DEPRESSION AND COGNITIONS

OF SIGNIFICANT LIFE EVENTS

Thesis Presented to

The Faculty of the Graduate School

Lakehead University

In Partial Fulfilment

of the Requirements for the Degree
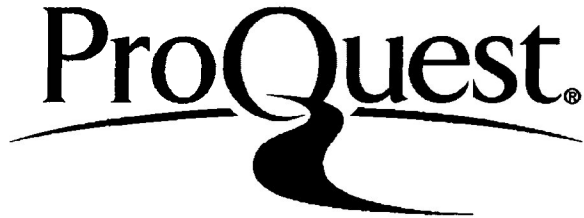
Master of Arts

by

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October 1987

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Abstract

The present study examined a number of relevant
underlying cognitions of depression, within the context
of learned helplessness theory, and more specifically,
reformulated learned helplessness theory. Previous
research has found mixed support for the possibility
that locus of control, moderates the effects of life
stress on depression. Externality is theoretically
linked to helplessness and in order to elucidate the
role of controllability in depression, the Levenson IPC
scales (Levenson, 1974) were employed in the present
study. The attributional reformulation of learned
helplessness theory proposes that depressives
make more attributions to internal, stable, global
causal factors over negative events than do
non-depressives. In addition to an assessment of
maladaptive attributional style, Harvey (1981) included
a controllable - uncontrollable dimension of causes in
his questionnaire and found that depressives also made
attributions to controllable causes. This finding,
using student subjects, minimized the central

importance of helplessness as related to depression. The present study attempted to test the above findings. Subjects included 126 college students and 26 out-patient counselling subjects. Each was given a Beck Depression Inventory (Beck, 1967), the Levenson IPC scales (Levenson, 1974), a Life Events Inventory (Cochrane and Robertson, 1973), and an Attribution Style Questionnaire (Hammon & Mayol, 1982). A multiple classification of analyses of variance revealed that male out-patients make attributions to internal, stable, global factors; while female out-patients, the highest scoring BDI group, made attributions to external, stable, global factors. There was partial support for the maladaptive attributional style, but several questions and issues were raised. In contrast to the findings of Harvey (1981), females whether depressed or not, attributed the cause of stressful events to external factors. Finally, a series of step-wise multiple regression analyses were conducted on the data to examine the relative contribution of the attributions generated from the Attribution Style Questionnaire and the three locus of control scales.

Results reveal the Uncertainty, Powerful other and Chance scales are the best overall predictors of depression. The above findings lend support to the learned helplessness model of depression rather than a negative self-attitude model (Beck, 1967).

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CHAPTER ONE

Introduction

Depression and Cognitions of Significant Life Events

The causes and consequences of depression have long
occupied the attention of psychologists. Despite its
importance as a mental health problem, little is
understood about depression. It is a construct
encompassing a heterogeneous set of behaviours.
Briefly, depression is characterized by (1) sad affect,
(2) biological changes, (3) behavioural retardation
(slowed activity and speech, inertia, lack of
initiative), (4) generalized attitudes of pessimism
(negativity, hopelessness, self-depreciation, guilt),
and passivity (loss of interest, lack of motivation,
helplessness).

Within recent years considerable theory and
research about the causes of depression has concerned
the role of cognitive processes (Beck, 1967; Abramson,
Seligman & Teasdale, 1978; Burger, 1984; Nelson &
Cohen, 1983; Ganellen & Blaney, 1984; Burns, Shaw &
Croke, 1987). Contemporary theories of depression such
as those of Beck (1967, 1976), Seligman (1975), and

Abramson, Seligman, and Teasdale (1978) have emphasized depression as a response to interpretations of negative events. These researchers and their colleagues share the view that it is the appraisals of events rather than their mere occurrence which shapes the nature and intensity of dysfunctional reactions.

Within the past ten years many researchers have explored the idea that cognitive aspects of depression may be amenable to an attributional analysis (Rehm & O'Hara, 1979; Abramson & Sackeim, 1977; Abramson et al. 1978). The symptomatalogy of depression is intimately related to the manner in which depressed individuals make inferences about the world and their role in the world. Such symptoms as pessimism, low self-esteem, and guilt translate easily into the vocabulary of attribution theory. Guilt, for instance, may represent the attribution of failure to intentional lack of effort. The processes that produce and maintain depression, then, may parallel processes that produce and maintain specific modes of making attributions. Similarly, therapy procedures for depression may be clarified or improved, if they are viewed as procedures for modifying attributions (Rehm & O'Hara, 1979).

Learned helplessness and locus of control are

constructs closely related to attribution theory and each have been applied to analyses of depression. These constructs along with other dimensions of attribution and the reconceptualization of learned helplessness shall be discussed.

Perceptions of Personal Control and Depression

In social learning terms (Rotter, 1966) perceived control is defined as a generalized expectancy for internal as opposed to external control of reinforcements. It is assumed that individuals develop a general expectancy operating across a variety of situations regarding their ability to control their lives. The generalized expectancy of internal versus external control of reinforcement involves a causal analysis of success and failure, involving the interpretation of the cause of those experiences (Lefcourt, 1976). Internal control refers to the perception of one's life events as being a consequence of one's own actions and/or personality characteristics and attributes, and thereby under personal control. External control refers to the perception of one's life events as being a function of luck, chance, fate,

powerful others, or powers beyond personal control or comprehension (Rotter, 1966; Lefcourt, 1966; Joe, 1971).

Accordingly, individuals are said to differ along a continuum of the extent to which they believe that events in their lives are controlled by themselves (internal locus of control) or by external sources, such as powerful others and chance (external locus of control). Furthermore, it is assumed that these beliefs represent stable individual differences.

Several investigators have examined the correlation between measures of locus of control and measures of depression. The majority of findings indicates that external locus of control tends to correlate positively with self-reports of depression (Abramowitz, 1969; Goss & Morosko, 1970; Warehime & Woodson, 1971; Calhoun, Cheeney, & Dawes, 1974; O'Leary, Donovan, & Hague, 1974; Emmelkamp, 1975; Procuik, Breen, & Lussier, 1976; Leggett & Archer, 1979; Costello, 1982).

As a result, many researchers have concluded that depressed persons tend to be external and consequently, passive with regard to important events in their lives. Individuals characterized by a belief in external control may not be as motivated to engage in the

instrumental responses necessary to achieve gratification which results in a decreased level of activity (Rehm & O'Hara, 1979).

Several scales have been developed to measure the locus of control construct for specific populations (Rotter, 1966; Reid & Ware, 1974; Mischel, Zeiss, & Zeiss, 1974; Lefcourt, 1976). The availability of Rotter's (1966) Internal-External Locus of Control Scale has led to a number of correlational studies with depression, which have produced much controversy.

First, most of the investigators have employed the Rotter (1966) scale. Several factor-analytic studies have demonstrated that this bipolar locus of control scale may be multidimensional (Gurin, Gurin, Lao, & Beattie, 1969; Mirels, 1970; Cherlin & Boroque, 1974; Viney, 1974). For example, it is unclear whether an external locus of control reflects a belief that powerful others or chance or a combination of both is responsible for what happens to the individual. Obscured differences may only be observed through the use of a multidimensional scale, such as the Levenson IPC Scales (1974).

Furthermore, Lamont (1972) maintained that mood may be confounded with item content on the Rotter scale.

He found that when subjects rated the Rotter scale items, the external items were judged to be significantly more depressive in tone than internal items. When the items were re-written to reflect positive, neutral or negative mood so that item mood level was partialled out statistically, the correlations between depression and the Rotter scale were no longer significant. These findings were replicated by Aiken and Baucom (1982) as well as Evans and Dinning (1978).

Another issue surrounding the suggested association between externality and depression, is a possible temporary shift in perception of control. Gilbert (1976) suggested that a change from internal to external expectancies of control may be an important antecedent to depression. He found that individuals attending a university counselling centre were able to distinguish between characteristic and situational perceptions of control and, although, reporting greater externality in describing their immediate situation, described themselves in many cases as characteristically internal. Thus, under distress, the general tendency to appraise internal control may yield to an external perception giving rise to a sense of loss of control.

Another group of studies have examined the personality dimension of control in the context of experimental manipulations of control or learned helplessness. These researchers find that under certain experimental conditions individuals perceiving a lack of personal control over traumatic events will exhibit increased signs of depression (Miller & Seligman, 1975; Leggett & Archer, 1979; Pittman & Pittman, 1979, Hiroto, 1974). One of the key experimental manipulations in the creation of helplessness is the altering of individuals' cognitions from one of assumed control to one of no or little control over the experimental task.

Some investigators examining the influence of locus of control beliefs within a learned helplessness experimental setting have found that internals and externals respond differently to the experience of uncontrollability. Hiroto (1974), for example, utilizing extreme groups on the internal-external dimension, demonstrated that subjects with an external locus of control performed more poorly on certain tasks after experiences with uncontrollable situations than did internals. However, Pittman and Pittman (1979) found this to be the case only with relatively mild

experiences with uncontrollability. Results revealed that internals exhibited greater performance decrements and reported greater depression under high helplessness conditions than did externals. In low helplessness conditions, internals tended to perform better on the anagram task than control subjects, while externals tended to perform worse than controls and internals, and reported greater depression than internals. In other words, after only mild experiences with uncontrollability, externals showed helplessness effects. It would seem, then, that internals are more prone to depression than externals under extensive conditions of helplessness. Under less severe conditions of helplessness, externals may be more prone to depression than internals. Thus, degree of experimentally manipulated helplessness may affect the locus of control and depression relationship.

The above studies seem to indicate that the Rotter (1966) scale may not accurately predict behaviour logically related to locus of control.

Externality and Coping

Ganellen and Blaney (1984) suggested that there are

several unanswered questions concerning the manner in which belief in the influence of chance (externality) mediates reactions to stressful events. Researchers such as Johnson and Sarason (1978) have claimed that stress may have its most adverse effects on individuals who perceive themselves as having little or no control over such stressful events. According to Ganellen and Blaney (1984) such a claim is ambiguous. They questioned whether the locus of control construct measures beliefs about one's responsibility for the creation of past stressful events or perceptions of control over future events. The former possibility which may be related to self-blame for an event's occurrence is consistent with an internal, attribution perspective (i.e., Abramson, Selignman, Teasdale, 1978) and a negative self-attitude model of depression (Beck, 1967). The latter possibility, in contrast, may be related to attempts to cope with stressful events once they have occurred. In this case, external attributions, such as to chance factors should reduce negative affect when stressful events occur.

Two recent studies argue against the possibility that externality explains why past events occurred. Hammon and Mayol (1982) examined types of events, their

relation to depression, and typical cognitive appraisals of events. Events were classified as to whether subjects were responsible for them and whether the events were desirable or undesirable. The events most strongly related to depression, those that were undesirable-responsible, were seen as being controllable, internally caused, intended, expected, and likely to recur. Harvey (1981) found that depressed subjects described negative events as being both internally caused and controllable rather than as being caused by chance factors. These studies suggest that subjects do not appraise depression-relevant events as being caused by chance factors. Externality, therefore, seems unlikely to explain why past events occurred.

Learned Helplessness and Depression

The work of Seligman and Maier (1967) in laboratory experiments with animals gave rise to the "learned helplessness" model of depression. Dogs, given an experience in which they cannot escape or avoid a noxious stimulus, behave passively when placed in a new aversive context, even though a response is available

that will permit escape from the painful event. The prior experience with uncontrollable, aversive stimulation is said to result in learned helplessness, manifested in a motivational deficit and in an interference with the learning of new response-relief contingencies. Seligman (1975) argued that it was not the exposure to aversive stimulation per se which caused the deficient instrumental learning but the uncontrollability of the stress. At the root of the learned helplessness model was the apparent need for control over the environment. Accordingly this need for control is so important that when one comes to expect that certain events are uncontrollable, hopelessness and depression may result. The experience of lack of control over aversive events produces a belief that responding is independent of outcome. This belief, termed "learned helplessness", parallels Rotter's external locus of control construct, and is also related to the attributional concept of external attribution of causality of the reformulated learned helplessness model of depression (Abramson, Seligman, & Teasdale, 1978).

Using principles developed in an experimental psychology laboratory, Seligman (1975) developed an

analogue of human depression. Seligman's hypothesis was that the primary cognitive symptom of reactive depression in humans was essentially a state of learned helplessness, characterized most notably by the perception of non-control. In several studies, Seligman and his colleagues have attempted to demonstrate that depressed and helpless subjects were less likely to alter beliefs regarding future success, despite previous success or failure (Miller & Seligman, 1973, 1976; Klein & Seligman, 1976). These studies were crucial because they attempted to test directly the central tenet of the helplessness model--the belief of independence of response and important outcomes. Although there is some evidence for arguing that externality is a symptom of depression, it has not yet been powerfully demonstrated that helplessness is the appropriate model for externality (Rehm & O'Hara, 1979).

As the many human studies of learned helplessness appeared, it gradually became apparent that the model was not predictive of the behaviour of humans as well as of animals. Furthermore, the basic model was questioned on a number of empirical and logical grounds (Blaney, 1977). Among the problems posed was the

generalizability of the effect. Why should the effects of uncontrollability transfer across mode of task to contingencies discriminably different from the original? There was also the problem of the inconsistency between learned helplessness and the symptom of guilt. If depressed persons believe that they have no control over the major events in their lives, then why should they feel guilty about past unhappy events? Guilt implies responsibility and thus an internal attribution and an internal locus of control. Abramson and Sackeim (1977) discussed this paradox and pointed out that it exists in clinical descriptions of depressive symptomatology, in theoretical accounts, and empirical findings with depressed subjects. These problems were of particular interest and led to the reformulation of the original learned helplessness model of depression.

Reformulated Learned Helplessness and Depression

To account for the above findings, the learned helplessness model was reformulated in attribution theory terms. Abramson, Seligman, and Teasdale (1978) have suggested an attributional model from learned

helplessness and discuss what they refer to as a "reformulated learned helplessness" model of depression. The model proposed that the relation between expectation of uncontrollability and depressive symptoms is mediated by an attribution of causality for the outcome that is perceived as uncontrollable. The researchers argued that attributions of causality can be classified along three dimensions. These dimensions are internal-external, stable-unstable, and global-specific.

Basically, the model maintained that the attribution of causality one makes for a traumatic uncontrollable event will determine the type and extent of one's depression. Attributions on the global-specific dimension influence the degree of generality of the depression. Individuals may thus be depressed with regard to one specific area of their life or experience a more general debility. Attributions on the stable-unstable dimension lead to a transient depression, whereas a stable attribution leads to a more chronic depression. Attributions to internal versus external causes influence self-esteem. According to the model, loss of self-esteem occurs only following an internal attribution to an aversive event. Seligman, Abramson,

Semmel, and von Baeyer (1979) found that depressed college students, compared to non-depressed college students, attributed bad outcomes to internal, stable, and global causes, as measured by an attributional style scale. These authors concluded that a maladaptive attributional style predisposes individuals to react in a depressive way to the presence of aversive events or the non-occurrence of positive events. Consequently, negative events attributed to internal (personal), stable (unchanging) and global (wide ranging) attributions are considered more devastating emotionally. According to this analysis, individuals vary in their susceptibility to depression as a function of differences in attributional style. In addition, people who tend to attribute failure to internal, stable, and global factors are more prone to guilt and chronic generalized depression.

In order to account for the weaknesses of the original model of learned helplessness, two forms of helplessness were postulated. In the first form people are helpless because they believe that events are caused externally and are independent of their own behaviour. These depressed people would logically behave in an apathetic passive manner but would not necessarily

exhibit low self-esteem and self-depreciation. The second type of depressed people would believe their helplessness to be due to their own lack of ability, effort, capacity or skill. This personal helplessness would result in low self-esteem and self-depreciation. This analysis would also explain why prior studies found inconsistencies in the correlation between depression and externality cited previously in the locus of control literature. However, the idea of two forms of helplessness is not entirely consistent with the clinical or research literature which suggests that both forms of attributions are often present in the same individual (Abramson & Sackeim, 1977).

