Locus of Control in Voluntary and Involuntary Psychiatric Patients

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LOCUS OF CONTROL IN VOLUNTARY AND
IN VOLUNTARY PSYCHIATRIC PATIENTS

BY

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Abstract

Psychiatric inpatients, consisting of 32 males and 33 females between the ages of 15 and 58 completed Rotter's (1966) Internal-External Locus of Control (I-E) Scale. The scale was administered individually to the patients at both admission and discharge, at the Crisis Stabilization Unit (CSU) in Orlando, Florida. Analysis of variance was used to determine whether there were significant differences due to commitment status (voluntary and involuntary), diagnosis (thought and affective and other disorders), and change scores (admission versus discharge). The hypothesis that involuntary patients would produce significantly higher scores was not confirmed. Further, no significant difference was found due to diagnosis. A second hypothesis that patients would score more internally at the time of discharge versus initial admission also was not confirmed. Therefore, there were no differences in I-E scores before or after treatments regardless of diagnosis or commitment status. There is no evidence to conclude that in terms of treatment, involuntary commitment is detrimental to the patients.
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I. INTRODUCTION

Involuntary commitment of patients to psychiatric facilities has "long perplexed the mental health and legal professions" (White and White, 1981, p. 953). In the 18th century, the few asylums in the United States were seen as "places of last resort" which removed the insane person from the community to protect the individual and the community. As psychology developed in the 19th century, confinement of the mentally ill took on rehabilitative aspects and the state transferred responsibility for the treatment of these individuals to the mental health profession. Meanwhile, legal procedures were being established for the involuntary commitment of psychiatric patients (White and White, 1981).

There has been much debate on involuntary hospitalization. Chodoff (1976) examined three points of view concerning society's right to involuntarily hospitalize a mentally ill individual. Chodoff labelled those persons who are opposed to involuntary commitment the "abolitionists". The abolitionists hold the viewpoint that involuntary hospitalization should never be resorted to under any circumstances. Chodoff reports that many psychiatrists belong to this group, and that for them, mental illness does not exist in
the field of psychiatry. The medical model of "mental illness" is rejected entirely, and acceptance of the medical model is a "fiction accepted jointly by the state and by psychiatrists as a device for exerting social control over annoying or unconventional people" (p. 497). The abolitionists believe that these individuals should be allowed the dignity of being responsible for their behavior and required to accept its consequences. Members of this group are not opposed to psychiatric treatment, but if voluntary cooperation on the patient's part could not be enlisted, then the psychiatrist would step aside and "allow social, legal, and community sanctions to take their course" (Chodoff, p. 497).

Chodoff labelled members of the second group the "medical model psychiatrists". These physicians believe that mental illness is a meaningful concept and that under certain conditions the state has the right and an obligation to arrange for the hospitalization of a sick individual, even if this means that he is deprived of his liberty. It is held that it would be far more cruel to leave the ill person at liberty, and that the patient has a "right to treatment". Chodoff wrote, "To remove the protective mantle of illness from these disturbed people is to expose them, their families, and their communities to consequences that are certainly maladaptive and possibly irreparable" (p. 497). He insists that mental illness does exist, but he recognizes
that not all people being treated by psychiatrists should be included as being mentally ill, but that there are those desperately ill persons for whom involuntary commitment must be considered.

Chodoff labels a third group the "civil liberties lawyers". These persons do not necessarily reject the necessity for involuntary hospitalization, but they do wish to reject the importance of medical model criteria in the hands of psychiatrists. They believe the standards of dangerousness are more objective and more capable of being handled in the courts as it is more possible to bring evidence to bear on each case.

Each group has its own arguments as to why their point of view is valid. The first and third groups argue that psychiatrists are in the position of being able to abuse their power, that they commit persons for reasons other than the correct, legal, and ethical ones. Hiday (1976) examined commitment laws in one state by studying court records and observing commitment hearings. She concluded that although fewer people are being committed, she still found occurrences where commitment resulted because the judges deferred to psychiatrist's opinions, rather than a preponderance of evidence. In another study, Affleck, Peszke, and Wintrob (1978) asked psychiatrists to respond to questionnaires regarding their knowledge of the commitment laws in their jurisdictions. They reported that few of the
psychiatrists did have a thorough understanding of those laws, that in some instances these physicians not only misunderstood the laws, but that they substituted their own criteria to commit the patients. In a series of newspaper articles, Mathers (1982) pointed out that critics of Florida's commitment law have charged that it is used as a tool to control indigents and vagrants. It was also pointed out that judges do not question the opinions of the psychiatrists at local commitment hearings. However, a study by Appelbaum and Hamm (1982) presents evidence to show that in nearly all instances, psychiatrists involved in commitment proceedings are very aware of local commitment laws and that they initiate commitment proceedings in accordance with those laws.

Chodoff (1976) acknowledges that the potential for abuse of these laws is there, but he still concluded that involuntary commitment should still be the domain of the medical model psychiatrists as they are in the best position to deliver appropriate treatment to the patients, provided those doctors can work with strict legal safeguards to protect patient's rights.

Involuntary commitment itself is not the only issue to be considered. Courts have been reviewing committed patients' rights to refuse various types of treatment, most notably, chemotherapy. White and White (1981) addressed this topic and report that, in general, the Supreme Court
upholds the patient's right to refuse chemotherapy, except where the patient is clearly a danger to himself or others.

Weiner (1982) reports that since the late 1960s there have been numerous lawsuits filed against mental health institutions in an effort to improve patient care, define patients' rights and to narrow the criteria for civil commitment. By and large, the district and appellate courts have ruled in favor of the mental health advocates, but the reviews by the Supreme Court have resulted in decisions which reject broadly worded commitment laws and which uphold the traditional reliance on decision-making by medical professionals. It appears that involuntary commitment of individuals who meet the criteria will continue to occur, but as the courts rule in favor of patients' rights, alternatives to the traditional medical model of treatment which includes chemotherapy will have to be found. White and White (1981) state that there will be an increased demand by patients for nonmedical treatments and that there will be a greater role for psychology professionals in inpatient treatment in the years ahead.

As evidenced above, much has been written on the ethical and legal aspects of involuntary hospitalization, but little in the literature deals with the treatment of involuntarily committed patients. Szasz (1977) addressed himself to the issue of treatment and concluded that in terms of treatment, involuntary commitment is detrimental to the
patient. Szasz used this argument to support the abolitionist point of view described above. However, in a study comparing both voluntary and involuntarily committed patients, Gove and Fain (1977) concluded that there is nothing detrimental to the patients in the commitment process.

