THE EFFECT OF DEPRESSION ON INTERPERSONAL INTERACTIONS IN COLLEGE STUDENTS

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This study is dedicated to my wife Judy

in appreciation for her support.

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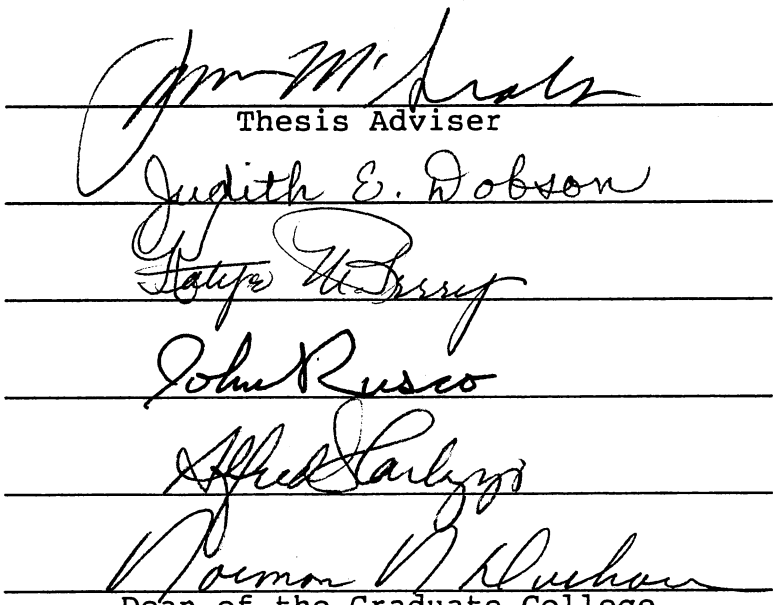

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CHAPTER I

INTRODUCTION

Within the last 60 years a large body of literature has been written about depression. This interest in depression reflects the advancement of psychology in general, and the prevalence of depression in modern society.

Depression is considered one of the major mental health problems in the United States today. The National Institute of Mental Health (NIMH) reveals that depression affects 10 million people in the United States each year (Landers, 1990). According to an NIMH report, "The Depressive Disorders" (Secunda, 1973), depression accounts for 75% of all psychiatric hospitalizations. Epidemiological evidence suggests that as many as 20% of the population will suffer an episode of major depression, and most people have experienced or will experience at least a mild depressive episode sometime during their lives (Wing & Bebbington, 1985). Although most people recover from depressive episodes, the disorder can be lethal. Approximately one out of every 100 individuals with a depressive illness dies by suicide (Williams, Friedman, & Secunda, 1970). Eighty percent of all suicides can be traced to precipitating depressive episodes (Friedman & Katz, 1974). Despite the

frequency of this disorder and the public health problem it poses, relatively little research has been directed toward its psychological aspects. In contrast, there is available an excess of theoretical formulation and biological research associated with depression (Beck, 1967a).

Considering the prevalence and seriousness of depression in society, Rush and Beck (1977) point out that no consensus has been made regarding what constitutes depression. They also note that the diagnostic criteria of depression do not describe a homogeneous population of patients regarding etiology, symptomatology, and responsiveness to therapeutic treatments. This situation interferes with decisions concerning choice of treatment for a particular client.

However, there is general agreement that depression encompasses distinct changes in mood and subjective experience; in thinking and evaluation; and in social, interpersonal, and physiological functioning (Beck, 1967a; Becker, 1974; Grinker, Miller, Sabshin, Nunn, & Nunnally, 1961; Mendels, 1970). The focus for this study is to evaluate what effect depression has on interpersonal functioning.

Significance of the Study

It has been well documented that depression is a major mental health problem in the United States today. Harper (1959) reported that 36 systems of psychotherapy were

documented in the literature. By 1984, the number of systems exceeded 250 (Corsini, 1984). Implicit in each system is a theory of why people feel depressed and what is needed to alleviate these feelings. However, in comparative studies of psychotherapies, no one form of psychotherapy has emerged as a preferred treatment for depression (Luborsky, Singer, & Luborsky, 1975; Shapiro & Shapiro, 1982; Smith & Glass, 1977).

Traditionally, depression has been viewed as an intrapersonal problem. The source of depression, and the responsibility for its maintenance, is held to be primarily within the depressed person. However, current general views of the nature of personality and of pathology have emphasized the importance of both personal and environmental factors in understanding human behavior. For example, Mischel's (1973) interactional view stressed the importance of person-environment transactions in personality development and understanding pathology. Another view that attempts to integrate personal and environmental factors is Bandura's (1978) reciprocal determinism model.

Bandura's model considers psychological functioning to be the result of a continuous reciprocal interaction of cognitive, behavioral, and environmental influences. While designed to provide a framework for understanding human behavior in general, Bandura's model has implications for the study of pathology, including depression. In accordance with Bandura's (1978) model, the study of depression is best

addressed by observing patterns of reciprocal interactions of person, behavior, and environment.

Coyne (1976b) also argues that the role of the social environment in the maintenance of depression is often minimized by traditional views. Coyne (1976b, 1982, 1985) presents an interpersonal model of depression maintenance that is consistent with the current state of theory regarding overall psychological functioning as exemplified by Bandura's (1978) reciprocal determinism model. The social context in which depression occurs is vitally important according to Coyne (1976b). Coyne diverges from traditional theories of depression with his view of the role of the environment, particularly the depressed person's interaction with the social environment. While Coyne does not deny that social withdrawal may occur in depression (Coyne & Gotlib, 1983; Coyne & Gotlib, 1986), he believes that the depressed person is actively involved with the environment, and that the social environment may withdraw from the depressed person. In Coyne's view, the social environment may provide support or be a significant source of stress, but it has a major impact on the maintenance of depression (Coyne & DeLongis, 1986).

Coyne's theory calls for a reexamination of the person-environment and the environment-behavior interactions in particular, as well as the effects of the combined model of person, behavior, and environment. Therefore, in keeping with current interactional views of the nature of

psychological functioning such as Bandura's model, the interaction of the depressed person's internal states and behavior with the social environment are crucial to study.

The interaction style of an individual is affected by the personal characteristics of the individual. Awareness of these styles and characteristics permits greater understanding of individual behavior and of the interaction between people (Schutz, 1966). However, interpersonal interactions may also be affected by the impact of depression. Counselors must be cognizant of differences in interpersonal interactions associated with the impact of depression. Therefore, the purpose of this study is to examine any differences between the interpersonal orientations of depressed and nondepressed college students.

Individuals in the nondepressed group had a score on the revised Beck Depression Inventory (BDI); (Beck, Rush, Shaw, & Emery, 1979) of 0 to 6. Individuals in the depressed group had a score on the BDI of 19 or greater. In order to clearly delineate between the depressed group and the nondepressed group, all subjects with a score of 7 to 18 on the BDI were omitted from the study (Beck & Steer, 1987).

Statement of the Problem

The question addressed in this study was: What is the effect of depression on interpersonal interactions in college students?

Research Questions

The specific research questions addressed in this study were the following:

1. Is there a difference in the expressed scores on (a) inclusion, (b) control, and (c) affection, as measured by the FIRO-B, between those subjects in the depressed group and those subjects in the nondepressed group?

2. Is there a difference in the wanted scores on (a) inclusion, (b) control, and (c) affection, as measured by the FIRO-B, between those subjects in the depressed group and those subjects in the nondepressed group?

3. Is there a difference in the (a) total expressed score, (b) the total wanted score, and (c) the social interaction index score, as measured by the FIRO-B, between those subjects in the depressed group and those subjects in the nondepressed group?

4. Is there a difference in the sum scores (the expressed score plus the wanted score) on (a) inclusion, (b) control, and (c) affection, as measured by the FIRO-B, between those subjects in the depressed group and those subjects in the nondepressed group?

5. Is there a difference in the difference scores (the expressed score minus the wanted score) of (a) inclusion, (b) control, (c) affection, and (d) the total difference score, as measured by the FIRO-B, between those subjects in the depressed group and those subjects in the nondepressed group?

Definition of Terms

The following terms are used in this study.

Depression refers to a broad continuum of changes in affective state, ranging from the normal mood fluctuations of everyday life to a severe melancholia. Depression as a clinical disorder is distinguished from everyday mood fluctuations by the persistence of the mood disturbance, accompanying symptoms, and impaired performance in society or at work. For the purpose of this study, depression is the disturbance of mood and accompanying symptoms as measured by a score of 19 or greater on the Beck Depression Inventory. The 21 symptoms and attitudes the Beck Depression Inventory assesses are mood, pessimism, sense of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusations, suicidal ideation, crying, irritability, social withdrawal, indecisiveness, body image change, work difficulty, insomnia, fatigability, loss of appetite, weight loss, somatic preoccupation, and loss of libido (Beck & Steer, 1987).

Interpersonal Orientation/Interactions. These terms are interchangeable and refer to the characteristic behavior of an individual toward other individuals in the areas of inclusion, control, and affection.

Interaction Variables. Three interpersonal interaction variables of inclusion, control, and affection were examined

on two dimensions, wanted and expressed behavior, as measured by scores on the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) scale (Schutz, 1958). The interaction variables of the FIRO-B scale were defined by Ryan (1977). Inclusion refers to the need to establish and maintain satisfactory relationships with people with respect to interaction and association. The inclusion scale of the FIRO-B measures the degree to which a person moves toward or away from people. Control refers to the need to establish and maintain satisfactory relationships with respect to control and power. The control scale of the FIRO-B measures the extent to which a person wants to assume responsibility or make decisions. Affection refers to the need to have satisfactory relationships with others with respect to love and affection. The affection scale of the FIRO-B measures the degree to which a person becomes closely involved with others.

The two dimensions of wanted and expressed behavior refer to the direction of behavior. Expressed behavior is what an individual expresses to others or actively initiates toward others. Wanted behavior is what an individual wants from others or what the individual wants other people to initiate toward them.