In order to account for the clinical phenomenon of self-blame/guilt, Harvey (1981) suggested that an assessment of the controllability of perceived causes be specified and included in the attributional model. Since Abramson, Seligman, Teasdale, and von Baeyer (1979) did not include the controllable dimension of causes in their attributional model of depression, internal attributions for aversive outcomes must have accounted for feelings of helplessness as well as self-blame. However, Harvey (1981) claimed that it was not clear that the internal-external dimension alone could

sufficiently describe the cognitive basis for self-blame. If one assumed that people are to blame only for what is presumed to be intentional, then blame by others and by oneself hinges on whether the cause of a negative event is perceived as controllable. Internal causes may not always be perceived as controllable, such as an individual who attributes the failure of a college entrance examination to subaverage native intelligence. The internal dimension, therefore, cannot sufficiently account for self-blame and hence, the controllable dimension of causes needs to be adequately assessed among the cognitions underlying depression (Abramson & Sackeim, 1977; Harvey, 1981).

The controllable dimension of causes is also important in distinguishing between helplessness and low self-esteem models of depression. Given the central role of uncontrollability in the original and reformulated learned helplessness models of depression (Maier & Seligman, 1967; Abramson et al. 1978), these models appear to predict that depressives more often attribute outcomes to uncontrollable causes. In contrast to the learned helplessness models, Beck's (1967) negative self model focuses on depressives' attitudes toward the self, and would predict that

depressed individuals would rate themselves as having greater responsibility over negative events than non-depressed persons. It would seem, then, that both the perceived locus of causality and perceived control dimensions of causes of events need to be addressed further in studies of cognitions and depression.

More recently the theory of causal attributions has led to the recent formulations relevant to depression and contributed the dimensions of intentionality, expectation (anticipation), degree of uncertainty caused by the event, and likelihood of its recurrence (c.f. Hammon & Mayol, 1982); thereby, reducing the possibility of a confound of unintended and unwanted events with uncontrollable events.

Purpose of The Present Study

Most of the studies reported (Abramson et al. 1978; Seligman et al. 1979; Harvey, 1981; Hammon and Mayol, 1982) are based on the perceptions of young adult college students most of whom were non-depressed. College students may perceive stressful events differently than do depressed non-student adult populations. The present study, then, compared both

student and out-patient counselling populations on depression relevant cognitions. It was predicted that the out-patient groups (male and female) would be significantly more depressed than student groups. Given the central role of uncontrollability (lack of control/helplessness) in the reformulated learned helplessness model of depression, it was predicted that the more depressed the subjects the more attributions to uncontrollable causes. This finding would be consistent with the proponents of the original and reformulated learned helplessness models but contrary to the findings of Harvey, Hammon and Mayol, who all found that "helplessness" was not a feature of depression for most of their sample. Once again, these researchers used a student sample, that was non-depressed. Consistent with maladaptive attributional style, out-patients will make more internal, stable, global attributions than the student groups.

Furthermore, using the multidimensional locus of control scale, results will indicate a belief in external factors is associated with greater depression. However, the Levenson scales will be able to indicate whether perceptions to powerful others or to chance factors is specifically related to high depression

scores.

The locus of control and learned helplessness literature indicate that the domain of depression-related cognitions regarding the perception of control is more complex and differentiated than is captured by most methodologies (Blaney, 1977; Burger, 1983; Brewin, 1986). Using multiple regression statistical analysis, the present study will demonstrate the best overall predictors of depression. They are expected to be the internal-external dimension, the uncontrollable-controllable dimension, and the externality scale of the Levenson scales. The importance of each of these dimensions has previously been established, and on a theoretical note, they capture the central notion of "helplessness" which is central to the reformulated model of depression.

CHAPTER TWO

Method

Subjects

A total of 126 undergraduate students, 94 females
and 32 males, ranging in age from 18 to 67 years,
participated in the study. Classes from the social
sciences department of the various post-secondary school
institutions in the Sault Ste. Marie, Ontario region
(Lakehead University, Thunder Bay, Ontario; Lake
Superior State College, Sault Ste. Marie, Michigan;
Algoma University College, Sault Ste. Marie, Ontario)
were approached and requested for volunteers'
participation in the study.

In addition, an out-patient counselling population
from the Psychology Department, Plummer Memorial Public
Hospital, Sault Ste. Marie, Ontario, was recruited. At
the time of a client's first appointment, the individual
was asked through written instructions on a "Consent To
Research Study" form (see Appendix A) whether
participation in the study was desired. In the event of
a positive indication, the client was given a packet and
requested to return it completed to the department of

psychology on the day of a second appointment. This method generated an out-patient counselling population of 26, 19 females and 7 males, ranging in age from 18 to 53 years.

Apparatus

All subjects completed a booklet containing the Beck Depression Inventory (BDI; Beck, 1967), the Levenson IPC scales (1974), a Life Events Inventory (Cochrane & Robertson, 1973), and an Attribution Style Questionnaire as found in Hammon and Mayol (1982). (Refer to Appendix B for a sample booklet).

The BDI is a 21 item self-report measure of the affective, behavioural, cognitive, and somatic symptoms of depression. The measure has been shown to correlate highly (r=.77, p<.05) in college students with psychiatrist-rated depression (Bumberry, Oliver, & McClure, 1978) and with interview-based Hamilton Rating Scale for Depression scores (Hammon, 1980; r=.75 p<.05). The range of possible scores extends from 0 to 63, with scores of 0 to 9 being categorized as not depressed, 10 to 15 as mildly depressed, 16 to 23 as moderately depressed and 24 to 63 as severely depressed.

The Levenson IPC scales (1974) each consist of 8 items, a total of 24 items, on a Likert 6-point scale so that the 3 scales are statistically independent from one another. Levenson constructed and validated the multidimensional locus of control scale to measure perceptions of influence on outcomes expected by internal mastery, control exerted by powerful others, and chance. The three scores provided by the scales are: the extent to which one believes that one is personally responsible for what happens to one (internal score); the extent to which one believes that powerful others tend to control what happens to one (powerful other score); and the extent to which one believes that what happens to one is determined by chance (chance score).

The booklet also contained a Life Events Inventory, comprising of 55 items (Cochrane & Robertson, 1973). Through the use of inter-rater judges, Hammon and Mayol (1982) classified the events of a modified Life Events Inventory (1973) by event type (Type A, desirable-responsible; Type B, undesirable-responsible; Type C, undesirable-not responsible; Type D, ambiguous).

The Attribution Style Questionnaire (1982) consists of 9 items rated on 7-point scales. The dimensions

measured are: Upset, Control, Locus of Causality (internal or external), Stability, Globality, Recurrence, Intentionality, Expectation, and Uncertainty. (Refer to Appendix C). Hammon and Mayol (1982) report information on the reliability of these scales and suggest that these single-item cognition scales have sufficient reliability to warrant use as research tools.

Procedure

All participants each received a booklet with the questionnaires. All instructions for filling out the inventories and questionnaire were contained in the packets. For the Life Events Inventory subjects were instructed to indicate the significant life events which had occurred within the previous 6 months of this study. Ganellen and Blaney (1984) suggested that retrospective reporting of events that occurred more than six months before recall may result in substantial under-reporting of event occurrence when compared to actual records of event frequency. For this reason the events occurring within the last six months of this study were requested rather than those occurring within

the previous year.

Abramson et al.'s (1978) findings lend partial support to an attribution model of depression, suggesting that depressed individuals attribute causes of failure to themselves to a greater degree than non-depressed individuals. However, the generalizability and validity of their results may be limited by the artificial and structured methods used to assess attributional style. The most popular assessment method has been the use of dimensional attributional rating scales of hypothetical events and outcomes (Sweeney & Bailey, 1986). In the present study, it was reasoned that by using real-life past significant stressful events, the causal relation between attributions and depression would be expected to be stronger than in imagined hypothetical situations, therefore, for each of up to 5 of the indicated events on the Life Events Inventory, participants were requested to complete the Attribution Style Questionnaire.

Booklets completed by the student and out-patient samples were each further divided into male and female groups. A 2 x 2 factorial design (refer to Table 1) was used, with group and sex as fixed factors.

Table 1

2 x 2 Factorial Design

Group	Sex		
	Males	Females	Total
Students	32	94	126
Out-Patients	7	19	26
Total	39	113	152

A series of one-way analyses of variance were conducted to obtain means and deviation scores on all variables for each of the 2 factors. A multiple classification of analyses of variance was, then, employed to generate any significant main effects and interactions on all variables. All independent variables (criterion predictors) were entered into seven step-wise multiple regression analyses to predict depression scores generated by the BDI (criterion). Finally, a series of Pearson correlation studies were conducted in order to compare and determine the strength of the relationship between variables.

CHAPTER THREE

Results

Using the Statistical Package for the Social Science (SPSS/PC) software (SPSS INC.), several statistical analyses were conducted on the data. One-way analyses of variance were conducted each by sex and group. Several significant differences were noted, therefore, neither the group or sex groups could be collapsed.

Multiple classification analyses of variance were applied on all variables by group and sex. (Refer to Tables 2 to 6 for a summary of means and standard deviation scores). (For a summary of significant main effects and interactions, refer to Figures 1 to 13).

A main effect for group on the Internal locus of control was significant, $F(1, 148)=7.61$, $p<.01$. Female out-patients indicated significantly lower Internal scores than all other groups. Out-patient males reported significantly greater Internal scores than female out-patients. Student females also reported significantly greater internality than out-patient females.

A group x sex interaction effect on the Powerful Other locus of control scale resulted in a significant

$F(1,148)=6.66$, $p<.01$. Female out-patients reported a significantly greater mean Powerful Other score than all other groups, while male out-patients indicated the significantly lowest Powerful Other score.

A group x sex interaction effect on the Chance locus of control dimension resulted in a significant $F(1, 148)=11.05$, $p<.01$. Female out-patients reported a significantly higher mean Chance score, while male out-patients reported the lowest mean Chance score.

Main effects for group and sex on Upset were significant, $F(1, 139)=12.97$, $p<.01$; $F(1, 139)=8.93$, $p<.01$, respectively. Female students reported a significantly higher mean Upset score than did male students, while female out-patients reported significantly higher Upset scores than student males.

Main effects for group and sex on the Control dimension were obtained, $F(1, 139)=4.05$, $p<.05$; $F(1, 148)=4.15$ $p<.05$, respectively. Male students reported significantly greater mean Control scores over life events than female students. Female out-patients reported significantly lower mean Control scores than both student groups.

A sex main effect on Locus of Causality was obtained, $F(1, 139)=101.06$, $p<.01$. Female students

reported a significantly greater external locus of causality than male students, while female out-patients also indicated a significantly greater mean locus of Causality, indicating greater externality than male out-patients.

A main effect for group on Stability was obtained, $F(1, 139)=4.36$, $p<.05$. Out-patient males reported a greater mean Stability score than did male students. Female out-patients reported a significantly greater mean Stability score than female students.

A main effect for group on Globality was also obtained, $F(1, 139)=9.84$, $p<.01$. Out-patients reported significantly higher Globality scores than did students. Specifically, out-patient males and females reported higher mean Globality scores than student males and females, respectively.

A significant group main effect and a marginal group x sex interaction on Recurrence were obtained, $F(1, 139)=4.86$, $p<.05$ $F(1, 139)=3.76$, $p<.054$, respectively. Male students reported a significantly greater Recurrence mean score, than female students and out-patient males.

No significant main effects or interactions on Intentionality were indicated.

Significant main effects for group and sex on Uncertainty scores were obtained, $F(1, 139)=17.41$, $p<.001$; $F(1, 139)=6.52$, $p<.05$, respectively. Out-patients reported significantly higher mean Uncertainty scores than the student groups. Both female out-patients and students reported significantly greater mean Uncertainty scores than males. Male students reported the significantly lower mean degree of Uncertainty, while female out-patients reported the significantly greater mean Uncertainty score.

A significant group main effect for Expectation was obtained $F(1, 139)=4.57$, $p<.05$. Students reported significantly greater mean Expectation scores than out-patients.

Table 2

Summary of Means and Standard Deviations and Variances for Male Students (N=32).

Variable	Mean	SD	Variance
BDI	5.36	6.58	43.30
Internal	32.90	6.18	38.22
Powerful Other	16.90	6.45	41.62
Chance	15.48	7.37	54.26
Upset	3.23	1.87	3.51
Control	4.25	1.87	3.49
Causality	4.58	1.61	2.59
Stability	3.44	1.85	3.42
Globality	4.26	1.77	3.12
Recurrence	5.37	1.52	2.32
Intentionality	3.85	1.69	2.84
Expectation	4.92	1.69	2.85
Uncertainty	2.76	1.66	2.75

Definition of Variables

BDI - (depression score)

Internal - (personal mastery over event outcomes)

Powerful Other - (extent to which one believes control

exerted by others)

Chance - (extent of belief that outcomes are determined

by luck, fate, chance)

Upset - (degree of upset over event occurrence)

Control - (degree of control)

Causality - (extent to which cause of event due to

internal-external factors)

Stability - (extent to which causes are unchanging/

changing)

Globality - (extent to which causes affect other areas

of life)

Recurrence - (likelihood of event occurrence within next

3 years)

Intentionality - (extent of intent of event occurrence)

Expectation - (extent of expectation of event

occurrence)

Uncertainty - (degree of uncertainty experienced as a

result of event occurrence)

Table 3

Summary of Means and Standard Deviations and Variances
for Female Students (N=94).

Variable	Mean	SD	Variance
BDI	6.64	5.35	28.66
Internal	32.73	6.77	45.78
Powerful Other	15.67	7.30	53.23
Chance	15.38	7.33	53.70
Upset	4.30	1.66	2.74
Control	3.55	1.75	3.07
Causality	5.24	1.50	2.24
Stability	3.61	1.79	3.22
Globality	4.58	1.53	2.33
Recurrence	4.61	1.69	2.86
Intentionality	3.75	1.80	3.23
Expectation	4.32	1.64	2.69
Uncertainty	3.50	1.61	2.58

Table 4

Summary of Means and Standard Deviations and Variances for Male Out-patients (N=7).

Variable	Mean	SD	Variance
BDI	9.71	7.09	50.24
Internal	32.14	4.22	17.81
Powerful Other	13.43	10.18	103.62
Chance	11.57	9.07	82.29
Upset	5.06	2.04	4.14
Control	3.33	1.88	3.53
Causality	3.29	1.51	2.29
Stability	4.19	2.10	4.40
Globality	5.56	1.30	1.70
Recurrence	3.46	1.93	3.71
Intentionality	4.09	1.85	3.44
Expectation	3.56	2.00	3.99
Uncertainty	4.07	2.05	4.21

Table 5

Summary of Means and Standard Deviations and Variances for Female Out-patients (N=19).