In reviewing the literature, little was found on the relationship between either voluntary or involuntary commitment and personality variables. It would seem that involuntarily committed patients' perceptions of their own ability to control their lives would differ significantly from patients who initiated hospitalization voluntarily. Locus of control is a personality variable which can be measured to assess an individual's perception of his or her own ability to control his or her life circumstances. There has been research into locus of control in psychiatric patients (Harrow and Ferrante, 1969; Fontana, Klein, Lewis and Levine, 1968; Leggett and Archer, 1979), but most of these have not addressed the topic of the relationship between locus of control and voluntary versus involuntary committed patients. One study (Levenson, 1972) described later in this paper, did look at the above mentioned relationship, but she used her own locus of control measure, rather than an older, more established measure of locus.

In the ensuing sections, locus of control will be defined and described. Its origin in social learning theory will be discussed, and locus of control as a personality
variable, particularly for psychiatric patients, will be examined. Considerations in the measurements of locus of control will be reviewed as well. Procedures of involuntary commitment unique to Florida law will be reviewed. The purpose of the present study is to examine locus of control perceptions from both the voluntary and involuntary commitment frame of reference, in an effort to determine differences between the commitment alternatives.
II. THE LOCUS OF CONTROL CONSTRUCT

Definition and Description of Locus of Control

Rotter (1966) did much of the original research on the locus of control concept and he defined it as follows:

The effect on a reinforcement following some behavior on a part of a human subject, in other words, is not a simple stamping-in process, but depends upon whether or not the person perceives a causal relationship between his own behavior and the reward. A perception of causal relationships need not be all or none, but can vary in degree. When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labelled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control (p. 1).

Locus of control, then, refers to one's orientation as to his or her own ability (or lack thereof) to control, through his or her own behavior, subsequent reward or punishment. Phares (1976) sees locus of control as a continuum. Persons who believe that they can control reinforcement through their own behavior (internals) are at one extreme, while persons who believe that reinforcement is independent of their behavior (externals) are at the other extreme. He further suggests that "perceived locus of control may be
viewed as a somewhat narrow expectancy arising out of a specific situation or it may be viewed as a relatively stable characteristic that persons carry with them from situation to situation" (p. 6). He further points out that "behavior is determined both by the structure of the situation and by the beliefs or expectancies brought to the situation by that person, with the relative contribution of each varying from situation to situation in lawful ways" (p. 6).

Various researchers have addressed themselves in describing the characteristics of internals versus externals. In reviewing the literature, Kinnaird (1977) wrote a character sketch of persons with an internal locus orientation versus persons with an external locus orientation:

To summarize, a character sketch of the individual with internal locus of control shows him to be a striving, cognitive, achievement-oriented, self-directed person who copes actively with his environment and expects to succeed. He is likely to be white and of middle class or higher status, and have had a secure and consistent upbringing. The external individual is apt to come from a less stable home, a lower socio-economic level, and/or ethnic minority and to be less likely to seek information or attempt to control his environment, but is more likely to take a chance (p. 39).

Joe (1971) reported that many researchers have investigated the relation of internal-external locus of control to personality characteristics, and he drew the following conclusion:

The findings depict externals, in contrast to internals, as being relatively anxious, aggressive, dogmatic, and less trustful and more suspicious of others, lacking in self-confidence and insight, having low needs for social approval, and having a greater tendency to use sensitizing modes of defenses (p. 623).
On the other hand, internals seem better able to cope with their environment and are more self-confident and self-directed than are externals. There are much data to support this view. Several researchers indicated that internal individuals are most likely to have satisfactory personal adjustment (Joe, 1971; Phares, 1976; Hersch and Scheibe, 1967). Phares (1976) describes internals as active, striving individuals who exhibit greater resistance to influence and who seem to handle success and failure in a more realistic fashion than externals... by contrast, externals should be more vulnerable and less capable of coping with their environment (p. 120).

However, Rotter (1966) saw a curvilinear relationship between locus of control and pathology, where persons at both extremes of the internal-external continuum are seen as maladjusted. But, Rotter (1975) also pointed out that one problem in conceptualization of the locus of control construct is the idea that internals are good and externals are bad. He states that there is no logical basis to assume that it is good to be internal and bad to be external. Researchers need to be aware of this and avoid the mistake of assuming pathology just because a person's scores on a locus of control measure show him to have an external frame of reference.

**Origin of Locus of Control in Social Learning Theory**

Social learning theory of personality integrates both reinforcement and cognitive approaches. It defines person
ality as learned behavior which is the result of the interaction of learned responses, acquired meanings, and physiological factors. This learned behavior is modifiable and changes with experience. Social learning has been described in various papers (Rotter, 1954, 1966; Phares, 1976). The locus of control concept developed out of social learning theory and interest in this variable developed as Rotter and others made the consistent observation that "increments and decrements in expectancies following reinforcement appeared to vary systematically, depending on the nature of the situation and also as a consistent characteristic of the person being reinforced" (Rotter, 1975, p. 56).

Rotter (1975) sees the crucial determinants of behavior as: (1) the reinforcement, whether it is positive or negative; (2) the past history, sequence, and patterning of such reinforcements; and (3) the value attached to each reinforcement. In an earlier article, Rotter (1966) listed four classes of variables which are important in predicting behavior in the context of reinforcement theory. These classes of variables are behavior, expectancies, reinforcements, and psychological situations. He utilized these variables in his general definition of behavior:

The potential for a behavior to occur in any specific psychological situation is a function of the expectancy that the behavior will lead to a particular reinforcement in that situation and the value of that reinforcement (1975, p. 57).
Phares (1976) defined those variables important in predicting behavior which were listed above. Reinforcement is "anything that has an effect on the occurrence, direction, or kind of behavior" (p. 15). Rotter (1954) defined expectancy as the "probability held by the individual that a particular reinforcement will occur as a function of a specific behavior on his part in a specific situation or situations" (p. 107). Phares (1976) differentiated between generalized and specific expectancies by pointing out that when individuals were in a novel situation, "generalized expectancies will be more important in determining their expectancy than will specific expectancies based on prior experience in that situation. When individuals have had a great deal of experience in a given situation, generalized expectancies will be the primary determinants" (p. 16). One determinant of the relative importance of generalized versus specific expectancies (in the same situation) is the amount of experience the individual has had in that particular situation. In determining behavior, the importance of generalized expectancies goes up as various situations are more novel and go down as a person's experience in that particular situation increases. It is important to understand the relationships of expectancies to situations. According to Rotter (1975), this helps us to understand under what conditions clear predictions might be expected from an accurate measure of generalized
expectancies, such as his internal-external (I-E) locus of control scale (Rotter, 1966).