Limitations

Interpretations of the findings of this study, as in

any casual-comparative study, must be approached with caution. The subject pool was primarily undergraduate students at a moderate size Midwestern university located in a large metropolitan area, therefore limiting generalization of the results to other populations. Also, the levels of reported depression were primarily in the moderate to severe range, which limits the ability to generalize conclusions to populations of more seriously depressed persons. The fact that the independent variable, depression, was not manipulated does not allow for a complete analysis of how the depressed individual's premorbid affective level influences their behavior in interpersonal interactions.

Since neither the nondepressed group nor the depressed group were formed by random sampling, the groups may differ on some variable other than the identified independent variable, and this unknown variable may be the true cause of observed differences. A data sheet was used to obtain information about these potentially influential variables. However, the validity of the study may be affected by variables that were not anticipated, or for which measures were not obtainable.

Due to lack of random sampling, lack of random assignments, and lack of manipulation, cause-effect relationships cannot be identified with any degree of certainty. Consequently, the attribution of the differences found in the variable of interpersonal orientations should be considered tentative until further research is completed.

Organization of the Study

The present chapter includes an introduction to the problem, the significance of the study, a statement of the problem, the research questions, the definition of terms, and the limitations of the study. Chapter II contains a review of the literature pertinent to this study. Chapter III describes the subject pool and selection of subjects, procedures, instrumentation, research design, and analysis. Chapter IV contains the findings and a discussion of the results of the study. Chapter V includes a summary of the study, conclusions, implications, and recommendations for further research.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Support for the study of depression and interpersonal interactions was drawn from three areas. First, studies of depressed persons have revealed observable differences in their behavior patterns compared with nondepressed persons. Second is the work describing the social skills deficits of depressed persons. Finally, a growing body of literature suggests that depressed persons experience problematic interpersonal relationships.

Behavioral Differences

A number of studies have addressed the issue of differences in the behavior of depressed versus nondepressed persons. Early studies (Hinchliffe, Lancashire, & Roberts, 1971a) showed that verbal productivity was lower for depressed than nondepressed persons. Reisinger (1972) found high rates of crying and low rates of smiling for a depressed inpatient. Reisinger also found that rates of crying and smiling could be shaped by token and, later by social reinforcement. This is important for the present

study's purposes because it is an early indication of the role of social reinforcement, or the response of the social environment, in depression maintenance.

Hersen, Eisler, Alford & Agras (1973) found that rates of talking, smiling, and motor activity could be shaped by a token economy system and increased social reinforcement. Waxer (1974) found three behavioral indexes that most clearly distinguished depressed patients from nondepressed controls. These three behavioral indexes were eye contact, mouth position (depressed more downcast, quivering, or drooping), and angle of head (depressed more downward). Eye contact was especially different, with depressed patients making eye contact at only about one-quarter of the duration and frequency of nondepressed patients.

In a further study, Waxer (1976) found that raters of videotapes could correlate ratings of depression with MMPI Scale 2 scores on the basis of nonverbal cues alone. This study was important because it indicated that not only were nonverbal, behavioral differences characteristic of depression, but that they could be used to estimate the severity of the depression. The behavioral differences that related to severity of depression were poor eye contact, downward turn of the mouth, downward angle of the head, and lack of hand gestures while talking (Waxer, 1976).

Differences in the verbal behavior of depressed persons include increased verbalization of sadness, hopelessness, guilt, worthlessness, irritability, and suicide intention

(Levitt & Lubin, 1975; Zung, 1965). Findings have also indicated a reduction of interpersonal activity in depressed persons (Beck, 1967b; Levitt & Lubin, 1975).

Memory recall studies with depressed patients demonstrate that these patients may tend to focus on negative subjects when they interact with others. For example, McDowall (1984) found that of depressed patients, nondepressed patients, and nondepressed normal controls, the depressed group recalled more unpleasant words. Slife, Miura, Thompson, Shapiro, and Gallagher (1984) found that the depressed subjects recalled more disliked trigrams and fewer liked ones than nondepressed subjects; and then, when depression was manipulated by therapy, depressed clients increased their recall of liked stimuli. These studies suggest that depressed persons may selectively attend to more negative stimuli, and to present more negative topics when they do engage in interaction with others. Recent research has demonstrated that depressed persons are biased toward attaching great importance to any evidence of failure (Wenzlaff & Grozier, 1988), and tend to overgeneralize negative feedback about themselves (Ganellen, 1988). Another recent study revealed that depressed persons who did not recover well tended to have global negative self-views (Dent & Teasdale, 1988).

The literature on behavioral effects of depression suggests that depressed persons do differ from nondepressed persons in their verbal and nonverbal presentation.

Nonverbal differences include crying (Reisinger, 1972), low rates of smiling and motor activity (Hersen et al., 1973), poor eye contact, downward mouth position and head angle (Waxer, 1974; 1976), and lack of hand gestures (Waxer, 1976). Additional nonverbal differences include facial expressions that are difficult to interpret (Prkachin, Craig, Papageorgis, & Reith, 1977), and sad vocal tone regardless of subject matter (Levin, Hall, Knight, & Alpert, 1985).

Depressed persons also appear to exhibit verbal differences from the behavior of nondepressed people. They seem to talk less in general (Hersen et al., 1973; Hinchliffe, Lanchashire, & Roberts, 1971b), and to interact with others less (Beck, 1967b; Levitt & Lubin, 1975). Depressed people appear to selectively filter information from the environment, focusing upon more negative aspects (Dent & Teasdale, 1988; Ganellen, 1988; McDowall, 1984; Slife et al., 1984; Wenzlaff & Grozier, 1988), and they tend to focus on less pleasant topics, such as hopelessness, guilt, worthlessness, and irritability, when they do interact with others (Levitt & Lubin, 1975; Zung, 1965). These behavioral differences may place depressed persons at a disadvantage in social relationships, as Lewinsohn has contended.

Social Skills Deficits

Several studies have revealed social skills deficits in

depressed persons. Libet and Lewinsohn (1973) defined social skill as a high rate of behaviors that were reinforced by others, and a low rate of behaviors that were punished by others. Libet and Lewinsohn (1973) found that depressed persons emitted fewer behaviors overall, and consequently were reinforced less for their social behaviors than were nondepressed persons. Another social skill deficit noted by Libet and Lewinsohn was that depressed subjects exhibited longer latencies to social response to others, and consequently "their timing was off" in social interchanges. This may have contributed to their receiving less positive social reinforcement from others.

Libet, Lewinsohn, and Javorek (1973) studied depressed and nondepressed subjects in small groups and at home with their families. The social skills differences for depressed subjects were most striking for depressed males. In the home situations with families, both male and female depressed subjects emitted fewer social behaviors, displayed longer latencies before responding to others, and received less positive reinforcement than nondepressed subjects. Similar lack of social skills and low rates of positive reinforcement from family members were also reported by Lewinsohn, Biglan, and Zeiss (1976).

Tanner, Weissman, and Prusoff (1975) conducted a longitudinal study of social skills in depression and found that social skills deficits were not present in the nondepressed periods for subjects who suffered from

depressive episodes. Youngren and Lewinsohn (1980) also reported fewer social skills deficits as depression abated for their subjects. Youngren and Lewinsohn found that both observer and peer ratings of social skills improved as depression lessened.

The treatment outcome studies of the Coping With Depression Course also support the notion that social skills deficits are associated with depression and abate as depression lessens (Lewinsohn, Steinmetz, Antonnucio, & Teri, 1985). A principal component of this structured program is social skills training. Treatment outcome studies have consistently demonstrated that such training is effective in improving both self-reported and observer ratings of the level of depression (Antonnucio, Lewinsohn, & Steinmetz, 1982; Brown & Lewinsohn, 1984; Steinmetz, Thompson, Breckenridge, & Gallagher, 1984).

More recent work has supported the notion of a relationship between social effectiveness and depression. For example, Wilbert and Rupert (1986) found Beck Depression Inventory scores correlated with measures of interpersonal loneliness, difficulty finding partners, and social anxiety. At a more general level, Monroe and Steiner (1986) have proposed a model of the mediating effect of social support on the interaction of personality and life stress factors, as these affect the development and maintenance of psychiatric disorders such as depression. Monroe and Steiner (1986) argue that many of the symptoms of depression

(irritability, loss of interest in people, loss of sexual interest, indecisiveness, etc.) have a high potential for adversely affecting social relationships. As social relationships deteriorate, the buffering effect of social support is lost, which allows the development and maintenance of the disorder to be exacerbated. Several studies have addressed the issue of interpersonal interactions and depression, and these will be discussed next.

Interpersonal Interactions and Depression

In this section, a wide range of evidence is reviewed as to the nature of the rich and reciprocal links between depressed persons and their interpersonal environments.

Social Support, Intimacy, and Depression

The hypothesis that having good social relationships protects against depression has been given considerable attention. Having a smaller social network, fewer close relationships, and less supportive relationships have all been shown to be related to depression (Billings & Moos, 1984; Schaefer, Coyne, & Lazarus, 1982). The quality of an individual's closest relationships may be most crucial, and support available from other relationships may not compensate for the deficiencies of intimate relationships (Coyne & DeLongis, 1986).

Brown and Harris' (1978) classic study gives what is

perhaps the richest picture of the importance of quality relationships in depression. They found that whether a woman had a confiding relationship with her spouse was a powerful mediator of the association between life events and depression. Women who lacked a confiding relationship with an intimate contact were three times more likely to become depressed in the face of a life event. A good intimate relationship appeared to eliminate the effects of other risk factors, such as having three young children at home, being unemployed, and having lost one's mother in childhood.

In subsequent analyses, Brown, Bifulco, Harris, and Bridge (1986) examined whether the difficulties in the marital relationships of depressed women could have been brought about by their affective state if they had been suffering from an insidious form of the disorder. They used a rating based on common sense judgment to determine whether these difficulties could be construed as "contingent" or "probably contingent" on the women's affective states, and found that only one-third of the marital difficulties were rated as "contingent." Two-thirds of the marital difficulties involved husbands judged to be "grossly undependable."

