.

A DISSERTATION

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## ABSTRACT

# MINNESOTA MULTI-PHASIC PERSONALITY INVENTORY DIFFERENCES BETWEEN FEMALE ADOLESCENT PSYCHIATRIC INPATIENT ELOPERS AND NON-ELOPERS

BY

CHARLES E. GRAYSON, JR.

In the present study differences in personality traits and behavioral characteristics between female adolescent psychiatric inpatients who eloped during their treatment and those patients who did not elope were investigated.

Differences between the groups were hypothesized based on a theoretical integration of research and clinical observation reported in the literature which suggested problems in early development of specific ego functions and in current adequacy of ego structures in eloping adolescents.

In this retrospective study MMPI item responses and scale scores for 43 patients who had eloped from the hospital were compared with those responses and scale scores of 48 patients who had not eloped.

Hypotheses were generated that predicted that elopers would:

1. Show greater aggression as represented by Pd (Psychopathic Deviance) scale elevation,
2. Less psychological defensive capability represented by (K) scale elevation,

3. Demonstrate a greater level of psychopathology as represented by (F) scale elevation, and
4. Have more depression which would be seen in (Dedepression) scale elevation.

Factor analysis of MMPI item responses which differentiated elopers and non-elopers was expected to reveal factors which would represent an experience on the part of eloper patients of a sense of lack of control of internal and external events. Adopted girls were expected to be over-represented in the eloper group.

None of the hypothesized MMPI scale score differences were found in analysis of variance procedures. Elopers did score significantly higher on the Mf (Masculine-Feminine) scale than did non-elopers. Significant interaction effects between previous history of runaway from home and involvement with police were found on the Pa (Paranoia) and Ma (Mania) scales. Factor analysis procedures did not reveal clearly interpretable factors of experience of uncontrol. Interpretable factors emerged, however, representing possible qualities and characteristics of elopers. These factors were:

1. Lack of verbal skills and interests,
2. Problems in interpersonal engaging,
3. Impulsive behavior, and
4. Problems with authority.

Discriminant analysis of discriminating MMPI items determined an equation which successfully categorized 91% of the subjects into eloper and non-eloper classifications.

**DEDICATION**

**TO MY PARENTS**

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## CHAPTER I

### THE PROBLEM

Elopement from psychiatric facilities on the part of adolescent patients is an event that raises many issues for those who would attempt to understand and treat these patients. In this chapter an examination of elopement from psychiatric hospitalization on the part of adolescent patients is initiated and a rationale for the current study is presented.

#### Need for the Study

The problem of patients running away from or "escaping" from psychiatric hospital settings has a long history. Miller (1957) wrote that his adolescent patients were universally concerned with possible escape. More recently the use of "open door" orientations and other liberalizing initiatives in hospital procedure which allow hospital patients more freedom of movement and less confinement has apparently changed the meaning and implications of running away from hospitalization. Levy (1972) suggests that elopement in adolescent psychiatric inpatient populations tends to reflect more specific kinds of personal and psychological implications than had previously been the case. He writes, "it should be noted that with more openness the types of runaway change - i.e. the idea of proving one can do it or of escaping tends to disappear." (p. 6). While the preoccupation with escape may no longer be prevalent and the psychological meanings and motives of running away have changed, the problem does not appear to have diminished. The frequency of the elopement phenomenon is documented by Antebe (1967, p. 2) when he writes

that the problem of patient runaway is a growing one, again, because of the advent of more open hospital units. Other authors have suggested that the act of leaving the psychiatric hospital without permission needs to be considered an expression of particular psychological problems, the meaning of which need to be understood for effective treatment to be accomplished (McNaught and McKamy, 1978, p. 304). In fact, McNaught and McKamy have suggested that this kind of acting out is or could be considered a form of indirect or non-verbal communication by adolescents who cannot communicate their problems verbally. Thus, they advise the psychotherapist that "you must try to understand what the adolescent is saying..." (p. 303). If it is true, as McNaught and McKamy suggest that these elopement behaviors convey important meaning then it clearly makes sense for the sake of informed treatment planning to better understand the elopement behavior and possible meanings that the act might have.

Of particular importance and application to settings in which inpatient treatment is relatively long term is the finding by Meyer, Martin, and Lange, (1967, p. 294) that the longer a patient is hospitalized the more likely it is that they will present the problem of elopement to the treatment team. Two of the three adolescent units at Pine Rest Christian Hospital which provided the setting and patient subjects for the current study maintain adolescent patients on an inpatient basis for an average of six months. This is considerably longer than the average psychiatric inpatient hospital stay but it is characteristic of a number of treatment facilities which carry on intensive treatment of adolescent psy-

chiatric patients.

The phenomenon of running away from the hospital appears to be more prevalent among the adolescent patient population than it is in the adult patient population. During a two year study of adolescent and adult inpatients Mayer, Martin, and Lange, (1967) found that "elopers were considerably younger than the non-elopers that made up the ward population (p. 298)" Altman, Angle, Brown, and Stetten (1972) in a correlational study found that the correlation of greatest magnitude between a variety of descriptive and demographic variables with elopement of psychiatric patients was a negative one of increasing age with elopement.

In the literature cited above the suggestion is repeatedly made that there are some important differences between psychiatric inpatients who elope from hospitalization and those who do not. Some of these issues could be of considerable importance in the psychiatric treatment of adolescents on an inpatient basis. Observations and findings reported in the literature of psychology and psychiatry formed the rationale for the present study.

General findings are as follows:

1. The phenomenon of runaway behavior is seen as having changed in its meaning.
2. Elopement appears to reflect important psychological experience which may be essential in the understanding of patients who engage in such behavior.
3. Long term hospitalization is associated with increased frequency of elopement.

4. Hospital runaway is a more common event in the adolescent population than it is in the adult population and is seen as a common and growing problem.
5. Patients who have eloped at some time during their inpatient treatment tend to do poorly or benefit less from therapy than others. Successful treatment may depend on understanding this behavior for those who are prone to it.

Because of these findings and observations the need to better understand the adolescent hospital runaway phenomenon is clear. In this study it was hoped that some beginning direction in the theoretical understanding of adolescent elopement can be established.

#### Purpose of the Study

The purpose of the research was to determine whether personality characteristics of female adolescent psychiatric patients who run away or elope from inpatient hospitalization can be identified. In this research an attempt was made to determine whether those adolescent patients who run away could be differentiated as a group from other patients who did not run away. Hypotheses regarding differentiating characteristics of the two groups were generated on the basis of psychodynamic theory. An attempt has been made in the current study to explore hypotheses about clinical, dynamic, and developmental correlates of runaway behavior. Clarification was sought through comparing elopers and non-elopers using the Minnesota Multiphasic Personality Inventory (MMPI). Results of earlier research were stated in the theoretical context and were tested as hypotheses about expected MMPI item configur-

ations and clinical scale elevations. It was hoped that some new personality factors associated with elopement in this population would be identified which would illuminate the phenomenon and lend direction to further study. There have been few empirical studies undertaken to examine the personality dynamics involved in elopement behavior in a population of adolescent psychiatric inpatients or to determine if there are demonstrable differences between those patients who elope and those who do not. Levy (1974) compared a group of female adolescent patients who had eloped from the hospital setting with another group of non-eloping patients. His study was confined to consideration of demographic, descriptive, and observational data. It was intended that the present research with the MMPI would begin to address the need for investigation in this area using objective methods of personality assessment. The extant studies have been reviewed here and the theoretical considerations, speculations, and clinical observations presented in previous research have been discussed in a presentation of theory following the review of these few systematic and largely demographic studies.

### Research Hypotheses

In the present study the following hypotheses were tested. It was expected that a group of female hospital elopers would demonstrate, relative to a group of similar patients who are non-elopers, evidence of greater deficits in ego-defensive functioning, greater level of overall psychopathology, greater indication of aggressive tendencies, and indications of greater representation of depression. An hypothesis was also presented that the group of elopers would demonstrate evidence of a

sense of lack of control of inner experience and external environmental events which would be greater than that demonstrated by non-eloper patients.

Also the hypothesis is presented that there will be a greater representation of adopted patients among the eloper group than among the non-eloper group and that, if a factor could be identified to represent a sense of lack of control, that the subgroup of those in the eloper group who have had involvement with police or corrections authorities would have a significantly lower mean score on the uncontrol factor.

#### Focus of the Study

The current research has been addressed only to the study of female adolescent patient subjects. The study has not been based on theory that is related specifically or exclusively to female adolescents. The present study has been built around research and theory that is more largely related to childhood and adolescence in general. However the developmental concerns of adolescent boys and girls have been demonstrated to be quite different (Blos, 1979) and do deserve separate treatment. Some of the elements of the study have been based upon work done by Levy (1972) which is focused on female patients. The current study in part is an attempt to consider and expand some of Levy's findings with the population of female adolescents. An additional reason for conducting this study with an exclusively female population is that a large number of subjects must be used in MMPI research in both female and male populations. The population of male elopers and non-elopers needs to be evaluated with similarly large samples. Evaluating large

male as well as female subject groups was not seen as feasible at this time. It will be important to contrast findings of future studies carried out with adolescent male samples with the findings of the present research.

Observations and theoretical constructs which pertain to elopement in the adolescent population are sometimes atheoretical (e.g. McNaught and McKamy) and at others depend on ego psychological or psychoanalytically oriented theories (e.g. Levy, Leventhal). The development of the hypotheses which are tested in this study is based upon psychoanalytic theory of personality development. The hypotheses are tied together in a logically interdependent set of constructs. A global sense of lack of control is hypothesized as being characteristic of elopers and has been observed among children and adolescent runaways (Leventhal, 1963). The tendency to "act out" which, it is assumed here, can be interpreted as an attempt to cope with or defend against the experience of lack of control are seen together as representing a variety of ego-developmental inadequacies or failures. The lack of development of adaptive and refined ways of defending observed in a patient also implies the likelihood of a lack of refinement and channeling of aggressive impulses and fantasies. An inability to establish controls over aggression toward important people in one's life, as might be expected in persons who have not been able to modify these impulses in general, and the experience of lack of control, especially in relation to normal as well as extraordinary developmental interpersonal loss experiences - are associated, theoretically, with the development of depression. This set of considera-



tions is derived from classical psychoanalytic theory (Freud, 1917) in which Freud describes the "shadow" of the lost objects falling over the ego in the development of depression. These related problems of ego development which are hypothesized as being significantly associated with elopement behaviors in adolescent female psychiatric patients are more completely developed in the work of Margaret Mahler (1975) and illustrated clearly by Blanck and Blanck (1974). In more recent ego psychological conceptions these authors offer a view of the development of ego functioning which lends itself to the clarification of the interdependence of the ego functions of psychological defending, the elaboration of internalized object relationships, and concomitant external interpersonal relationships, the establishment of inner controls over experiences of anxiety and depression and the experience of mastery.

### Overview

In the second chapter of this text the literature relevant to conceptual and theoretical understanding of elopement or runaway behaviors in children and adolescents is reviewed. A review of the extant studies of clinical, demographic, and practical aspects and incidence of hospital elopement is presented. Previous research carried out with the MMPI in relation to any aspect of elopement or escape attempts is described. A theoretical formulation is developed which integrates psychodynamic and ego-psychological developmental implications of elopement in adolescents. Some of these implications are presented as hypotheses.

In the third chapter a presentation of the design of a study to test the hypotheses put forth in Chapter II is made. The population of

interest, sampling techniques, and the rationale for the design of the study is delineated. Another statement of the hypotheses in testable form as well as a description of the analytic procedures used is then given.

In the fourth chapter hypotheses are restated and the results or outcome of the testing of each one is presented. Additional findings accrued in the analytic procedures are described.

In the fifth chapter conclusions are presented. Clarification of the implications of the results for the theoretical formulations presented in the second chapter are developed. Consideration and suggestions are then made for possible directions for further research.

## CHAPTER II

### REVIEW OF THE LITERATURE

Only a few studies are found in the literature which address the problem of the elopement of adolescent psychiatric inpatients. Literature searches revealed no studies which used objective personality assessment in describing and differentiating adolescent or adult elopers and non-elopers.

In the first section of this chapter formal studies and clinical studies which describe or address the problem of the elopement of patients from psychiatric hospitals, both adult and adolescent, are reviewed. In addition, studies which focus on the dynamics of adolescents who run away from home are described. In the second section of the chapter a construction of hypotheses about personality characteristics of adolescent elopers is presented. These hypotheses, based on some of the major research and clinical papers presented in the first section, are elaborated from an ego-psychological developmental perspective.

#### Hospital Elopement

Meyer, Martin and Lange (1967) studied a mixed group of adolescent and adult psychiatric inpatients who had eloped from psychiatric hospital settings. They used descriptive demographic data and clinical records to characterize the eloper or runaway subjects and contrasted the derived characteristics of this group with a group of non-eloper patients. In addition they endeavored to move beyond previous studies

which had been limited to reports of demographics and incidence of elopement through "a systematic analysis" using what they considered to be measures and ratings which could be replicated. The replicable measures or ratings consist of four basic categories of precipitants to elopement:

1. Internal factors in the patient
2. Threatening aspects of the ward environment
3. Difficulties in the patient/therapist or therapist/supervisor relationship
4. Interference from significant family members or from other sources outside the hospital milieu.

The psychotherapists who treated the eloper patients were asked to indicate which of these four categories they thought was the most likely and probable precipitant of each of the patients' elopement episodes.

In their study of patient records Meyer, et al found that successful treatment outcomes were less common for the eloping patients than for patients who had not eloped. Comparison of elopers and non-elopers also revealed that elopers tend to be more seriously disturbed than the non-eloper control group and that the elopers tend to be considerably younger than non-eloper controls.

The outcome of the part of the study which categorized elopement episodes into primary precipitants showed that internal factors in the patient were judged as the predominant reason for elopement and accounted for 55% of the cases. Ward-patient conflicts were seen as precipitating 25% of the episodes with outside interfering forces and thera-

pist-patient relationship problems accounting for 9% and 11%, respectively.

The finding that a majority of elopers are judged by their therapists as responding largely or primarily to internal problems when they elope is useful in supporting further research studies of personality characteristics and psychological status of eloper patients. Meyer et al's findings demonstrate the importance of intrapersonal variables in elopement behavior as opposed to strictly environmental and interpersonal considerations.

The finding that elopers were more disturbed than non-eloper controls is based on a nosological categorization of the patients by psychiatrists. This method of diagnosis is notoriously unreliable (Achenbach, 1974, p. 544). The failure of these investigators to look separately at adolescent and adult subject groups and the failure to report gender differences in their results is unfortunate.

McNaught and McKamy (1978) gather and report clinical data on psychiatric hospital adult and adolescent runaways and attempt to delineate psychodynamic and situational reasons and precipitants for the runaway behaviors in these patients. McNaught and McKamy develop a list of seven possible "causes" of hospital elopement:

1. Discomfort brought about by change or growth.
2. Fear of being close to others.
3. Rejection of the treatment concept or the treatment staff.
4. Anxiety about a lack of external control, as well as a request for it.