In social learning theory, the psychological situation is seen as an important determinant of behavior. Phares (1976) suggests that careful analysis of situations is important in order to identify the cues that can, for a given person, affect the expectancies and reinforcement values. "Although personality traits or dispositions are important, failure to take account of the psychological situation significantly reduces predictive efficiency" (p. 17). He also pointed out that the structure of a specific situation affects an individual's behavior as well as that person's generalized beliefs about locus of control. Phares (1976) summarized this by pointing out that locus of control can be seen as a more or less stable characteristic which persons carry with them from situation to situation, or as a somewhat narrow expectancy which arises out of some specific situation.

Measurement of Locus of Control

In view of the fact that locus of control may be seen as a stable characteristic generalizable across many situations or a narrow expectancy associates with a specific situation, it is obvious that different measures of locus of control are necessary, depending upon the purpose of the research. To devise a good instrument, Phares (1976) points
out that it is desirable to make clear exactly what is being measured.

There have been several measures of locus of control, for both adults and children. The scope of this paper does not permit exhaustive explanations of each measure, but they are listed, and those that seem pertinent to this work will be described in more detail.

One of the earlier measuring devices was the Intellectual Achievement Responsibility Questionnaires (IAR) developed by Crandall, Katkovsky, and Crandall (1965). This measure focuses on locus of control in intellectual achievement situations, and is used primarily with children. Another measurement used with children is the Nowicki-Strickland Locus of Control Scale for Children (1973). The authors report that studies have found significant correlations between this measure and achievement test scores. For preschool children, the Stanford Preschool Internal-External Scale (SPIES) was developed by Mischel, Zeiss, and Zeiss (1974).

Perhaps the most important measure of locus of control has been Rotter's (1966) Internal-External (I-E) Locus of Control Scale. Here, the items on the scale represent an attempt to sample locus of control beliefs across a wide range of situations, such as interpersonal situations, government, work, and politics (Phares, 1976). Because it samples a wide range of expectancies, the I-E scale is a
measure of generalized, rather than specific, expectancies. Phares (1976) explains what the I-E scale, a generalized measure of locus of control, can and cannot do:

What a general measure of locus of control allows us to do is describe each individual's "average" locus of control attributes over many situations. But we should remember that the wider the range of situations, the less predictive the concept will be. Therefore, I-E may do a good job of predicting people's behavior in general but miss rather badly in any specific situation. Whether we can tolerate such misses depends upon our purposes (p. 46).

Rotter (1966) designed the I-E scale unidimensionally, that is, a person's score reflects whether he is internal or external on a continuum, with internals at one end and externals at the other. The I-E scale is seen as a measure of generalized, rather than specific, expectancies because the questions on this scale represent an attempt to sample locus of control beliefs in a wide range of situations (Phares, 1976). The I-E scale consists of 29 items, presented in a dyadic, forced choice format. One point is given each time an external statement is selected by the subject, and the possible range of scores is from zero to 23. Included in the scale are six filler items which are not scored. Phares reports that filler items were included to at least partially disguise the purpose of the questionnaire.

Phares (1976) states that the test-retest reliability for the I-E scale appears to be adequate. Rotter (1966) reported that reliabilities for several samples varied from .49 to .83, depending upon the sample and time interval
involved. Concerning psychiatric patients, Harrow and Ferrante (1969) reported a reliability figure of .75 over a six week period. Using college students for subjects, Hersch and Scheibe (1967) administered the I-E scale and three different measures of intelligence and reported that correlations between the I-E scale and intelligence were nonsignificant.

It may appear that a generalized measure would be impotent in the face of so many specific situations. But Phares (1976) cites reasons for conceptualizing personality in terms of broad dispositions and having appropriate measures for them. For instance, the clinician/psychologist must predict what patients are likely to do in situations and circumstances that are unknown to them. He may be asked, for example, "if John Doe is discharged from the hospital, how will he do?" In other words, the clinician is being asked about the effects of many situations, not just one. Most clinicians have no way of knowing what will happen to Mr. Doe five years in the future. Phares (1976) concludes, "The lack of information regarding the nature of specific situations may force us to rely more heavily than we would like on general personality factors" (p. 47). It is for this reason that Rotter's I-E scale has been used so often since first presented. Rotter's (1966) monograph on locus of control has not only prompted much research (Thornhill, Thornhill, and Youngman [1975] presented a computerized bibliography on
locus of control which had over 1200 references), but also generated criticism as well.

The criticism of the I-E scale centers around two issues. The first concerns the issue of specificity-generality, which has been alluded to earlier. As pointed out, the I-E scale measures generalized rather than specific expectancies of locus of control. Rotter (1975) noted that previous researchers have misused the I-E scale by trying to use it in the prediction of specific behaviors for specific situations, and he urged researchers to take this into consideration before designing their research. He pointed out that it would be a difficult undertaking to construct a different measure for each conceivable specific purpose, but also acknowledged that specific measures do have their place.

One measure of specific expectancies that is of use with psychiatric patients is the Mental Health Locus of Control (MHLC) Scale developed by Hill and Bale (1981). This scale is designed to measure specific expectancies concerning who will be in control, that is, responsible for change, in mental health treatment situations. These authors point out that what clients expect from a therapist will influence such vitally important processes as whether the clients take the first step in entering therapy and how these clients interpret and respond to treatment. These expectancies can also play a role in determining the course and eventual outcome of treatment. Hill and Bale state that the MHLC is
designed specifically to meet the need for an instrument to measure locus of control expectancies for situation involving client-therapist interactions. The MHLC contains 28 statements concerning mental health. With each statement there is a six point scale which allows the subject to agree or disagree with that particular statement. Included in this measure are six filler items, as in Rotter's I-E scale. Also, like the I-E scale, the MHLC is a bipolar construct where the two poles represent belief in either internal or external control.

Hill and Bale (1981) also developed a second scale, the Mental Health Locus of Origin (MHLO) Scale. Constructed in a similar manner to the MHLC, and MHLO scale is designed to measure beliefs about the etiology of psychological problems. At one end of this scale is a component labelled endogenous beliefs which refers to patients' perceptions attributing "mental illness" to factors such as heredity and organicity. At the other end of the scale is the interactional pole, where persons perceptions regarding the etiology of mental illness emphasizes interpersonal and intropsychic causes of mental illness.

Hill and Bale (1981) analyzed the validity of their MHLC and MHLO scales using 147 female and 79 male college students. They found that the correlation between the MHLC and MHLO scales was .40 (p<.001). Using the same 226 college students, they also compared the correlation between MHLC
and MHLO, the correlation was .18 \( (p < .001) \). They concluded that their measures were valid, but they also pointed out that they used college students in their samples, and they recognized the need for validity studies using different subject populations.