Brown and Harris (1978) distinguished between life events as provoking agents in depression and a lack of intimacy as a vulnerability factor, with the effects of a lack of intimacy occurring in the presence of a life event. This aspect of their work has been subject to the

greatest criticism. Other investigators have reanalyzed the Brown and Harris (1978) data using alternative statistical techniques, and they have been able to show that the effects of lack of intimacy are independent of serious life events (Cleary & Kessler, 1982; Tennant & Bebbington, 1978). This reinterpretation is consistent with the conclusion of community surveys that a lack of social support has a direct effect on depressive symptoms and diagnosis (e.g., Andrews, Tennant, Hewson, & Valliant, 1978; Aneshensel & Stone, 1982; Costello, 1982).

Further questions have been raised as to the meaning of intimacy and social support scores and their referents in the everyday lives of survey respondents. The general assumption has been that a high score on social support or intimacy indicates that respondents have something in their lives (i.e., social support or intimacy) that low scorers lack. However, rather than indicating the presence of something positive, a high score may most importantly indicate that respondents are relatively free from interactions or conditions in their relationships that might prove depressing (Coyne, Ellard, & Smith, in press).

Consistent with this notion, Roy (1978) found that women reporting an inability to confide in their husbands were but a subset of those reporting a "bad marriage," and that having a bad marriage was what places women at risk for depression and not the lack of a confiding relationship per se.

However, the most relevant and provocative data comes from the Yale Epidemiologic Catchment Area Study (ECA; Weissman, 1987). In a sample of over 3,000 adults, being married and being able to talk to one's spouse apparently provided a modest reduction in the risk for depression over that associated with being single, separated, or divorced. This may be viewed as the benefit of intimacy. However, this effect was overshadowed by the negative effects of being married but unable to communicate.

The odds ratio for depression associated with being married and not being able to communicate (i.e., the odds associated with not being able to talk to one's spouse versus the odds associated with all other conditions) was a striking 25:8 for men and 28:1 for women. Taken together, results of this study strongly suggest that most of the apparent effects of a good relationship with one's spouse found in other studies (i.e., spousal support or intimacy) are actually a reflection of the detrimental effects of being married but not communicating. These findings add credibility to arguments that not having to deal with problematic features of bad relationships may be more powerful than the purported salutary effects of good relationships. To understand better the interactions between depressed persons and the key persons in their lives, it becomes necessary to sample interactions in which the participants do not have a history together.

Depressed Persons Interacting with Strangers and Roommates

Studies of depressed persons' interactions with strangers allow investigation of the effects of their current behavior without the confounding effects of past interactions and background that color marital and familial interactions. Interpersonal difficulties observed in these studies cannot be attributed to mate selection, preexisting conflict, or long-term negative attitudes of depressed persons and their spouses that might explain the pattern of their relationships.

In the Popperian sense, the notion that depression has an identifiable impact in a fleeting contact with a stranger is a "risky hypothesis"--a hypothesis that could so easily be wrong and for that very reason increases our confidence in its validity when it stands up to empirical test. Despite the intuitive notion that strangers would be less tolerant of depressed person's difficulties than would family members, several studies (e.g., Hinchliffe, Hooper, & Roberts, 1978; Weissman & Paykel, 1974) have noted that interpersonal disturbances are more pronounced within intimate relationships. A 20-minute conversation in which strangers are asked to become acquainted is socially constraining and places minimal demands on participants, and so it is quite possible that the usual difficulties of depressed persons will not have the opportunity to

develop. Depressed persons may be more inclined to withdraw from strangers and hide their distress than with intimate contacts (Meyer & Hokanson, 1985).

Studies of interactions with strangers can therefore serve to enlighten our interpretation of studies of interactions with intimate contacts, but a lack of predicted findings may prematurely discourage us from pursuing a potentially fruitful line of inquiry concerning a valid phenomenon. Fortunately, results of studies of depressed persons do, indeed, encourage the development of an interactional perspective on depression.

How do others respond to depressed persons? Coyne (1976a) suggested that the aversive nature of interactions with depressed people often leads others to respond negatively or to avoid future interactions with these individuals. Coyne (1976b) found that subjects were more inclined to reject depressed patients than nondepressed patients or controls, using a questionnaire in which subjects indicated how willing they would be to interact with a target individual in the future. Hammen and Peters (1977; 1978), Strack and Coyne (1983), Howes and Hokanson (1979), Winer, Bonner, Blaney, and Murray (1981), and Boswell and Murray (1981) all used essentially the same measure and found similar results, although the latter study demonstrated this trend only for male subjects.

Convergently, Robbins, Strack, and Coyne (1979) found

that subjects were less willing to give positive reactions to depressed individuals, and Youngren and Lewinsohn's (1980) depressed subjects reported receiving fewer positively reinforcing responses from others. Hokanson, Sacco, Blumberg, and Landrum (1980) likewise reported that subjects communicated more extrapunitiveness (e.g., feelings of irritation) to depressed individuals than to controls. However, two studies (Gotlib & Robinson, 1982; King & Heller, 1984) used Coyne's (1976a) rejection questionnaire and found no differences in the extent to which depressed persons were rejected.

In everyday situations, as opposed to laboratory analogues, rejection of depressed persons may take the form of actual avoidance. Yarkin, Harvey, and Bloxom (1981) found that simply telling subjects someone is depressed causes them to sit further away before an interaction begins. Weissman and Paykel's (1974) discovery that depressed persons had relatively few social contacts and support systems is consistent with this idea. In addition, several studies have found that depressed people are devalued and perceived as less well-adjusted (e.g., Boswell & Murray, 1981; Burchill & Stiles, 1988).

Others' responses to depressed persons have also been assessed through behavioral observations, including verbal codings with positive/negative evaluations of each utterance and nonverbal codings of posture, eye contact, gestures, and facial expressions. Two studies suggested that others give

fewer total responses, fewer positive responses, and more negative responses when interacting with depressed people (Gotlib & Robinson, 1982; Howes & Hokanson, 1979).

This nonverbal indication of mood change and rejection in the Gotlib and Robinson (1982) study occurred after only three minutes, even though subjects did not subsequently report a variation in their willingness to interact with depressed or nondepressed persons in the future. The discrepancy between self-report and behavioral measure in this study may reflect subjects' ambivalence about actually feeling annoyed when they believe they should be helpful. This interpretation is also consistent with Coyne's (1976a) contention that others respond with artificial support toward depressed persons. Further, it could indicate that others' nonverbal reactions to depressed persons are automatic and not mediated by the same kinds of conscious recognition and interpretation that would be registered in questionnaire responses.

In most of the research concerning the response of others to depressed persons, the focus has primarily been on the responses that are elicited by depressed persons, and any variability or contribution by the others has been slighted. One exception is the study by Ellard, Coyne, Showers, and Ruvulo (1987) of the role of others' expectancies in determining the experiences of both parties in dyadic interactions involving a depressed person. As in other research, persons who expected that they were going to

interact with a depressed person were negative in their evaluation of the actual interaction. Likewise, subjects who were told that the person with whom they would interact was warm, outgoing person responded negatively when that person was actually depressed. Apparently, subjects reacted to the disconfirmation of their expectations. However, when subjects were told that their partner was nurturant and high in self-esteem, but uncomfortable in initial encounters, both subjects and their naive depressed partners evaluated themselves and each other positively.

Ellard et al. (1987) interpreted these results in terms of how this manipulation of expectations simultaneously prepared subjects for what would follow and reduced their self-imposed responsibility for managing the interaction. Ellard et al. (1987) suggest that more emphasis be placed on what others bring to an interaction with a depressed person and the demands this places on both parties.

Depressed persons in interpersonal interactions. Depressed persons' speech content and speech processes, as well as nonverbal behavior, have been assessed. Contributions to the aversive nature of the interactions may include their negative self-statements and self-devaluations (Blumberg & Hokanson, 1983; Hokanson et al., 1980; Jacobson & Anderson, 1982), negative affective content (Gotlib & Robinson, 1982), higher level of self-disclosure (Coyne, 1976b; Jacobson & Anderson, 1982), negative facial

expression and body language (Gotlib & Robinson, 1982), and nonreciprocal involvement and greater focus on self (Pyszczynski & Greenberg, 1987; Ziomek, Coyne, & Heist, 1983).

Two studies creatively used the Prisoner's Dilemma Game to study the interactions of depressed persons. Hokanson et al. (1980) found that depressed persons who are in a high power role tend to be exploitive and uncooperative and communicate more self-devaluation and helplessness. This elicited uncooperativeness, extrapunitiveness, and expressions of helplessness for their partners. Depressed persons who are in a low power role tend to blame their partners for their role, eliciting more friendliness and ingratiating behavior from them.

In an extension of this study, Blumberg & Hokanson (1983) varied the roles played by confederates interacting with depressed and nondepressed college students. Confederates playing a critical-competitive role elicited more extrapunitiveness from depressed than from nondepressed subjects, and helpless-dependent confederates elicited more negative self-statements from depressed than from nondepressed subjects. Across confederate roles, depressed persons communicated high levels of self-devaluation, sadness, helplessness, and general negative content.

The interactions occurring in a Prisoners Dilemma Game are highly constrained and limited in their goal. Nonetheless, these studies provide some further insights

into the behavior of depressed persons and the response of others, including the observation that, as well as being sad, depressed persons have a capacity for being hostile, uncooperative, and extrapunitive.

Many of the effects found in the stranger studies may be exacerbated when they occur over an extended period of time. The general negativity of the depressed person's speech content, outlook, and self-absorption may create small effects in brief interactions with strangers, but would likely be considerably more aversive when experienced daily. Convergent with this idea, Weissman and Paykel (1974) found that depressed women's greatest interpersonal disturbances were in their roles as wife and mother.

The relationships and interactions of depressed college students and their roommates offer an intermediate position between those with strangers and those with spouses or family members. College roommates have much more extensive contact than strangers and negotiate an ongoing relationship with typical interactional styles. However, selection factors are much less important, as students are frequently assigned roommates by lottery, and their involvement is generally less intimate and interdependent than married couples.