Variable	Mean	SD	Variance
BDI	24.47	11.38	129.49
Internal	27.42	6.54	42.70
Powerful Other	21.21	10.19	103.73
Chance	22.84	6.90	47.59
Upset	5.42	1.19	1.43
Control	2.86	1.17	1.38
Causality	5.26	1.30	1.68
Stability	4.45	1.69	2.87
Globality	5.53	1.18	1.40
Recurrence	4.25	1.41	1.99
Intentionality	2.96	1.11	1.23
Expectation	3.78	1.40	1.96
Uncertainty	4.99	1.26	1.60

<u>Figure 1</u>. <u>Mean BDI Scores</u>.
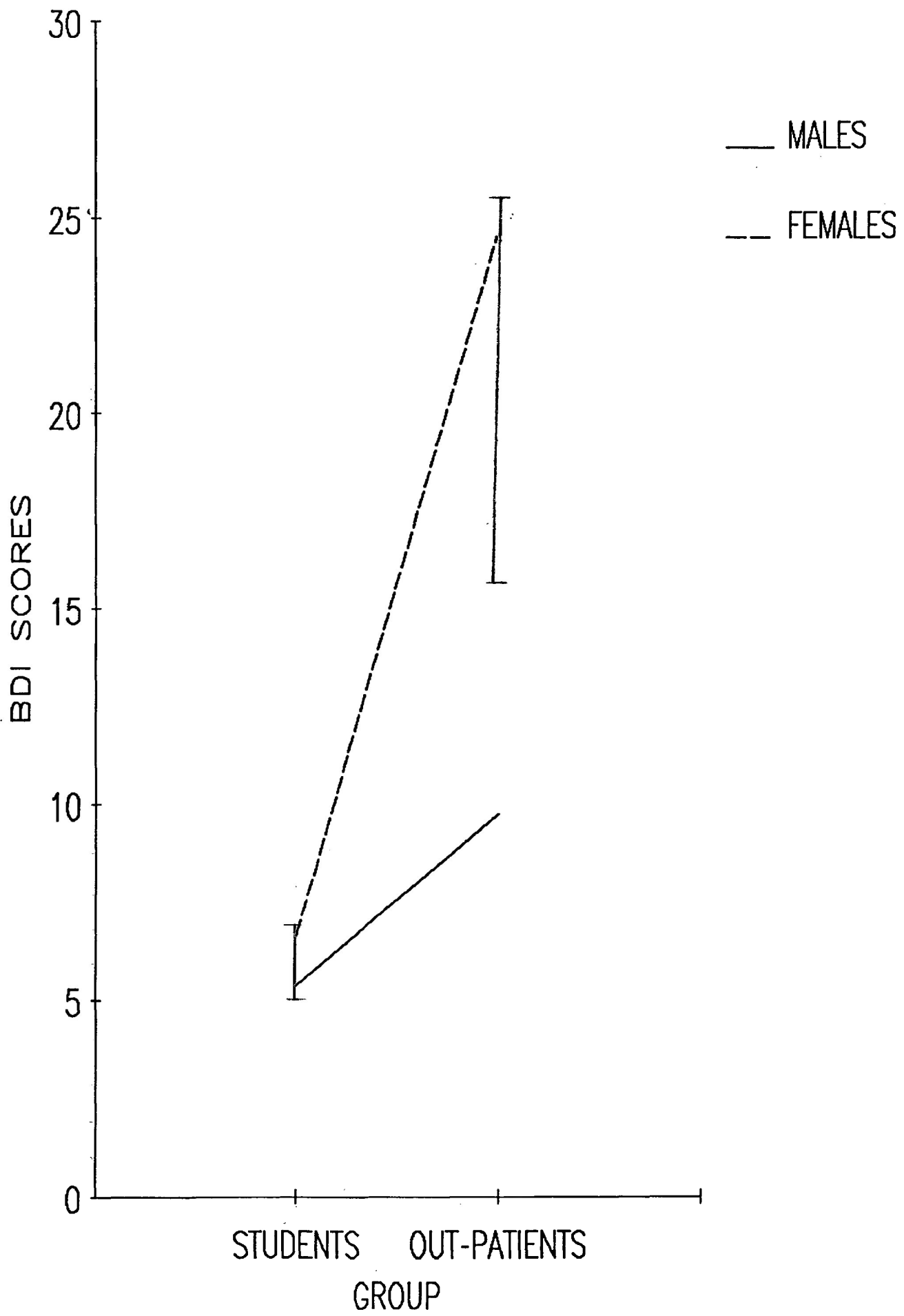
Figure 2. **Mean Internal Scores.**