A second criticism of the I-E scale which has generated other research has been the issue of unidimensionality—multi-dimensionality. For instance, Levenson (1981), questioned "the validity of combining under the rubric of external control, as Rotter did, the expectancies of fate, chance, and powerful others" (p. 15). Levenson (1973) had developed her own locus of control scale which separated the I-E scale into three different dimensions of expectancy, which were presented as scales: the Internal (I) Scale, the Powerful Others (P) Scale, and the Chance (C) Scale. The I, P, and C scales originated because of the idea that people who believe in one external orientation such as the belief in the powerful others will think and act differently than those who see the world as unpredictable, which is a different external orientation. Levenson points out that the major implication of this was that individuals who see the world as unordered should be expected to act differently from people who believe powerful others are in control.

Levenson (1973) administered her I, P, and C scales to psychiatric patients in a state hospital and found that patients who were involuntarily committed held the attitude
that powerful others controlled their lives (an external orientation) significantly more than voluntary psychiatric patients. She also reports, however, that there were no significant differences between committed and voluntary patients on her other two scales, the internal and chance scales.

It should be noted, however, that Rotter (1966) acknowledged the multidimensionality aspect and reported that he also attempted to isolate different dimensions. Rotter reported that these isolated dimensions in his early research were not sufficiently reliable to indicate separate subscales. Phares (1976) makes this comment about multidimensional scales: "Obviously, if one constructs a scale so that it reflects several dimensions, it is not surprising to find evidence of such dimensions" (p. 50). He concluded that while there is evidence of separate factors, there is less evidence that demonstrates their ability to make accurate predictions.

To summarize, there are several different measures of locus of control which are available to the researcher. Which measure is selected depends on the purpose of the research involved. Rotter's I-E scale has been used extensively in locus research which includes studies involving psychiatric patients. It is important to realize that this scale measures generalized expectancies, rather than specific expectancies, in adults. This scale cannot make specific
predictions of behavior, but it can assist the clinician in making generalized predictions of behavior.

**Locus of Control as a Personality Variable**

Joe (1971) reviewed the literature on locus of control as a personality variable. He looked at the relation of I-E scale scores to personality characteristics, ethnic and social class differences, anxiety, attempts to control the environment, achievement motivation, reaction to social stimuli, reaction to threat, risk-taking, and psychological adjustment.

In addition, he examined locus of control research with anxiety as measured by self-report measures. Externals described themselves as anxious, less able to show constructive responses to frustration, and more concerned with fear of failure than with achievement. Internals, on the other hand, described themselves as more concerned with achievement, more constructive in overcoming frustration, and being less anxious.

Joe (1971) also cited a group of studies that support the hypothesis that internals show more initiative and effort in controlling their environment, and can better control their impulses than externals. Related to this is a study by Seeman and Evans (1962). Using tuberculosis patients, they focused on the relationships between locus of control and knowledge and information seeking behaviors of
the patients. They found that internals asked more ques-
tions of doctors and nurses, and knew more about their spe-
cific situation than did externals.

Joe (1971) reported that several investigators had de-
monstrated a relationship between internal-external locus of
control and psychological adjustment, where pathological
subjects were reported to have higher external scores than
normal subjects. Hersch and Scheibe (1967) administered
Rotter's (1966) I-E scale and other self-report measures
such as the Incomplete Sentences Blank (ISB), the California
Psychological Inventory (CPI) and the Psychasthenia section
of the Minnesota Multiphasic Personality Inventory (MMPI),
to college students. These authors report that internal
scorers on the I-E scale are less maladjusted as shown by
their scores on the other measures administered.

Joe (1971) further noted that studies involving locus
of control and social class and ethnic differences found
that blacks and lower class persons usually had higher ex-
ternal scores than did whites and middle class persons. In
reviewing these studies, he concludes:

Data are consistent with the theoretical expectation
that individuals who are restricted by environmental
barriers and feel subjected to limited material oppor-
tunities would develop an externally oriented outlook
on life. Also, social class interacts with race so
that individuals from the lower classes and minority
groups tend to have high expectancies of external con-
trol (p. 624).

Joe (1971) also reviewed the research as concerns locus
of control and persons' reactions to social stimuli. Rotter
(1966) hypothesized that internals would be able to resist environmental manipulations (provided that they were aware of those manipulations), while externals would be less resistive as they already had expectancies of environmental control. Joe (1971) found that some studies have confirmed this hypothesis while others have not. He suggested that "more attention should be given to exploring the hypothesis that internals conform only if they perceive conforming to be to their advantage" (p. 630).

Joe (1971) reports also that the research indicates a relationship between suicide proneness and externality, and that externals tended to more often report feelings of anger and depression. In reviewing these results and the results showing that pathological subjects had higher external scores, Joe questioned whether "a belief in external control produces psychopathology or whether psychopathology produces a belief in external control" (p. 633). He then concluded that the study of locus of control is relevant to studying psychopathology. This is reflected in several studies concerning psychiatric patients.

**Locus of Control and Psychiatric Patients**

As Joe indicated, several researchers have found a relationship between locus of control and psychological adjustment. Shybut (1968) reported that psychotic subjects had higher external scores than did neurotic and normal subjects.
He also suggested that prolonged hospitalization can cause a person's belief in external control to be increased and reduce his belief that he can attain long-range goals. Levenson (1973) administered her I, P, and C scales to functionally psychotic and neurotic inpatients in a state hospital. Results showed that, when compared to normal samples, the inpatients perceived control by chance forces and powerful other significantly more often. She readministered her scales to the patients one month later. While overall the patients scored higher on the Internal scale, there was no significant difference in patient's scores on the Chance and Powerful Others scales. Levenson speculated as to these results:

It may be that the patients who remained in the hospital long enough to be retested were less susceptible to change on these measures, or that high perceptions of control by powerful others or chance were maintained as a function of prolonged length of institutionalization (p. 404).

This result suggests that as length of hospitalization increases, patients' perceptions of external control do not diminish.

Harrow and Ferrante (1969) administered Rotter's I-E scale to upper middle class patients during their first and seventh weeks of hospitalization. These authors looked at general characteristics of locus of control in these patients with the following factors in mind: the distribution of patients on the locus of control continuum; the relationship between their I-E scores and diagnoses; and the
relationships between their I-E scores and age and sex. They also looked at locus of control score changes following seven weeks of hospitalization to determine (1) whether or not psychiatric patients become more internal as their pathology decreases during treatment; (2) how changes in their I-E scores were related to their formal diagnosis and (3) how locus of control orientation changes were related to age and sex.