Roommate Studies. Two studies have indicated that the relationships of depressed college students with their roommates were more antagonistic and negative than those of

nondepressed students and suggested that more prolonged contact between depressed persons and others does not ameliorate the effects found in interactions with strangers.

Burchill and Stiles (1988) found that depressed students were rejected and disliked more, and were perceived as functioning less well, as they spent less time with their roommates. In addition, the roommates of depressed students came to an experimental setting in worse moods than did roommates of nondepressed students, highlighting the aversive nature of an anticipated interaction with a depressed person. However, after an interaction in which they discussed relational concerns, the moods of depressed students and their roommates actually improved, whereas the moods of nondepressed students and their roommates did not change. The positive effects of this particular interaction may represent the relief of finally having an opportunity to directly address their relational conflicts.

These students frequently remarked to the experimenter that although they recognized that the relational concerns discussed in the experiment were genuine problems, they had never attempted to address them directly. Perhaps this pattern represented an avoidance of problem-solving that left both of them frustrated with their ineffective coping. By contrast, the nondepressed students and their roommates appeared to have fewer problems to tackle, and the experimental interaction was thus an innocuous one that did

not affect their moods.

Hokanson and colleagues (Howes, Hokanson, & Lowenstein, 1985; Hokanson, Lowenstein, Hedeen, & Howes, 1986) followed college roommates in a three-month longitudinal study. Like Burchill & Stiles (1988), Howes et al. (1985) found that the roommates of depressed students were more depressed than the roommates of nondepressed students, but they were also able to show that there was an increase in depression from the first to the fifth week and again to the 11th week of rooming together.

The roommates of depressed students reported that they increased their caretaking of the depressed students over time, but the depressed students themselves came to see their roommates as more distrustful and competitive (Hokanson et al., 1986). This apparent contradiction may be explained by the roommates' attempts to be supportive while simultaneously resenting the burden placed on them. Such frustration with the depressed students' inability to be helped could lead to both members becoming angry and unhappy. Hokanson et al. (1986) also found that the depressed students were more dependent, distrustful, and self-devaluing, and that the dependent behavior increased over time.

These roommate studies offer an opportunity to investigate more chronic effects of depressed persons' relationships while still providing a control for the possible selection bias seen in marital relationships.

They demonstrate that the mood induction that has been found inconsistently in studies of brief interactions occurs with students rooming with a depressed person. They also suggest that these relationships come to be characterized in negative terms, and that roommates grow to dislike and reject depressed persons, perhaps because they resent their impossible position of trying to alleviate the depressed person's suffering. This frustration and anger may lead to blaming the depressed person, who in turn is angered by the rejection and lack of support. Both partners become stuck in a pattern of ineffective coping (Coyne, Wortman, & Lehman, 1988).

Effects of Intimacy on Depressed Person's Relationships. As discussed in the preceding section, the effects of interacting with a depressed person may vary with the degree of intimacy found in the relationship. The stranger studies have shown that others respond negatively to depressed persons immediately in first-time encounters. The roommate studies indicate that more extensive, long-term interactions lead to the development of negative moods in roommates and were marked by relationships that were negative, rejecting, and contained greater conflict. These findings suggest that the effects noted above will likely be more intense in marital and familial interactions, as well as more complicated systemically. For example, the depressed student-roommate pairs in the Burchill and Stiles

(1988) study developed more positive moods only after an interaction in which they discussed problematic aspects of their relationship. Marital partners placed in a similar interaction, however, would likely have unsuccessfully attempted such resolution many times previously. Their conflicts are likely to be more entrenched, complex, and less amenable to one positive interaction.

The Marriages and Families of Depressed Persons

A number of studies suggest that spouses corroborate depressed persons' negative reports about their marriages (Coleman & Miller, 1975; Kahn, Coyne, & Margolin, 1985; Merikangas, Prusoff, Kupfer, & Frank, 1985), and so these complaints cannot be dismissed as a reflection of depressed persons' general negativity or cognitive distortions, as prevailing cognitive theories of depression might suggest. Yet, the picture that is emerging of the marital relationships of depressed persons is much more complex than can be conveyed by such global statements. The spouses of depressed persons bring their own vulnerabilities and difficulties to the marriage. Marital interactions are quite negative during a depressive episode. The quality of the marriage influences the course of depression and the response to treatment.

Spouses of Depressed Persons. Spouses of depressed persons may have personal and family histories of psychopathology, and they may have heightened psychological and physical complaints during their partner's depressive episode. Furthermore, evidence suggests that some women vulnerable to depression marry men who contribute to the likelihood that they will become depressed.

Studies of assortative mating have examined the extent to which the spouses of depressed persons are married to persons with diagnosable psychopathology. In one of the studies, Merikangas & Spiker (1982) found that over half of spouses of affectively disturbed patients met the Research Diagnostic Criteria for a lifetime diagnosis of psychiatric illness. Most of these spouses met the criteria for affective disorder, and both patients' and spouses' affective disturbances tended to develop after marriage.

Sex differences have been noted: women may be considerably more vulnerable to becoming depressed when living with a depressed partner than men, and some of this may be due to these women being more likely to have family histories of affective disturbance. In contrast, depressed women are more likely than controls to be married to a man with an alcohol or substance abuse problem, or personality disorder (Coyne & DeLongis, 1989).

About 40% of spouses of patients currently in a depressive episode have enough symptoms to be classified as probable cases or are suitable for referral. This contrasts

with 17% of the spouses of depressed patients who are not currently experiencing an episode (Coyne, Kessler, Tal, Turnbull, Wortman, & Greden, 1987). Tracking the spouses of depressed patients seen in family practice, Widmar, Cadoret, and North (1980) found that they made more office visits than control persons. The spouses showed a pattern of significant increases in somatic complaints leading up to the patient's diagnosis, and a decrease subsequent to it.

Several studies suggest that women's relationships with their spouses may be an important mediator of the association between childhood adversity and depression in adulthood. Birtchnell (1980) studied women whose mothers had died in childhood and who had a poor relationship with subsequent maternal figures and found that a good relationship with spouses successfully compensated for this risk. Those women who had a good relationship with their spouses and still became depressed did so almost a decade later than those with a bad relationship.

Parker & Hadzi-Pavlovic (1984) found that not only did affectionate relationships with spouses largely eliminate the influence of this negative childhood experience, but unaffectionate relationships with spouses undid the influence of a positive relationship with the father and step-mother. The spouses of women vulnerable to depression may have their own contribution to problems in the marital relationship.

Quinton, Rutter, and Liddle (1984) found that poor

adjustment in women raised in an institution was associated with their spouses currently having alcohol or drug problems, or difficulties with the law. Furthermore, spouses' reports of their own deviance in adolescence were predictive of their wives' current adjustment.

Taken together, these studies suggest that early adverse experiences may be largely indirect and in part through the selection of the spouse. Taken together with the previously discussed findings of increased personality disturbance among the husbands of depressed women, this may indicate that women whose vulnerability to depression is such that it is more critical that they maintain a positive intimate relationship may also marry men who are less able to provide it. Consistent with this, recall that Brown et al (1986) found that depressed women with marital difficulties tended to be married to husbands who were "grossly undependable."

Depression and Marital Interaction. Not surprisingly, studies of the marital interaction of depressed persons have found them to be tense, hostile, and conflictful. Kahn et al. (1985) found no difference between depressed outpatients and their spouses in sadness or anger following a brief laboratory discussion, but both differed greatly from controls. The depressed persons and their spouses experienced each other in the interactions as more negative, hostile, mistrusting, and detached, and less agreeable,

nurturant, and affiliating.

Arkowitz, Holliday, and Hutter (1982) found that husbands of outpatient depressed women did not report more general feelings of hostility than did husbands of nondepressed outpatient women or normal controls. However, following a brief laboratory interaction with their wives, they were more hostile than the control husbands who had similarly interacted with their wives.

Kahn et al. (1985) also found that depressed outpatients and their spouses did not differ from each other in how they generally coped with marital conflict, but that they both differed from control couples. Depressed persons and their spouses were in agreement that each was high in aggressive behavior and withdrawal and low in constructive problem-solving.

Hinchliffe et al. (1978) found that, compared with controls and their spouses, interactions between depressed persons and their spouses were characterized by greater tension and negative expressiveness, more emotional outbursts, and considerable incongruence between verbal and nonverbal behavior. Interactions between depressed patients and strangers were much less negative than interactions with their spouses, with the depressed persons showing more adaptive and reciprocal behavior.

The Frie Universitat Berlin group (Hautzinger, Linden, & Hoffman, 1982; Linden, Hautzinger, & Hoffman, 1983) studied distressed married couples with and without a

depressed partner as these couples discussed a variety of issues. Compared with the spouses of persons who were not depressed, the spouses of depressed persons evaluated their partners and their relationships more negatively and even though they spoke negatively of their own well-being, they evaluated themselves more positively. They also cried more often than the spouses of nondepressed persons, agreed less with their partners' statements, but offered more help to their partners.

Depressed persons made more negative self-evaluations and statements about the future, while making more positive statements about the partner and the relationship. They also agreed more often with their partners. Other studies suggest that depressed women concede more in disagreements with their husbands (Merikangas, Ranelli, & Kupfer, 1979), and that they are more likely than women who were not depressed to be dominated by their husbands in decision-making (Hoover & Fitzgerald, 1981).

Researchers at the Oregon Research Institute (Biglan, Hops, Sherman, Friedman, Arthur, & Osteen, 1985; Hops, Biglan, Sherman, Arthur, Friedman, & Osteen, 1987) have published studies of marital interactions of depressed persons that employed sequential analysis as an analytic tool. In a problem-solving discussion, couples in which the wife was depressed engaged in less disclosure (excluding complaints about well-being). The husbands of depressed women proposed more solutions than their wives did, whereas

the wives in the control couples proposed more solutions. The husbands' facilitative behavior reduced wives' depressive behavior.