5. Inability to undergo change while in the treatment milieu.
6. Overriding sense of responsibility for a situation perceived to be or actually occurring outside the hospital.
7. Promotion of elopement by other members of the group (staff, or patients who may have their own motivations to encourage the runaway).

McNaught and McKamy acknowledged that the list is not exhaustive and that "like all aspects of behavior, the phenomenon is determined by multiple causes (p. 304)."

McNaught and McKamy did not differentiate adult and adolescent patients in their discussion of elopement and they used no objective instrument of personality assessment to describe or differentiate the eloper group.

Greenberg, Blank, and Argrett (1968) also developed a typology with which to categorize elopers. They established eight possibilities which include:

1. Elopement arising from physician patient dyad problems.
2. Elopement as a function of parental resistance.
3. Elopement as a pre-discharge protest.
4. The scapegoated eloper.
5. The group eloper.
6. The star crossed lovers.
7. Elopement due to difficulty in accepting that others care.
8. Elopement as a precipitate of internal staff problems.

The paper by Greenberg et. al. was useful because the concepts

were derived from observations of a specifically adolescent population. No attempt, however, was made to establish the extent to which any of these categories is applicable to actual eloping patients and actual frequency of elopement episodes.

Altman, Angle, and Brown (1972) in a retrospective study examined adolescent and adult psychiatric inpatient records in an attempt to determine what features or characteristics would predict elopement in the patient. No attempt was made in this research to render explanation or theoretical elaboration or to explore the phenomenon of elopement. Altman et. al. used a very large sample of patients and correlated a variety of clinical and descriptive variables which had been recorded in diagnostic interviews upon admission to hospitalization. The main findings consisted of correlations of descriptive variables with eventual elopement.

An important finding that was gained from this study was that in the sample considered by Altman et. al. manifest depression was highly negatively correlated with elopement. Also the correlation of greatest magnitude in the study was a negative one of increasing age with elopement.

Levy (1972) studied a group of female adolescent psychiatric inpatients and compared those who had eloped sometime during their hospitalization with those who had not. In this paper he developed some ideas about the dynamics and developmental implications of the runaway act based on demographic findings and clinical impressions. Levy also reported demographic and observational findings. Some possible explana-

tions for elopement behavior were discussed in the context of adolescent psychiatric inpatient settings. Levy discussed possible intrapsychic, psychodynamic and sociological understandings and explored the impact of the elopement act upon the treatment staff. Elopement as a reaction to problematic elements of important relationships between staff and patients was discussed. He gave an example of an elopement which was later viewed as a response by the patient to abandonment by staff who transferred to work elsewhere in the hospital.

In a review of the diagnoses borne by the patients in the groups Levy discovered that "neurotic youngsters ran less than the characterologically or psychotically disturbed youngsters (p. 13)." Levy found that the adolescents who ran away tended to have childhood histories which included more early losses of significant persons in their lives. Disruptions in interpersonal relationships which Levy characterized as abandonment were seen commonly in the histories of runaways. He found that patients who had been adopted as children were greatly over-represented in the runaway population. Upon post-discharge follow-up investigation, girls who had eloped were seen to be either exceedingly close to their families or to be exaggeratedly separated from their families of origin.

Levy's findings are quite valuable because they suggest that some general differences may exist between female adolescent psychiatric inpatient elopers and non-elopers. The differences which seemed quite important and useful in theory building and psychodynamic conceptualization, such as differences of style in relating to family of origin,



do not, unfortunately, lend themselves to very objective measurements.

### Running Away From Home

In a study carried out with children and adolescents who were living at home but were in outpatient psychiatric treatment Leventhal (1963, 1964), in two separate papers, developed scales with which to rate a degree of inner lack of control and a lack of control of outside or "non-ego" forces or events. He studied a group of children and adolescents who were patients at a child guidance clinic and who had at some point run away from home. He compared them with a matched group of patients from the child guidance clinic who had not run away from home (1963, p. 122). The patients were all 17 years of age or younger and included both males and females. The measures of "uncontrol" in the initial study in which he looked specifically at external sense of lack of control included:

1. "Sensitization to control as an issue;
  2. Behavioral reactivity (responses are readily elicited and with little modification);
  3. Anticipation of ever greater spreading and intensification of poorly controlled behavior;
  4. Self-image of being powerless as an expression of lack of control over and a feeling of submission to external stimulation."
- (1963, p. 122).

In his later paper Leventhal (1964) specifies criteria for internal uncontrol measures:

1. "Discharge type behavior, for example, impulsivity, temper

tantrums, excessive masturbation, enuresis;

2. Deficient mechanisms that usually regulate behavior. Poor judgement, insufficiencies in cognition and motility and conative lacks, are examples of structures that when impaired do not serve the purposes of control well.
3. Self-image of being helpless and unable to control." (1964, p. 170).

In the second paper (1964) Leventhal stated that the sense of uncontrol of external events and forces was complementary to his more newly defined concept of a sense of lack of control of inner experiences.

Leventhal hypothesized that these characteristics of both internal and external uncontrol would be found to a greater degree in the clinical data gathered about runaway subjects than the data pertaining to the non-runaway subjects. He also hypothesized that manifestations of inner uncontrol would be associated with manifestations of outer uncontrol. Clinical material used to test these hypotheses consisted of ratings of criteria cited above applied to material and history gathered from one or two interviews with patients in each of the groups. Interviews were carried out by staff psychiatrists. One or two intake interviews with a parent or parents was used to gather additional information. The results of the studies were, therefore, based on the use of behavioral observations and upon a detailed history. Leventhal did find that, as he had predicted, judges tended to rate the clinical material of the runaways as evincing significantly greater uncontrol as defined above in both of the studies. He found that runaways who

were referred by correctional agencies and by the police had lower uncontrol ratings than those runaways who either referred themselves or were referred by non-punitive agencies.

Leventhal's two studies were conducted with a mixed group of children and adolescents. The groups were not differentiated in the reporting of results in age groups. He sampled from a population of patients being treated in a child guidance clinic and used judges ratings of the clinical interviews to derive his data. All of these characteristics are seen as weaknesses in the design of the study.

Robbins and O'Neal (1959) studied groups of runaways and non-runaways who were seen at a child guidance clinic on an outpatient basis. They sought out adult male ex-child guidance clinic patients some 30 years after the subjects had been in treatment. In this study they hypothesized that the subjects who had run away from home as children would show more deviance as reflected in and defined by arrests, prison sentences, divorce, and psychiatric disease than would be found in ex-patients who had not run away as children. They found that the runaways had more difficulties of the nature hypothesized than had the non-runaway ex-patients. They felt, however, that adult adjustment was not related to running away per se. They stated that it is more likely that the observed difficulties in adjustment were related to the seriousness of more general anti-social behavior with which Robbins and O'Neal associate the runaway act. They found that the group of adults who had as children or adolescents run away tended to have a larger representation of subjects diagnosed as having a sociopathic personality relative to the non-runaway group.

Reimer (1940) described children who run away from their home. His paper is largely a theoretical and descriptive one. He describes run-away children as "antagonistic, surly, defiant, assaultive, distrustful, and impulsive." He views the behavior as a cry for help and as a denial of this need for help at the same time.

#### Elopement and the MMPI

There have been no studies conducted to date which have used MMPI or any other psychological or personality assessment techniques to systematically compare psychiatric hospital elopers and non-elopers or to characterize and describe personality attributes of these patients. However, two studies of a very different kind of elopement have been conducted using the MMPI as a criteria. The two studied were attempts to use the items of the MMPI to build a predictive index of escape from a prison setting. Beall and Panton (1956) analyzed the differential response of escapees and non-escapees to the items of the MMPI-long form. They compared their group of prisoners who had escaped or attempted escape with a non-random control group of prisoners who had been judged "good custody risks (p. 393)." Through chi-square analysis of each item they found 42 items which differentiated the two groups at the .01 level of confidence. Beall and Panton dubbed this newly developed scale the "escapism" or "EC" scale. In a replication study Shupe and Bramwell (1963) found that when a random sample of non-escapee prisoners were used as controls instead of the "good custody risk" prisoners which Beall and Panton used that only nine items differentiated the escapees and non-escapees even at the .05 level of

confidence. Shupe and Bramwell also found that escapees scored significantly higher on the Si (Social Introversion) scale than the non-escapees. When Shupe and Bramwell attempted to cross-validate the EC scale they found that differences between escapees and non-escapees were in the predicted direction and were significant at the .05 level of confidence. In their discussion they suggest, however, that there is a decided lack of value to such a clinical scale for practical purposes of prediction because of the very low base rate of escape phenomena in the population.

Neither of the research undertakings described above attempted to learn more about escape behavior or its possible correlates with other personality and behavioral characteristics of escapees. The subjects were males representing an age range of late adolescence through late adulthood.

#### Critique of Research Design

The review of literature on elopement and runaway reveals a variety of theoretical weaknesses and design problems in the studies which have been examined. Such problems are addressed in the following section.

Meyer, Martin, and Lange (1967) found that elopers tended to demonstrate greater psychological disturbance than non-elopers. Judgements were based on psychiatric diagnosis. Levy (1974) presents similar findings which are, again, presumably based on psychiatric diagnosis. A more reliable measure of psychological disturbance was determined in the present study in which MMPI clinical scale scores of elopers and non-eloper groups were compared.

The authors and researchers whose papers have been reviewed in the previous section have used a variety of techniques to demonstrate and clarify differences between elopers and non-elopers. Some of the suggested distinctions between elopers and non-elopers are based on observations by clinicians and historical data (Levy, 1974, Robbins and O'Neill, 1959). Other differentiating qualities were tested in research designs which used a process of ratings by judges of qualities of personality and motivation (Leventhal, 1963, 1964, Meyer, Martin, and Lange, 1967, Greenberg, Blank, and Argrett, 1968).

In the present study an attempt was made to test some hypotheses about differences between eloper and non-eloper groups as well as to explore the phenomenon with the hope of finding possible differences not yet considered. The value of using the MMPI in this context was that an empirical measure allows for ease of replication and clarification of findings about group differences on psychological and personality variables.

A variety of interesting observations and theoretical distinctions between elopers and non-elopers have been presented in the literature. Many of the most interesting of hypothesized and observed differences, particularly those observations made by Levy (1974) and Leventhal (1963, 1964) which relate to styles of intra-psychic and interpersonal behavior, do not lend themselves easily or directly to verifiable and objective measurement.

In the present study observations and theoretical elements regarding runaway and elopement were integrated and formulated into more

general hypotheses about aspects of ego functioning and personality characteristics which may be more easily measured.

Of the studies which have been reviewed Levy's (1974) was the only one in which a population with well defined age and gender parameters (adolescent girls) was studied. The present study was also focused exclusively on adolescent girls. The many behavioral and psychological distinctions between late childhood or the latency period of personality development and adolescence clearly indicate the need for more specific scrutiny of each developmental period (Mussen, Conger, and Kagan, 1974, Sullivan, 1954). In the current research the problem of the need to examine age and gender distinctions is addressed by delimiting the population of interest to girls who are 15 to 18 years of age.

The studies by Beall and Panton (1956) and Shupe and Bramwell (1963) which are reviewed in the previous section of this chapter represented an attempt to develop a scale which could predict escape. The relevant issue of the difference between prison escape of adult male convicts from a prison and the elopement of female adolescents limits any conceptual value of a comparison of these studies with the present one. Any temptation to make such a comparison would be tempered by the fact that no theoretical development of concepts is attempted in the papers. The primary and singular goal was to develop a predictive scale with the use of the MMPI. The attempt to develop a predictive scale in the case of escape or elopement as a primary and singular research objective seems premature. The idea that a scale could be developed from a personality assessment tool, such as the MMPI, which would predict a behavioral out-

come, implies a belief on the part of the researchers in an underlying similarity in elements of personality or character structure within the group of escapees. No attempt was made in the two studies of prison escapees to investigate or to evaluate findings in a clinical or theoretical way. The exploration and development of understanding of escape or elopement to the end of development of theory about the phenomenon must precede, it would seem, or accompany attempts to differentiate actual behavioral outcomes in a predictive way. Contrasting the aims of the current study with those of Beall and Panton (1957) and Shupe and Bramwell (1963) seems useful. In the present research MMPI differences have been measured and examined toward a primary goal of deriving possible meaning in regard to personality characteristics and behavioral tendencies of eloper patients. The goal of developing a predictive scale is addressed in this study but is not seen as a primary goal of research.

### Sociological and Environmental Theories

The emphasis which researchers and theorists have placed upon the situational, interpersonal, or immediate environmental precipitants of elopement from the hospital has varied markedly. Some authors who have written on the subject of elopement or runaway emphasized a variety of precipitants and environmental dynamics of runaway behavior (Levy, 1974, McNaught and McKamy, 1978, Greenburg, Blank & Argrett, 1968 and Meyer, Martin and Lange, 1967). Although there is consistent suggestion from these authors to consider environmental and situational causes or determinants of runaway behavior there is also consistent concern about



internal or personality elements implicated in elopement on the part of all of these authors and others (Reymer, 1940, Robbins and O'Neil, 1959, Leventhal 1963, 1964). The findings of Meyer, Martin and Lange (1967) that a majority of patients were seen by their therapists as eloping predominantly because of internal factors would support research efforts to consider in more detail psychodynamic and personality factors in an attempt to understand elopement behaviors more fully. Differences in early life history between elopers and non-elopers have been cited above in a review of Levy's (1974) paper as well as Leventhal's (1963, 1964) findings. Those findings that runaways could be differentiated from other non-runaway patients on the basis of early life events as well as current indices of psychological quality of lack of control emphasize the importance of an investigation of possible psychological differences between elopers and non-elopers in general and of possible psychological determinants of elopement behavior.

The importance of environmental, sociological, and other variables are acknowledged here and it is recognized that, these may be, in many cases, of central importance in the understanding of specific elopement behaviors. The goal of doing this research was to better understand the contribution of these factors to the precipitation of elopement behavior.

#### Theoretical Development of Hypotheses

In this section an effort is made to generate developmentally based theoretical hypotheses about elements of personality trends and psychological functioning of elopers. The concepts developed here are specula-

tive and based on ego psychological theoretical constructs about personality structure and upon research results which are reviewed above.

Aggression. Leventhal's (1963, 1964) papers raised developmental psychological considerations of runaway behavior in focusing on difficulties around the issue of control of internal processes and external sources of demands for controls upon the runaway child. Control issues and struggles around dependence and independence were also raised by Leventhal (1964) and Levy (1974). Control and dependency concerns are central developmental conflicts in the psychoanalytic psychosexual stage of personality development known as the "anal" stage. The anal stage of personality development is a period which Erikson (1950) describes as being characterized by a developmental crisis between establishing a sense of autonomy and the alternative of developing a sense of shame and doubt with its implications of frustrated aggression. Erikson and other psychoanalytic writers describe the developmental period as an important or even central one in the integration of aggression into constructive purposefulness and the establishment of psychological defenses against extremes of internally experienced aggression (Fenichel 1945, Erikson 1950, Cameron, 1936).