Overall, the authors report that data collected on their psychiatric samples did not differ significantly from non-psychiatric samples. The mean locus of control score obtained from the samples overall was 8.70, well within the range of mean scores listed by Rotter (1966). Harrow and Ferrante created diagnostic subgroups in the following way: schizophrenics, depressives, character disorders, manics, and other. They reported that the schizophrenic subgroup had a mean score of 10.07, which was significantly above the mean of the total remaining subjects. This shows that, as a group, schizophrenics were more external in locus orientation. Harrow and Ferrante explained why they thought schizophrenics exhibit more externality:

Looked at in terms of their history, the schizophrenic sample should contain a greater percentage of patients who have had long-standing difficulties in adjustment and have experienced chronic disappointment. Furthermore, this disorder includes symptoms such as delusions and paranoid ideation which are threatening to others, produce greater social stigma and may lead to a sense of personal futility, with some resulting externality (p. 584).
Depressives, in this study, tended to produce more internal scores. The authors account for this finding by explaining that in the population they studied, the depressives had a better premorbid adjustment and that their disorder was not as chronic as the schizophrenic.

Harrow and Ferrante (1969) reported that patients classified as character disorders also scored more internally than schizophrenics. They pointed out that these patients usually have problems in only one or two areas which are usually related to their lifestyle, and that for the most part, these patients have performed in social and occupational areas in a competent way for many years.

Harrow and Ferrante pointed out that when manics are initially hospitalized, they usually are displaying grandiose thinking about their ability to control their lives. This was suggested to explain the result that manic patients were significantly more internal in locus orientation than the total sample of non-manic patients.

As mentioned earlier, the I-E scale was readministered at the end of six weeks treatment in this study. It was predicted that patients would be more internal, based on the hypothesis that an increased sense of personal mastery, brought about by symptom relief, could lead towards increased internality. Results indicated that there was a trend towards internality, but it was non-significant. But when analyzed by the different subgroups, different results
were evident. Schizophrenics were more external, but this
trend was non-significant as well. These schizophrenics
were considered very "sick" and the chronicity of their prob-
lems seemed to account for these results. In general, the
non-schizophrenics (not counting the manics) did become
slightly more internal during the six weeks of treatment.
This was seen particularly in those patients labelled char-
acter disorders. The authors acknowledged that much of the
character pathology remained in these patients, but accounted
for this result by pointing out that at least the acute rea-
son for their admission had been relieved and these patients
were now free to return to their old level of functioning.

Depressed patients scored significantly more internally
when the I-E scale was readministered. As their symptoms
diminished, the patients became more internal. The authors
believed that as the patients returned to their premorbid
levels of self-esteem and control, their confidence in-
creased and hence, the more internal score.

At the end of the six weeks, manic-depressive patients
became more external. Harrow and Ferrante pointed out that
during hospitalization they recover from their original
grandiosity and become more aware of their own limitations.
This shift towards externality, in manics, is considered to
be a shift towards reality, hence a positive outcome of
treatment. No significant differences were noted between
younger and older patients at the end of six weeks treatment,
when the I-E scale was readministered. However, there was evidence to show that females, in general, scored more internally.

Overall, Harrow and Ferrante's study showed that acute psychiatric symptoms and hospitalization did influence some of the I-E scores in one direction or the other, depending on the patient's diagnosis. This study supports Rotter's (1966) contention that persons scoring near the extreme ends of the I-E continuum are more maladjusted whereas persons scoring in the middle are more likely to be better adjusted psychologically. The study also suggests that, in psychiatric patients, an external orientation can be changed to an internal one.

Related to Harrow and Ferrante's results is a study by Fontana, Klein, Lewis and Levine (1968). They demonstrated that schizophrenics who wanted to appear very sick scored in the external direction on the I-E scale. Of these results, Joe (1971) writes, "The implication is that internals wish to convey to others that they are normal and well adjusted while externals wish to impress upon others that they are "sick" so they cannot be held accountable for their behavior" (p. 634). This study also supports Rotter's idea that individuals at the extreme ends of the locus of control continuum are maladjusted.
III. THE INVOLUNTARY COMMITMENT OF PSYCHIATRIC PATIENTS

Criteria on Procedures for Involuntary Commitment

Chodoff (1976) listed three criteria which should be utilized in determining whether or not a patient should be committed. All three must be met, according to Chodoff, before a patient can be committed. First, the person should be suffering from a mental illness. Chodoff points out that this is a complex concept, and there is lack of consensus about its meaning. His explanation of this concept, "extends the domain of illness to encompass certain forms of social deviance as well as biological disorders....They (the patients) are all suffering both emotionally and physically, they are incapable by an effort of will of stopping or changing their destructive behavior, and those around them consider them to be in an undesirable sick state and to require medical attention" (p. 498). He points out that only a belief in the existence of mental illness can justify involuntary commitment. By looking at mental illness in terms of the medical model, it is understood that physicians are considered to be the "technically competent experts to deal with its effects" (p. 498). Secondly, the person must be experiencing a disruption of both intrapsychic (e.g.,
depression, debilitating anxiety) and interpersonal (acting out towards others due to paranoid ideation, for example) functioning. Chodoff points out that this does not include a person's "minor peccadilloes or eccentricities" (p. 498). Also, "the behavior in question must represent symptoms of the mental illness from which the person is suffering" (p. 498). Included in these symptoms are those actions which cause a person to be a danger to himself or others. Third, there must be a need for care and treatment, and there must be facilities available for this purpose. Chodoff argues that if the state has the right to define those conditions necessary to commit someone, then the doctors have the right to ask for treatability of the patients as a criterion for commitment as well.

Chodoff concludes that these procedures and criteria apply particularly to chronic recurrences and initial episodes of mental illness. Admittedly, Chodoff is in favor of involuntary commitment when appropriate, but he draws this conclusion in discussing the criteria for commitment: "it is necessary to find a way to satisfy legal and humanitarian considerations and yet allow psychiatrists access to initially and acutely ill patients in order to do the best that they can for them" (p. 498).

In Florida, the guidelines for the commitment of mentally ill persons are similar to those outlined by Chodoff above. According to Florida State Statutes, Chapter 394,
Section 463, a person may be taken to a psychiatric receiving facility involuntarily under the following circumstances:

1. He is mentally ill.
2. He has refused voluntary examination by a doctor.
3. He is unable to determine for himself that such examination is necessary.
4. He is a danger to himself or others, or he is unable to care for himself.

This period of involuntary examination, according to the Florida statutes, is not to exceed 72 hours without a court order for further treatment.

Initiation of involuntary examination is done by the following methods:

1. A court order, called an ex parte order, can cause a person to be taken to a receiving facility. Usually court orders are obtained by friends and family members of the patient, or by social service workers with the Department of Health and Rehabilitative Services (HRS). Usually three responsible adults swear out affidavits attesting to the problems of the patient in question, and after review by a circuit court judge, the order is issued.