In couples in which there was both marital distress and a depressed wife, the wives' depressive behavior decreased the husbands' subsequent aggression (expressions of sarcasm and irritation), while the husbands' aggression decreased the wives' subsequent depressive behavior. Thus, each was able to exert aversive control over the other's behavior and was able to obtain brief, though immediate, respite from the other's averseness. In home observations, depressed wives' dysphoric behavior also suppressed their husbands' aggressive behavior, but it suppressed expressions of caring as well (Hops et al., 1987). Husbands' caring behavior reduced their wives' dysphoric behavior more than in couples without depression or marital distress.

Leff and Vaughn (1985) found that the majority of the spouses of depressed persons were critical of them. While some of this criticism centered on their depressed partner's current symptomatic behavior, a considerable proportion of it was aimed at traits and behavior evident before the onset of the patient's depression. Such a hostile, critical environment can be the origin of depressed persons' self-complaints and hopelessness, a means of validating and expanding upon existing self-criticism, and a buffer against change. Consistent with this latter possibility, experimental studies suggest that intimate contacts who

agree with a person's negative self-view can effectively insulate that person from positive experiences that might otherwise challenge this view of themselves (Swann and Predmore, 1985).

Leff and Vaughn (1985) further found that the majority of depressed patients, particularly women, were fearful of loss and rejection and desired continual comfort and support. Placing this observation into context, Leff and Vaughn (1985) showed that depressed persons may be maintained in such fears and perceptions. Namely, "few depressed patients described as chronically insecure or lacking in self-confidence were living with supportive or sympathetic spouses . . . when this was the case, the patients were well at follow-up" (Leff & Vaughn, 1985; p. 95).

Overall, the pessimism, hopelessness, feelings of insecurity, self-complaints, and lack of a sense of self-efficacy of depressed persons may be more congruent with the nature of their relationships with their spouses than has generally been supposed. Depressed persons' distress and problems, such as dependency, inhibition, and difficulties dealing with hostility, do not occur in a vacuum. The connection of these difficulties with the patterning of their close relationships warrants more attention.

The marriages of depressed persons tend to be distressing and insecure and not conducive to renegotiating

expectations, to overt disagreement, or to the direct expression of negative affect. Further, rather than simply being passive and withdrawn, depressed persons are often caught up in miscarried efforts to resolve their difficulties with intimate contacts in which they become unsuccessfuly confrontational. As Kahn et al. (1985) suggests, depressed persons and their spouses may be involved in a cycle in which their unsuccessful efforts to resolve differences lead to withdrawal and avoidance and to negative affect, mistrust, and misgivings about each other. The accumulated effect of such interaction is to overwhelm the couple when they again attempt to settle specific differences, increasing their hopelessness about the possibility of improving their relationship.

Marriage, Marital Quality, and the Course and Outcome of Depression. Studies of the quality of marriages and marital interactions of depressed persons suggest the need to consider further not only how interactional factors trigger an episode of depression, but how they shape its expression, management, and consequences for both depressed persons and the people around them. These influences are reflected in studies of the treatment and outcome of depression.

The finding that married patients respond less well to antidepressant medication (Keller, Klerman, Lavori, Coryell, Endicott, & Taylor, 1984) might be dismissed as an anomaly,

except that persons who have recently ended a relationship improve more than those in enduring relationships whether they received psychotherapy for depression (Parker, Tennant, & Blignault, 1985) or were identified as depressed cases among general practice patients (Parker, Holmes, & Manicavagar, 1986) or in a community sample (Parker & Blignault, 1985). In the absence of further data, it can be speculated that recovery from the ending of a relationship may be easier for some depressed persons than renegotiating their chronically distressing relationships.

Other studies have found that marital problems predict poorer treatment outcomes. The Yale group has found that the marital problems faced by many depressed persons are a negative prognostic indicator in treatment with antidepressant medication (Rounsaville, Weissman, Prusoff, & Herceg-Baron, 1979). Those patients whose marriages improved responded satisfactorily to medication, but the medication apparently had little direct effect on the quality of depressed persons' involvement in their marriages (Weissman, Klerman, Prusoff, Sholomskas, & Padian, 1981).

Four-year follow-up assessments of depressed persons with marital problems who have been treated with antidepressants suggest that they tend to continue to be vulnerable to depression and to have marital problems (Rounsaville, Prusoff, & Weisman, 1980). Rounsaville et al. (1980) found that depressed women with marital problems were less likely to improve in individual psychotherapy than

those without problems. Although cognitive therapy has proven to be effective with depressed outpatients; Jacobson, Schmelling, Salsalusky, Follette, and Dobson (1987) found that depressed persons with marital problems benefited little from it.

Two important studies suggest that the number of critical comments about a depressed patient that the spouse makes in an interview during the patient's hospitalization predicts relapse, independent of the patient's level of symptomatology (Hooley, Orley, & Teasdale, 1986; Vaughn & Leff, 1976). In this work, criticism was defined as "a clear statement of resentment, disapproval, dislike, or rejection" (Leff & Vaughn, 1985; p. 125). In the Vaughn and Leff (1976) study, a cutoff of two critical comments by the spouse provided the best discrimination of those depressed patients who subsequently relapsed, while in the Hooley et al. (1986) study, the best discrimination was with three comments. In the latter study, none of the eight patients whose spouses ranked low in criticism relapsed, whereas 20 of the 31 patients whose spouses ranked high relapsed.

Taken together, these studies highlight the continued effects of interpersonal circumstances and specifically the marital situation beyond the instigation of a depressive episode. The findings that response to medication may be affected by marital problems point to the need to better understand the link between interpersonal circumstances and the biology of depression. Further, the finding that

treatment with antidepressants may not resolve the marital problems associated with depression suggest the need to consider the close relationships of depressed persons either as a primary treatment or an adjunct to medication.

No incapatibility exists between medication and marital intervention and, for more severely depressed patients, a combination may be the approach of choice (Coyne, 1988). However, the same difficulties that suggest the need for marital intervention may limit couples with a depressed partner from seeking or benefiting from conventional conjoint therapy. Interventions may be needed that target the negative interactions and miscarried problem-solving that characterize these couples without assuming that they will be able or motivated to cooperate (Watzlawick & Coyne, 1980).

Children of Depressed Parents

The children of depressed parents are at risk for a full range of psychological problems, academic difficulties, and physical health problems. Problems are apparent throughout infancy and early childhood (Sameroff, Barocas, & Seifer, 1985; Seifer, Sameroff, & Jones, 1981), primary school years (Fisher, Kokes, Harder, & Jones, 1980; Neale & Weintraub, 1975), and adolescence (Hirsch, Moos, & Reischl, 1985). Difficulties are apparent in self-report, as well as the reports of peers, teachers, and parents.

As many as 40 to 50 percent of the children of a

depressed parent have a diagnosable psychiatric disturbance (Cytryn, McKnew, Bartko, Lamour, & Hamovit, 1982; Decina, Kestenbaum, Farber, Kron, Gargan, Sackeim, & Fieve, 1983; Orvachel, Walsh-Allis, & Weijai, 1988). These children are at particular risk for affective disorder, with the children of unipolar parents having three times the rate of affective disorder and six times the rate of major depressive disorder. Some studies have found these children to have more conduct disorders, attentional disorders, and substance abuse disorders, but these findings are not as consistent as for affective disturbance.

The Links Between Parental Depression and Child Problems. The difficulties of these children have been presumed to be a result of being parented by a depressed person, but the association between depression in parents and problems in children is probably complex. Depressed parents do report directing even more hostility toward their children than toward their spouses, and that they are less affectionate, more emotionally distant, irritable, and preoccupied, and experience guilt and difficulty communicating with their children (Weissman & Paykel, 1974). Observational studies also reveal hostility (Hammen, Gordon, Burge, & Adrian, 1987).

Surprisingly, the influence of the sad affect of parents has not received as much attention as their hostility, but Biglan, Hops, and Sherman (1988) showed that

depressed mothers' sad affect suppressed displays of hostility from their children. Results of other studies suggest that depressed mothers use less effort in dealing with their children than mothers who are not depressed. Depressed parents show lower rates of behavior, particularly the expression of positive affect, and they respond more slowly and less contingently and consistently (Field, Sandberg, Garcia, Vega-Lahr, Goldstein, & Guy, 1985).

Depressed persons may thus show many of the same difficulties with their children that they show with other adults (Libet & Lewinsohn, 1973; Youngren & Lewinsohn, 1980). Consistent with an interactional perspective, considerable evidence indicates that the negativity and hostility between depressed parents and their older children is reciprocal (Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1988; Hammen et al., 1987). Sequential analysis of interactions between depressed parents and their younger children show that they contribute equally to the maintenance of this pattern.

Evidence also indicates that the same contextual factors that contribute to the parents becoming depressed may have been a source of their problems with their children. The children of depressed parents who score high on measures of support and low on stress have considerably fewer adjustment problems than the children of depressed parents in general (Billings & Moos, 1984). Further, the problems of the children may depend on the adjustment of the

depressed person's spouse and whether marital problems or disruption are present. Thus, the risk that the child will be disturbed increases when both parents are disturbed (Kuyler, Rosenthal, Igel, Dunner, & Fieve, 1980; Weissman, Prusoff, Gammon, Merikangas, Leckman, & Kidd, 1984).

Emery, Weintraub, and Neale (1982) concluded that, in the absence of marital difficulties, the risk of problematic school behavior among the offspring of an affectively disturbed parent was no greater than among the offspring of normal control parents. Other studies have found that families in which a divorce has occured account for a considerable proportion of the psychologically disturbed children of depressed parents (Conners, Himmelhoch, Goyette, Ulrich, & Neil, 1979; Kuyler et al., 1980).

Depression in a parent is associated with major threats to the well-being of children, and these children are particularly at risk for depression themselves. Many of the difficulties depressed persons have with others are reflected in their parenting. Yet, as elsewhere in this review, complex reciprocal processes are revealed; specifically, there are indications of the influence of the depressed parents on their children, some indications of reciprocal influences of children on their depressed parents, but also of the other parent on the relationship between depressed persons and their children. Caution should be practiced when placing the responsibility on the depressed person for what are best seen as difficulties tied

to the larger context and that may be contingent on the adjustment, behavior, or availability of the other parent.