One of Leventhal's findings (1964) was that an element of uncontrol was manifested in runaways with a greater frequency of what he regarded as extremely aggressive fantasy (p. 173). Bettelheim (1955), in his description of "Harry" (p. 411), a patient in residential treatment, discussed the boy's running away behavior as an attempt to defend through avoidance against his own unmanageable and extreme aggressive

impulses and fantasies. "Besides protecting him from dangers originating mother, running away also protected him from the probable consequences of his own hostility (p. 411)." Leventhal (1963) cites a case example of a runaway boy who "when he loses his temper he gets so wild he is afraid he could kill somebody (p. 39)." A psychodynamic understanding of the manifest aggressive impulse experience and fantasy ascribed to runaways by Leventhal and described in a case study by Bettelheim could be useful in their implications about elements of developmental history and the current psychological status of the eloper. The presence of unneutralized aggressive fantasy in an adolescent (Blank and Blank 1974) and lack of requisite psychological capability to defend against direct experience of these impulses and affects may be, in cases such as this, betrayed by the apparent need to act out on the part of the eloper. Evidence of unneutralized aggression would indicate a generally poor picture of ego development and adjustment on the part of the runaway or eloper in addition to indication of problems with aggression.

Ego Defence. Some historical events are seen commonly in the background of hospital elopers such as having experienced some kind of loss of important persons or abandonment early in life (Levy, 1974), or having experienced abuse from alcoholic or psychotic parents, and repetitive physical or emotional trauma (Reimer, 1940). A particularly startling example of differences between patients who have run away and those who haven't was pointed out by Levy (1974) who found that 73% of all adopted patients studied run away while 26% of the non-

adoptive group did so (p. 13). Levy understands this as the adoptees having turned their experience of abandonment from a passively experienced one to an active defensive one in a primitive and maladaptive attempt at mastery of the loss. While this idea makes dynamic sense and is congruent with the development of the present hypotheses one could speculate that, in addition, early disruption between these particular adoptees and the adoptive parents in normal bonding and other aspects of early ego development, particularly in regard to development of psychological defenses, could have negatively impacted the child's ability to cope with aggressive impulses. A similar explanation could apply to the other kinds of early disruptions in object relationships which have been cited as prevalent among runaways. The noted prevalence of disruption or loss experiences in the histories of adolescents may lend support to a hypothesis that, as a group, runaways would be expected to show a lower level of ego functioning, especially that of ego or psychological defence due to the impact of factors on ego developmental processes.

#### Level of Psychopathology

Levy (1974) makes an interesting observation in his follow-up study of the adolescent girls who ran away from the children's residential treatment unit at the Menninger Foundation which he reported as follows: "One outcome finding which seemed different for the runaway group was the ultimate relationship with the family of origin. The distribution here seems to be bimodal-i.e., the runaway girls either are relatively completely disconnected from their families or have returned home and

remain closer to their families than one might expect for their respective ages (p. 13)." Further support for the notion that runaway adolescents, in general, will be characterized by deficits in important elements of early ego development, may be found in Levy's observation quoted above in which there appears to be manifested a difficulty on the part of these adolescent girls in establishing an integrated separation-individuation adjustment. This speculation is based on what appears to be a lack of ability to maintain positive and ongoing relationships with important early dependency objects (parents) while at the same time being able to maintain a separate and individual identity. Eloser patients are seen as either being completely disconnected or as remaining closer to their families than would seem appropriate. A formulation of apparent failure of these patients to achieve adequate separation individuation lends support to our developing notion that the phenomenon of runaway is associated with and dynamically involved in defects in early ego development and capacities for adaptive interpersonal and social behavior.

The current speculations would lead to a general expectation that, as a group, runaways would be expected to show a considerable degree of psychopathology. Robbins and O'Neil (1959) reported that runaway children were seen as adults to have a very poor social adjustment. They had a very high level of divorce, imprisonment, and psychiatric illness as well as psychiatric hospitalization. The research literature reveals a number of findings bearing on the question of whether runaways tend to be more disturbed than other patients. McNaught and McKamy (1978) state

that their eloper group appears to show greater psychological disturbance. Levy (1972) found that the better adjusted patient, who tended to be more often diagnosed as having neurotic and character problems, tended not to run whereas the patients who manifested psychotic illness and more severe character pathology had more of a tendency to do so (p. 13). Leventhal (1963) suggested a more clearly severe picture of psychopathology in runaways when he stated that "on the basis of marked overconcern with loss of control and with ego surrender and some degree of reality distortion, prepsychotic functioning is suggested (p. 127)."

A theoretical understanding of apparent stunting of development of ego defense against aggression in the runaway and the running away behavior as a motoric and primitive defensive effort also supports a hypothesis that a group of elopers would manifest greater psychopathology than a group of patients who had not run away.

Depression. Leventhal (1964) found that children and adolescents who ran away tended to express in their interviews an experience of helplessness (p. 175) apparently relating to both external events and to internal experiencing, and behavioral responding. McNaught and McKamy (1978) in their study of adolescent elopement from a treatment milieu also identify anxiety about a lack of external control and the inability to change while in that treatment setting as one of six causes or determinants of elopement behavior. Seligman (1975) describes the experience of helplessness as "... a psychological state that frequently results when events are uncontrollable."

Seligman (1975) discusses the experience of control in a behavioral

format. Control is experienced when a voluntary response can be made by the subject which effects the outcome of a given situation. The present consideration of an internal sense or feeling of uncontrol is different from those which Seligman develops in his concept of learned helplessness. Seligman focused on the classical conditioning of the experience of helplessness primarily about external circumstances while the current research used theoretical constructs about ego defense structures whose developmental process is related in large part to internal processes which are not easily clarified by his theory. Those who studied runaway behavior have pointed out that these children who run away or elope do tend to come from chaotic home environments, the vicissitudes of which are likely to be experienced in many ways as traumatic and uncontrollable. Runaways frequently are reported to have experienced early losses and disruptions in their lives which, it stands to reason, would also be experienced as traumatic and most certainly as being outside the child's ability to have impact on or any sense of control over. All of these kinds of events, it could be argued, might suggest that these children be regarded as having experienced important noxious stimuli under conditions which allowed them no instrumental or operant response. This set of events could conceivably be regarded as establishing a classical conditioning paradigm for the learning of helplessness as suggested by Seligman. The way of viewing the effects on the child's development of the early life events, as it is being discussed here, is perhaps, competitive with the current consideration of pathological ego development but is not incompatible with ego psychological developmental concepts.

The apparent similarities between the clinical psychological phenomenon of a sense of uncontrol and of learned helplessness is particularly important in its suggestion of an additional link between an experience of uncontrol and depression which would be similar to the one made by Seligman between learned helplessness and depression (1975).

The primary diagnosis of depression does not seem to be a common one ascribed to runaways although some of them do bear that designation. Runaways have been seen to bear a variety of diagnoses. Levy (1972) does not report the incidence of any specific diagnosis ascribed to his research sample but does indicate that they represent the gamut of diagnostic categories.

The need to present in the current study a theoretical connection between Seligman's learned helplessness concept and Leventhal's uncontrol concept is to provide an additional link between depression and runaway behavior. The need to establish such theoretical and clinical connections is because of the lack of clinically observable hallmarks of depression in these adolescents. In discussing what depression is and whether or not it is a clinical syndrome found in children and adolescents Harris (1982) points out that the symptoms of depression in adolescents are not as clearly defined as they tend to be in adult manifestations of depression (p. 1). Toolan (1982) states that even though clear and overt depressive manifestations are rarely seen in children and adolescents that nevertheless "depressive equivalents are often found in these age ranges (p. 404)."

Mezzich and Mezzich (1979) studied MMPI profiles of depressed



adolescents and found that the two factors derived that appear to be particularly characteristic of adolescents were social abandonment and acting out (p. 267). Stone (1981) commented that adolescents who can be seen to have psychodynamics which are characteristic of depression but who do not show the typical sadness, hopelessness, or dysphoria can be realistically viewed as suffering from masked depression (Cytryn and McKnew, 1973). Freedman (1972) lists running away as one possible presentation of masked depression. The prevalence of early loss of significant persons and of family disruptions early in the lives of the runaway patient does tend to suggest an additional etiological and theoretical connection between runaway or elopement as an adolescent phenomenon with depression. Object loss has long been considered an important precipitant, dynamic, and casual factor in the etiologic understanding of depression (Freud, 1917). Paykel et al (1974) in conducting a study comparing depressed adolescent patients with controls found that the depressed patients could be differentiated from controls on the basis of having had interpersonal losses or "exits" of important people from their life (p. 760).

Running away, whether from home or from the psychiatric hospital, is generally seen and is certainly more easily viewed in the rubric of "acting out". Acting out used in this sense does not refer to the original meaning as used in psychoanalysis. The intended meaning of acting out in the present context when applied to behavior such as running away is to imply that the subject or patient has problems with or lack of impulse control and that behavior is often unmodified by

intervening psychological structures. Running away, in the view of Robbins and O'Neil (1959) is not considered to be a reflection of internal psychological conflicts or affective disorder. Runaway or elopement is seen more as a matter of sociopathic or antisocial personality manifestation. A different conceptualization of acting out is supported by Mezzich and Mezzich's (1979) finding that acting out is a common characteristic or manner of presentation in adolescent depression lends additional logic to a theory that adolescent elopement may be seen as a manifestation of atypical or masked depression.

Depression can be viewed largely as a pathological reaction and an inability to psychologically cope with or defend against the experience of loss. Evidence has been developed and explicated that the runaway is likely to have experienced considerable loss and that the typical picture of the runaway includes a deficit and incapacity for psychological defending. Stone (1981) has suggested that depression is likely to be present when typical psychodynamics of depression are present and when other signs of a clinical nature are absent.

Experience of Uncontrol. Leventhal's (1963, 1964) concept of the quality, sense, or experience of uncontrol has been used extensively in the development of some ideas about possible psychological characteristics of elopers. The idea that a relatively pervasive sense of uncontrol is characteristic of runaways or elopers and would differentiate them from other patients has been presented and supported by Leventhal in his two studies. In the present study the conception of uncontrol has been used to enhance or support theories about deficits of ego

defensive functioning in the adolescent eloper, and to establish a theory of depression partly based on the analogy of the concept of uncontrol with that of helplessness. The idea of a sense of lack of control is clearly pivotal in a variety of clinical and diagnostic respects as has been pointed out. Concepts about uncontrol or other kinds of concepts which could be viewed as similar to it such as learned helplessness (Seligman, 1975) or internal-external locus of control (Rotter, 1975) have never been presented prior to Leventhal's work relating the experience of uncontrol to runaway or elopement phenomena. A reasonable expectation, if Leventhal is right in his assertion that measures of a sense of uncontrol can discriminate between runaways and other patients, is that the quality of uncontrol should be represented in a clinical inventory of personality such as the Minnesota Multiphasic Personality Inventory.

By studying a well defined population with the MMPI, a widely used and objective instrument for personality assessment, an attempt was made to lend support and possible clarification to several theories derived from previous studies and developed here in hypotheses about adolescent psychiatric inpatients who run away from the hospital during treatment. An attempt has been made to demonstrate that runaway behavior, which is seen as reflecting generally poor ego development, can be demonstrated in a group of elopers in contrast to a group of non-elopers in:

1. A greater representation of aggressive tendencies.
2. Greater deficits in ego or psychological defensive functioning.
3. Generally greater level of psychopathology.

4. More depression.
5. A greater sense of uncontrol over internal and external events.

### Summary

Studies of psychiatric hospital elopement phenomena and studies of children and adolescents who run away from home were reviewed. A critique of elements of research designs used in the studies of elopement was given with a description of ways in which these design issues would be addressed in the present research. Because of its reliability the use of the MMPI as an assessment instrument was seen as an improvement over studies which used judges' ratings or psychiatric diagnoses in order to characterize elopers or runaways. The few studies which have used the MMPI to study a distantly related population and phenomena - adult prison escapees - were reviewed and criticized for a lack of effort to attempt to use the MMPI results to interpret and better understand the phenomena under study. The goal of prediction of behavior was described as secondary in the present study to that of exploration for the purpose of theory development and clinical understanding.

Studying populations with a clearly defined age and gender specification was also considered to be an improvement over extant studies.

A speculative and theoretically interdependent set of hypotheses are generated on the basis of the findings of previous research efforts and upon the basis of developmental ego psychological assumptions. These hypotheses suggest that elopers would be likely to demonstrate

more aggression, less capability for psychological defence, greater level of psychological disturbance, more depression, and a greater sense of lack of control of internal and external events, referred to by Leventhal (1963) as "uncontrol," than non-elopers.

## CHAPTER III

### METHODOLOGY

A plan for the design and implementation of research procedures to investigate the hypotheses generated and set forth in Chapter 2 is presented here. The population of interest is defined, sampling techniques are described, and the measures used in the study are defined. The design of the study and a list of testable hypotheses are delineated and procedures for analytic treatment of data are given.

#### Population

The sample currently under study was drawn from a population of white female adolescent psychiatric inpatients who were between the ages of 15 and 18 years. These were patients who have been treated at Pine Rest Christian Hospital between January of 1978 and September of 1982. In this study differences were examined between a group of 43 patients who, at some time during their hospitalization, eloped or ran away and a group of 48 other patients who did not elope during treatment. The patient subjects were girls whose homes are, predominately, in the vicinity of Grand Rapids, Michigan. There were, however, a considerable percentage of girls whose homes are in other parts of the state of Michigan and a few who came from other midwestern states and from Canada. The girls in this population represent a range of socio-economic class backgrounds.

Pine Rest Christian Hospital was founded by and is still associated with the Christian Reformed Church which impacts the composition of the

population in a variety of ways. The number of patients who have grown up in specifically Christian Reformed homes where religion is an important concern are certainly over-represented relative to the population of adolescent female psychiatric inpatients in general. The environment of the hospital itself, although not taken into formal consideration in the study, may have had an important impact upon the patients that is due to the particular values of the institution and the staff.

Another possibly important limitation to generalization of findings will be the fact that Pine Rest is a private hospital and admission is not based solely upon the clinical indication of the need for psychiatric hospitalization of an adolescent as is often the case in public or state institutions. At Pine Rest the admission disposition or decision includes consideration of "treatability". These decisions are largely made at the discretion of the psychotherapy staff of each ward. The result is that many severely disturbed psychotic and assaultive patients do not gain admission to Pine Rest's adolescent units. These considerations dictate limitation in the extent to which findings from this study can be applied to other female adolescent psychiatric inpatient population.