2. A law enforcement officer may take a person who appears to meet the criteria for involuntary examination described above to a receiving facility for examination. That officer is required to make a written report as to his reasons for bringing the patient to that facility.
3. A physician, psychologist, psychiatric nurse, or clinical social worker (all licensed through the State of Florida) may also initiate involuntary examination. They, too, are required by law to make a written report as to their reasons for initiating the examination.

After the person has arrived at the receiving facility, he is evaluated by a licensed physician. If that physician agrees with the need for inpatient treatment and that the legal criteria are met, he signs documents initiating the involuntary (inpatient) examination, which cannot exceed 72 hours. If the psychiatrists in the receiving facility believe that the person needs longer inpatient treatment, then two psychiatrists or a psychiatrist and a psychologist are required to initiate proceedings for involuntary commitment (this must be done within the 72 hour examination period). However, before a person can be committed, he has the right to a court hearing (which he also has the right to waive) in which the judge makes a decision concerning the disposition of the patient. The judge has three alternatives:

Plan A: The person may be sent to a long term psychiatric treatment facility. The amount of time a patient spends there depends upon the severity of his illness. Nonetheless, patients committed in this manner are reviewed periodically by the courts and the hospital physicians.

Plan B: The judge may decide to release the person into his own care.
Plan C: The patient may be required to participate in inpatient treatment, usually 14 to 30 days, in a local psychiatric facility.

Hereafter, for the purposes of this paper, commitment will refer to those individuals who are placed in a psychiatric facility involuntarily, whether for examination or actual commitment.

A Comparison of Involuntary Versus Voluntary Patients

In an attempt to compile more pertinent information as concerns the debate on involuntary commitment, authors have focused on comparisons of voluntary versus involuntary psychiatric patients in hospital settings. Zwerling, Karasu, Plutchik and Kellerman (1974) did such a comparison, noting similarities and differences on different variables such as age, sex, religion, marital status, educational levels, and household composition. There were no significant differences between voluntary and involuntary patients. In their study, committed patients were found to have had prior hospitalization. Also, voluntary patients were much more likely to have been referred by family and friends, where committed patients were referred by police, courts, or private psychiatric clinics. Zwerling et al. interpreted this to mean that "involuntary patients may be more chronically ill, or perhaps the treatment itself creates an aversion for seeking additional treatment voluntarily" (p. 83).
The patients were also assessed according to symptoms and it was found that voluntary patients had problems with depression and feelings of inferiority and that committed patients more often (but not significantly) showed more delusions and inappropriate affect. In looking over their data, Zwerling et al. did not find any significant differences in the overall severity of illness between voluntary and committed patients, but did find that committed patients were more likely to be schizophrenic, assaultive, and agitated, while voluntary patients complained of depression, alcohol abuse, and drug abuse. It was also learned that committed patients more frequently left the hospital without permission (eloped) than voluntary patients.

After assessing their overall information, the authors concluded that their results "offer ammunition for both sides of the debate concerning involuntary hospitalization" (p. 86). They argued that the high elopement rate of committed patients strengthens the anticommitment positions of the civil libertarians. But they also stated that many patients who had refused hospitalization but were committed against their will did come to accept that hospitalization. The authors acknowledged that because of the patient's state of mind, commitment was the only way that some patients' "right to treatment" could be protected. But these authors held a critical view of commitment in their final conclusion: "Whether their numbers (that of patients who
need involuntary commitment) justify the perpetuation of a machinery for involuntary hospitalization which is so patently and relentlessly open to overuse and outright abuse is a judgment we leave to society--it is too grave an issue to be left to the mental health professionals" (p. 86).

Gove and Pain (1977) followed up the above mentioned study and compared voluntary and involuntary patients before, during and after admission to a psychiatric hospital. In the prehospital phase, demographic information was gathered on the patients, and it was learned that committed patients tended to have a lower income than voluntary patients, but both had approximately the same educational levels, and voluntary patients were more likely to have been employed.

At the time of admission, psychiatrists noted whether the patient was severely distressed by observing signs of worry, dysphoria, and agitation. They also noted whether the patient was disorganized in this thinking (e.g., hallucinations, delusions, flight of ideas, gross confusion, etc.) and the severity of that disorganization. The collected data indicated that voluntary patients experience distress more than committed patients. The authors suggest that this means that the commitment process, in and of itself, does not seriously distress most patients. However, this difference can reflect another explanation. The involuntary patients' lack of distress may be due to their thought disorder. In fact, the admitting psychiatrists also indicated
that thought disorganization was more likely to play a role in initiating hospitalization for committed patients than for voluntary patients. They also indicated that committed patients were more likely to be assaultive prior to admission. Gove and Fain (1977) concluded that upon admission, committed patients tended to have a more severe disorder than voluntary patients.

A record was kept of how long it took to bring the patient's symptoms under control and it was discovered that it took considerably longer to bring the disorganization of the committed patients under control as opposed to the voluntary patients, and committed patients tended to have a longer hospitalization. They also indicated that after controlling for severity of impairment, committed patients still had a longer hospitalization.

Citing data regarding whether or not patients had resided in an institution prior to hospitalization and data as to whether or not the patients had to return to an institution, the authors concluded that the commitment process does not increase the patient's chance of becoming chronically institutionalized. The authors also examined follow-up data on the social performance of the patients. Following hospitalization, there was a general improvement for both voluntary and committed patients. Gove and Fain (1977) concluded here that "this provides strong evidence that hospitalization did not have a detrimental effect on either type
of patient and is consistent with the view that both types of patients can be helped by hospitalization" (p. 675). Patients were also followed up as to their own attitudes towards being hospitalized. The majority of patients, both voluntary and committed, indicated that they saw themselves as being helped by hospitalization.

Gove and Fain (1977) differed from Zwerling et al. in that after having analyzed their data, they concluded that there is nothing seriously debilitating in the commitment process and that, given good treatment facilities, commitment is a reasonable course of action when a patient is seriously ill. Despite reservations cited in other research about involuntary commitment (Zwerling et al., 1975), the study above indicates that generally, involuntary commitment is not debilitating and should be continued in those extreme cases when it is the only reasonable course of action.