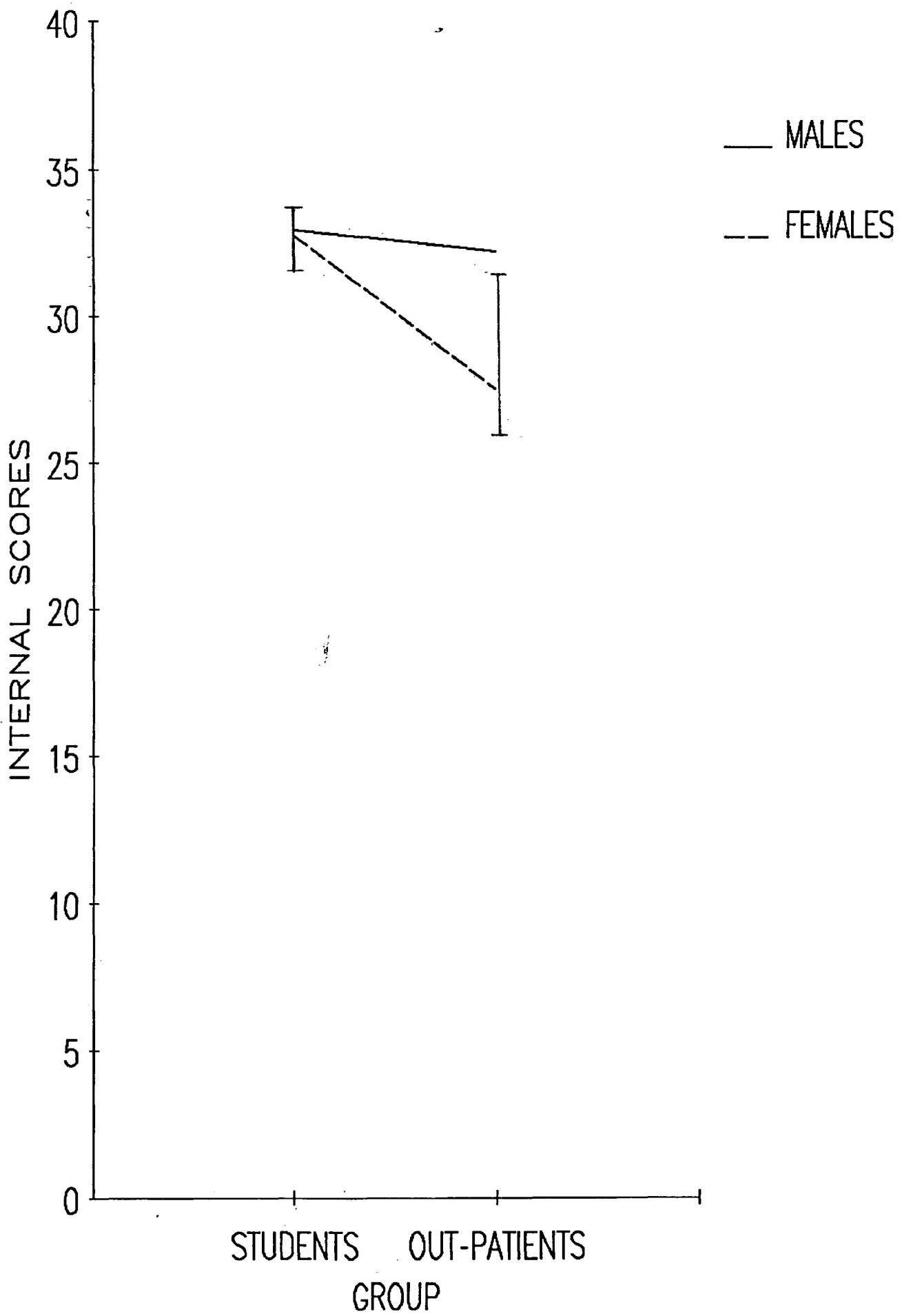
Figure 3. **Mean Powerful Other Scores.**
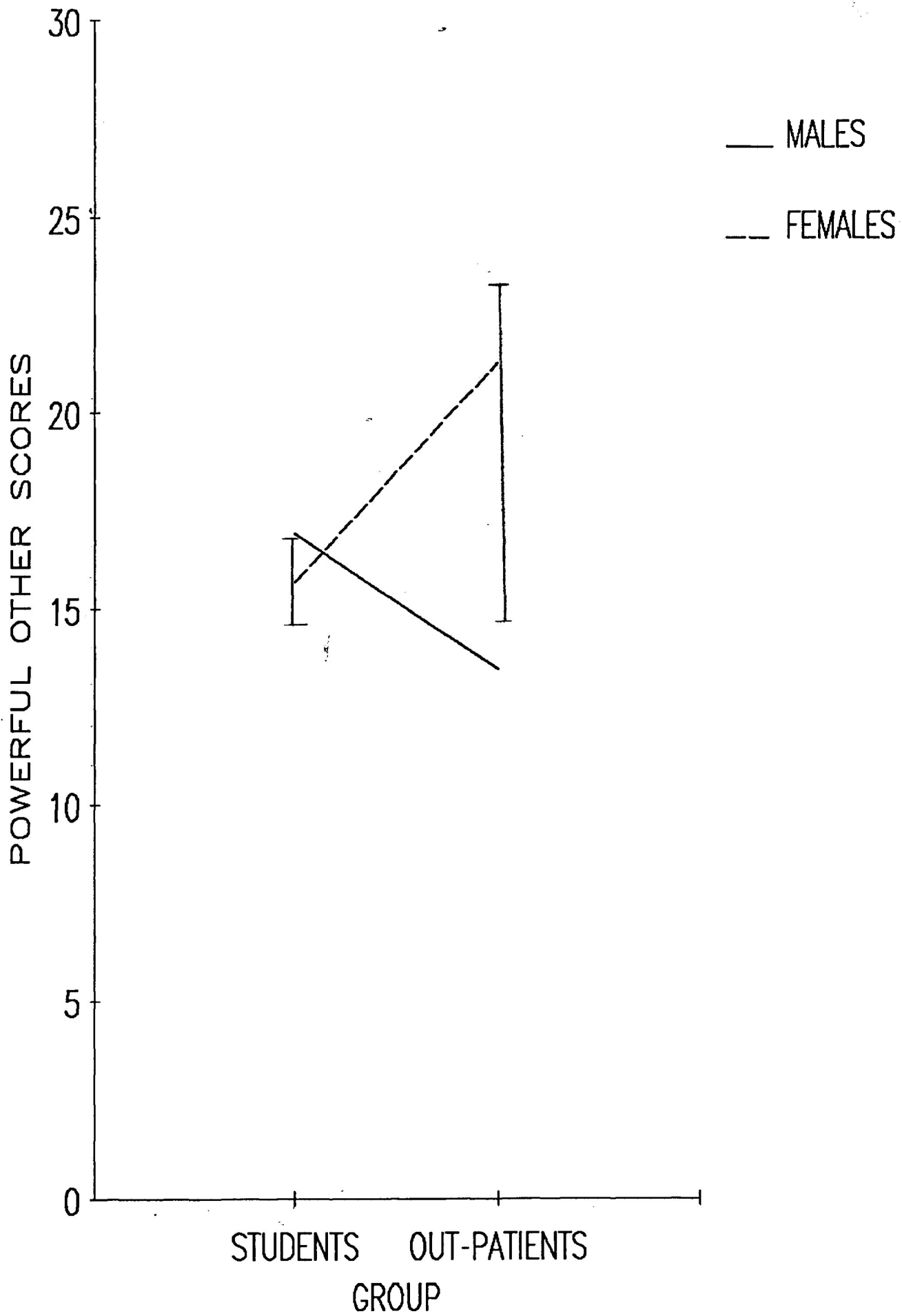
Figure 4. **Mean Chance Scores.**
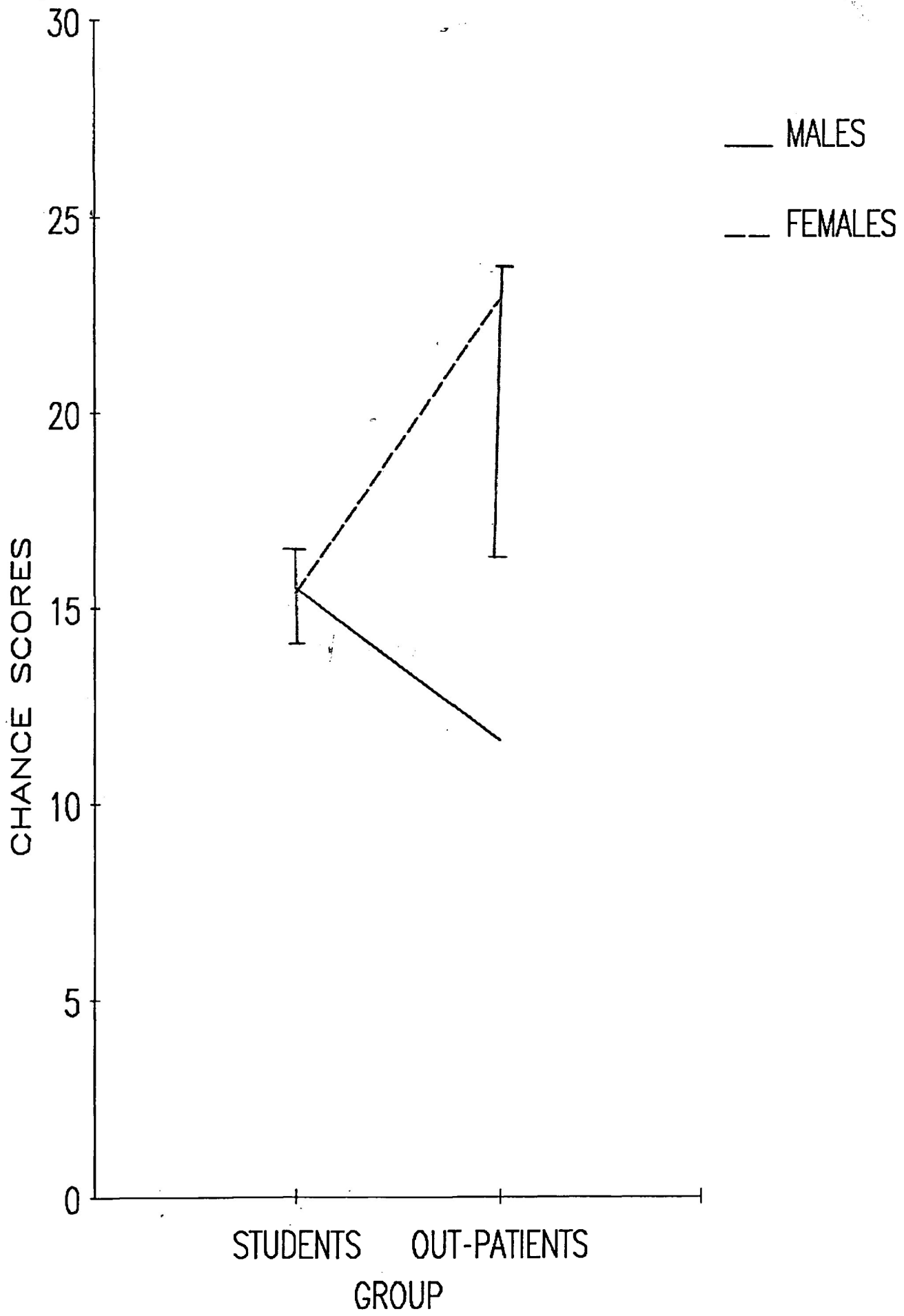
Figure 5. **Mean Upset Scores.**
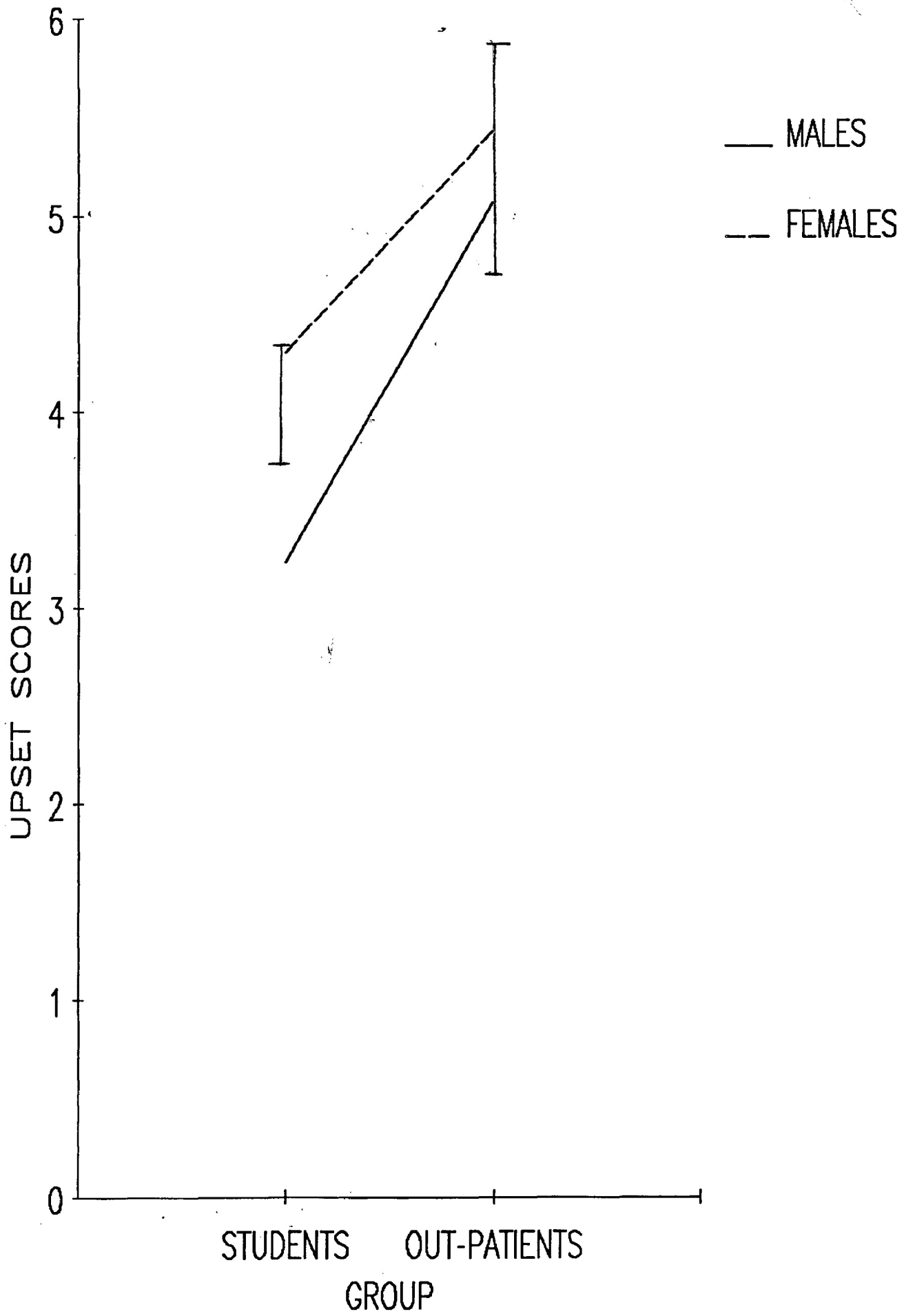
Figure 6. **Mean Control Scores.**
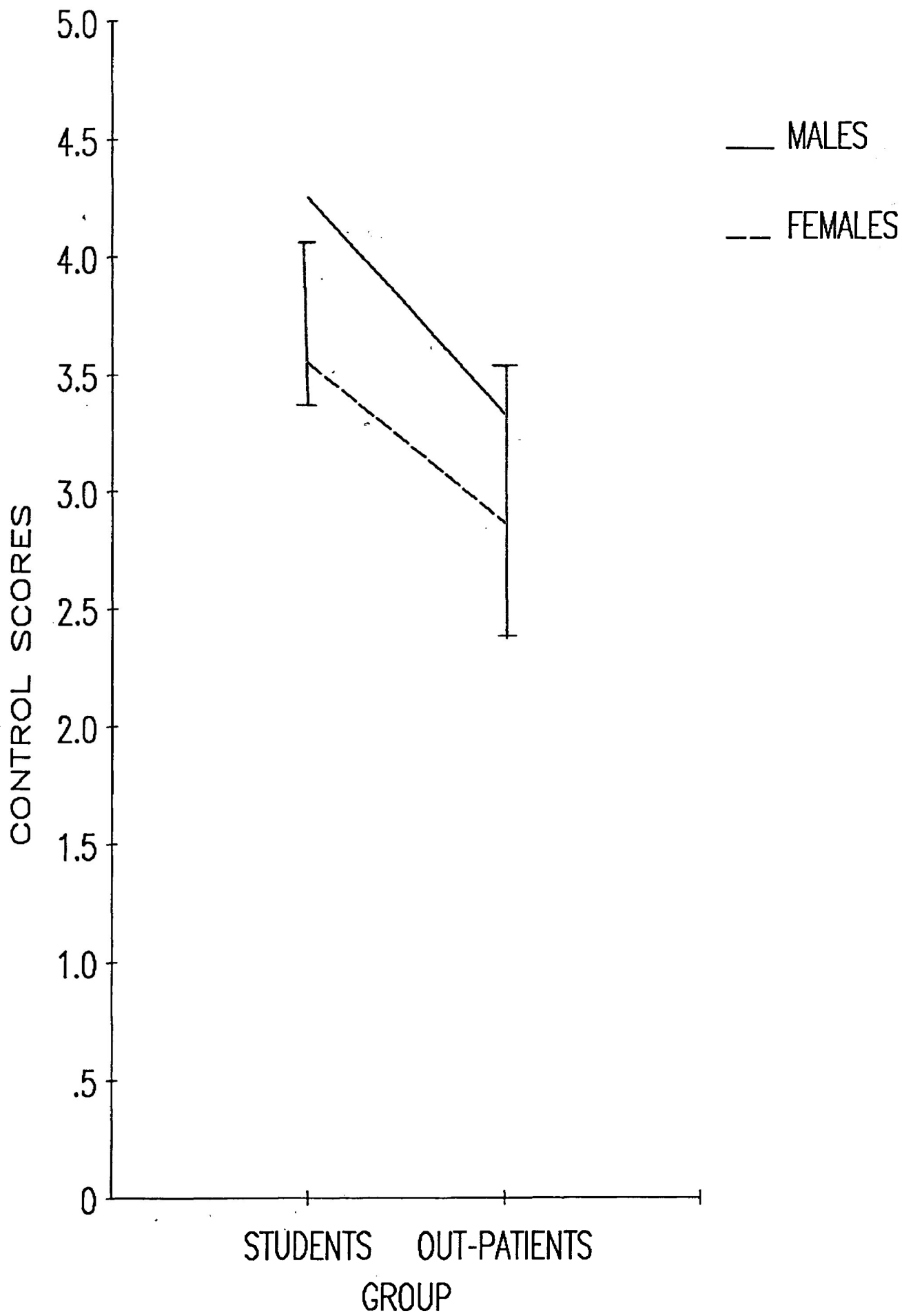
Figure 7.   Mean Locus of Causality Scores.
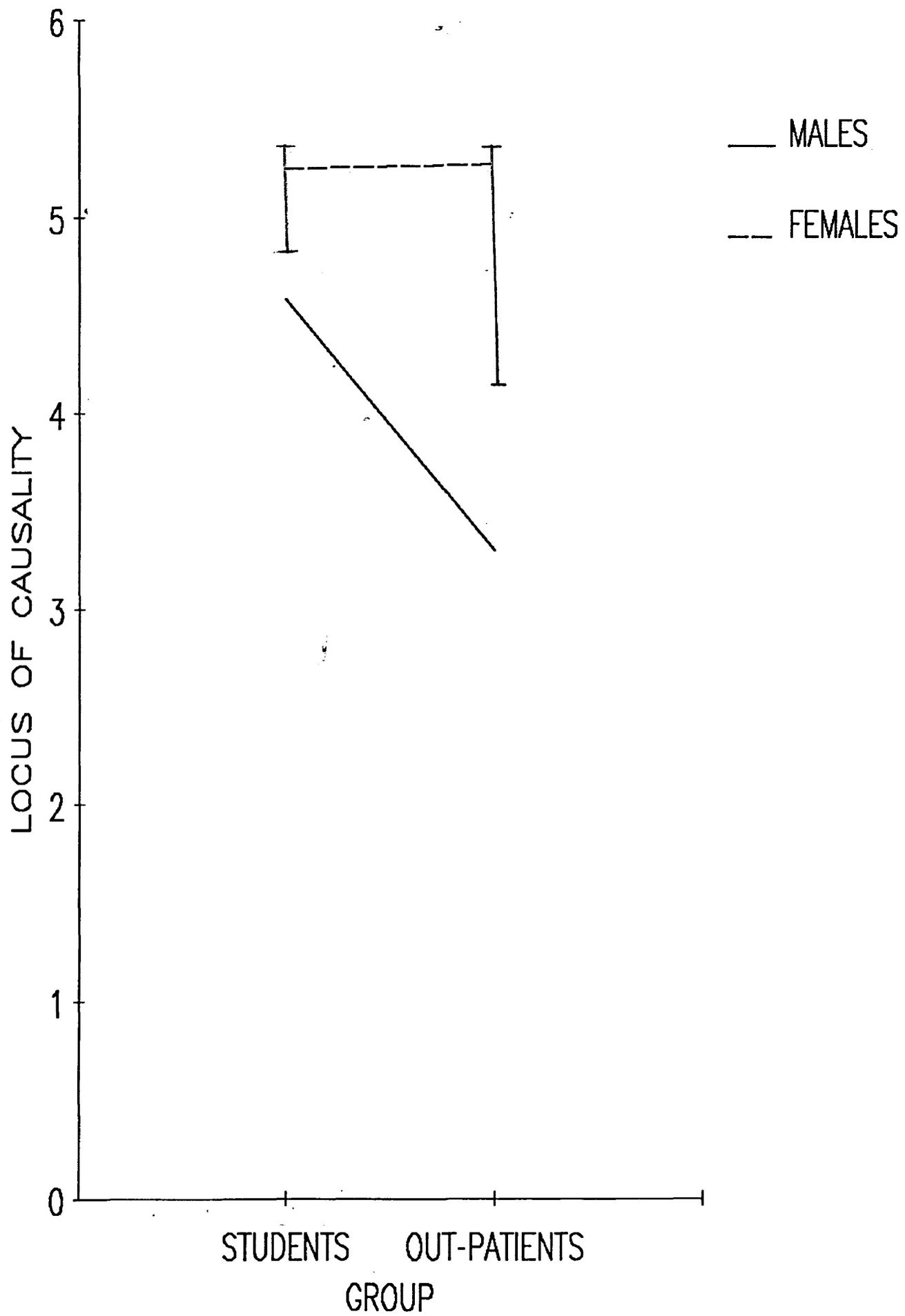
Figure 8. Mean Stability Scores.