### Sample

Membership in the criterion group, designated the "elopement group" was defined by a patient having left the grounds of the hospital without authorization sometime during her hospital stay. In their study of adult and adolescent psychiatric patient elopers Meyer, Martin and Lange (1967) define elopement as "any unauthorized absence from the

psychiatric unit necessitating staff intervention." The inclusion of this additional element of the elopement having necessitated staff intervention is included in the criteria here for membership in the eloper group. The comparison group patients were those who according to the best knowledge of the treatment staff and the official hospital record had not run away from the hospital.

The reliability of the criterion and comparison group were established by an examination of patient records in a randomly chosen subsample in both elopement and non-elopement sample groups.

Therapists and nursing staff were consulted and asked to nominate or designate patients' appropriateness for either the criterion or comparison group. Verification of the designations given to the researcher by members of the nursing and therapy staffs were established through an examination of patient records. The verification carried out involved determining the presence or absence of a formal registration in the patient record documenting unauthorized leave (see Appendix A). Research assistants verified through these records whether each patient did or did not elope and whether the original designation made by staff was a correct one. The number of cases examined for reliability was 20 for both the comparison group and control group. A calculation was done on the percentage of correct designations as verified by the hospital record. The level of correct designation in both groups was 100%. In an effort to maintain the integrity of the control group no patients were included in the pool of non-elopers if they had been even tentatively identified by any nursing or therapy staff member as having eloped. These exclu-



sions were made to guard against the possibility that patients who had made elopement attempts or had eloped but whose behavior had not been noted in their official records would not be included in the non-eloper subject pool.

### Measures

The measures used in the study were the items and profile scale scores of the Minnesota Multiphasic Personality Inventory (MMPI-short form R).

The MMPI-form R as an objective instrument for personality assessment, has been shown to demonstrate adequate reliability in its application to patient and non-patient adolescent groups (Hathaway and Monachesi, 1953) and is used commonly in clinical practice (Dahlstrom, Welsch, and Dahlstrom, 1973).

The (K) scale of the MMPI was originally developed as a measure of guardedness and defensiveness in test taking behavior (Dahlstrom, et al, 1973, p. 120). It was used as an adjustment with other scales to enhance valid measurement. In subsequent clinical use and research the (K) scale has come to be seen as a measure of more general characteristics of defending in the interpersonal and psychological sense. According to Carson (1976) some moderate elevation of the K scale is found in the protocols of people who "manifest many adaptive attitudes and behavior (p. 472)." A moderate elevation is associated with ego enhancing defensive capabilities and extremely high scores on the (K) scale are associated with rigid and overcontrolled thinking and behavior. Very low scores can be interpreted as reflecting a lack of ego adaptive and

defensive capability in the present study.

In a review of the actuarial studies of adolescent MMPI profiles Marx, Seeman, and Haller (1974) found that many of the configurations in which psychopathic deviate (Pd, Scale 4) is one of the two highest that the adolescents are described as aggressive in demeanor and behavior (p. 212). In the present study elevations in (Pd) T-scores were regarded as a measure or indication of aggression.

The (F) scale, another of the validity scales in the MMPI profile, is described by Carson (1976) as "positively correlated with the severity of illness in a clinic population (p. 471)." The (F) scale T-scores were used as a generalized indicator of psychopathology in the current study.

In their actuarial studies Marx, et al (1974) found that the adolescents with profile configurations in which a score on the Depression (D, Scale 2) scale is one of the two highest in the profile that there are common and predominant symptoms and complaints of depression reported by the subject or as judged by the subject's psychotherapist. Dahlstrom, Welsch and Dahlstrom (1973) report that high scores on the depression scale are demonstrated by patients with a high level of clinically diagnosed depression (p. 187).

### Procedures

This study was retrospective in that existing medical records were the primary data source and the subjects were patients who have been discharged from the hospital. Routinely adolescents were administered the MMPI-short form R during the evaluation process prior to admission

to hospitalization. These tests are administered under the supervision of one of several outpatient psychologists.

A complete list of all adolescent (ages 15 through 18 years) female psychiatric inpatients who were admitted to the Pine Rest Christian Hospital adolescent psychiatric units between 1978 and 1982 was obtained. The list of 568 patient names were reviewed with nursing staff from the units upon which each girl was quartered as well as with the therapists who treated the girls. An identification was made from the records of all of the patients in assigning patients to either an elopement group or non-elopement group according to the criteria given above. One hundred and sixteen patients were identified independently by both therapists and nursing staff as having met the criteria for inclusion in the eloper group. Forty two of the patients were identified, sometimes quite tentatively, by at least one staff member as having eloped but were not remembered as having done so by other staff who treated the patient. This group of 42 patients was eliminated from the subject pool for consideration of inclusion in either group. One hundred and ten patients were selected randomly from the group of identified elopers. One hundred and ten patients were also randomly selected from the remainder of the subject pool who were assumed to be non-elopers. Any patient who was identified even tentatively as having eloped was not included in this group.

Research assistants collected from the medical record of each of the patient subjects the following information:

1. The presence or absence of documentation of unauthorized

leave from the hospital.

2. The subject's birthdate.
3. The date of admission to the hospital.
4. Whether or not the subject had been adopted.
5. Whether or not there was a reported history of runaway from home or other residential institutions in the pre-admission history.
6. Whether the patient was either referred by the police or was in any way noted to be involved in the juvenile corrections system.
7. Copies of pre-admission MMPI-short form item responses and scale profiles. (See Appendix B).

### Design

The research is correlational and descriptive in nature. The character of the phenomena under study, the natural setting in which the study is undertaken, and the fact that the research is retrospective, severely limit the control of potential confounding variables.

The design used in the current research is, therefore, a "data analysis" design (Campbell and Stanley, 1963, p. 64). It is acknowledged that causal connections between hypothesized psychological characteristics and the runaway phenomenon cannot be demonstrated in such a non-experimental study. The value of conducting such a study is defended by the need to expose these difficult to test hypotheses to "a chance of disconfirmation" (Campbell and Stanley, 1963, p. 64) and to provide possible direction to further inquiry and theory development.

Hopefully such a design will lead to predictive rather than post-dictive studies.

### Testable Hypotheses

The following five major research hypotheses were tested:

1. Female elopers will tend to show more indication of aggression than will the non-eloper group can be stated in testable form as: The mean T-score of the (Pd) scale will be higher for the eloper group than for the non-eloper group.
2. The eloper group will tend to show more deficit in ego defensive functioning than will the non-eloper group can be stated in a testable form: The mean T-score of the (K) scale, which reflects defensive functioning, will be lower for the eloper group than it will be for the non-eloper group.
3. Female elopers will tend to be more emotionally disturbed or show more psychopathology than non-elopers can be stated in testable form as: The mean T-score for the (F) scale from the MMPI will be greater for the eloper group than for the non-eloper group.
4. Elopement is associated with depression or as an indication of underlying depressive experience can be stated as: The mean T-score on the (D) or depression scale of the MMPI will be greater for the eloper group than for the non-eloper group.
5. The eloper group will demonstrate a sense of experience of lack of control of inner and outer events that will differentiate them from the other patients designated as non-elopers. This

hypothesis can be stated as: Interpretable structural meaning will be found for the items which discriminate between elopers and non-elopers on the MMPI and these elements of structural meaning will reflect identifiable features of uncontrol.

Other hypotheses which were tested through simple comparison of demographic and historical data collected in both sample groups were:

1. Adoptees will represent a greater percentage of the eloper group than they will in the non-eloper group.
2. The subgroup of elopers who have been referred by law enforcement agencies will demonstrate a lesser sense of uncontrol than elopers who have had no such referral or involvement when these subgroups are compared on the derived MMPI factors of uncontrol.

### Analysis

The first four major research hypotheses were tested through an analysis of subgroups of the eloper and non-eloper groups crossed with the subscale scores of the MMPI. Presence or absence of both legal history and history of runaway episodes prior to hospitalization are nested variables. The technique used here was the univariate analysis of variance procedure. In this process the hypotheses were tested at the .05 alpha level. In addition to a test of the major hypotheses the analysis explored possible interactions between variables in accounting for variance.

The use of an alpha level of  $p < .05$  for this research can be justified on the basis of the intended and probable use of the research re-

sults. There would be few unfavorable consequences to a greater probability of type two error. The intent of the study is to explore a clinical phenomenon which has been almost entirely ignored in terms of objective research. Any positive findings derived from the analysis are treated heuristically as indication for further study. It would be a more serious matter and a potentially important loss to the scientific and treatment disciplines involved in the study and practice of inpatient psychiatric treatment of adolescents to limit the possibility of positive findings with the use of a lower alpha level.

In the fifth major research hypothesis an expectation was presented that factorial structures would represent lack of control experience. These factors were expected to be identified in the patterns of responses by the group of elopers and to differentiate this group from the non-elopers. This hypothesis was tested through the use of factor analytic procedures.

The method which was employed is one in which a significance test of each item from the MMPI-short form was conducted using a chi-square test of significance (Shupe and Bramwell, 1963). The test was performed with 2 x 2 contingency table. All of the items which were demonstrated to differentiate the groups at a significance level of .10 were considered. An alpha level of  $p < .10$  in this chi-square procedure resulted in too many items for analysis purposes on the computer and the alpha was revised to .05. The factor analytic procedure made use of a varimax rotation with eigenvalues set at one. Unity was used in the diagonals.

The factors resulting from this analysis were interpreted in regard

to content. Also significant items comprised a scale of elopement whose predictive value will be, therefore, empirically derived in future cross-validation studies.

A discriminant analysis procedure was also conducted with MMPI items which were found to significantly discriminate the groups at  $P < .05$ . A discriminant function was derived which, it is hoped, will be used in further research in which classification of subjects not involved in the current study can be attempted.

### Summary

Sample groups were randomly chosen from a population of female adolescent psychiatric inpatients who eloped from hospitalization and from an equivalent population of patients who did not elope. A retrospective study of MMPI individual responses and group mean clinical scale scores was designed.

Hypotheses about expected differences in mean scores on clinical scales were tested by means of univariate analysis of variance procedures. Each of the clinical scales not included in operationalized hypotheses was also tested in the same manner. In all of the analysis of variance procedures a previous history of running away from home or other institution and previous history of involvement with the police or other correctional authorities were nested independent variables.

A hypothesis that elements of a sense of uncontrol would be found to comprise a factor or set of factors in an interpretation of MMPI items found to differentiate the eloper and non-eloper groups was tested. Chi-square analysis of each MMPI item revealed items which



differentiated the groups at the  $p < .05$  level of confidence. These items were factor analyzed and rotated with the Varimax technique. The factors were collapsed until factors derived were judged to be conceptually interpretable in a psychologically sensible way.

The items found through chi-square analysis to significantly differentiate elopers and non-elopers were subjected to a stepwise discriminant analysis procedure. A discriminant function, a linear function of the most predictive combination of weighted items, was derived and tested for its capability to predict and to classify the patients in the two sample groups as to their actual group membership.

## CHAPTER IV

### ANALYSIS

In Chapter four the results of each of the hypotheses are set forth. The results of the testing of hypotheses about MMPI clinical scale score differences are presented in the first section. In the second section the results of the further exploratory testing of clinical scale score differences are given. The third section includes the results of the factor analytic procedures. The fourth section contains the summary of the results of the development of a discriminant function procedure. The fourth section summarizes the results.

#### Results

The initial research plan provided for the use of 100 subjects for both the eloper and non-eloper sample groups. The final data gathering included 43 subjects in the eloper group and 48 subjects in the non-eloper group. The hospital record of patients who had been identified as appropriate for subject selection criteria were often found to be lacking MMPI data. In many of the cases the test had apparently not been administered and in others the Welsch codes in interpretive reports were present without the raw data. These cases, of course, could not be included in the research. The lower number of subjects actually used are not considered to pose a threat to the data analysis procedures.

#### MMPI Scale Score Hypotheses

Hypotheses I: The mean T-score of the (Pd) scale will be higher for the eloper group than for the non-eloper group.

The first research hypothesis stating that the eloper group will have a significantly greater mean I-score than the non-eloper group on the (Pd) scale of the MMPI form R was tested in a univariate analysis of variance. The difference between the mean values was not found to be significant ( $F=.424$ ,  $p<.05$ ). The hypothesis was therefore not supported by the results. Two way interactions between the independent variable of legal history and the variable of previous history of runaway behavior revealed no significant effects. (See Appendix C).

Hypothesis II: The mean T-score of the (K) scale, which reflects defensive functioning, will be lower for the eloper group than it will be for the non-eloper group.

The second research hypothesis stating that the eloper group will have a significantly lower mean I-score than the I-score of the non-eloper group on the (K) scale of the MMPI form R was tested in a univariate analysis of variance. The difference between the mean values was not significant ( $F=.075$ ,  $p<.05$ ). The hypotheses was, therefore, not supported. Also there were no significant main effects or two way interactions found at  $p .05$  for legal history or for previous history of runaway. (See Appendix D).

Hypothesis III: The mean T-score for the F scale from the MMPI will be greater for the eloper group than for the non-eloper group.

The third research hypothesis stating that the eloper group will have significantly higher mean I-scores than the non-eloper group on the (F) scale of the MMPI form R was tested in a univariate analysis of variance. The difference between the mean values was not found to be significant ( $F=.818$ ,  $p<.05$ ). This hypothesis was, therefore, not

supported. Investigation of two way interaction between legal history and previous history of runaway or elopement revealed no significant effects. (See Appendix E).

Hypothesis IV: The mean  $\bar{T}$ -score on the (D) or depression scale of the MMPI will be greater for the eloper group than for the non-eloper group.

The fourth research hypothesis stating that the eloper group will have a significantly higher mean  $\bar{T}$ -score than the non-eloper group on the (D) scale of the MMPI short form was also tested in a univariate analysis of variance. The difference between mean values was not found to be significant ( $F=1.324$ ,  $p < .05$ ). Two way interaction between elopement, legal history and pre-hospital history of runaway or elopement revealed no significant effects. (See Appendix F).

Exploratory analysis of MMPI scale scores. Each of the remaining clinical scales of the MMPI were tested in the same manner as described above in the interest of exploration. No significant differences were found between the mean  $\bar{T}$ -scores of the eloper and non-eloper groups on the Hs (Hypochondriasis) scale, the Hy (Hysteria) scale, the Pt (Psychasthenia) scale, the Sc (Schizophrenia) scale, or on the Si (Social Introversion) scale. (See Appendixes G, H, I, J, K).

When the multivariate analysis of variance procedure was conducted on the Mf (Masculine-Feminine) mean scale scores significant main effect differences between the eloper and non-eloper groups ( $F=7.883$ ,  $p < .05$ ) were found. The eloper group mean (Mf) scores were greater than that of the non-elopees. No two or three way interactions were found to be significant. (See Tables 4.1 and 4.2).

Table 4.1

Analysis Of Variance Table Of MMPI (Mf) Scale Mean  
 Scores For Female Adolescent Psychiatric Inpatients  
 With Independent Variables Of Hospital Elopement  
 ("Run"), Previous History of Runaway ("History"),  
 And Previous Legal Involvement ("Legal").