There are major differences between involuntary and voluntary patients on several variables. Committed patients usually manifest a more severe type of disorder which will likely have an effect on locus of control orientation, at least initially, when the patient is in acute distress. One way to control for this in a research project would be to administer the locus of control measure both at the beginning and near the end of treatment in a manner similar to Harrow and Ferrante's (1969) study.
IV. RESEARCH PROJECT

Statement of the Problem

The purpose of this study was to determine if voluntary versus involuntary committed mental health patients differ in terms of their locus of control orientation. For this study, the instrument used was Rotter's Internal-External (I-E) Locus of Control Scale which measures the degree that a person perceives his own ability to control events through his own actions. This measure of generalized expectancies was chosen for the following reasons:

1) Since clinicians are often asked to make generalized predictions about a patient's future behavior, a measure of generalized, rather than specific, expectancies seems appropriate.

2) The I-E scale has never been used in research specific to voluntary versus involuntary patients.

3) The I-E scale has demonstrated its reliability in a variety of research.

4) Levenson (1973) administered her I, P, and C scales to patients to compare those involuntarily committed patients with the voluntary patients, and learned that involuntary patients held the attitude that powerful others controlled their lives. This is an external orientation, and
it is expected that on the I-E scale, committed patients would also score in an external direction.

Using Rotter's (1966) I-E scale to measure locus of control, this paper was concerned with the following hypotheses:

1. There is a significant difference in locus of control scores between voluntary and involuntarily committed psychiatric patients. As has been shown, voluntary patients play a role in their own hospitalization, while committed patients do not. Since the voluntary patients had a hand in the initiation of their treatment, it is expected that they would score significantly more often as being internally oriented. Also, the voluntary group is more likely to have a large group of depressives, and previous studies (Harrow and Ferrante, 1969) show them more likely to score in the internal range. Schizophrenics, on the other hand, are more likely to be committed because of their thought disorganization, and previous research (Harrow and Ferrante, 1969) indicates that on the I-E scale, they score in the external range of the locus continuum. For these reasons, a significant difference in locus of control scores is expected, with voluntary patients scoring in the internal range, and committed patients scoring more in the external range.

2. Locus of control scores in the committed and voluntary patients will change at the end of treatment, after the patient has been stabilized. Previous research indicates
that after seven weeks of treatment, patients score more internally (Harrow and Ferrante, 1969), as they experienced symptom relief. Gove and Fain (1977) reported that psychiatric patients, in general, come to see themselves as being helped by the hospitalization, and this included both voluntary and committed patients. Similar improvements, as stabilization is implemented, seem likely to occur in the setting being studied here as well. It is expected that towards the end of treatment, both voluntary and involuntary patients would score more in the internal direction.

Method

Subjects

The subjects were 32 male and 33 female psychiatric patients admitted to the Orange County, Florida Crisis Stabilization Unit (CSU), described below. These subjects represent various types of psychiatric diagnoses and problems requiring hospitalization. Some of the subjects had been placed involuntarily as per Florida statutes, while others were voluntary patients. All patients at the CSU are diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders, Edition III (DSM III), and the diagnosis was determined by a licensed, practicing psychiatrist on the unit. Demographically, the patient sample is typical of inpatient settings housing indigent patients. The female patients ranged in age from 15 to 58 years with the mean
age being 30.9. Males ranged from 16 to 57 years with the mean age being 28.5. Of the total sample of 65 patients, 37 had a prior history of psychiatric hospitalization. Of the 33 voluntary patients, 16 had been hospitalized previously, as compared to 21 of the 32 involuntary patients. The average length of stay was 6.1 days for the voluntary patients and 7.6 days for involuntary patients. All of the patients sampled were considered unable to pay for psychiatric treatment because they typically had an income (one person) of under $390.00 per month. (This is the case for all patients admitted to the CSU). This information was collected by checking each patient's clinical record after completion of Rotter's I-E (1966) questionnaire.

Setting

The research was conducted at the psychiatric facility mentioned above, the CSU. This 30 bed unit relies on milieu, group and recreational therapy, with ataractic medications (tranquilizers, antidepressants) used consistently. Besides the psychiatrists, the CSU staff consists of psychiatric nurses, social workers, technicians, and aides, all of whom are in direct contact with the patient during treatment. This treatment staff helps to facilitate change through teaching responsibility for behavior, control and awareness of symptoms and learning socialization skills (often with support and follow-up through local mental health centers).
The CSU is an open, rather than secure, psychiatric facility, but both voluntary and involuntary patients are treated there. At the CSU, crisis stabilization provides a protective environment, usually not exceeding five days. One goal of treatment is to facilitate rapid recovery so that the patient can return to the community. At times, due to the severity of a person's illness, a return to the community is not practicable, and other arrangements (such as placement at a state hospital or longer treatment at the CSU) are made.

Procedure

Rotter's (1966) I-E Locus of Control scale was individually administered by this experimenter to patients admitted to the CSU described above. An attempt was made to administer this measure to each consecutive admission within 24 hours of that actual admission. Three patients chose not to participate, while eight more remained too acutely ill to successfully complete the questionnaire. The I-E scale was also readministered to forty-one of the above patients prior to their discharge from the CSU. The other 24 patients either eloped (left the CSU without permission), declined, or were discharged before the I-E scale could be readministered. This measure was administered to each patient in a private room at the CSU where the patient was observed by the experimenter. Instructions for this scale are as follows: (Rotter, 1966):
This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief; obviously, there are no right or wrong answers... Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice... In some instances, you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also, try to respond to each item independently when making your choice; do not be influenced by your previous choice (p. 26).

The patients were given the questionnaire (Rotter's I-E scale) which required them to circle their responses either a or b. Scoring was accomplished by adding one point each time an external statement was selected by the subject, with the range of scores being from 0 to 23. The I-E scale is a forced choice scale, with 29 items. Six filler questions are included which are not scored. The 23 items which are critical to this study attempt to measure the subject's perceptions as to his or her own ability to control events as being a consequence of his or her own actions and beliefs.
V. RESULTS

An independent samples t-test was conducted to determine if there was a significant difference in locus of control scores between males and females. Results were similar to Rotter's (1966) findings that differences between male and female college students was insignificant. A t score of -1.342 failed to show any difference due to sex. Thus, the data were pooled and no sex differentiation was considered in subsequent analyses.

A two way factorial analysis of variance was performed to determine differences in the patient's initial locus of control scores. The independent variables were commitment status (involuntary and voluntary), diagnosis (thought disorders, affective disorders and other psychiatric diagnoses). The dependent measure was the I-E score. Analysis of variance results are summarized in Table I. No significant difference was found due to commitment status \( F(1,59) = 1.0191 \). The interaction of status and diagnosis also was nonsignificant \( F(2,59) = .1979 \). This is in contrast to Harrow and Ferrante's (1969) finding that I-E scores were influenced by diagnosis.