Summary

The literature reviewed indicates that a clear basis exists for the study of depression and interpersonal interactions. Studies of depressed persons have demonstrated observable differences in their behavior patterns compared to nondepressed persons. The differences are shown in verbal and nonverbal behaviors as well as in reduced interpersonal activity. Several studies have revealed social skills deficits for depressed persons. Some of these deficits were the emission of fewer social behaviors, longer latencies for social response to others, and lower rates of positive social reinforcement. These studies support the view that depression is more than an intrapersonal problem. One trend in the literature is to view depression as reflective of poor interpersonal relationships. This literature supports the importance of further study of depression and interpersonal interactions.

The literature on social support suggests that being in an unsatisfactory intimate relationship is a powerful risk factor for depression and that the detrimental effects of involvement in a bad intimate relationship may exceed the benefits of a good one. Reviewed next were the studies of interactions between depressed persons and strangers and the relationships between depressed college students and their

roommates. These studies are not a substitute for consideration of what occurs in depressed persons' close relationships, but they have a unique contribution to make in terms of demonstrating that depression can engender problems between persons who do not have a previous history together.

Living with a depressed family member can be associated with considerable distress. This review presents a more complex view of depressed persons' marriages, suggesting that spouses of depressed persons may bring their difficulties to the relationship and that they may even contribute to the depressed persons' vulnerability.

Review of the literature concerning the children of depressed persons found them to be at considerable risk, particularly for depression. Depressed parents can be hostile toward their children, and they use less effort in dealing with them. Their children also show considerable hostility toward them. Many of the problems between depressed persons and their children may be the result of preexisting conditions that contributed to these parents becoming depressed. Studies of children of depressed parents highlight the need to consider close relationships and to be prepared for considerable complexity.

These studies enrich our understanding of the interactional aspects of depression. Therefore, research should become more interactional in its conceptualization and design. An interactional perspective on depression is

more than the hypothesis that depressed persons are distressing and suffer rejection. It is a call for a different way of thinking about psychopathology. It is a way of thinking that involves an appreciation of the reciprocal links between people and their environments and the significance of close relationships. These troubled intimate relationships should not be reduced to the theoretical point of view of the victimization of spouses and family members by depressed persons or of depressed persons by them. Rather, one needs to appreciate how all involved may have gotten caught up in difficult circumstances and how their ways of coping may perpetuate these circumstances despite intentions to the contrary.

An interactional perspective does not deny the individuality of depressed persons, those who are involved with them, or how each may contribute to problematic situations. However, an interactional perspective does look to the emergent characteristics of interactions and relationships for how this individuality will be shaped and how these problems unfold. Thus, while it is assumed that depression may be preceded by stressful life circumstances and overtly problematic relationships, greater emphasis is placed on how the behavior of depressed persons and those around them become interwoven over time.

At this point, the interactional perspective involves a broadening of the range of factors to be considered in attempts to better explain the effects of depression on

interpersonal interactions. The existing literature provides a strong impetus for further development of an interactional perspective on depression and highlights the futility of continuing to attempt to build models of depression that do not adequately take into account depression's interpersonal context.

CHAPTER III

INSTRUMENTATION AND METHODOLOGY

Introduction

The purpose of this study was to examine differences between the interpersonal interactions of depressed and nondepressed college students. This chapter begins by discussing the subjects employed in this study and examines the instruments used to measure the subjects' individual characteristics. The methodology used in conducting this study is also explained. Specifically, the demographic information, selection of subjects, research design, collection procedures, and analysis of the data are discussed.

Subject Selection

The subjects for this study were male and female graduate and undergraduate students enrolled at a moderate size comprehensive university in a large metropolitan city in the Midwestern United States. Cluster sampling was used to select the sample. All of the participants were volunteers. The nondepressed group was comprised of volunteers from undergraduate psychology classes. The

depressed group came from graduate and undergraduate volunteers seeking counseling for various reasons at the university counseling center. Permission for participation in this study was given by the university, the classroom professors, the counseling center, and the volunteers. Permission from the university was granted through the Institutional Review Board (IRB). Permission from the professor and director of the university counseling center was given verbally based on previous approval by the IRB. Permission from the volunteer was given in writing by signing an informed consent form (Appendix A).

The depressed and nondepressed groups were determined based on the subject's score on the revised Beck Depression Inventory (BDI; Beck et al., 1979) (Appendix B). Those in the nondepressed group had scores ranging from 0 to 6 and those in the depressed group had scores of 19 and above. Anyone with a score of 7 through 18 on the BDI was not included in this study in order to clearly delineate between the depressed and nondepressed groups (Beck & Steer, 1987).

The demographic survey form included questions related to gender, race, age, marital status, number of children, educational level, income, and mental health. This information was gathered to describe individual characteristics of the subject pool. The demographic survey form is included in Appendix C.

Procedures

Graduate and undergraduate students at a moderate size comprehensive university in a large metropolitan area in the Midwest were offered the opportunity to participate in this research. Both of the administrative procedures for requesting participation in this study are included in Appendix D. Students were informed that participation was voluntary and that all scores would remain strictly confidential. After students acknowledged intent to participate, they were given the informed consent to read and sign. This was the only document they signed. All other documents remained anonymous.

If the participants had any questions regarding the study they were given the opportunity to have their questions answered by this researcher. Attached to the informed consent was the demographic information sheet, the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) test and the Beck Depression Inventory (BDI). The volunteer had the freedom to complete these forms in the order they chose. The FIRO-B test was given to evaluate the student's interpersonal orientation. The BDI was given in a triage procedure to identify the student's current level of depression. The BDI (Beck et al., 1979) was administered following the procedures outlined by Beck (1967b).

Feedback concerning individual test scores was given to those who requested it after the scoring was completed. The

informed consent, demographic information, FIRO-B, and BDI were completed in one session lasting approximately 30 minutes. No follow-up sessions for further testing were necessary. All students who requested information regarding the outcome of this research were provided a short summary of the group results.

Protection of Subjects

Anonymity of subjects was protected as follows: (a) subject's name appeared only on the informed consent sheet, and (b) the informed consent sheet with the subject's name on it was separated from the rest of the material; (c) the consent forms were kept in a locked file. Data sheets and test forms were also kept in the file when not in use for this study.

Description of the Instruments

The Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) Test

According to Schutz (1976), all human relational behavior can be classified as inclusion, control, and affection. Scores on the FIRO-B measure the degree to which individuals want others to express these three behaviors toward them, and the degree to which individuals express these behaviors toward others.

The FIRO-B is a questionnaire consisting of 54 items

first published by William C. Schutz (1958). The FIRO-B is an evaluation of perceived interaction that measures three dimensions of interpersonal interaction: inclusion, control, and affection. Each of these dimensions on the FIRO-B are assessed in two ways: expressed behavior and wanted behavior. Expressed behavior (e) is that which is observable by another person. Expressed behavior is directed from self toward others. Wanted behavior (w) is not observable by another person. Wanted behavior is that which is preferred from others and directed from others toward oneself.

The FIRO-B consists of six questions that are stated in nine different ways. Subjects are asked to select one of six possible answers, ranging from "never" to "usually," as their response to each question. The only way for a subject to invalidate this test is to consistently provide answers that are in contrast to other answers that have been recorded in response to different forms of the same question. Ryan (1970) suggested that the FIRO-B does not contribute to anxiety and, therefore, discourages faking.

According to Schutz (1966), the primary purposes of the FIRO-B are to measure how an individual acts in interpersonal situations and to provide an instrument that will facilitate the prediction of interaction between people. The FIRO-B is based on the theory that the three dimensions measured are needs that exist in all people. The dimensions of the FIRO-B (inclusion, control, and affection)

represent the behavior that is produced in relation to needs that an individual has in the same three areas. Thus, the FIRO-B is designed to measure the existence of needs related to the three dimensions and the degree to which an individual can meet these needs, all based on the individual's self-report of behavior.

Ryan (1977) provided the behavioral definitions for the three dimensions of the FIRO-B. Inclusion is the interpersonal need to establish and maintain a satisfactory relationship with people with respect to interaction and association. The need to be included is evident in an individual's pursuit of attention, participation, prominence, belonging, and identity. The inclusion scale on the FIRO-B measures the degree to which a person moves toward or away from people.

Control is the need to establish and maintain a satisfactory relationship with others with respect to control and power. Controlling behavior is concerned with the decision-making process between people. The need for control is demonstrated in the individual's desire for power, authority, independence, and superiority. When the need for control is low, it may be represented as submissiveness or avoiding responsibility. The need for control may exist quite differently in terms of what one wants from others and what one expresses to others. Therefore, the control scale measures the extent to which a person wants to assume responsibility or make decisions.

Affection is the interpersonal need to have a satisfactory relationship with others with respect to love and affection. An individual's emotional feelings and intimacy with others reflect the quality of this dimension. Affection is a dyadic relation that occurs only between pairs of people; whereas, inclusion and control may occur with an individual, dyad, or group. Relations between family members, friends, or lovers are exemplary of affection. The affection scale measures the degree to which a person becomes closely involved with others.

Reliability of the FIRO-B

Coefficient of Internal Consistency. Since the scales of the FIRO-B are all Guttman scales (unidimensional scales that produce a cumulative scale), reproducibility is the appropriate measure of internal consistency. This measure indicates the degree to which the items of a test assess the same thing. As reproducibility requires that all items are unidimensional and that the items occur in a certain order, it may be a more stringent criterion than other measures of internal consistency.

Schutz (1978) indicated coefficients of internal consistency of .93 to .94 for the six basic questions of the FIRO-B, with a mean coefficient of .94. The FIRO-B scales were developed from the responses of approximately 150 college student subjects. The reproducibility was calculated using 1,500 subjects.