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Value
Main Effects				
Run	1	795	794.49	7.883*
History	1	118	118.37	1.175
Legal	1	284	284.14	2.819
Two Way Interactions				
Run History	1	19	19.42	.193
Run Legal	1	1	.53	.005
History Legal	1	209	209.05	2.074
Three Way Interactions	1	42	42.35	.402
Residual	82	8264	101	
Total	89	9767	119	

\*F<.05  
 N = 90

Table 4.2  
Mean Scores On The MMPI Mf (Masculine-Feminine) Scale  
For Female Adolescent Psychiatric In-patients Dichotomized By Hospital Elopement, Previous Runaway and Legal History

		Legal History		No Legal History	
Elopers	Previous Runaway	n = 13	54.62	n = 12	53.35
	No Previous Runaway	n = 5	63.40	n = 11	51.55
Non-elopers	Previous Runaway	n = 11	48.82	n = 9	46.11
	No Previous Runaway	n = 1	53.00	n = 28	48.18

N = 90

In a univariate analysis of variance conducted on the Pa (Paranoia) scale mean  $\bar{T}$ -scores no main effects were found to be significant. However, the two way interaction of previous history of runaway or elopement and prior legal history was found to be significant in accounting for variance ( $F=5.926$ ). (See tables 4.3 and 4.4). The univariate analysis of variance conducted with group mean  $\bar{T}$ -scores on the Ma (Mania) mean scale scores also revealed significant effects in a two way interaction between previous history of runaway or elopement and legal history ( $F=9.003$ ,  $p < .05$ ). The two way interaction was significant at the  $p .01$  level of confidence. (See Tables 4.5 and 4.6).

The hypothesis that patients who had been adopted as children would be over-represented in the eloper group was not supported. There were 10 eloper patients (23.5%) and 11 non-eloper patients (20.5%) who were found to have been adopted as children. Although there was a very slightly higher percentage of adoptees in the eloper group the difference is not a remarkable or statistically significant one.

### Factor Analysis

Each of the 399 items from the MMPI form R (short-form) was tested in a two by two chi square analysis procedure to determine whether the item significantly differentiated the eloper group from the non-eloper group at  $p < .05$ ). Results of these chi square tests must be viewed with caution until replication can be carried out. Inspection of the series of two by two chi square tables revealed that in several cases of items that were significant the actual discrimination was on only one dimension of the true-false category. There were 21 items which did discriminate

between the groups and these were intercorrelated and factor analyzed. (See Appendix L). The factor analysis procedure was instituted so that data which may be based on communalities observed in individuals could be reduced. Conceptually meaningful and interpretable variables were expected to emerge from this procedure. As set forth in the Analysis section of Chapter III, the eigenvalue and diagonals were set at one.



Table 4.3

Analysis of Variance Table of MMPI (Ma) Scale Mean  
 Scores For Female Adolescent Psychiatric Inpatients  
 With Independent Variables Of Hospital Elopement  
 ("Run"), Previous History of Runaway ("History" ),  
 And Previous Legal Involvement ("Legal").

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Value
<b>Main Effects</b>				
Run	1	214	214.68	1.453
History	1	207	206.95	1.402
Legal	1	1	1.91	.006
<b>Two Way Interactions</b>				
Run History	1	19	18.61	.126
Run Legal	1	12	12.21	.083
History Legal	1	1328	1328.09	9.003*
<b>Three Way Interactions</b>				
Three Way Interactions	1	1	1.59	.004
Residual	82	12100	147.56	
Total	89	14314	160.83	

\*F < .05  
 N = 90

Table 4.4

Mean Scores On The MMPI Ma (Mania) Scale For Female  
Adolescent Psychiatric Inpatients Dichotomized By Hospi-  
tal Elopement, Previous Runaway and Legal History

		Legal History		No Legal History	
Elopers	previous runaway	n = 13	62.00	n = 12	65.33
	no previous runaway	n = 5	79.80	n = 11	59.91
Non-elopers	previous runaway	n = 11	59.55	n = 9	60.00
	no previous runaway	n = 1	66.00	n = 28	61.43

N = 90

Table 4.5  
 Analysis of Variance Table of MMPI (Pa) Scale Mean  
 Scores For Female Adolescent Psychiatric Inpatients  
 With Independent Variables Of Hospital Elopement  
 ("Run"), Previous History Of Runaway ("History"),  
 And Previous Legal Involvement ("Legal").

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Value
<b>Main Effects</b>				
Run	1	305	304.94	1.772
History of Runaway	1	202	202.01	1.174
Legal	1	161	160.74	.934
<b>Two Way Interactions</b>				
Run History	1	44	44.28	.257
Run Legal	1	4	3.89	.021
History Legal	1	1020	1019.81	5.926*
<b>Three Way Interactions</b>	1	196	196	1.139
<b>Residual</b>	82	14112	172	
<b>Total</b>	89	15978	180	

\*F<.05  
 N = 90

Table 4.6  
Mean Scores On The MMPI Pa (Paranoia) Scale For Female  
Adolescent Psychiatric In-patients Dichotomized By  
Hospital Elopement, Previous Runaway and Legal History

		Legal History		No Legal History	
Elopers	previous runaway	n = 13	62.23	n = 12	67.67
	no previous runaway	n = 5	74.80	n = 11	59.55
Non-elopers	previous runaway	n = 11	60.82	n = 9	68.33
	no previous runaway	n = 1	72.00	n = 28	57.82

N = 90

The resulting factor analysis provided eight principle factors which were rotated using a varimax procedure. The factors were not seen as interpretable. Further varimax rotations were carried out until a set of 5 factors emerged which were judged to be conceptually interpretable. (See Table 4.7).

#### Discriminant Analysis

The 21 MMPI items which were found to significantly discriminate the eloper and non-eloper groups at  $p < .05$  were subjected to a stepwise discriminant analysis procedure. Of the 21 items which were entered in the stepwise procedure 14 items were retained and weighted. The 14 items are listed in Table 4.8 in descending order of predictive discriminating value with their respective standardized canonical discriminating value with their respective standardized canonical discriminant function coefficients (weightings). The values have been assigned to each item through the stepwise process of linear combinations. The set of items and weights described a linear discriminant function.

Twenty four of the subject patient cases were eliminated due to the absence of responses of one or more of the 14 discriminating MMPI item variables. Because of the elimination of subjects the eloper group consisted of 31 patients and the non-eloper group consisted of 36 patients for the discriminant analysis procedure.

The discriminant function equation was used to classify and predict group membership for the 66 cases. Predicted group membership was compared with actual group membership (See Table 4.9). The success of the 14 item discriminant function was high. For the eloper group 93.5%

TABLE 4.7

Four Emergent Factors From Factor Analysis of Which Individual MMPI Items Differentiate Elopers and Non-elopers

Item	Factor One: Lack Of Verbal Skills	Loading
126.	I like dramatics. (-)	.70362
4.	I think I would like the work of a librarian. (-)	.63148
203.	If I were a reporter I would like very much to report news of the theatre. (-)	.58779
236.	I brood a great deal. (-)	.51638
256.	The only interesting part of newspapers is the funnies. (+)	.33810
1.	I like mechanics magazines. (-)	.29762
Factor Two: Problems in Interpersonal Engaging		
390.	I do not mind meeting strangers. (-)	.65890
260.	I was a slow learner in school. (+)	.57423
278.	I have often felt that strangers were looking at me critically. (+)	.49374
332.	Sometimes my voice leaves me or changes even though I have no cold. (+)	.47964
252.	No one cares much what happens to you. (+)	.42750
259.	I have difficulty in starting to do things. (-)	.37671
204.	I would like to be a journalist. (-)	.29537
Factor Three: Impulsive Behavior		
381.	I enjoy gambling for small stakes. (+)	.67162
254.	I like to be with a crowd who play practical jokes on each other. (+)	.50206
386.	I find it hard to set aside a task that I have undertaken, even for a short time. (-)	.47204
135.	If I could get into a movie without paying and be sure I was not seen I would probably do it. (+)	.34888
Factor Four: Problems With Authority		
294.	I have never been in trouble with the law. (-)	.50975
95.	I go to church almost every week. (+)	.50765

\* (-) = endorsed as "false" by eloper subjects

(+) = endorsed as "true" by eloper subjects

TABLE 4.8

**MMPI Items Which Were Retained in Discriminant Analysis and  
Their Coefficients in the Derived Discriminant Function**

Item	Coefficient
1. I like mechanics magazines. (-) *	0.29447
78. I like poetry. (-)	0.41699
135. If I could get into a movie without paying and be sure I was not seen I would probably do it. (+)	0.40733
204. I would like to be a journalist. (-)	0.45561
245. My parents and family find more fault with me than they should. (+)	0.35520
254. I like to be with a crowd who play practical jokes on each other. (+)	0.25017
256. The only interesting part of newspapers is the funnies. (+)	0.27033
259. I have difficulty in starting to do things. (-)	0.83213
260. I was a slow learner in school. (+)	0.29531
278. I have often felt that strangers were looking at me critically. (+)	0.25586
294. I have never been in trouble with the law. (-)	0.41086
332. Sometimes my voice leaves me or changes even though I have no cold. (+)	0.29351
386. I find it hard to set aside a task that I have undertaken even for a short time. (-)	0.22933
390. I do not mind meeting strangers. (-)	0.47656

\* (-) = endorsed as "false" by eloper subjects

(+) = endorsed as "true" by eloper subjects

Table 4.9

Outcome Of Discriminant Function Prediction of Elover  
or Non-elover Status Contrasted With Actual Group Sta-  
tus of Elover or Non-elover for 67 Female Adolescent  
Psychiatric Patients

Actual Group Status	N	Accurate Prediction
Elover	31	93.5% (29 cases)
Non-elover	36	88.9% (32 cases)



of the patients were accurately predicted and 88.9% of the non-eloper group were also predicted accurately. The discriminant function was accurate in classifying 91.04% of all of the cases.

### Summary

Five major research hypotheses were investigated in this study. The first four hypotheses consisted of expected differences in mean T-scores on four MMPI scales between eloper and non-eloper female adolescent psychiatric inpatients.

The mean T-scores on these four MMPI scales were subjected to analysis of variance procedure with elopement, history of previous runaway, and previous involvement with police and correctional authorities as the independent variables. The analysis revealed no significant differences between an eloper and a non-eloper group or interaction between or with the other independent variables.

The remaining MMPI clinical and validity scale mean T-scores for the elopers and non-elopers were also tested by univariate analysis of variance. The analysis revealed main effects on the independent variable of elopement on the Mf (Masculine-Feminine) scale. Two way interaction effects were found in the testing of the Pa (Paranoia) scale and the Ma (Mania) scales. Both of these interactions demonstrated effects of the independent variables of previous history of runaway and involvement with correctional authorities.

Factor analysis of individual MMPI items was carried out with 21 which were found through chi square analysis to differentiate elopers and non-elopers at  $p < .05$ . Four factors emerged from this process

which were judged to be meaningful and psychologically interpretable. The factors were titled as follows.

Factor I, "Verbal Skills," Factor II, "Problems in Engaging," Factor III, "Impulsive Behavior," and Factor IV, "Problems with Authority."

A discriminant analysis of the 21 individual MMPI items which discriminated the eloper and non-eloper groups determined a discriminant function. The discriminant function equation was found to be capable of correctly classifying 91% of the patients correctly regarding membership in either eloper or non-eloper groups.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

In this chapter a brief overall review of the study may be found. The major focus of the subsequent sections is the interpretation of the results and outcomes which are reported in Chapter 4. Implications that the results and their interpreted meanings may have for theory development are discussed. Possibilities for further research and inquiry into elopement phenomena are considered and suggested.

#### The Present Study

A retrospective study was conducted in which 43 female adolescent psychiatric inpatients who had eloped from hospitalization were compared to a group of 48 female psychiatric patients who had not eloped. Expected differences between the groups were hypothesized based on a theoretical integration of research and clinical observation reported in the literature regarding hospital elopement specifically, as well as the problem and clinical phenomenon of elopement or runaway from home. Hypotheses shared a general and common focus. Problems in the early development of specific ego functions and in current adequacy of ego structures in eloping adolescents was the focus of consideration in generating hypotheses. The available literature gave a variety of indications for the study of elopement from this perspective. Investigation of possible group trends of elopers and differences between elopers and non-elopers seemed to be a reasonable and valuable endeavor given the suggestion of such differences by clinical observers and

researchers in the field. No study was found that compared adolescent elopers and non-elopers using any kind of personality assessment measures.

Studies were discovered which were conducted with adult inmates of prisons in which a retrospective analysis of the MMPI items and scale scores of escapees and non-escapees was carried out. The results of these studies were not examined by the authors or from the perspective of theoretical, developmental, or dynamic distinctions between the groups.

In the present study comparison of mean MMPI scale scores and individual items between the eloper and non-eloper groups was carried out. Hypotheses about elevations expected for the eloper group relative to the non-eloper group, based on theoretically derived expectations of specific ego deficits in the eloper group, were tested.

Predicted significant differences between the eloper group and the non-eloper group in the (F), (K), (D), and (Pd) scale score elevations were not found. Factor analysis of differentiating MMPI items did not reveal clearly interpretable predicted factors of uncontrol. Adoptees were not found to be over-represented in the eloper group as had been predicted. A discriminant analysis procedure carried out upon individual MMPI items which had been found to significantly differentiate the eloper and non-eloper groups resulted in the development of a discriminant function. This linear function was found to be capable of classifying 91% of the members of the two sample groups into their correct classification as elopers or non-elopers.

The remaining clinical scale score means were tested for significant differences. Main effects of elopement and non-elopement were found on the (Mf) scale and significant two way interactions were found on both the (Pa) scale and the (Ma) scale between the independent variable of prior involvement with police or correctional agencies and the independent variable of a history of prior runaway episodes.

Although factors representing a sense of uncontrol were not interpretable from the item clusters derived in factor analysis, four factors were interpreted as representing: 1. Lack of verbal skills and interests, 2. Problems in interpersonal engaging, 3. Impulsive behavior, and 4. Problems with authority.

#### Conclusions Regarding Stated Hypotheses

The first four hypotheses that were developed in the second chapter of this study were not supported by subsequent analysis of variance procedures. These hypotheses represented aspects of an integrated conception of personality structure which, it had been thought, adolescent elopers would be likely to manifest. The hypotheses that the elopers would demonstrate more tendency to aggression, poorer ego defensive capability, greater overall level of psychopathology, and more depression than non-elopers were presented in Chapter 2 as a set of hypotheses reflecting a picture of disturbed personality functioning and underlying deficits in the elements of ego structure that were studied (i.e. aggression, ego defense, overall disturbance, and depression).

Hypotheses one through four were tested through comparison of eloper and non-eloper group mean scores on the clinical scales which were thought to represent or measure the qualities of ego functioning to which the hypotheses were directed. The findings of this part of the study must be understood as failing to support the hypotheses as they were operationally defined. The hypotheses about specific ego functions which were predicted in the clinical scale elevations were not proven to be "false" in the present research. However, there are a variety of interpretations which can be applied to the results in addition to a declaration of the simple fact that the hypotheses were not supported. These considerations are reviewed in a later section of the paper.