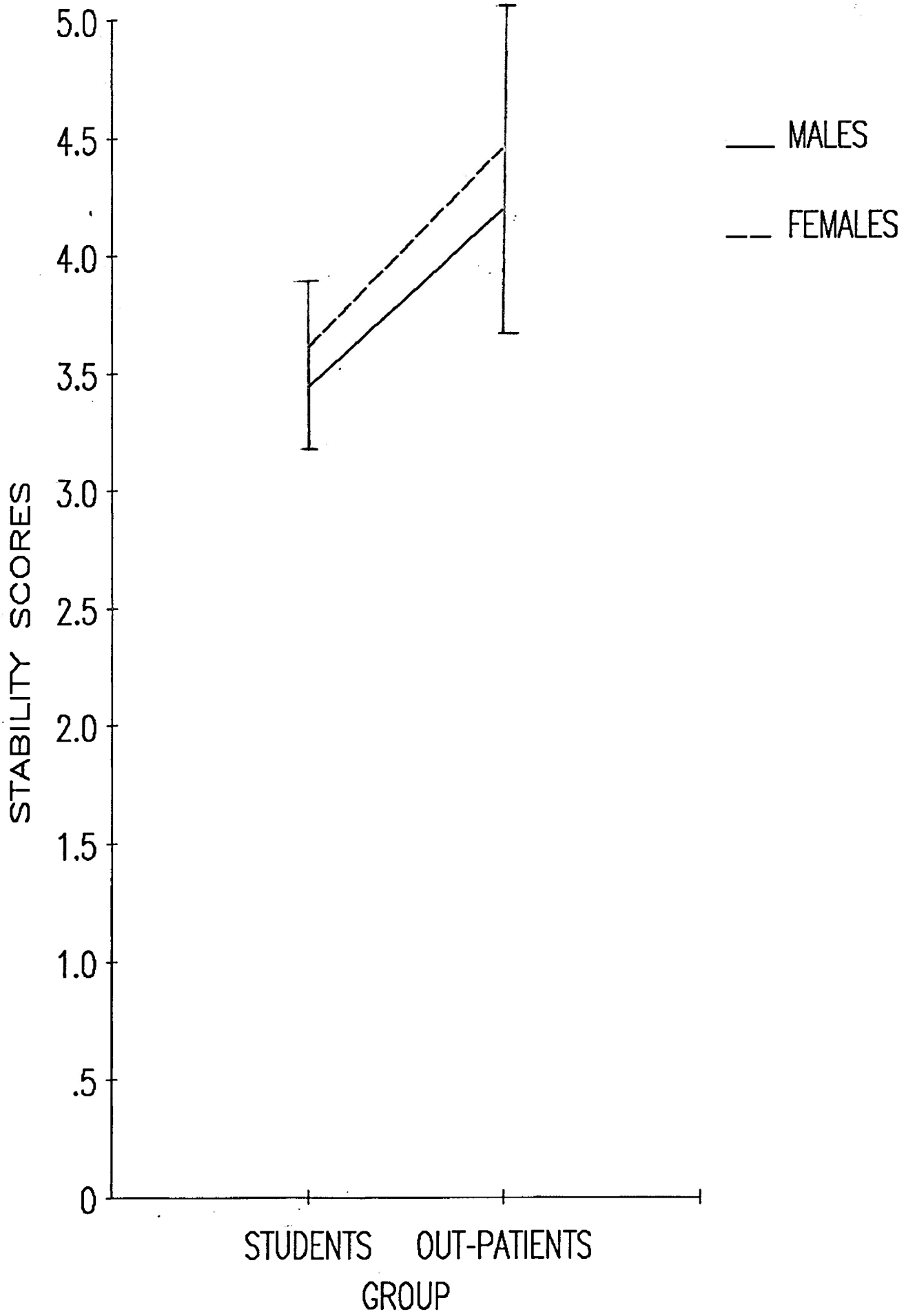
<u>Figure 9</u>. <u>Mean Globality Scores</u>.
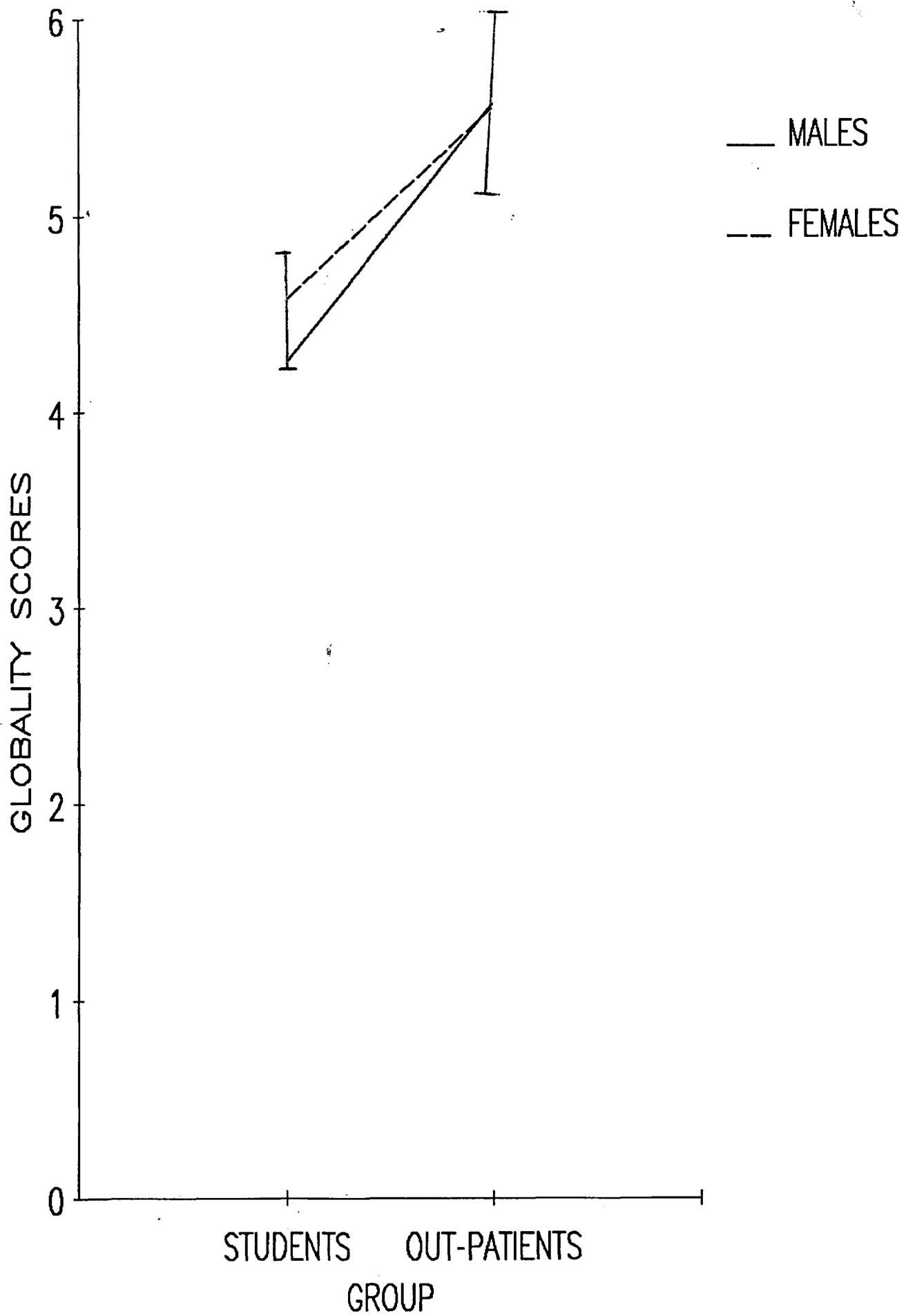
Figure 10. **Mean Recurrence Scores.**
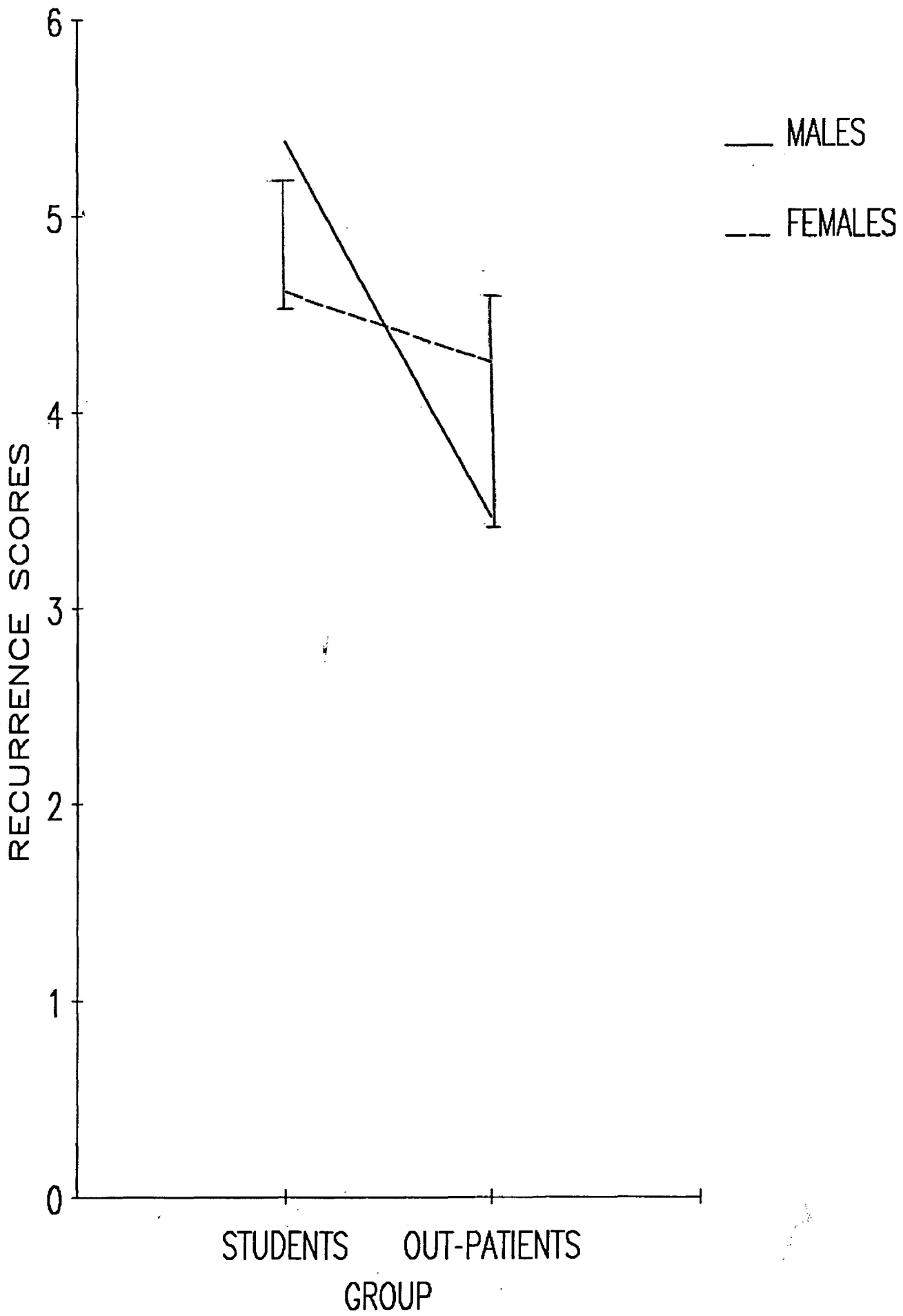
Figure 11. **Mean Uncertainty Scores.**
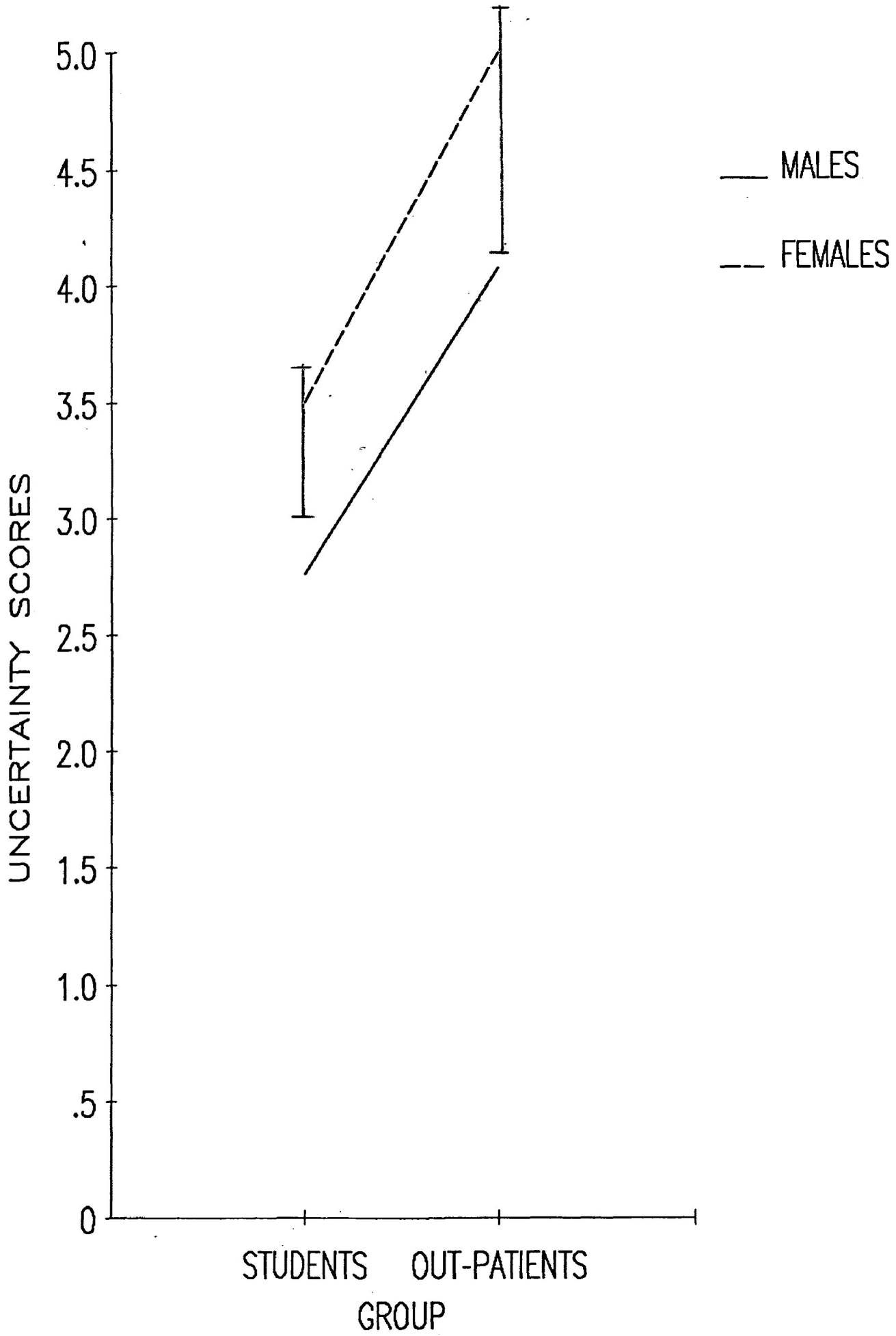
Figure 12. Mean Intentionality Scores.
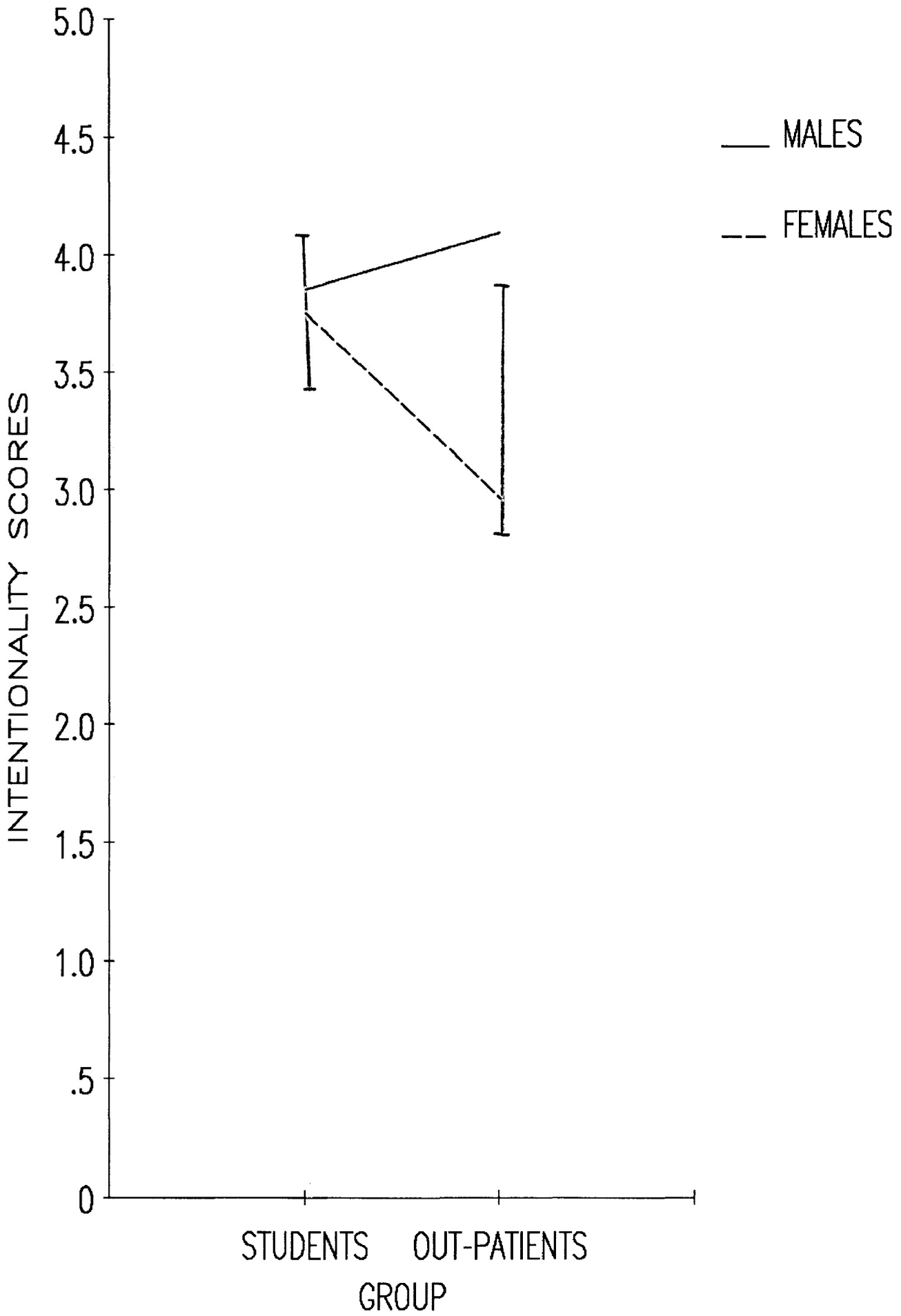
Figure 13. **Mean Expectation Scores.**
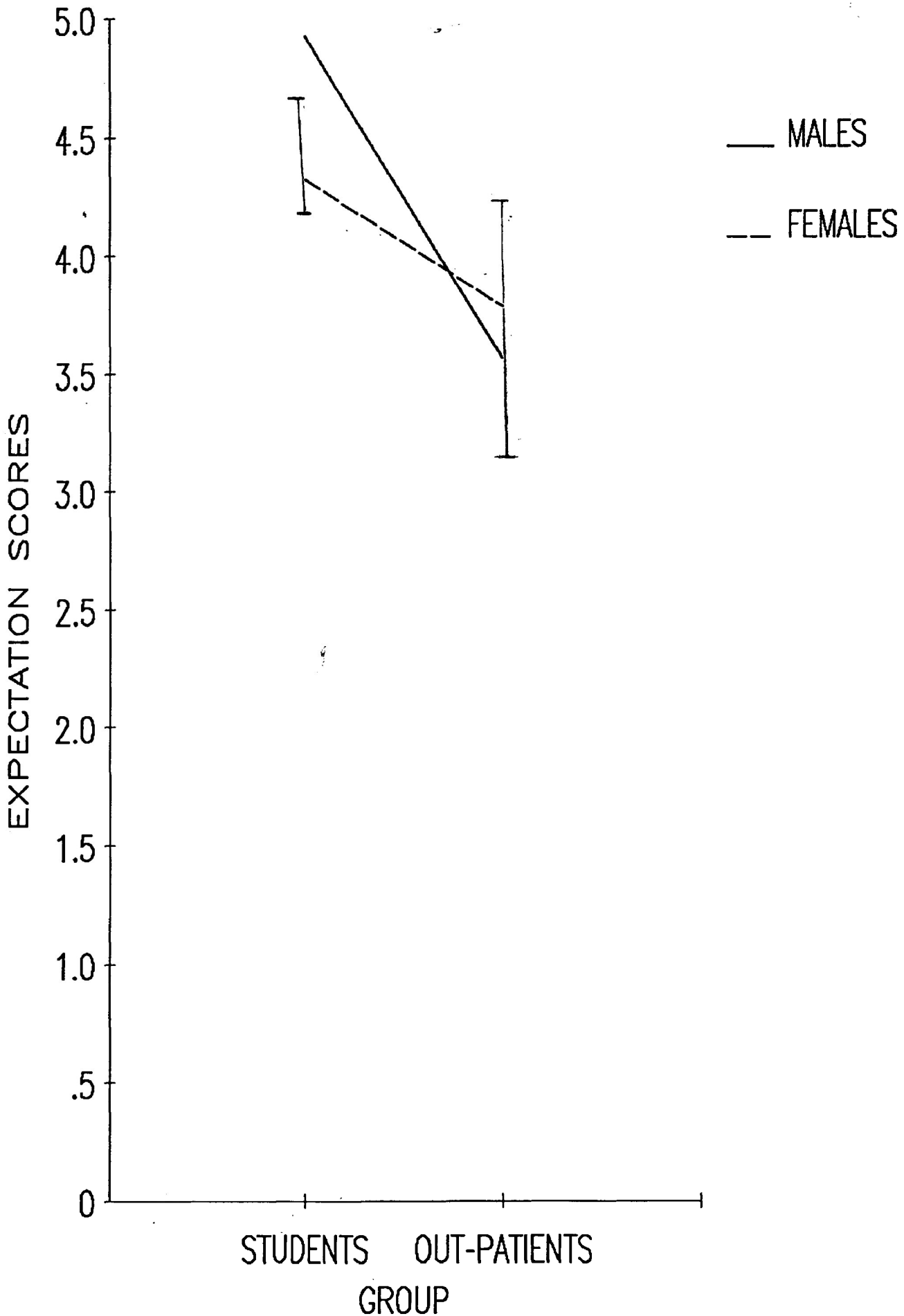
Table 6