Coefficient of Stability. This measure refers to the correlation between test scores on a retest after a time lapse. Schutz (1978) reported coefficients of stability ranging from .71 to .82 for the six FIRO-B questions, with a mean coefficient of .76. Schutz's coefficients of stability were based on test-retest reliability results among Harvard students over a one-month period, except the coefficients related to the affection dimension, which were based on an interlude of one week.

Validity of the FIRO-B

Content Validity. Schutz (1978) argued that content validity is a property of all legitimate cumulative scales and, therefore, of the FIRO-B, if the theory underlying the use of Guttman scales is accepted. Gilligan (1973) found that reliability coefficients of the FIRO-B were lower than those reported in the manual. However, the highest internal consistency of the overall scales was found to be .81, with the sums of the wanted and expressed scales being .75. Similar populations of college freshmen were used in each study.

Construct Validity. Kramer (1967) concluded that the three basic dimensions of the FIRO-B shared significant common variables that normal subjects could perceive in themselves. Froehle (1970) could not reproduce Kramer's results, but Gluck (1979) attributed this to a difference in

the design used by Froehle and supported Kramer's findings. Malloy and Copeland (1980) provided additional support for the reliability and validity of the FIRO-B, but suggested caution in using it as a clinical measure.

Concurrent Validity. This type of validity refers to how well test scores correspond to measures of concurrent criterion performances or status. Schutz (1978) suggested that the FIRO-B has concurrent validity, because studies have shown it has been demonstrated that it can differentiate between groups with already known attitudes in ways consistent with earlier differentiations. Schutz cited a study of 12 occupational groups as the primary support for concurrent validity of the FIRO-B.

Intercorrelation of Scales. Based on a sample of 1,340 subjects, Schutz (1978) indicated significant correlations between expressed and wanted scores for inclusion and affection. He also indicated a smaller, but statistically significant correlation between the inclusion and affection scales. Schutz concluded that the correlation between the inclusion and affection scales is small enough that it could hamper the predictive function if either scale of the FIRO-B were deleted and, therefore, considers it advantageous to retain the scales in their present form.

The Beck Depression Inventory (BDI)

The Beck Depression Inventory (Beck, Ward, Mendelson,

Mock, & Erbaugh, 1961) has been used extensively in depression research. During the last 26 years, the BDI has become one of the most widely accepted instruments in clinical psychology and psychiatry for assessing the intensity of depression in psychiatric patients (Piotrowski, Sherry, & Keller, 1985) and for detecting possible depression in normal populations (Steer, Beck and Garrison, 1985).

The BDI is a self-report, 21-item, multiple-choice questionnaire designed to assess the severity of depression in adolescents and adults. This instrument consists of 21 categories that reflect various symptoms and attitudes related to depression. Each category includes four statements that represent the range of severity of the symptom. Each statement is assigned a numerical value from 0 to 3 that corresponds to its respective level of severity. A total score is computed by adding these values. The possible range of scores is from 0 to 63. A score of 0 to 9 on the BDI represents a normal range, 10 to 18 represents mild to moderate depression, 19 to 29 represents moderate to severe depression, and 30 to 63 represents severe depression. Original norms were developed from a sample of 966 patients classified under various nosological categories (Beck & Steer, 1987).

Reliability of the BDI

The reliability and validity of the BDI has been

extensively documented (Beck, 1967b; Bumberry, Oliver & McClure, 1978; Davies, Burrows & Poynton, 1975; Dobson & Shaw, 1986; Hammen, 1980) as an index of depression within a psychiatric population. These studies note a range of test-retest reliability in coefficients from .69 to .90. Split-half reliability of the BDI was reported as .93 by Beck (1967b).

Coefficient of Stability. Beck, Steer, and Garbin (1988) reviewed 10 studies that addressed pretest and post-test administration of the BDI. They reported that the range of Pearson product-moment correlations between pretest and post-test administrations of the BDI for varying time intervals for psychiatric patients ranged from .48 to .86, whereas the test-retest correlations for nine studies of nonpsychiatric patients ranged from .60 to .90. The nonpsychiatric samples displayed more stable BDI scores than did the psychiatric patients. Lightfoot and Oliver (1985) reported a test-retest correlation of .90 over a two-week interval with 204 undergraduate students, suggesting that scores are stable over time for nonpatients. However, Zimmerman (1986) found a one-week interval test-retest reliability of .64 with 139 undergraduate students (Beck & Steer, 1987).

Coefficient of Internal Consistency. Internal consistency estimates based upon Cronback's coefficient alpha for the mixed, single-episode major depression,

recurrent-episode major depression, dysthymic, alcoholic, and heroin-addicted patients are .86, .80, .86, .79, .90, and .88 respectively. These estimates are consistent with mean coefficient alphas reported by Beck et al. (1988) of .86 for the BDI in a meta-analysis with nine psychiatric samples, and .81 for 15 nonpsychiatric samples. Therefore, the revised BDI has high internal consistency in both clinical and nonclinical populations (Beck & Steer, 1987). Estimates of internal consistency using Pearson product moment coefficients range from .86 to .93. Bumberry et al. (1978) found that the BDI scores in a college population correlated highly (.77) with clinical ratings of depression obtained from psychiatric interviews.

Validity of the BDI

Concurrent Validity. Concurrent validity estimates with clinicians' ratings of depth and severity of depression are in the range of .62 to .77 (Bumberry et al., 1978). Additional concurrent validity studies (Beck, 1967b) have found the BDI to correlate from .40 to .66 with the Depression Adjective Check List, .75 with the Minnesota Multiphasic Personality Inventory Depression Scale, and .75 (Spearman rank correlation) with the Hamilton Rating Scale. More recent studies have employed samples of college students and noted concurrent validity of the BDI with nonverbal behavior, perfectionism, negative self-schema, and other constructs associated with depression (Gotlib &

Robinson, 1982; Hatzenbuehler, Parpal, & Matthews, 1983; Hewitt & Dyck, 1986; Zimmerman, 1986).

Overall concurrent validity of the BDI with respect to other measures of depression is high. The BDI is not only related to clinical assessments of depression but also demonstrates strong positive relationships with four well-researched instruments measuring depression: (a) the Hamilton Psychiatric Rating Scale for Depression; (b) the Zung Self-reported Depression Scale; (c) the MMPI Depression Scale; and (d) the Multiple Affect Adjective Checklist Depression Scale. Positive relationships were also found between the BDI and a variety of other depression instruments, such as the SCL-90-R and the Mental Status Schedule.

The BDI's relationships with other instruments were comparable regardless of whether or not the sample was psychiatric or nonpsychiatric. However, there was some evidence that the BDI had a stronger relationship with clinical estimates of depression in psychiatric samples than it had in normal samples (Beck et al., 1988).

Discriminant Validity. The BDI was not designed to discriminate among patients with different psychiatric diagnoses. Although depression is considered to be a psychopathological dimension or syndrome occurring across a wide variety of psychiatric disorders (Beck, 1967a), a number of studies have indicated that the BDI can

differentiate psychiatric patients from nonpsychiatric patients (Steer, Beck, Riskind, & Brown, 1986).

Conde and Esteban (1976) reported that they were able to differentiate depressed and alcoholic patients from others using the BDI. Akiskal, Lemmi, Yerevanian, King, and Belluomini (1982) also differentiated between psychiatric and nonpsychiatric subjects; the affected patients had higher BDI scores than did the others. Byerly and Carlson (1982) reported that inpatients and outpatients with mixed psychiatric diagnoses had higher mean BDI scores than 88 undergraduates. Gallagher, Nies, and Thompson (1982) found that 77 depressed older adults had higher mean BDI scores than 82 nondepressed older adults. Patients who attempted suicide had higher mean BDI scores than cancer patients and cancer patients' next of kin in a study by Plumb and Holland (1977).

The BDI can also discriminate between Dysthymic and Major Depressive Disorders (Steer, Beck, Brown, & Berchick, 1987), and has also been shown to differentiate between Generalized Anxiety Disorders and Major Depressive Disorders (Steer et al., 1986).

Construct Validity. The construct validity is strong, and the BDI detects a number of hypothesized relationships between physiological, behavioral, and attitudinal variables indicative of depression (Beck et al., 1988).

Factorial Validity. Studies by Tanaka and Huba (1984); Clark, Cavanaugh, and Gibbons (1983); and Clark, Gibbons, Fawcett, Augesen, and Sellers (1985) using latent structure analysis suggest that the BDI represents one underlying general syndrome of depression (Clark et al., 1983) that can be decomposed into three highly intercorrelated factors (Tanaka & Huba, 1984). Although the explicit composition of the factors may shift from one diagnostic group to another, the three factors seem to reflect Negative Attitudes Toward Self, Performance Impairment, and Somatic Disturbance as originally described by Beck and Lester (1973).

Research Design

This study used a two-group, causal-comparative design, with the two groups being depressed and nondepressed college students. The data were not collected under controlled conditions. Rather, this study investigated possible cause-and-effect relationships by observing existing consequences and searching back through the data for plausible causal factors. The data were evaluated to determine the impact of depression on self-reported interpersonal interactions.

The causal-comparative method was appropriate because the independent variable (depression) could not be manipulated. All of the variations that are a part of depression could not be controlled. Attempting to control all of the nuances except a single variable would create an artificial, highly unrealistic environment and prevent

normal interaction with other influential variables. The dependent variable was interpersonal interaction as measured by the FIRO-B test. The results show how reported interpersonal interaction varies as a result of the level of depression.

Analyses of Data

The FIRO-B test produces six independent measures, all wanted and expressed: inclusion, control, and affection. Scores on the FIRO-B may range from 0 - 9 on each dimension. The obtained scores may be classified as: 0 - 2 ("low"), 3 - 6 ("average"), and 7 - 9 ("high") (Ryan, 1970).

A multivariate analyses of variance (MANOVA) was performed on the data. MANOVA was selected for two reasons. First, MANOVA is specifically designed to be used with multiple dependent variables. Second, MANOVA was selected over a series of univariate analyses of variance (ANOVA) because of the protection it affords against Type I errors. The Type I error rate was set at .05. Current level of depression, as measured by the BDI (depressed and nondepressed), was the independent variable. The dependent variables of inclusion, control, and affection (expressed and wanted) were tested for significance. A significance level of .05 was used.