I-E score changes were also examined comparing patients at the time of admission versus the time of discharge. It
Table I
Analysis of Variance Comparing Difference Scores on First Administration of the I-E Scale

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment status</td>
<td>1, 59</td>
<td>19.1302</td>
<td>1.0191</td>
</tr>
<tr>
<td>(voluntary versus involuntary)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis (thought versus affective</td>
<td>2, 59</td>
<td>3.7541</td>
<td>0.2000</td>
</tr>
<tr>
<td>versus other disorders)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>2, 59</td>
<td>3.7160</td>
<td>0.1979</td>
</tr>
</tbody>
</table>
was predicted that both voluntary and involuntary patients would score in a more internal direction. Of the original 65 patients, 41 completed the I-E scale prior to discharge. Using the data obtained from these patients, a 2 x 3 x 2 analysis of variance was performed utilizing commitment status, diagnosis, and the score obtained at admission or discharge. Mean scores are presented in Table II, and F ratios are presented in Table III.

As in the earlier analysis, no significant differences were found due to status ($F[1,35] = .8145$), diagnosis ($F[2,35] = .1478$), or their interaction ($F[2,35] = .4412$), which is similar to results obtained by Harrow and Ferrante (1969). Differences due to score changes at admission versus discharge were not significant ($F[1,35] = 2.2049$). Interactional effects due to status and change scores were insignificant ($F[1,35] = .0100$), as well as interactional effects due to diagnosis and change scores ($F[2,35] = 1.4125$). The interaction effect of all three (status, diagnosis, and change scores) variables was nonsignificant as well ($F[2,35] = 2.3387$).
### TABLE III

Mean Scores Obtained on Both Administrations of the I-E Scale by Diagnosis and Commitment Status

#### First Administration

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Voluntary</th>
<th>Involuntary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thought Disorder</td>
<td>9.57</td>
<td>9.85</td>
</tr>
<tr>
<td>Affective Disorder</td>
<td>9.30</td>
<td>11.5</td>
</tr>
<tr>
<td>Other Disorders</td>
<td>8.83</td>
<td>10.125</td>
</tr>
</tbody>
</table>

#### Second Administration

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Voluntary</th>
<th>Involuntary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thought Disorder</td>
<td>10.0</td>
<td>9.833</td>
</tr>
<tr>
<td>Affective Disorder</td>
<td>8.50</td>
<td>7.75</td>
</tr>
<tr>
<td>Other Disorders</td>
<td>6.33</td>
<td>11.0</td>
</tr>
</tbody>
</table>
Table III
Analysis of Variance Comparing Difference Scores on Both Administrations of the I-E Scale

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment status</td>
<td>1, 35</td>
<td>27.9199</td>
<td>.8145</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>2, 35</td>
<td>5.0630</td>
<td>.1478</td>
</tr>
<tr>
<td>Interaction (status x diagnosis)</td>
<td>2, 35</td>
<td>15.1239</td>
<td>.4412</td>
</tr>
<tr>
<td>Change Scores (admission versus discharge)</td>
<td>1, 35</td>
<td>12.0383</td>
<td>2.2049</td>
</tr>
<tr>
<td>Interactions (status x change scores)</td>
<td>1, 35</td>
<td>.0547</td>
<td>.0100</td>
</tr>
<tr>
<td>Interactions (diagnosis x change scores)</td>
<td>2, 35</td>
<td>7.7121</td>
<td>1.4125</td>
</tr>
<tr>
<td>Interactions (status x diagnosis x change scores)</td>
<td>2, 35</td>
<td>12.768</td>
<td>2.3387</td>
</tr>
</tbody>
</table>
VI. DISCUSSION

The first hypothesis that there would be a significant difference in locus of control scores was not confirmed. This is in contrast to the original expectation that there would be significant differences based on Levenson's (1973) findings that involuntary patients perceived control by powerful others more often than voluntary patients. It was also expected that diagnosis would be a significant factor here, since other research (Harrow and Ferrante, 1969), indicated that I-E scores were influenced by acute psychiatric symptoms. This expectation was not confirmed either, as no significant difference was found due to diagnosis.

It should be noted that both Harrow and Ferrante's (1969) and Levenson's (1973) studies, patients who completed the locus of control questionnaires were hospitalized for a long term period, usually several weeks, in a state hospital setting. This is unlike the patients at the CSU who were admitted in acute crisis and length of stay averaged just under one week (6.9 days). Also, the patients at the CSU were admitted while in acute crisis, as compared to patients at the state hospital. Several psychotic patients (n=8) at the CSU remained too acute to complete the questionnaire. Many of the other psychotic patients who did complete the I-E scale did so only after they were medicated for at least
one whole day, thus reducing symptoms. Most of the non-psychotic patients (n=34) completed the I-E scale immediately upon admission.

Previous research (Fontana, Klein, Lewis, and Levine, 1968) demonstrated that psychiatric patients were able to present as sick or healthy, depending upon their purposes. Several of the committed patients who had extremely low I-E scores (n=5) faced the prospect of having a court appearance to determine whether they would be committed for a longer period of time. It is logical to speculate that these patients may have been trying to present themselves as internally oriented so as to appear normal to the staff and hence be able to influence their court hearing. Their low I-E scores drove down the overall mean scores for involuntary patients, possibly accounting for the nonsignificant results.

The hypothesis that locus of control scores would, as a result of treatment, change in a more internal direction was not confirmed. This is consistent with Harrow and Ferrante's (1969) result that, overall, there were no significant differences in I-E scores due to treatment. At the end of six weeks treatment, Harrow and Ferrante found that patients labelled both manic depressives and character disorders had significant change scores. There was not any significant differences in I-E scores due to diagnosis at the end of treatment in this study. Here, the length of hospitalization is again an important issue. Patients in
Harrow and Ferrante's (1969) study had a far longer treatment period (six weeks) than did patients admitted to the CSU (who averaged 6.9 days).

As cited above, Levenson (1973) found that involuntary patients perceived control by powerful others and Harrow and Ferrante (1969) found that the interaction of diagnosis and length of hospitalization was significant. With the exception of these two results, the bulk of research indicates that, overall, locus of control orientation does not change as a result of psychiatric treatment.

Gove and Fain (1977) reached a similar conclusion after assessing state hospital psychiatric patients in terms of demographic variables and the nature and severity of their problems.

There is nothing in these results supporting the notion that in terms of treatment, involuntary commitment is detrimental to the patient, as Szasz (1977) had concluded. Since the debate concerning involuntary hospitalization continues, it remains relevant to pursue the effects of involuntary commitment on psychiatric treatment. Research involving other personality variables in relation to involuntary commitment can help to clarify what does happen to patients' attitudes and behaviors when they are committed against their will.
References


Procedures for Involuntary Examination, Florida Statutes, Chapter 394, Section 467, (1982 Supplement)