Summary of Significant Findings

| | Out-patients | | Students | |
| | M | F | M | F |
	(N=7)	(N=19)	(N=32)	(N=94)
BDI	9.71	24.47	5.36	6.64
Internal	32.14	27.42	32.90	32.73
Powerful Other	13.43	21.21	16.90	15.67
Chance	11.57	22.84	15.48	15.38
Control	3.33	2.86	4.25	3.55
Causality	3.29	5.26	4.58	5.24
Stability	4.19	4.45	3.44	3.61
Globality	5.56	5.53	4.26	4.58
Uncertainty	4.07	4.99	2.76	3.50

Multiple Regression Analyses

A series of step-wise multiple regression analyses we're preformed for each of: the entire sample, the out-patient group, the student group, student male group, student female group, out-patient male group, and out-patient female group, to examine the relative contribution of the attributions generated from the Attribution Style Questionnaire and the three locus of control scores in predicting depression scores.

Analysis 1 (see Table 8) revealed a significant overall standardized coefficient of .39, $F(1, 141)=43.67$, $p<.001$ for the Uncertainty dimension, with 24 percent explained variance. A second variable was entered into the equation on Step 2, Internality, yielding a significant correlation of $-.27$, $F(2, 140)=33.15$, $p<.001$, and 32 percent explained variance. On Step 3 the Powerful Other scale yielded a significant correlation of .27, $F(3, 139)=29.73$, $p<.001$, and 39 percent explained variance.

The second analysis involving the student group revealed an overall significant correlation coefficient for Uncertainty, .32, $F(1, 115)=18.47$, $p<.001$ with 14 percent explained variance. On Step 2 Powerful Other yielded a significant coefficient, .26 $F(2, 114)=14.00$,

$p<.001$ with 20 percent explained variance. On Step 3 the Internality scale was entered into the equation with a significant coefficient of $-.26$, $F(3, 113)=12.32$, $p<.001$. On Step 4 the Control dimension yielded a significant correlation coefficient of $.19$, $F(4, 112)=10.52$, $p<.001$. On Step 5 the Expectation dimension was entered yielding an overall coefficient of $-.18$, $F(5, 111)=9.62$, $p<.001$ with 30 percent explained variance.

The third analysis on the out-patient group yielded two significant predictors, Powerful Other scale and the Uncertainty dimension with overall coefficients of $.41$, $F(1, 24)$, $p<.01$ and $.38$, $F(2, 23)$, $p<.01$, respectively.

Analysis 4 of the step-wise multiple regression analyses, revealed a significant overall standardized coefficient of $.53$, $F(1, 29)=11.17$, $p<.01$ for the Chance variable, with 2.8 percent explained variance. A second variable was entered into the regression equation on Step 2. Uncertainty yielded a highly significant correlation coefficient of $.33$, $F(2, 28)=8.56$, $p<.001$ with 38 percent of the variance explained.

The fifth analysis on female students involving the Uncertainty attribution yielded an overall multiple regression correlation of $.34$, which is significant,

$F(1, 84)=10.73$, $p<.01$. The Powerful Other dimension was entered on Step 2 and yielded a significant overall multiple regression coefficient of .40, which is highly significant, $F(2, 83)=7.92$, $p<.001$. Uncertainty contributed 11 percent of explained variance, while Powerful Other contributed 16 percent of explained variance.

For the sixth analysis on the male out-patient group, no variables were entered or removed from the analysis due to small sample size. Refer to Table 9 for a summary of the above results.

Table 7

Multiple Regression Analyses for each of:

Male-Students, Male Out-patients,

Female-Students, Female Out-patients

Dependent Variables	Independent Variables
BDI	Internal
	Powerful Other
	Chance
	Upset
	Control
	Causality
	Stability
	Globality
	Recurrence
	Intentionality
	Expectation
	Uncertainty

Table 8

Predicting BDI scores from ASQ and IPC scores.

Variable	R	$\%\,R^2$	F	Beta
Analysis 1				
Entire Sample, N=152				
Uncertainty	.49	.24	43.67***	.39
Internality	.57	.32	33.15***	-.27
Powerful Other	.63	.39	29.73***	.27
Analysis 2				
Students, N=126				
Uncertainty	.37	.14	18.47***	.32
Powerful Other	.44	.20	14.00***	.26
Internality	.50	.25	12.32***	-.26
Control	.52	.27	10.52***	.19
Expectation	.55	.30	9.64***	-.18
Analysis 3				
Out-patients, N=26				
Powerful Other	.53	.29	9.24**	.41
Uncertainty	.64	.41	8.01**	.38

***p<.001   **p<.01

Table 9

Predicting BDI scores from ASQ and IPC scores.

Variable	R	%	F	Beta
Analysis 4				
Male Students, N=32				
Chance	.53	.28	11.17**	.53
Uncertainty	.62	.38	8.56***	.33
Analysis 5				
Female Students, N=94				
Uncertainty	.34	.11	10.73**	.34
Powerful Other	.40	.16	7.92***	.22
Analysis 6				
Male Out-patients, N=7				
No variables entered or removed from analysis.				
Analysis 7				
Female Out-patients, N=19				
Powerful Other	.60	.36	9.45**	.60

***p<.001   **p<.01

The seventh analysis on the female out-patient group yielded a significant overall correlation of .60, for the Powerful Other dimension, which is significant, $F(1, 17)=9.45$, $p<.01$, with 36 percent explained variance.

Correlations

Averages for Upset, Control, Locus of Causality, Stability, Globality, Recurrence, Intentionality, Expectation, Uncertainty dimensions for each subject were obtained. Pearson product correlations were computed between all independent variables including BDI scores. Refer to Table 10 for a summary of significant correlations.

Globality yielded a significant correlation with BDI, ($r=.33$, $p<.01$). The Internal scale from the IPC scales correlated negatively with BDI scores ($r=-.36$, $p<.001$), whereas, Powerful Other and Chance scales correlated positively, ($r=.41$, $p<.001$; $r=.38$, $p<.001$, respectively). Powerful Other and Chance scales correlated significantly, ($r=.63$, $p<.001$).

Total number of significant life events correlated significantly positive with depression scores, Globality, Upset, and Uncertainty, ($r=.45$, $p<.001$;

r=.30, p<.001; r=.37, p<.001; r=.37, p<.001,
respectively).

Age correlated negatively with Control, (r=-.23,
p<.01), thereby, indicating that with age, the less
control one is believed to have over the occurrence of
significant life events.

Upset yielded significant correlations for all
variables except the Internal scale of the IPC scales.

Uncertainty also yielded a number of significant
correlations for all variables except for the Internal
scale, Locus of Causality, and Stability dimensions.

Table 10

Summary of Significant Correlations Between Variables

	BDI	I	P	C	#	Ups	Con	Cas	Sta	Glo	Rec	Int	Exp	Unc
BDI		-.36**	.41**	.37**	.45**	.38**				.33*				.49**
I	-.36**													
P	.41**			.63**		.20**								.24*
C	.37**		.63**			.34**				.30*		-.21*		.20*
#	.45**					.37**				.30**				.37**
Ups	.38**		.20*	.34**	.37**		-.29**	.27**	.22*	.44**	-.35**	-.45**	-.45**	.58**
Con						-.29**		-.44**				.37**	.21*	-.25*
Cas						.27**	-.44**					-.40**	-.26*	
Sta						.22*								
Glo	.33**			.20*	.30**	.44**					-.25*			.58**
Rec						-.35**				-.25*			.41**	-.21*
Int				-.21*		-.45**	.37**	-.40**					.34**	
Exp						-.45**	.21*	-.26*			.41**	.34**		-.20*
Unc	.49**		.24*	.20*	.37*	.58**	-.25*			.58*	-.21*		-.20*	

** p<.001   * p<.01

CHAPTER FOUR

Discussion

Locus of Control and Depression

Using the three-factor measure of locus of control, the present study revealed that Internality was significantly negatively correlated with depression, while Powerful Other and Chance scales were significantly positively associated with depression scores (r=-.36; .41; .37, p<.001, respectively). Correlations between IPC scales support the conceptual distinction between them, since the correlations between Internality and the other two scales (-.13 with Powerful Other, and -.18 with Chance) are modest. These findings are consistent with those of Ganellen and Blaney (1982). Powerful Other and Chance scales were significantly correlated (r=.63, p<.001).

Of the three scales, Powerful Other, correlated the most with overall depression (r=.41, p<.001), thereby, suggesting that the more people attribute the outcome of stressful events to powerful people around them, the more depressed they tend to be. One possible explanation for this finding would be what Schill,

Ramanaiah, and Toves (1982) refer to as a defensive pattern of blame projection and mistrust employed by these defensive external scorers who may isolate themselves from potential sources of support in their environment and thereby enhance their vulnerability to stress.

The female out-patient group had the highest mean Powerful Other and mean Chance score as well as the lowest mean Internal score across all other groups. These results suggest that it is a possible combination of expectation of control by powerful people and high beliefs in chance factors which are characteristic of significantly depressed individuals. Nonetheless, the results support the central tenet that the more one views reinforcements as non-contingent upon their behaviour and act accordingly, the more prone towards depression, and helplessness.

Male out-patients, on the other hand had Internality scores much closer to those of the student group. Powerful Other scores were significantly lower than those of all other groups, while Chance scores were also significantly lower than all other groups. According to Ganellen and Blaney (1984) when externals experience high levels of depression, as did the female out-patient

group, then externality to chance or powerful others should reflect perception of control over future events. Furthermore, they postulate that when high Internals such as the male out-patient group experience high levels of depression, they reflect perception of control over past significant events. Externals may characteristically exert less effort into coping attempts than will those who believe that they can influence outcomes (Procuik, Breen, & Lussier, 1976). Internals may demonstrate reactance in the face of stress perceived as uncontrollable that is, they exert more effort because they perceive more control than they really have (Wortman & Brehm, 1975). As a result the more effort they exert to assume control, the more depressed they become.

Attributional Style and Depression

The present study attempted to study attributional style in a clinically depressed population in addition to a student population. In studies using depressed psychiatric samples, no significant differences have been reported between depressed and non-depressed psychiatric patients on ASQ scores (Hargreaves, 1985;

Miller, Klee, Norman, 1982). Furthermore, Miller et al. (1982) found no significant differential attributional styles despite using attributions of real-life events. The results of the present study are more consistent with the above findings.

As an entire group, out-patients were significantly more depressed than students. Out-patients were more upset over significant life events, and as a result experienced greater uncertainty in their lives. They also attributed significantly more stable and global causal attributions than students. These results are consistent with the reformulated learned helplessness model of maladaptive attributional style.

More specifically, however, out-patient findings are confounded by female out-patient scores. Results indicate that most depressed female out-patients attribute the causes of significant life events to external factors (mean locus of causality = 5.26) and not to internal causes. This finding is crucial because, it does not support one of the central tenets of the reformulated model (Seligman et al. 1979; Abramson et al. 1978; Hammon & Mayol, 1982) that depressed subjects characteristically make internal attributions of causality for negative events and that

they attribute the causes of good events to unstable, external factors compared to non-depressed individuals. It could be argued here, that the present study presents a confound for negative events with positive events because the two were not separated. All events from the Life Events Inventory were regarded as stressful and requiring adjustment (Cochrane & Robertson, 1973; Ganellen & Blaney, 1984). In spite of the possibility, female out-patients only indicated three positive (desirable-responsible) events as a group for which attributions were rated. This is hardly a significant number, therefore, the possibility of a confound of positive events, does not seem likely to explain these results.

On the other hand, male out-patients ($\underline{M}$ BDI = 9.71) indicated only two positive events for which causal attributions were made. They indicated significantly less depression than female out-patients, but significantly greater depression than both female/male student groups. Male out-patients made significantly more internal, stable, global attributions than student groups. This result is consistent with the reformulated model. Further research is needed to determine whether this attributional style reflects a

consistent sex difference or whether degree/severity of depression is a mediator variable. However, when comparing female out-patients and female students, differential external locus of causality attributions were not significant, in fact the mean causality scores were extremely similar (5.26, s=1.30; 5.24, s=1.50, respectively) with little variability. Therefore, severity of depression seems unlikely a variable affecting these results. A possible positive event confound may exist for female students since 14.35 percent of all events reported were of the desirable-responsible kind. A consistent sex difference for depressed and non-depressed groups is a plausible explanation for the present findings and discrepancy between male and female depressed subjects with respect to locus of causality. Females, whether depressed or not, attributed the cause of stressful events to external factors (such as fate, chance, circumstances, or other persons) more so than males.

The locus of causality scale and controllable dimension of causes were highly related (r=-.44, p<.001) which means that the more internal the causal attribution, the greater controllability experienced over the significant events. In addition to maladaptive

attributional style, Harvey (1981) found that depressed students were consistent in attributing personal events to internal, but controllable causes over negative events. In this study depressed female out-patients attributed significant life events to external and uncontrollable causes. Mildly depressed male out-patients attributed significant life events to internal but uncontrollable causal factors. Neither of these results is consistent with those of Harvey (1981) nor Hammon and Mayol (1982) each of which found that depressives made significant more attributions to internal and controllable factors than non-depressed students.

Abramson et al. (1978) described the controllable dimension as logically orthogonal to the internal-external, stable-unstable, and global-specific causal dimensions, but probably empirically correlated with internal and unstable attributions. And since the controllable dimension of causes has been established to be related to self-blame (Harvey, 1981) it is also necessary for the adequate assessment of cognitions underlying the helplessness/self-blame paradox in depression (Abramson & Sackeim, 1977). The results of the present study seem to give credence to the learned

helplessness model of depression, rather than to the low self-esteem models of depression or negative self-attitude models of depression (Beck, 1967). The significantly depressed people in the present study (female out-patients) are depressed and feel helpless because they believe their significant stressful life events were caused externally and the outcomes are independent of their own behaviour as opposed to due to their own lack of ability, effort which would manifest itself in low self-esteem. The present depressed females, then, would logically behave in an apathetic, passive manner and would not necessarily exhibit low self-esteem. Furthermore, the female depressed group made significant uncontrollable attributions. Since attributions to controllable causes is related to self-blame, the female out-patients can be said not to have suffered from self-blame, but from the first form of helplessness, discussed earlier.

On the other hand, male out-patients are said to have suffered from helplessness due to their own lack, ability, effort, which resulted in low self-esteem and self-depreciation over events perceived as uncontrollable. Mean controllable attributions were (3.33), significantly lower than the student groups.

Male out-patients, then, in contrast to female out-patients suffered from low self-esteem (due to internal attributions) and helplessness, (not necessarily self-blame/guilt). For the male out-patients internal causes were not perceived as controllable.

Attributions, Locus of Control, and Depression

The IPC scales, number of significant life events, Upset, Globality, and Uncertainty scales were each significantly correlated with depression, based on the entire subject sample.

The correlation between Locus of Causality and Levenson's Internality scale was non-significant but in the expected direction (r=-.10). No significant correlations between Control dimension and Locus of Control scales were found.

The purpose of the present study was in part to determine the best combination of depression predictors based on ASQ attributions and Locus of Control scales. The best combination for the combined sample is Uncertainty, Internality, and Powerful Other scores. For the female out-patient group the only predictor was the Powerful Other scale; while for male students the

best combination of predictors is Chance and Uncertainty; and for female students, Uncertainty and Powerful Other.

The Uncertainty dimension seems to play a significant role in depression. Uncertainty is significantly correlated with the Powerful Other and Chance scales, as well as significantly negative with Control, Recurrence and Expectation. The concept of uncertainty, is theoretically related to the unknown regarding the future and hence, explains the very significant relationship between Globality and Uncertainty. Globality refers to generalization of depression. Furthermore, conceptually, Uncertainty and helplessness are related to one's ability to effect one's future meaningfully. In addition to the Uncertainty dimension the Powerful Other scale was a significant predictor for all groups, while Chance was specifically to male students, once again stressing the relationship between externality and depression.