The fifth hypothesis which stated that elopers would demonstrate a sense of internal and external uncontrol was operationalized in Chapter 3, such that interpretable factor patterns representing "uncontrol" would be found. In the factor analysis of items which differentiated elopers from non-elopers the hypothesis was set forth that a factor or set of factors would emerge which would be interpretable as a representation or direct indication of these experiential elements of uncontrol. An inspection of derived factors did not reveal any clearly interpretable uncontrol factor. The fifth hypothesis was, therefore, not supported by the findings.

#### Conclusions of Exploratory Studies

Hypotheses about differences between eloper and non-eloper groups were not formulated for two of the validity scales and for

eight of the clinical scales. Group mean differences on these scales were tested, however, in the interest of exploratory investigation.

One analysis of variance procedure revealed main effects of elopement. Two others revealed two way interaction of legal history and previous history of runaway.

Two way interaction effects were found in analysis of variance of both the Pa (Paranoia) scale and the Ma (Mania) scale. In both of these analysis of variance procedures independent variables of previous history of runaway behavior and the independent variable of legal history accounted for the interaction effects.

The interpretation of the results of analysis of variance of the (Pa) scale indicate that within the group of patients who had no legal history that patients who had run away prior to hospitalization had a significantly but not markedly higher score on the (Pa) scale than did those patients who had not run away (See Figure 1.). Of those patients who did have a legal history the patients without previous history of runaway behavior had a markedly higher mean score on the (Pa) scale than did the group who did have a previous history of running away.

A more profound interaction than was seen with the (Pa) scale is found in the analysis of variance of mean scale scores on the Ma (Mania) scale (See Figure 2.). Within the subgroup of patients who had no legal history the group with a previous history of runaway had a mean score which is significantly higher than the mean scores attained by the patients who had no previous history of running away. Both of the subgroups included in the main group of patients who had

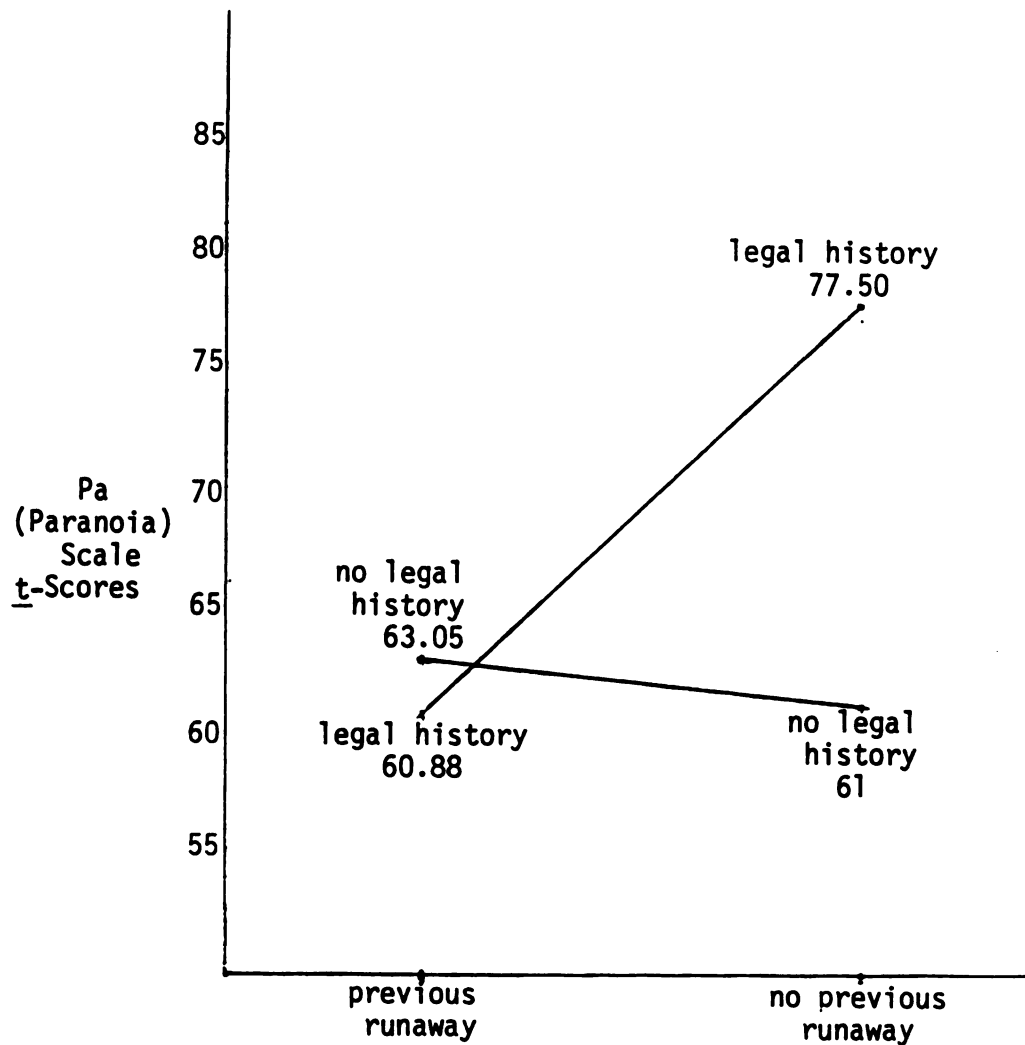


Figure 1.

Graphic Display Of Mean Scores Of Interaction Effects Of Legal History And History of Previous Runaway In Analysis Of Variance Of Female Adolescent Patients Mean Scores On the MMPI Pa (Paranoia) Scale.



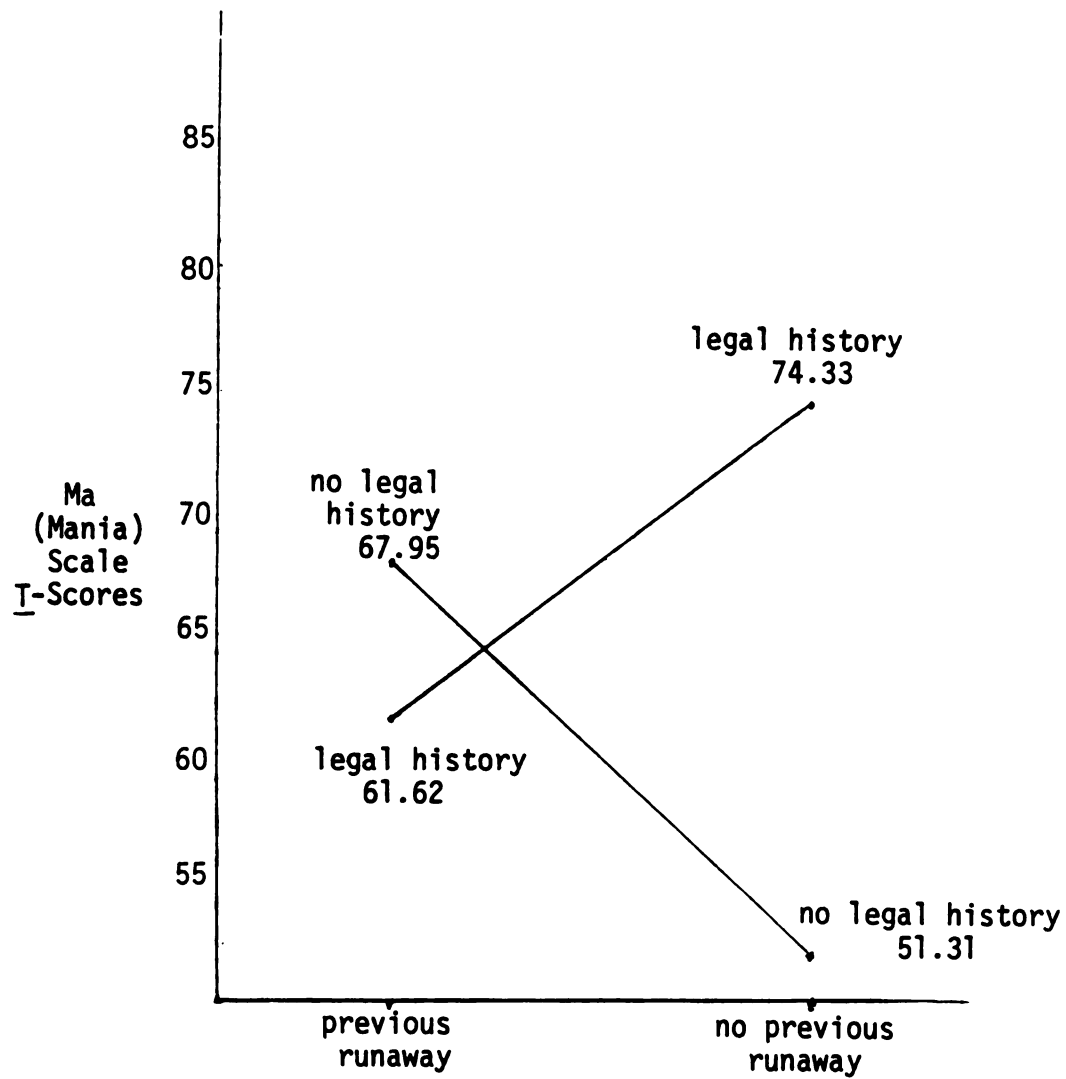


Figure 2.

Graphic Display of Mean Scores of Interaction Effects of Legal History And History of Previous Runaway In Analysis Of Variance Of Female Adolescent Patients Mean Scores On The MMPI Ma (Mania) Scale.

a legal history showed a significantly higher mean score on the (Ma) scale than the group showing no legal history. Within the group with no legal history the subgroup who had a history of previous runaway had a significantly higher mean score on (Ma) than did the group with no such history.

Of the group that did have a legal history the subgroup which had a history of previous runaway had a significantly lower mean score on the (Ma) scale than did the group with no history of runaway.

Despite the fact that the interactions described above do not illuminate in a direct way the phenomenon of psychiatric hospital elopement or possible differences between eloper and non-eloper patients, some consideration must be given here to their interpretation. The independent variable of previous history of runaway, for the purpose of the present level of inquiry, has by no means been ruled out as having dynamics and meaning which may be similar to those dynamics and meanings involved in psychiatric hospital elopement phenomenon.

Elevation on the (Pa) scale is seen as representing interpersonal sensitivity (Carson, 1976, p. 485) and with greater elevations is seen as oversensitivity, projection of blame on to others, and extreme and outright paranoid distortion of reality (LeChar, 1974, p. 22).

The group of patients who had by far the highest mean elevation on the (Pa) scale were those who had been in trouble with the police but had not run away from home. One possible interpretation for this finding might be that adolescent girls who are extremely or overly sensitive

and attentive to interpersonal nuance are less able or willing to leave home, that they be more emotionally involved in family relationships than non-runaways. Further speculation might suggest that the far lower mean scale score for the subgroup who have had legal problems but who have run away may reflect their lack of anxiety and concern over interpersonal attachments and, subsequently a lack of concern about impulsively leaving their home and family. Alternatively, the finding may suggest that girls who run away from home are reacting to environmental problems rather than personal and psychopathological ones.

The two way interaction in the analysis of variance of group mean scores on the Ma (Mania) scale reveals a similar and, again, frankly unexpected, pattern. The group of patients who have had problems with the police but who have no history of runaway attained a mean score which was significantly greater than the group that had also had legal problems but who had run away from home.

The (Ma) scale was originally supposed to identify "Hypomania" (Dahlstrom and Welsch, 1960, p. 64). Qualities of grandiosity, overactivity, excitement, and in more extreme elevations, hyperactivity, irritability, and lack of impulse inhibition or control (Carson, 1975, p. 491) are reflected in relative elevation of the (Ma) scale. Again the group who displays the most pathology on this scale is the non-runaway subgroup whose members have been in trouble with the police. The speculations presented above which addressed similar pattern in mean group scores for the (Pa) scale can be applied here. Possible explanations are that runaways may be less anxious and disturbed but

be more character disordered and, thus, less concerned about maintaining family relationships or they may be reacting to environmental problems rather than intrapsychic and psychopathological ones.

Significant main effects were found in the analysis of variance of the Mf (Masculine-Feminine) clinical scale scores. The eloper group had a significantly higher ( $P < .01$ ) mean  $\bar{I}$ -score on the scale than the non-eloper group.

The (Mf) scale was originally intended to be used in identifying male "sex role inversion" ((Dahlstrom and Welsch, 1960, p. 63). The meaning of this scale has more recently been revised in its interpretation. The scale is not seen as being a reliable measure of masculinity and/or femininity. Low raw scores and high  $\bar{I}$ -scores (for females a higher raw score corresponds to a low  $\bar{I}$ -score) are correlated with lower levels of education and intelligence (Carson, 1975, p. 483). High  $\bar{I}$ -scores in adolescents, particularly, are associated with lack of intellectual interests and with poor prognosis, irritability, and undercontrol of impulses (Marks, et. al., 1974, p. 224).

Because of their higher (Mf) scores the hospital eloper group would be likely, then, to show more qualities of lack of intellectual interests, but demonstrate impulsiveness and irritability. They might also be expected to have a poorer prognosis than non-elopers.

Factor Analysis of Discriminating Items. Factor I analysis of individual MMPI items that had been found to significantly differentiate the eloper and non-eloper group loaded into four interpretable

factors. The first factor has been interpreted as representing "verbal and intellectual skills and interests".

The general picture which Factor I, the strongest of the factors, presents is one of a relative lack of interest and perhaps skills in intellectual and literary activities on the part of elopers. The general implication of the factor is clear in what are essential self reports of disinterest in dramatics, the work of a librarian, being a reporter who reports theatre news, mechanics magazines, and the reported conviction that the funnies are the only interesting part of the newspaper.

A possible implication of Factor I would be that in general elopers may be seen as certainly disinterested in activities involving the written and perhaps spoken word and that they might, in fact, be uncomfortable with activities or tasks involving the written and spoken word. Two of the items which are answered negatively by the elopers involve interest in dramatics. A speculative hypothesis might be that elopers have little interest in the activities and "life dramas" of other people. Inferences about the issue might bring into question capacity for investment in empathic interaction with others on the part of elopers.

Another dimension of the factor is suggested by the inclusion of MMPI item 236. "I brood a great deal." (false). The loading of this particular item on the factor that is largely seen as representing alienation from verbally oriented activities may indicate that these patients have a lesser capacity or investment in a fantasy kind of

reverie which would be characterized by thinking in words and with development of ideas and even problem solving. It is speculated that these patients may not be as able to use fantasy as an escape from or a way of coping with uncomfortable affect; anger, anxiety, guilt, and depression.