According to Parker, Brown, and Blignault (1986) the course of depression is better predicted by measures of current rather than general dominant personality variables and coping. The present study reveals that current, situation-specifically generated cognitions

such as degree of uncertainty are contributory, and that stable individual differences of how people perceive reinforcements are indeed important to a study of depression and perception of control.

Due to the central role of Locus of Causality, the controllable causal attributions, and Locus of Control to the learned helplessness models of depression, their combinations among depressive groups is important to study. The significantly depressed group made more mean external, causal attributions to uncontrollable causes and an external locus of control (equally high Chance and Powerful Other scores). Male out-patients, however, made internal causal attributions to uncontrollable causes with a high mean internal locus of control. Female students make external causal attributions which tended toward the uncontrollable end. Male students made external attributions to controllable causes with a more internal locus of control. Depressives, then, seem to be both high externals and/or high internal scorers, thereby, supporting Rotter's (1967) theory regarding the curvilinear relationship between locus of control and adjustment. Individuals falling at either extreme may have greater difficulties in adjusting to stressful life events. However, this theory still does not account for

why out-patient males' internal scores were not significantly greater than those of students.

In addition to the present findings further research is suggested to determine whether attributional styles are uniquely, related to depression or whether it is a feature of other psychopathologies.

Furthermore, most experiments using research measurement tools and criterion situations have focused upon events that are largely in the range of controllability. Devices are needed which ascertain belief about events that are extremely improbable and commonly believed to be beyond control, such as victims of natural disasters, or terminally-ill sample groups (Lefcourt, 1976: Wise, Mann, Puscheck, Dove & Kiernan, 1985).

Future research should be concerned with the question of whether people actually make attributions spontaneously or whether they are just doing so in response to researcher's questions. Another limitation, here, is that subjects' recall of stressful events may be affected by their level of depression. How differential recall of stressful events might influence causal explanations is not clear, but some role is possible (Peterson et al. 1985).

Finally, the ratings of past stressful events and BDI scores were obtained at the same point in time. The helplessness reformulation assigns to cognitions a causal role (Abramson et al. 1978; Peterson et al. 1985; Peterson & Seligman, 1984) but the results are merely correlational. Future research is necessary to establish whether the relations between cognitions and depression are or are not causal. Because all the data were obtained at the same time, subjects may have imposed consistency on their responses (Peterson et al. 1985). The present study data reflect the need for more sophisticated, long term designs with which they can assess the causal influence of cognitions on depression.

References

Abramowitz, S.I. (1969). Locus of control and
     self-reported depression among college students.
     Psychological Reports, 25, 149-150.

Abramson, L.Y., & Sackeim, H.A. (1977). A paradox in
     depression: Uncontrollability and self-blame.
     Psychological Bulletin, 84, 838-851.

Abramson, L.Y., Seligman, M.E.P., & Teasdale, J. (1978).
     Learned helplessness in humans: Critique and
     reformulation. Journal of Abnormal Psychology, 87,
     49-74.

Aiken, P.A., & Baucom, D.H. (1982). Locus of control
     and depression: That confounded relationship.
     Journal of Personality Assessment, 46(4), 391-395.

Beck, A.T. (1967). Depression: Clinical experimental
     and theoretical aspects. New York: Harper & Row.

Beck, A.T. (1976). Cognitive therapy and the emotional
     disorders. New York: International Universities
     Press.

Blaney, P.H. (1977). Contemporary theories of
     depression: Critique and comparison. Journal of
     Abnormal Psychology, 86(3), 203-223.

Brewin, C.R. (1986). Internal attribution and self-

esteem in depression: A theoretical note. <u>Cognitive Therapy and Research</u>, <u>10</u>(4), 469-475.

Bumberry, W., Oliver, J.M., & McClure, J.N. (1978). Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. <u>Journal of Consulting and Clinical Psychology</u>, 46, 150-155.

Burger, J.M. (1984). Desire for control, locus of control, and proneness to depression. <u>Journal of Personality</u>, <u>52</u>(1), 71-89.

Burns, D.D., Shaw. B.F., & Croker, W. (1987). Case Histories and shorter communications. <u>Behavioural Research Therapy</u>, <u>25</u>(3), 223-225.

Calhoun, L.G., Cheeney, T., & Dawes, A.S. (1974). Locus of control, self-reported depression, and perceived causes of depression. <u>Journal of Consulting and Clinical Psychology</u>, <u>42</u>, 736.

Cameron, N. (1963). <u>Personality development and psychopathology</u>. Boston: Houghton, Mifflen.

Cherlin, A., & Boroque, L.B. (1974). Dimensionality and reliability of the Rotter I-E Scale. <u>Sociometry</u> <u>37</u>, 565-585.

Cochrane, R., & Robertson, A. (1973). The life events inventory: A measure of the relative severity of

psycho-social stressors. <u>Journal of Psychosomatic Research</u>, <u>17</u>, 565-585.

Costello, E.J. (1982). Locus of control and depression in students and psychiatric out-patients. <u>Journal of Clinical Psychology</u>, <u>38</u>(2), 340-343.

Coyne, J.C., & Gotlib, I.H. (1983). The role of cognitions in depression: A critical appraisal. <u>Psychology Bulletin</u>, <u>94</u>, 472-505.

Emmelkamp, P.M.G., & Cohen-Kettenis, P.T. (1975). Relationship of locus of control to phobic anxiety and depression. <u>Psychological Reports</u>, <u>36</u>, 390. Evans, R.G., & Dinning, W.D. (1978). Reductions in experienced control and depression in psychiatric inpatients: A test of the learned helplessness model. <u>Journal of Clinical Psychology</u>, <u>34</u>(3), 609-613.

Ganellen, R.J., & Blaney, P.H. (1984). Stress, externality, and depression. <u>Journal of Personality</u>, <u>52</u>(4), 326-337.

Gilbert, L.A. (1976). Situational factors and the relationship between locus of control and psychological adjustment. <u>Journal of Counselling Psychology</u>, <u>23</u>(4), 302-309.

Goss, A., & Morosko, T.E. (1970). Relation between a

dimension of internal-external control and the MMPI
with an alcoholic population. <u>Journal of Consulting
and Clinical Psychology</u>, <u>34</u>, 189-192.

Gurin, R., Gurin, G., Lao, R.C., & Beattie, M. (1969).
Internal-external control in the motivational
dynamics of Negro youth. <u>Journal of Social Issues</u>,
<u>25</u>, 29-53.

Hammon, C.L. (1980). Depression in college students:
Beyond the Beck Depression Inventory. <u>Journal of
Consulting and Clinical Psychology</u>, <u>48</u>, 126-128.

Hammon, C.L., & Mayol, A. (1982). Depression and
cognitive characteristics of stressful life-event
types. <u>Journal of Abnormal Psychology</u>, <u>91</u>(3),
165-174.

Hargreaves, I.R. (1985). Attributional style and
depression. <u>British Journal of Clinical Psychology</u>,
<u>24</u>, 65-66.

Harvey, D.M. (1981). Depression and attributional
style: Interpretations of important personal events.
<u>Journal of Abnormal Psychology</u>, <u>90</u>(2), 134-142.

Hiroto, D. (1974). Locus of control and learned
helplessness. <u>Journal of Experimental Psychology</u>,
<u>102</u>, 187-193.

Joe, V.C. (1971). Review of the internal-external

control construct as a personality variable.

Psychological Reports, 28, 619-640.

Johnson, J., & Sarason, I. (1975). Life stress,

depression and anxiety: internal-external control as

a moderator variable. Journal of Abnormal

Psychology, 84, 228-238.

Lamont, J. (1972). Depression, locus of control and

mood response set. Journal of Clinical Psychology,

28, 343-345.

Lefcourt, H.M. (1966). Internal-external control of reinforcement:

A review. Psychological Bulletin, 65 (4), 206-220. (a)

Lefcourt, H.M. (1976). Locus of control: Current

trends in theory and research. New Jersey: Lawrence

Erlbaum Associates.

Leggett, J., & Archer, R.P. (1979). Locus of control

and depression among psychiatric inpatients.

Psychological Reports, 45, 835-838.

Miller, I.W., Klee, S.H., & Norman, W.H. (1982).

Depressed and non-depressed inpatients' cognitions of

hypothetical events, experimental tasks, and

stressful life events. Journal of Abnormal

Psychology, 91, 78-81.

Miller, W.R., & Seligman, M.E.P. (1975). Depression and

learned helplessness in man. Journal of Abnormal

Psychology, 84, 228-238.

Miller, W.R., & Seligman, M.E.P. (1973). Depression and
'the perception of reinforcement. Journal of Abnormal
Psychology, 82, 62-73.

Mirels, H.L. (1970). Dimensions of internal versus
external control. Journal of Consulting and
Clinical Psychology, 34, 226-228.

Mischel, W., Zeiss, R., & Zeiss, A. (1974). Internal-
external control and persistence: Validation and
implications of the Stanford pre-school internal-
external scale. Journal of Personality and Social
Psychology, 29, 265-278.

Molinari, V., & Khanna, P. (1981). Locus of control and
its relationship to anxiety and depression. Journal
of Personality Assessment, 45(3), 312-314.

Nelson, D.W., & Cohen, L.H. (1983). Locus of control
and control perceptions and the relationship between
life stress and psychological disorder. American
Journal of Community Psychology, 11(6), 705-722.

O'Leary, M.R., Donovan, D.M., & Hague, W.H. (1974).
Relationship between locus of control and MMPI
scales among alcoholics: A replication and
extension. Journal of Clinical Psychology, 30,
312-314.

Overmier, J.B., & Seligman, M.E.P. (1967). Effects of inescapable shock upon subsequent escape and 'avoidance behaviour. Journal of Comparative and Physiological Psychology, 63, 29-33.

Parker, G., Brown, L., & Blignault, I. (1986). Coping behaviours as predictors of the course of depression. Archives of General Psychiatry, 43, 561-565.

Peterson, C., Bettes, B.A., & Seligman, M.E.P. (1985). Depressive symptoms and unprompted causal attributions: Content analysis. Behavioural Research Therapy, 23(4), 379-382.

Peterson, R., Sushinsky, L., & Schmucker-Demask, R. (1978). Are locus of control and depression related? Psychological Reports, 43, 727-731.

Pittman, N.L., & Pittman, T.S. (1979). Effects of amount of helplessness training and internal-external locus of control on mood performance. Journal of Personality and Social Psychology, 37(1), 39-47.

Procuik, T.J., Breen, L.J., & Lussier, R.J. (1975). Defensive externality and its relation to academic performance. Journal of Personality and Social Psychology, 31, 549-556.

Rehm, L., & O'Hara, M.W. (1979). Understanding depression. In I.H. Frieze, D. Bar-Tal, & J.S.

Carroll (eds.), New Approaches to Social Problems. San Francisco: Jossey-Bass.

Reid, D., & Ware, E.E. (1974). Multidimensionality of internal-external control: Addition of a third dimension and non-distinction of self versus others. Canadian Journal of Behavioural Science, 6, 131-142.

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80(1), (Whole No. 609).

Schill, T., Ramanaiah, N., & Toves, C. (1982). Defensive externality and vulnerability to life stress. Psychological Reports, 51, 878.

Schwartz, D.A. (1964). The paranoid-depressive existential continuum. Psychiatric Quarterly, 38, 690-706.

Seligman, M.E.P. (1975). Helplessness: On depression, development and death. San Francisco: W.H. Freeman.

Seligman, M.E.P., Abramson, L., Semmel, A., & von Baeyer, C. (1979). Depressive Attributional Style. Journal of Abnormal Psychology, 88(3), 242-247.

Seligman, M.E.P., & Maier, S.F. (1967). Failure to escape traumatic shock. Journal of Experimental Psychology, 74, 1-9.

Sweeney, P.D., Anderson, K., & Bailey, S. (1986).

Attributional style in depression: A meta-analytic

'review. Journal of Personality and Social

Psychology, 50, 974-991.

Warehime, R.G., & Woodson, M. (1971). Locus of control

and immediate affect states. Journal of Clinical

Psychology, 27, 443-444.

Wise, T.N., Mann, L.S., Puscheck, E., Dove, H., &

Kiernan, K. (1985). Factors affecting anxiety and

depression in psychiatric consultation patients.

International Journal of Psychiatry in Medicine,

15(2), 1985-1986.

Wortman, C.B., & Brehm, J.W. (1975). Responses to

uncontrollable outcomes: An integration of reactance

theory and learned helplessness model. In L.

Berkowitz (ed.), Advances in Experimental Social

Psychology, 8, New York: Academic Press.

Appendix A

<u>CONSENT TO PARTICIPATE IN RESEARCH STUDY</u>:

<u>DEPRESSION AND COGNITIONS OF SIGNIFICANT LIFE EVENTS</u>

The purpose of the research study is designed to review

the relationship between depression and related

cognitions as part of an experiment in partial

fulfilment of a Master of Arts degree in clinical

psychology.

I, _____, understand that my
        participation in the study is entirely
voluntary.
        (Please print)

1.   All responses are anonymous and thereby,
      confidential. You are requested to write <u>only</u> your
      <u>age</u> and <u>sex</u> on the front of the test booklet.

2.   No physical and/or mental discomfort will arise from
      your participation in the research.

3.   It is understood that you, the participant, are free
      to decline to participate in or withdraw from
      research without any consequences to follow.

4.   Your participation in this study is in no way
      intended to be part of the treatment plan.

5.   You will not be identifiable as an individual in any
      report resulting from this research study.

6.   Please return the completed test booklet to the
      secretary on the day of your next appointment or
      you may complete it now in the waiting area.

Witnessed by:_____   Signature: _____

Date: _____   Date: _____

Appendix B

The following test package is designed to measure depression and related cognitions as part of an experiment in partial fulfilment of a thesis for a Master of Arts degree.

All responses are anonymous.

Please state your age and sex on this page.

1.   The following is a reliable mood-measuring device.
Read each item carefully and circle the number next to the
answer that best reflects how you have been feeling during
the past few days. Make sure you circle one answer for each
of the questions. If more than one answer applies to how
you have been feeling, circle the higher number. If in
doubt, make your best guess. Do not leave any questions
unanswered. (Several questions ask if you have recently
been experiencing a particular symptom such as irritability
or insomnia, "... any more than usual," or "... more than
before." If the symptom has been present for a long time
because of chronic depression, you are to answer the question
based on a comparison of how you are feeling now with how
you were feeling the last time you were happy and undepressed.
If you believe you have never felt happy and undepressed,
then answer the question based on a comparison of how you
are feeling now with how you imagine a normal, undepressed
person would feel.)

1. 0 I do not feel sad.
    1 I feel sad.
    2 I am sad all the time and I can't snap out of it.
    3 I am so sad or unhappy that I can't stand it.

2. 0 I am not particularly discouraged about the future.
    1 I feel discouraged about the future.
    2 I feel I have nothing to look forward to.
    3 I feel that the future is hopeless and that things cannot improve.

3. 0 I do not feel like a failure.
    1. I feel I have failed more than the average person.
    2 As I look back on my life, all I can see is a lot of failures.
    3 I feel I am a complete failure as a person.

4. 0 I get as much satisfaction out of things as I used to.
    1 I don't enjoy things the way I used to.
    2 I don't get real satisfaction out of anything anymore.
    3 I am dissatisfied or bored with everything.

5. 0 I don't feel particularly guilty.
    1 I feel guilty a good part of the time.
    2 I feel quite guilty most of the time.
    3 I feel guilty all of the time.

6. 0 I don't feel I am being punished.
    1 I feel I may be punished.
    2 I expect to be punished.
    3 I feel I am being punished.

7. 0 I don't feel disappointed in myself.
    1 I am disappointed in myself.
    2 I am disgusted with myself.
    3 I hate myself.

8. 0 I don't feel I am any worse than anybody else.
    1 I am critical of myself for my weaknesses or mistakes.
    2 I blame myself all the time for my faults.
    3 I blame myself for everything bad that happens.