Factor II. The second factor, has been interpreted as representing "problems in interpersonal engaging". The interpreted overall sense of the configuration of items making up Factor II is one of uncomfortableness in interpersonal encounter, suspicion and lack of trust, possible difficulty in self-expression. The item which has the least significant loading on Factor II, item 204. "I would like to be a journalist," which is answered significantly more often as "false" by elopers is difficult to integrate into the general interpretation of the factor. It is interesting to consider this item in combination with the item which loaded second highest on the factor, item 260, "I was a slow learner in school," which is endorsed as true significantly more often by eloper patients than non-eloper patients. Item 260 can include a number of speculative implications for behavior and personality: being a "slow learner" might be expected to imply low self-esteem, especially when viewed in combination with item 252, "No one much cares what happens to you," answered in the affirmative; it might be in combination with item 278, "I have often felt that strangers were looking at me critically," and answered in the affirmative, imply a sense of inadequacy and over-sensitivity to criticism.

It could be that the admission of disinterest in a literary

career (item 204) combined with an admission of relative failure or lack of achievement in school (item 260) may again, as in Factor I, suggest a specific problem in verbal abilities. A possibly important element of speculation around Factor II is that this combination of items is correlated within the context of Factor II which portrays uncomfortableness in interpersonal encounter, suspicion and lack of trust, and possibly difficulty in self-expression. The possibility that verbal deficits are meaningfully correlated and involved in the apparent problems in engaging with other people on the part of elopers must be considered.

Factor III. Factor three has been interpreted as representing "impulsive behavior." An initial perusal of the items initially inspired the concept of "impulse control problems". However, the items which load on this factor, while representing apparent impulsive behavior, do not imply problems of lack of control. The items indicate preferences for relatively impulsive and antisocial behavior on the part of the eloper.

Factor IV. Factor four has been titled "Issues With Authority". There are only two items which load on this factor. (See Table 4.). Due to the small number of items which load on it, the interpretation and naming of this factor is more speculative and inferential than in the naming of the previous factors. An elaboration of the speculation would be that eloper patients coming into direct conflict with legal authorities as represented in item 294, is related to conflicts, both internal and external, generated by a possibly strict religious

background which is represented in item 95.

### Adoption and Elopement

Levy (1974) found in his study of female adolescent psychiatric inpatients that adopted patients were quite significantly over-represented in his sample of patients who eloped. Although the dynamic meanings of such a phenomenon were unclear the finding was interesting and did make sense in the development of hypotheses presented in Chapter 2 of the present study. Further speculation and use of the finding in development of theory about elopement required first that this finding be replicated. Since no significant difference was found between representation of adoptees in the eloper and non-eloper group in the current research the issue requires no further elaboration beyond the report of a failure to replicate Levy's finding.

### Implications Of The Results For Theory

The theoretical development which guided the generation of hypotheses in this study was one in which elopers were viewed as having experienced deficits in ego development and subsequent psychopathology of a relatively severe nature. Some assumptions that were made in this formulation were based on an expectation that the commonly observed trauma and early losses in the lives of the elopers, reported by Levy (1974) would have the outcome of specific difficulties in ego development. The deficits were thought to include: 1) lack of modulation of aggression and defenses against the experience and expression of aggression, 2) considerable depression as a result of the losses experienced (due, perhaps, as well to the likely turning of



the aggression against the self), and 3) overall increased level of psychopathology and problems in adaptation. Leventhal's notion that runaways experienced a sense of "uncontrol" seemed to be a reasonable expectation given these historical factors and their presumed developmental outcomes in manifest psychological problems.

The lack of support that the analysis of the data demonstrated in regard to these hypotheses and some of the unexpected outcomes of exploratory research efforts within the study require a different perspective and perhaps a different theoretical approach in accounting for the results.

Lack of control and impulsiveness is found to be significantly greater in elopers if, as Marks, Seeman, and Haller (1974, p. 224) suggest, a high I-score on (Mf) represents "undercontrol of impulses". The kind of lack of control that may be considered to be characteristic of hospital elopers as a group is probably quite different from the kind of uncontrol considered by Leventhal (1963, 1964) to be characteristic of runaways. However, Leventhal's description of elopers as being "reported more often to steal, deceive, truant, be irresponsible.... and to exercise poor judgment" (p. 160) actually suggest and support the hypothesis that running away or elopement could be considered to be a manifestation of a more sociopathic or psychopathic character.

An important clinical and diagnostic issue that is brought into question by the considerations that begin to be raised in the preceding paragraph is whether or not the eloper feels the kind of "uncontrol" that can be thought of as uncomfortable or anxiety arousing to the person

experiencing it. The alternative, of course, is that a person may lack internalized controls but that this state of affairs would not be anxiety arousing and would be ego syntonic. An interpretation such as this is supported by Factor III in which endorsement of voluntary impulsive and antisocial acts are made. The distinction being made here certainly bears on a question that has been raised by other authors (Robbins and O'Neill, 1941). Robbins and O'Neill suggested that runaway behavior be viewed in the context of a larger picture of antisocial behavior.

Interpretation of the analysis of variance done on both the (Pa) and (Ma) scales suggests that within this psychiatric patient population, in which clinical scales of psychopathology would be expected to be higher overall, that the patients who have at some time run away from home have a lower measure of psychiatric disturbance than the group who have never run away. The result indicates that in general the runaways, within the group that have had trouble with police authorities, probably experience less internal concern and disturbance than do their peers who have not run away.

An important element of conjecture emerges in view of the failure of support for the stated hypotheses of this study and by the interpretations of exploratory analysis of MMPI differences between elopers and non-elopers. The factors derived from items differentiating the two patient groups suggest that elopers did not experience an out of control feeling. Rather, they portray themselves as being impulsive as well as antisocial in their behavior by choice

(See Factor III, I"Impulsive Behavior").

In order to review the emerging generalized psychological picture of the eloper group in a psychoanalytic and ego psychological context, which was the initial perspective used in the conceptualization described in Chapter II, the findings of the study must be transposed.

The findings in the factor analysis which reveal antisocial and impulsive behavioral preferences suggest the probability that, as a group, the development of super ego or conscience is incomplete or inadequate. Lack of super ego can be extrapolated to an indication of a lack of concern about other people and their reactions. Speculation could be made that the eloper group demonstrates a lack of or low level of investment in others. The relative absence of super ego development and lack of empathy, emotional investment, and interest in other people suggest the possibility of psychopathic or sociopathic character disorder. The ego psychological developmental theory of the development of this character structure bears some similarity to the description given in Chapter 2 of the hypothesized character development of the generalized eloper group. In the present consideration of the possibility of sociopathic character traits the early losses and disruptions in the home, which have been observed more often in the histories of eloping patients than with other patients are considered or hypothesized to have a different meaning for and impact upon personality development. Instead of experiencing the losses and disruptions as traumatic to existing relationships it may be that the eloper group represents adolescents whose early losses interfered

with basic establishment of relationships and subsequent development of empathic relationship capability. The emergence of Factor II, "Problems in Engaging," as an apparent quality characterizing elopers is interpreted as a primary problem in engaging with other people in productive and adaptive relationships.

#### Indications for Future Research

Further research to help unravel the complex phenomenon of elopement from a psychiatric hospital could take many directions.

Elopement and Other Populations. A comparison of the results of the present study with the results of a similar set of procedures carried out with male adolescent psychiatric inpatients could be of considerable interest and benefit in theory construction and understanding of elopement. Adult psychiatric inpatient populations should also be studied and results should be compared with adolescent outcomes.

Prediction. The discriminant function was developed in the present study through discriminant analysis of individual MMPI item responses of elopers and non-elopers. This function was shown to be quite effective in predicting actual group membership of elopers and non-elopers. A predictive cross-validation study is required at this point in which a large sample of female adolescent psychiatric inpatients could be given the MMPI. The individual item responses would be subjected to the discriminant function which was generated in the present research and prediction of elopement in these cases which would be made on the basis of discriminant function analysis of

MMPI items would then be compared with later behavioral outcomes of either elopement or non-elopement. The potential practical value of achieving a high enough rate of success in prediction of elopement would be the practical application of the discriminant function equation as a screening measure in admission of adolescent girls to psychiatric hospitalization. The value of the development of a predictive instrument, although seen as a secondary goal at the present stage of understanding, is recognized here. Meyer, Martin, and Lange (1967) found that elopers tended to have a poorer prognosis than did non-elopers. While accurate prediction of risk of elopement would have obvious value in preparing for the likelihood of elopement behavior there would also be considerable benefit in being aware of patients who would be at risk for therapeutic failure.

Poor Prognosis for Elopers. The implication of Meyer, Martin, and Lange's (1967) finding that elopers tend to benefit less from treatment was given tentative support in the finding of the current research that elopers scored considerably higher on the (Mf) scale. Carson (1976) has found that relative evaluation of the (Mf) scale in adolescents is associated with poorer prognosis. A study should be made of treatment outcomes of both male and female adolescent eloper patients to determine if such a generalization can be further substantiated.

Two explanations for such a finding would be:

1. The patients are not invested in treatment relationships and their problem behavior is largely ego syntonic and/or,

2. Patients' skills and/or inclination to verbal interaction, processing, and symbolizing are inadequate to use therapy to substantial benefit. There may be many other possible explanations as well. Further exploratory research is necessary to establish the validity of these or other hypotheses.

Apparent Verbal Skill Deficit. Further exploration of the apparent correlation between lack of verbal skills and intellectual interests with the phenomenon of female adolescent hospital elopement which was found in this study is indicated. If elopement from the hospital on the part of female and, perhaps, male adolescents can be clearly and specifically associated with possible verbal deficits this information could lead to better and more informed handling and treatment of such individuals.

Efforts to study the specific academic skills of eloping patients and to identify the areas of deficit could conceivably have a practical benefit to the treatment of these patients. An understanding of the eloper adolescent's limitations, especially as they seem to involve verbal modalities of communication, could direct the therapist and treatment team to approach the patient in different ways. Knowing that a patient has a limitation in capacity for verbal modes would also help to modify the expectations for treatment response. If unrealistic expectations can be dealt with early then the disappointment which a treatment team can experience in the face of poor response on the part of the patient can be avoided.

Antisocial Personality and Elopement. In the previous section of this chapter some speculative and conjectural interpretations of the outcomes of the current research was given. The possibility was raised that the generalized eloper group would be accurately characterized as having antisocial personality traits including: low capacity for empathy and emotional investment in other people, voluntary and ego syntonic impulsive behavior, and a lack of development of conscience or super ego structure. Further investigation of antisocial trends in elopers as a population is necessary. Assessment procedures other than the MMPI may at this point generate more useful and interesting data with which to elaborate the generalized clinical status of elopers and to compare them with non-elopers. These instruments could include projective tests such as the Thematic Apperception Test as well as more detailed personal, family, and legal history. These data would be used to ascertain in more detail the actual resemblance of hospital elopers to what are considered to be antisocial and sociopathic personality characteristics.

Environmental Causes and Correlates. In Chapter II acknowledgment was given to the variety of possible environmental, especially interpersonal, stimuli that can be logically implicated in hospital elopement behavior. Attempts should be made to study the relationship between some measures of staff conflict and attitude in inpatient treatment settings and the correlation of these measures with elopement episodes. In the review of the literature aspects of inpatient milieu conflicts and interpersonal problems were cited by many of the

authors in lists of causes and percipitants of elopement. Also in conducting the current research this perspective has been suggested independently by several of the professionals who supplied information about patient subjects.

Limitations of Post-dictive Studies. The current research was post-dictive and hypotheses were based on theoretical conjecture and speculation. The aim was to begin to explore the phenomenon of elopement with replicable and practical measures. Some considerations have emerged from the current research which should be pursued. The next step in the research of hospital elopement would be to do clinical and idiographic case studies. Further clarification could be made, through this process, of ideas generated in the current research. A variety of such concerns would bear examination: 1) a closer look at actual verbal skills and deficits, favored modes of communication, and the apparent impact and meaning of these limitations or preferences for eloper patients, 2) aspects of interpersonal interaction observed on the ward which would suggest the level of non-manipulative interaction and empathic caring of which eloper patients seemed capable.

It is through the process of individual case study that initial elaboration of the meaning and validity of the findings of the present study could be established. Observations from case studies should be looked at to determine common themes in addition to but, perhaps including the kinds of general findings from the current study. Predictive research to follow these initial case studies



could be done by comparing groups of elopers and non-elopers to cross validate the specific MMPI findings of the present research. These projected studies would ideally involve consideration of a variety of observations in addition to MMPI data.

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## APPENDICES

# APPENDIX A DOCUMENTATION OF UNAUTHORIZED LEAVE

OP# - 2418 NOTICE OF UNAUTHORIZED LEAVE FROM: PINE REST CHRISTIAN HOSPITAL

-I-

TO:

The below described individual is subject to being returned to the named hospital or facility.

NAME                      WARD, COTTAGE                      DATE                       
 Or  
 CASE#                      ADDRESS                      TIME                      A.P.                       
 P.M.                       
 DESCRIPTION OF PATIENT (note scars, deformities and any other distinguishing characteristics)                     

SEX            AGE            RACE            WEIGHT            HEIGHT            HAIR            EYES           

COMPLEXION                     

DESCRIPTION OF CLOTHING PATIENT WAS WEARING AT TIME OF LEAVE (IF KNOWN)                     

MANNER AND TIME OF LEAVE                     

IS PATIENT DANGEROUS OR SUICIDAL? DESCRIBE:                     

REPORTED BY:                     

-II-

## NOTIFICATION OF POLICE AND RELATIVES

1. State Police	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
2. Sheriff	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
3. Local Police	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
4. Nursing Supervisor	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
5. Chief of Service - M.D. in charge of patient	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
6. Therapist	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
7. Doctor on call	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
8. Superintendent	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
9. Relative	TIME <u>          </u>	PERSON <u>          </u>	HOW <u>          </u>
RELATIVE NAME <u>                    </u>	RELATIONSHIP <u>                    </u>		

ADDRESS                      PHONE                     

Directions for peace officer or relatives, if any, other than to return patient or resident to hospital of facility:                     

SIGNED                     

-III-

## FOLLOW-UP

### NOTIFICATION OF PATIENT'S RETURN FROM UNAUTHORIZED LEAVE OR DISCHARGE

Local Police	Date <u>          </u>	Person <u>          </u>
M.D. in charge of patient	Date <u>          </u>	Person <u>          </u>
Therapist	Date <u>          </u>	Person <u>          </u>
Nursing Supervisor on duty	Date <u>          </u>	Person <u>          </u>
Relative	Date <u>          </u>	Person <u>          </u>

SIGNED:                     

COPIES SENT TO:

1. Hospital - Patient's chart
2. Police Agency



APPENDIX B  
DATA COLLECTION FORM

Patient # \_\_\_\_\_

AWOL sheet present: yes no (circle)

MMPI present: yes no (circle)

Birthdate: \_\_\_\_\_

Age: \_\_\_\_\_

Adopted: yes no (circle)

Admission date \_\_\_\_\_

Discharge date \_\_\_\_\_

History of previous runaway:

Legal involvement:

## APPENDIX C

ANOVA Of Mean Pd (Psychopathic Deviance) For Female  
Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	849.352	3	283.117	2.245	0.089
RUN	179.572	1	179.572	1.424	0.236
HISTORY	243.952	1	243.952	1.934	0.168
LEGAL	63.349	1	63.349	0.502	0.481
2-WAY INTERACTIONS	118.781	3	39.594	0.314	0.815
RUN HISTORY	70.797	1	70.797	0.561	0.456
RUN LEGAL	2.340	1	2.340	0.019	0.892
HISTORY LEGAL	70.845	1	70.845	0.562	0.456
3-WAY INTERACTIONS	127.852	1	127.852	1.014	0.317
RUN HISTORY LEGAL	127.852	1	127.852	1.014	0.317
EXPLAINED	1095.986	7	156.569	1.241	0.290
RESIDUAL	10342.281	82	126.125		
TOTAL	11438.268	89	128.520		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

## APPENDIX D

## ANOVA Of Mean (K) Scores For Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF DF F
MAIN EFFECTS	596.813	3	198.938	2.041	0.115
RUN	7.344	1	7.344	0.075	0.784
HISTORY	100.376	1	100.376	1.030	0.313
LEGAL	222.038	1	222.038	2.278	0.135
2-WAY INTERACTIONS	416.016	3	138.672	1.423	0.242
RUN HISTORY	326.766	1	326.766	3.352	0.071
RUN LEGAL	239.679	1	239.679	2.459	0.121
HISTORY LEGAL	116.079	1	116.079	1.191	0.278
3-WAY INTERACTIONS	84.037	1	84.037	0.862	0.356
RUN HISTORY LEGAL	84.037	1	84.037	0.862	0.356
EXPLAINED	1096.866	7	156.695	1.607	0.145
RESIDUAL	7993.499	82	97.482		
TOTAL	9090.365	89	102.139		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

## APPENDIX E

## ANOVA Of Mean (F) Scores For Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	994.050	3	331.350	0.818	0.488
RUN	972.575	1	972.575	2.400	0.125
HISTORY	9.702	1	9.702	0.024	0.877
LEGAL	0.263	1	0.263	0.001	0.980
2-WAY INTERACTIONS	1908.697	3	636.232	1.570	0.203
RUN HISTORY	0.100	1	0.100	0.000	0.987
RUN LEGAL	177.259	1	177.259	0.437	0.510
HISTORY LEGAL	1434.245	1	1434.245	3.539	0.063
3-WAY INTERACTIONS	175.037	1	175.037	0.432	0.513
RUN HISTORY LEGAL	175.037	1	175.037	0.432	0.513
EXPLAINED	3077.789	7	439.684	1.085	0.381
RESIDUAL	33230.539	82	405.250		
TOTAL	36308.328	89	407.959		

n= 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

## APPENDIX F

ANOVA Of Mean D (Depression) Scores For  
Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	724.955	3	241.652	1.324	0.272
RUN	0.000	1	0.000	0.000	0.999
HISTORY	198.063	1	198.063	1.085	0.301
LEGAL	212.198	1	212.198	1.163	0.284
2-WAY INTERACTIONS	1366.335	3	455.445	2.495	0.066
RUN    HISTORY	59.346	1	59.346	0.325	0.570
RUN    LEGAL	396.982	1	396.982	2.175	0.144
HISTORY    LEGAL	533.402	1	533.402	2.922	0.091
3-WAY INTERACTIONS	12.680	1	12.680	0.069	0.793
RUN    HISTORY    LEGAL	12.680	1	12.680	0.069	0.793
EXPLAINED	2103.971	7	300.567	1.647	0.134
RESIDUAL	14966.854	82	182.523		
TOTAL	17070.824	89	191.807		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

## APPENDIX G

## ANOVA Of Mean Hs (Hypochondriasis)

## Scores For Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	SIGNIF F	OF F
MAIN EFFECTS	57.469	3	19.156	0.093	0.964
RUN	9.813	1	9.813	0.048	0.828
HISTORY	1.474	1	1.474	0.007	0.933
LEGAL	24.111	1	24.111	0.117	0.733
2-WAY INTERACTIONS	624.654	3	208.218	1.010	0.393
RUN    HISTORY	118.153	1	118.153	0.573	0.451
RUN    LEGAL	223.360	1	223.360	1.083	0.301
HISTORY    LEGAL	1.821	1	1.821	0.009	0.925
3-WAY INTERACTIONS	7.147	1	7.147	0.035	0.853
RUN    HISTORY    LEGAL	7.147	1	7.147	0.035	0.853
EXPLAINED	689.273	7	98.468	0.477	0.848
RESIDUAL	16911.156	82	206.234		
TOTAL	17600.430	89	197.758		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

## APPENDIX H

## ANOVA of Mean Hy (Hysteria)

## Scores For Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	135.195	3	45.065	0.309	0.819
RUN	130.737	1	130.737	0.896	0.347
HISTORY	0.405	1	0.405	0.003	0.958
LEGAL	0.025	1	0.025	0.000	0.990
2-WAY INTERACTIONS	421.950	3	140.650	0.964	0.414
RUN    HISTORY	322.436	1	322.436	2.210	0.141
RUN    LEGAL	19.453	1	19.453	0.133	0.716
HISTORY    LEGAL	185.112	1	185.112	1.269	0.263
3-WAY INTERACTIONS	100.278	1	100.278	0.687	0.410
RUN    HISTORY    LEGAL	100.278	1	100.278	0.687	0.410
EXPLAINED	657.424	7	93.918	0.644	0.719
RESIDUAL	11964.980	82	145.914		
TOTAL	12622.404	89	141.825		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

## APPENDIX I

## ANOVA of Mean Pt (Psychasthenia)

## Scores For Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	202.248	3	67.416	0.285	0.836
RUN	107.125	1	107.125	0.453	0.503
HISTORY	118.283	1	118.283	0.501	0.481
LEGAL	1.546	1	1.546	0.007	0.936
2-WAY INTERACTIONS	191.924	3	63.975	0.271	0.846
RUN    HISTORY	19.095	1	19.095	0.081	0.777
RUN    LEGAL	179.108	1	179.108	0.758	0.386
HISTORY    LEGAL	0.251	1	0.251	0.001	0.974
3-WAY INTERACTIONS	27.484	1	27.484	0.116	0.734
RUN    HISTORY    LEGAL	27.484	1	27.484	0.116	0.734
EXPLAINED	421.656	7	60.237	0.255	0.969
RESIDUAL	19372.371	82	236.248		
TOTAL	19794.027	89	222.405		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement



## APPENDIX J

## • ANOVA Of Mean Sc (Schizophrenia)

## Scores For Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	660.350	3	220.117	0.711	0.548
RUN	593.947	1	593.947	1.920	0.170
HISTORY	9.858	1	9.858	0.032	0.859
LEGAL	1.786	1	1.786	0.006	0.940
2-WAY INTERACTIONS	1307.919	3	435.973	1.409	0.246
RUN    HISTORY	14.957	1	14.957	0.048	0.827
RUN    LEGAL	237.429	1	237.429	0.767	0.384
HISTORY    LEGAL	815.680	1	815.680	2.636	0.108
3-WAY INTERACTIONS	69.902	1	69.902	0.226	0.636
RUN    HISTORY    LEGAL	69.902	1	69.902	0.226	0.636
EXPLAINED	2038.172	7	291.167	0.941	0.480
RESIDUAL	25372.219	82	309.417		
TOTAL	27410.391	89	307.982		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

## APPENDIX K

## ANOVA Of Mean Si (Social Introversion)

## Scores For Female Adolescent Psychiatric Patients

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	663.191	3	221.064	1.181	0.322
RUN	205.291	1	205.291	1.097	0.298
HISTORY	445.980	1	445.980	2.383	0.127
LEGAL	203.359	1	203.359	1.086	0.300
2-WAY INTERACTIONS	319.895	3	106.632	0.570	0.637
RUN    HISTORY	41.939	1	41.939	0.224	0.637
RUN    LEGAL	198.404	1	198.404	1.060	0.306
HISTORY    LEGAL	179.104	1	179.104	0.957	0.331
3-WAY INTERACTIONS	2.655	1	2.655	0.014	0.905
RUN    HISTORY    LEGAL	2.655	1	2.655	0.014	0.905
EXPLAINED	985.742	7	140.820	0.752	0.629
RESIDUAL	15348.703	82	187.179		
TOTAL	16334.445	89	183.533		

n = 90

Run = Elopement

History = History of Previous Runaway Episode

Legal = Previous History of Police Involvement

# APPENDIX L

1.

## CORRELATION MATRIX OF MMPI ITEMS WHICH SIGNIFICANTLY DIFFERENTIATE ELOPERS AND NON-ELOPERS

	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI
	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI	MMPI
MMPI	1.00000	0.19222	-0.03836	0.07156	0.27556	0.06882	0.07156	-0.05894	0.21631
MMPI	0.19222	1.00000	0.12853	0.10596	0.49968	0.01415	0.29918	0.20257	-0.16054
MMPI	-0.03836	0.12853	1.00000	-0.06782	0.31708	0.07919	0.23251	0.15743	-0.01848
MMPI	0.07156	0.10596	-0.06782	1.00000	0.04552	-0.05046	0.29545	-0.01768	0.16444
MMPI	0.27556	0.49968	0.31708	0.04552	1.00000	-0.04352	0.41685	0.21717	0.00514
MMPI	0.06882	0.01415	0.07919	-0.05046	-0.04352	1.00000	0.09175	0.09175	0.00340
MMPI	0.07156	0.29918	0.23251	0.29545	0.41685	0.09175	1.00000	0.21717	0.00514
MMPI	-0.05894	0.20257	0.15743	-0.01768	0.16444	-0.05046	0.21717	1.00000	0.00514
MMPI	0.21631	0.32027	-0.01848	0.16444	0.22426	0.12836	0.40340	0.00514	1.00000
MMPI	0.01162	-0.16054	0.01337	-0.17654	-0.05289	-0.02743	-0.10453	-0.03252	0.00945
MMPI	-0.12205	-0.05622	-0.28556	-0.06183	-0.01852	-0.03251	0.03905	-0.06182	0.25990
MMPI	-0.07766	-0.20880	-0.23518	-0.06130	-0.22332	0.22940	-0.36536	-0.28934	-0.11477
MMPI	-0.09585	-0.14182	0.03217	-0.17728	-0.12727	0.02394	-0.32581	-0.10301	-0.22813
MMPI	0.00785	0.01162	-0.06094	-0.14355	0.10269	0.09191	0.07530	-0.14355	0.17958
MMPI	0.08352	-0.07293	-0.17127	-0.15417	0.14869	-0.30573	0.00514	-0.31347	0.18954
MMPI	-0.01780	-0.29870	-0.05576	0.12339	-0.12831	0.07543	0.12339	-0.24441	0.09778
MMPI	0.21774	0.23395	-0.05876	0.29822	0.16449	-0.06929	0.44158	0.15489	0.26228
MMPI	-0.13166	-0.19494	0.12476	0.02252	0.05289	-0.16879	0.03252	-0.03949	0.06382
MMPI	-0.00704	-0.11815	-0.13368	0.19429	0.03205	0.29412	-0.06798	-0.15487	-0.05014
MMPI	0.19722	0.02835	0.05618	0.18378	-0.01861	-0.00209	0.11257	0.04135	0.07587
MMPI	0.04826	0.17123	0.17127	0.31347	-0.07313	0.23338	0.07451	0.15417	-0.10850
MMPI									-0.15599

# APPENDIX L

2.

	M252	M254	M256	M259	M260	M278	M294	M332	M381	M386
M001	-0.12205	-0.07766	-0.09585	0.00785	0.08352	-0.01780	0.21774	-0.13166	-0.00704	0.19722
M004	-0.05622	-0.20880	-0.14192	0.01162	-0.07293	-0.29870	0.23395	-0.19494	-0.11815	0.02835
M078	-0.28556	-0.23518	0.03217	-0.06094	-0.17127	-0.05576	-0.05876	0.12476	-0.13368	0.05618
M095	-0.06183	-0.06130	-0.17728	-0.14335	-0.15417	0.12339	0.29822	0.03252	0.19429	0.18378
M126	-0.01852	-0.22332	-0.12727	0.10269	0.14869	-0.12831	0.16449	0.05289	0.03205	-0.01961
M135	-0.03251	0.22940	0.02394	0.09191	-0.30573	0.07543	-0.06929	-0.16879	0.29412	-0.00209
M203	0.03905	-0.36536	-0.32581	0.07530	0.00514	0.12339	0.44156	0.03252	-0.06758	0.11257
M204	-0.06182	-0.28934	-0.10301	-0.14335	-0.31347	-0.24441	0.15489	-0.03949	-0.15487	0.04135
M236	0.25390	-0.11477	-0.22913	0.17938	0.18954	0.09778	0.26228	0.06382	-0.05014	0.07597
M245	0.16462	0.16891	0.28868	-0.06278	0.22926	0.09167	0.02127	0.19231	0.11656	-0.05494
M252	1.00000	0.00948	0.17287	0.23652	0.15727	0.22167	0.00745	0.11374	0.01270	-0.01924
M254	0.00948	1.00000	0.20936	-0.12339	0.03992	0.10138	-0.18856	0.39247	0.23787	-0.23199
M256	0.17287	0.20936	1.00000	0.03349	0.07313	0.15082	-0.24344	0.25783	0.11486	-0.08718
M259	0.23652	-0.12339	0.03349	1.00000	0.10535	0.26756	0.03662	0.12988	-0.08397	0.18411
M260	0.15727	0.03992	0.07313	0.10535	1.00000	0.17263	-0.02940	0.21035	-0.13895	-0.06896
M278	0.22167	0.10138	0.15082	0.26756	0.17263	1.00000	0.13577	0.38197	0.06747	0.11765
M294	0.00745	-0.18836	-0.24344	0.03662	-0.02940	0.13577	1.00000	-0.08719	-0.21267	0.41536
M332	0.11374	0.39247	0.25783	0.12988	0.21035	0.38197	-0.08719	1.00000	0.04403	-0.01057
M381	0.01270	0.23787	0.11486	-0.08397	-0.13895	0.06747	-0.21267	0.04403	1.00000	-0.40345
M386	-0.01924	-0.23199	-0.08718	0.18411	-0.06896	0.11765	0.41536	-0.01057	-0.40345	1.00000
M390	-0.25390	0.11477	-0.07313	-0.32804	-0.35164	-0.24747	-0.04352	-0.28363	-0.03868	-0.07597

# APPENDIX L

3.

M390

M001	0.04926
M004	0.17123
M078	0.17127
M095	0.31347
M126	-0.07313
M135	0.23338
M203	0.07451
M204	0.15417
M236	-0.10850
M245	-0.15599
M252	-0.25990
M254	0.11477
M256	-0.07313
M259	-0.32804
M260	-0.35164
M278	-0.24747
M294	-0.04352
M332	-0.28363
M381	-0.03868
M386	-0.07597
M390	1.00000

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