9. 0 I don't have any thoughts of killing myself.
    1 I have thoughts of killing myself, but I would not carry them out.
    2 I would like to kill myself.
    3 I would kill myself if I had the chance.

10. 0 I don't cry any more than usual.
    1 I cry more now than I used to.
    2 I cry all the time now.
    3 I used to be able to cry, but now I can't cry even though I want t

11. 0 I am no more irritated by things than I ever am.
    1 I am slightly more irritated now than usual.
    2 I am quite annoyed or irritated a good deal of the time.
    3 I feel irritated all the time now.

12. 0 I have not lost interest in other people.
    1 I have lost some interest in other people.
    2 I have lost most of my interest in other people.
    3 I have lost all my interest in other people.

13. 0 I make decisions about as well as I ever could.
    1 I put off making decisions more than I used to.
    2 I have greater difficulty in making decisions than before.
    3 I can't make decisions at all anymore.

14. 0 I don't feel that I look any worse than I used to.
    1 I am worried that I am looking old or unattractive.
    2 I feel that there are permanent changes in my appearance that
       make me look unattractive.
    3 I believe that I look ugly.

15. 0 I can work about as well as before.
    1 It takes an extra effort to get started at doing something.
    2 I have to push myself very hard to do anything.
    3 I can't do any work at all.

16. 0 I can sleep as well as usual.
    1 I don't sleep as well as I used to.
    2 I wake up 1-2 hours earlier than usual and find it hard to
       get back to sleep.
    3 I wake up several hours earlier than I used to and cannot
       get back to sleep.

17. 0 I don't get more tired than usual.
    1 I get tired more easily than I used to.
    2 I get tired from doing almost anything.
    3 I am too tired to do anything.

18. 0 My appetite is no worse than usual.
    1 My appetite is not as good as it used to be.
    2 My appetite is much worse now.
    3 I have no appetite at all anymore.

19. 0 I haven't lost much weight, if any, lately.
    1 I have lost more than five pounds.
    2 I have lost more than ten pounds.
    3 I have lost more than fifteen pounds.

20. 0 I am no more worried about my health than usual.
    1 I am worried about physical problems such as aches and pains,
       or upset stomach, or constipation.
    2 I am very worried about physical problems and it's hard to
       think of much else.
    3 I am so worried about my physical problems that I cannot
       think about anything else.

21. 0 I have not noticed any recent change in my interest in sex.
    1 I am less interested in sex than I used to be.
    2 I am much less interested in sex now.
    3 I have lost interest in sex completely.

2. The following is a questionnaire to find out the way in which certain important events in our society affect different people. Read each statement carefully and then rate from 0-6 how true the statement is for you. (0 means the statement is completely untrue; 6 means the statement is completely true).

1. Whether or not I get to be a leader depends mostly on my ability.

   0   1   2   3   4   5   6

2. To a great extent my life is controlled by accidental happenings.

   0   1   2   3   4   5   6

3. I feel like what happens in my life is mostly determined by powerful people.

   0   1   2   3   4   5   6

4. Whether or not I get into a car accident depends mostly on how good a driver I am.

   0   1   2   3   4   5   6

5. When I make plans, I am almost certain to make them work.

   0   1   2   3   4   5   6

6. Often there is no chance of protecting my personal interest from bad luck happenings.

   0   1   2   3   4   5   6

7. When I get what I want, it's usually because I'm lucky.

   0   1   2   3   4   5   6

8. Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power.

   0   1   2   3   4   5   6

9. How many friends I have depends on how nice a person I am.

   0   1   2   3   4   5   6

10. I have often found that what is going to happen will happen.

   0   1   2   3   4   5   6

11. My life is chiefly controlled by powerful others.

    0   1   2   3   4   5   6

12. Whether or not I get into a car accident is mostly a matter of luck.

    0   1   2   3   4   5   6

13. People like myself have very little chance of protecting our personal interests when they conflict with those of strong pressure groups.

    0   1   2   3   4   5   6

14. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.

    0   1   2   3   4   5   6

15. Getting what I want requires pleasing those people above me.

    0   1   2   3   4   5   6

16. Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time.

    0   1   2   3   4   5   6

17. If important people were to decide they didn't like me, I probably wouldn't make many friends.

    0   1   2   3   4   5   6

18. I can pretty much determine what will happen in my life.

    0   1   2   3   4   5   6

19. I am usually able to protect my personal interests.

    0   1   2   3   4   5   6

20. Whether or not I get into a car accident depends mostly on the other driver.

    0   1   2   3   4   5   6

21. When I get what I want, it's usually because I worked hard for it.

    0   1   2   3   4   5   6

22. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me.

    0   1   2   3   4   5   6

23. My life is determined by my own actions.

    0   1   2   3   4   5   6

24. It's chiefly a matter of fate whether or not I have a few friends or many friends.

    0   1   2   3   4   5   6

3. Following is an inventory of significant life events.
Circle the events which have occurred within the
previous 6 months of this study.

Section 1. All
1. Unemployment (of head of household)
2. Trouble with superiors at work
3. New job in same line of work
4. New job in new line of work
5. Change in hours or conditions in present job
6. Promotion or change of responsibilities at work
7. Retirement
8. Moving house
9. Purchasing own house (taking out mortgage)
10. New neighbours
11. Quarrel with neighbours
12. Income increased substantially (25%)
13. Income decreased substantially (25%)
14. Getting into debt beyond means of repayment
15. Going on holiday
16. Conviction for minor violation (e.g. speeding or drunkencs
17. Jail sentence
18. Involvement in fight
19. Immediate family member starts drinking heavily
20. Immediate family member attempts suicide
21. Immediate family member sent to prison
22. Death of immediate family member
23. Death of close friend
24. Immediate family member seriously ill
25. Gain of new family member (immediate)
26. (Problems related to alcohol or drugs)
27. Serious restriction of social life
28. (Period of homelessness (hostel or sleeping rough))
29. Serious physical illness or injury requiring hospital treatment
30. (Prolonged ill health requiring treatment by own doctor)
31. Sudden and serious impairment of vision or hearing
32. (Unwanted pregnancy)
33. (Miscarriage)
34. (Abortion)
35. Sex difficulties
Section 2. Ever-married only
36. Marriage
37. Pregnancy (or of wife)
38. Increase in number of arguments with spouse
39. (Increase in number of arguments with other immediate
family members (e.g. children))
40. Trouble with other relatives (e.g. in-laws)
41. Son or daughter left home
42. (Children in care of others)
43. (Trouble or behaviour problems in own children)
44. Death of spouse
45. Divorce
46. Marital separation
47. Extra-marital sexual affair
48. (Break up of affair)
49. Infidelity of spouse
50. Marital reconciliation
51. Wife begins or stops work
Section 3. Never-married only
52. (Break up with steady boy or girl friend)
53. (Problems related to sexual relationship)
54. (Increase in number of family arguments (e.g. with parents))
55. (Break up of family)

4. For each of up to 5 most personally upsetting events indicated on the life events inventory, please answer the following questions. Rate each answer on the 7-point scale. Only circle one number for each question. The questionnaire is a measure of one's attitudes towards significant life events.

EVENT: _____

1. How upsetting was the event for you?
   Not at all   Very much
     1   2   3   4   5   6   7

2. How much control over the occurrence of this event did you have?
   No Control   Much control
     1   2   3   4   5   6   7

3. Did this event occur primarily because of something about you
   (such as personality, effort)--or was it primarily due to
   something about the situation or another person or persons?
   Because of me   Because of situation, person/s
     1   2   3   4   5   6   7

4. Did this event occur because of something that changes readily
   (such as mood, effort, luck, or fate)--or because of something
   relatively unchanging (e.g., ability, unchanging qualities of a
   situation or person)?
   Unchanging   Changing
     1   2   3   4   5   6   7

5. To what extent do the causes of this event affect other areas
   of your life?
   Not at all   Very much
     1   2   3   4   5   6   7

6. How likely do you feel that a similar event will occur in your
   life in the next 3 years? (Try to give an estimate based on
   your personal feelings rather than based on a rational judgement).
   Unlikely   Very likely
     1   2   3   4   5   6   7

   Answer (a) or (b).

a) If this event occurred primarily because of something about you,
   to what extent did you intend for this event to happen?
   No intention   Much intention.
     1   2   3   4   5   6   7

b) Or, if this event occurred primarily because of something about
   the situation or person, to what extent did the other person or
   persons intentionally cause this event to happen to you?
   No intention   Much intention
     1   2   3   4   5   6   7

. How much had you expected this event to occur?
   Not at all   Very much
     1   2   3   4   5   6   7

. How much uncertainty have you experienced in your life as a
   result of this event?
   None   Very much
     1   2   3   4   5   6   7

1. How upsetting was the event for you?
   Not at all   Very much
   1   2   3   4   5   6   7

2. How much control over the occurrence of this event did you have?
   No Control   Much control
   1   2   3   4   5   6   7

3. Did this event occur primarily because of something about you
   (such as personality, effort)--or was it primarily due to
   something about the situation or another person or persons?
   because of me   Because of situation, person/s
   1   2   3   4   5   6   7

4. Did this event occur because of something that changes readily
   (such as mood, effort, luck, or fate)--or because of something
   relatively unchanging (e.g., ability, unchanging qualities of a
   situation or person)?
   Unchanging   Changing
   1   2   3   4   5   6   7

5. To what extent do the causes of this event affect other areas
   of your life?
   Not at all   Very much
   1   2   3   4   5   6   7

. How likely do you feel that a similar event will occur in your
   life in the next 3 years? (Try to give an estimate based on
   your personal feelings rather than based on a rational judgement).
   Unlikely   Very likely
   1   2   3   4   5   6   7

   Answer (a) or (b).

   If this event occurred primarily because of something about you,
   to what extent did you intend for this event to happen?
   No intention   Much intention.
   1   2   3   4   5   6   7

   Or, if this event occurred primarily because of something about
   the situation or person, to what extent did the other person or
   persons intentionally cause this event to happen to you?
   No intention   Much intention
   1   2   3   4   5   6   7

   How much had you expected this event to occur?
   Not at all   Very much
   1   2   3   4   5   6   7

   How much uncertainty have you experienced in your life as a
   result of this event?
   None   Very much
   1   2   3   4   5   6   7

EVENT: _____

1. How upsetting was the event for you?
    Not at all   *Very much*

      1   2   3   4   5   6   7

2. How much control over the occurrence of this event did you have?
    No Control   *Much Control*

      1   ·2   3   4   ·5   6   7

3. Did this event occur primarily because of something about you
    (such as personality, effort)--or was it primarily due to
    something about the situation or another person or persons?
    e cause of me   *Because of situation, persons*

     ·1   ·2   3   4   5   6   7

4. Did this event occur because of something that changes readily
    (such as mood, effort, luck, or fate)--or because of something
    relatively unchanging (e.g., ability, unchanging qualities of a
    situation or person)?
    Unchanging   *Changing*

      1   2   3   4   5   6   7

5. To what extent do the causes of this event affect other areas
    of your life?
    Not at all   *Very much*

      1   2   3   4   5   6   7

6. How likely do you feel that a similar event will occur in your
    life in the next 3 years? (Try to give an estimate based on
    your personal feelings rather than based on a rational judgement).
    Unlikely   *Very likely*

      1   2   3   4   5   6   7

    Answer (a) or (b).

) If this event occurred primarily because of something about *you*,
   to what extent did you intend for this event to happen?
   No intention   *Much intention.*

      1   ·2   3   4   5   6   7

) Or, if this event occurred primarily because of something about
   the situation or person, to what extent did the other person or
   persons intentionally cause this event to happen to you?
   No intention   *Much intention*

      1   2   3   4   5   6   7

· How much had you expected this event to occur?
· *Not at all*   *Very much*

      1   2   3   4   5   6   7

   How much uncertainty have you experienced in your life as a
   result of this event?
   None   *Very much*

      1   2   3   4   5   6   7

EVENT: _____

1. How upsetting was the event for you?
    Not at all   *Very much*
    1   2   3   4   5   6   7

2. How much control over the occurrence of this event did you have?
    No Control   *Much control*
    1   2   3   4   5   6   7

3. Did this event occur primarily because of something about you
    (such as personality, effort)--or was it primarily due to
    something about the situation or another person or persons?
    Because of me   *Because of situation, person/s*
    1   2   3   4   5   6   7

4. Did this event occur because of something that changes readily
    (such as mood, effort, luck, or fate)--or because of something
    relatively unchanging (e.g., ability, unchanging qualities of a
    situation or person)?
    Unchanging   *Changing*
    1   2   3   4   5   6   7

5. To what extent do the causes of this event affect other areas
    of your life?
    Not at all   *Very much*
    1   2   3   4   5   6   7

6. How likely do you feel that a similar event will occur in your
    life in the next 3 years? (Try to give an estimate based on
    your personal feelings rather than based on a rational judgement).
    Unlikely   *Very likely*
    1   2   3   4   5   6   7

    Answer (a) or (b).

a) If this event occurred primarily because of something about you,
    to what extent did you intend for this event to happen?
    No intention   *Much intention*
    1   2   3   4   5   6   7

b) Or, if this event occurred primarily because of something about
    the situation or person, to what extent did the other person or
    persons intentionally cause this event to happen to you?
    No intention   *Much intention*
    1   2   3   4   5   6   7

.   How much had you expected this event to occur?
    Not at all   *Very much*
    1   2   3   4   5   6   7

.   How much uncertainty have you experienced in your life as a
    result of this event?
    None   *Very much*
    1   2   3   4   5   6   7

EVENT: _____

1. How upsetting was the event for you?
   Not at all   Very much
   1   2   3   4   5   6   7

2. How much control over the occurrence of this event did you have?
   No Control   Much control
   1   2   3   4   5   6   7

3. Did this event occur primarily because of something about you
   (such as personality, effort)--or was it primarily due to
   something about the situation or another person or persons?
   Because of me   Because of situation, person/s
   1   2   3   4   5   6   7

4. Did this event occur because of something that changes readily
   (such as mood, effort, luck, or fate)--or because of something
   relatively unchanging (e.g., ability, unchanging qualities of a
   situation or person)?
   Unchanging   Changing
   1   2   3   4   5   6   7

5. To what extent do the causes of this event affect other areas
   of your life?
   Not at all   Very much
   1   2   3   4   5   6   7

6. How likely do you feel that a similar event will occur in your
   life in the next 3 years? (Try to give an estimate based on
   your personal feelings rather than based on a rational judgement).
   Unlikely   Very likely.
   1   2   3   4   5   6   7

   Answer (a) or (b).

a) If this event occurred primarily because of something about you,
   to what extent did you intend for this event to happen?
   No intention   Much intention.
   1   2   3   4   5   6   7

b) Or, if this event occurred primarily because of something about
   the situation or person, to what extent did the other person or
   persons intentionally cause this event to happen to you?
   No intention   Much intention
   1   2   3   4   5   6   7

. How much had you expected this event to occur?
   Not at all   Very much
   1   2   3   4   5   6   7

. How much uncertainty have you experienced in your life as a
   result of this event?
   None   Very much
   1   2   3   4   5   6   7

Appendix C

The Attribution Style Questionnaire (1982)
consists of the following items rated on 7-points
scales:

(1)   How upsetting was the event for you?   (Upset)

(2)   How much control over the occurrence of this event
      did you have?   (Control)

(3)   Did this event occur primarily because of something
      about you (such as personality, effort)--or was it
      primarily due to something about the situation or
      another person or persons?   (Locus of causality)

(4)   Did this event occur because of something that
      changes readily (such as mood, effort, luck or
      fate)--or because of something relatively
      unchanging (e.g., ability, unchanging qualities of
      a situation or person)?   (Stability)

(5)   To what extent do the causes of this event affect
      other areas of your life?   (Globality)

(6)   How likely do you feel that a similar event will
      occur in your life in the next 3 years?   (Try to
      give an estimate based on your personal feelings
      rather than based on a rational judgement).
      (Recurrence)

(7) (a) If this event occurred primarily because of
something about you, to what extent did you intend
for this event to happen? (Intentionality)

(b) Or, to what extent did other person or persons
intend for the event to happen to you?

(8) How much had you expected this to occur?
(Expectation)

(9) How much uncertainty have you experienced in your
life as a result of this event? (Uncertainty)