CHAPTER IV

RESULTS

Introduction

The purpose of this chapter is to present the results of the statistical analyses used in this study. The purpose of this study was to examine the difference between reported interpersonal interactions of depressed and nondepressed college students. The data consisted of subjects' scores on the FIRO-B inclusion, control, and affection scales at both the expressed and wanted levels. The procedure involved the collection of data from college students at a moderate size midwestern university in a metropolitan center. The nondepressed subjects were selected from undergraduate psychology classes. The depressed subjects were selected from graduate and undergraduate students seeking counseling for various reasons at the campus counseling center.

A two-group multivariate analysis of variance (MANOVA) was performed to test for significant difference between depressed and nondepressed college students with respect to the following dependent variables:

1. expressed inclusion, expressed control, and expressed affection

2. wanted inclusion, wanted control, and wanted affection
3. total expressed score, total wanted score, and social interaction index score
4. inclusion sum score, control sum score, and affection sum score
5. inclusion difference score, control difference score, affection difference score, and total difference score

The variable map and FIRO-B test score sheet is included in Appendix E. Univariate analyses of variance (ANOVA) on each dependent variable were examined as post hoc procedures.

Demographic Data

Table 1 lists the number of subjects (N=139) in each of the groups and identifies their gender, race, education level, age, marital status, number of children, percentage contributed toward educational expenses, and mental health history. Thirty-eight percent of the total sample were males and 62% were females. The majority of students were Caucasian (71%), while 29% were not. Eighty-six percent of the sample were freshmen and sophomores. Only two subjects in the depressed group were graduate students.

TABLE 1

DEMOGRAPHIC INFORMATION

Variable	Depressed Frequency (n=21)	Depressed Percent	Nondepressed Frequency (n=118)	Nondepressed Percent
Gender				
Male	7	33%	46	39%
Female	14	67%	72	61%
Race				
African American	0	0%	19	16%
Asian American	2	9.5%	7	6%
Caucasian	17	81%	82	70%
Hispanic	0	0%	4	3%
Native American	2	9.5%	6	5%
Education Level				
Freshman	6	29%	80	67.8%
Sophomore	5	24%	29	24.6%
Junior	3	14%	7	5.9%
Senior	5	24%	2	1.7%
Masters	2	9%	0	0%
Doctorate	0	0%	0	0%

TABLE 1 (Continued)

Variable	Depressed Frequency (n=21)	Depressed Percent	Nondepressed Frequency (n=118)	Nondepressed Percent
Age				
16	0	0%	1	.9%
17	2	9.5%	12	10%
18	4	19%	46	39%
19	5	24%	32	27%
20	3	14%	13	11%
21	2	9.5%	6	5%
22	2	9.5%	2	1.7%
23	1	5%	2	1.7%
24	2	9.5%	1	.9%
25	0	0%	2	1.7%
26	0	0%	0	0%
27	0	0%	1	.9%
Marital Status				
Single	16	76%	115	97%
Married	5	24%	2	2%
Divorced	0	0%	0	0%
Cohabitating	0	0%	0	0%
Separated	0	0%	1	1%
Widowed	0	0%	0	0%

TABLE 1 (Continued)

Variable	Depressed Frequency (n=21)	Depressed Percent	Nondepressed Frequency (n=118)	Nondepressed Percent
Number of Children				
0	21	100%	116	98%
1	0	0%	0	0%
2	0	0%	2	2%
Percent of College Expenses Provided by Student				
0%	6	29%	48	40.6%
1-10%	2	9%	33	28%
11-33%	1	5%	10	8.5%
34-50%	2	9%	10	8.5%
51-75%	1	5%	2	1.7%
76-100%	9	43%	15	12.7%
Mental Health History				
1. I have been hospitalized for depression.	1	5%	0	0%
2. I am currently on medication for depression.	5	24%	1	.8%
3. I have been on medication for depression in the past, but am not on medication for depression now.	1	5%	5	4%

TABLE 1 (Continued)

Variable	Depressed Frequency (n=21)	Depressed Percent	Nondepressed Frequency (n=118)	Nondepressed Percent
Mental Health History (continued)				
4. I have been depressed sometime in my life for two weeks or longer.	12	57%	27	23%
5. I have never been depressed for two weeks or longer.	4	19%	58	49%
6. I am currently in counseling.	21	100%	0	0%
7. I am not in counseling at this time.	0	0%	28	24%
8. I have never been in counseling.	0	0%	88	75%

The mean age of the students across both groups was 19.07. Specifically, the mean age of the depressed group was 19.9, which was slightly higher than the mean age of 18.9 for the nondepressed group. The age distributions were skewed in that most students were age 18 to 20. Of the depressed group, 57% were 18 to 20 years old. Of the nondepressed group, 77% were 18 to 20 years old. The majority of students were single (94%); only 5% were married. Of the seven students who were married, two of them had two children. Therefore, 95.6% had no children. Only one student reported being separated from his/her spouse.

Of the total number of students (N=139) 64% contributed 10% or less to their college expenses, 18.7% contributed between 11 and 75%, and 17.3% contributed more than 75% toward their educational expenses.

Of the 21 students in the depressed group, 19 reported that they (a) had been hospitalized for depression in the past, (b) were currently on medication for depression or had been on medication for depression, or (c) had been depressed for two weeks or longer in the past. All 21 were in counseling at the time they were tested.

Twenty-seven students in the nondepressed group reported that they had been depressed sometime in their lives for two weeks or longer. However, 58 reported that they had never been depressed for two weeks or longer and 88 reported they had never been in counseling.

Statistical Analyses of Research Questions

Table 2 shows the mean profiles of depressed and nondepressed college students on the FIRO-B. A multivariate analysis of variance (MANOVA) was used to analyze the overall differences between the two groups considering the dependent variables simultaneously. The overall multivariate test of significance indicated a significant difference between the depressed and nondepressed students on expressed scores ($F(3,135) = 3.557$, $p = .016$; wanted scores ($F(3,135) = 5.227$, $p = .001$; and sum scores ($F(3,135) = 6.386$, $p = .0004$.

Univariate analyses (ANOVA) were significant for 6 of the 16 variables: expressed inclusion ($F(1,137) = 7.46$, $p = .007$; expressed affection ($F(1,137) = 5.94$, $p = .016$; wanted control ($F(1,137) = 11.38$, $p = .001$; inclusion sum score ($F(1,137) = 4.70$, $p = .031$; control sum score ($F(1,137) = 8.94$, $p = .003$, and affection sum score ($F(1,137) = 4.38$, $p = .038$. Specifically, depressed students scored significantly lower on expressed inclusion, expressed affection, inclusion sum scores, and affection sum scores. However, depressed students scored significantly higher on wanted control and control sum scores. Results of the MANOVA and follow-up univariate ANOVAs are presented in Table 3.

TABLE 2

MEAN FIRO-B PROFILES FOR DEPRESSED AND NONDEPRESSED SUBJECTS

	Inclusion	Control	Affection	Sum I+C+A
Depressed (n=21)				
Expressed	4.00	3.09	3.62	10.71
Wanted	4.80	4.57	5.38	14.75
Sum (e + w)	8.80	7.66	9.00	25.46
Difference (e - w)	-0.80	-1.48	-1.76	-4.04
Nondepressed (n=118)				
Expressed	5.44	2.49	5.09	13.02
Wanted	5.83	2.80	6.02	14.65
Sum (e + w)	11.27	5.29	11.11	27.67
Difference (e - w)	-0.39	-0.31	-0.93	-1.63

TABLE 3

MANOVA SUMMARY TABLE

Effect	Test	Value	F	df	Significance
1. Expressed Scores	Wilks' Lambda	.926	3.55	3,135	.0161*
Univariate ANOVAs					
Expressed Inclusion			7.46	1,137	.0071*
Expressed Control			1.04	1,137	.3089
Expressed Affection			5.94	1,137	.0160*
2. Wanted Scores	Wilks' Lambda	.895	5.22	3,135	.0019*
Univariate ANOVAs					
Wanted Inclusion			1.80	1,137	.1818
Wanted Control			11.38	1,137	.0010*
Wanted Affection			1.42	1,137	.2360
3. Total Scores	Wilks' Lambda	.963	2.56	2,136	.0806
Univariate ANOVAs					
Total Expressed			3.58	1,137	.0604
Total Wanted			0.01	1,137	.9406
Social Interaction Index (Te + Tw)			0.97	1,137	.3263

TABLE 3 (Continued)

Effect	Test	Value	F	df	Significance
4. Sum Scores (e + w)	Wilks' Lambda	.875	6.38	3,135	.0004*
Univariate ANOVAs					
Inclusion (e + w)			4.70	1,137	.0319*
Control (e + w)			8.94	1,137	.0033*
Affection (e + w)			4.38	1,137	.0383*
5. Difference Scores (e - w)	Wilks' Lambda	.970	1.36	3,135	.2564
Univariate ANOVAs					
Inclusion (e - w)			0.43	1,137	.5110
Control (e - w)			2.19	1,137	.1416
Affection (e - w)			2.36	1,137	.1270
Total Difference score I(e - w) + C(e - w)+A(e - w)			3.69	1,137	.0567

* significance $p < .05$

Discussion of Research Questions

The specific research questions addressed in this study were the following:

Research Question One. Is there a difference in the expressed scores on (a) inclusion, (b) control, and (c) affection, as measured by the FIRO-B between subjects in

the depressed group and subjects' scores in the nondepressed group?

Significant differences (MANOVA) were found in the expressed scores of inclusion, control, and affection between depressed college students and nondepressed college students. Post hoc examination (ANOVA) revealed significant differences in the expressed inclusion scores (1a) and the expressed affection scores (1c) between depressed students and nondepressed students. However, there was no significant difference in the expressed control scores (1b). Depressed students scored lower in regard to expressed inclusion and expressed affection but higher in expressed control. These results indicate that depressed college students have less of a desire to establish and maintain satisfactory relationships with people with respect to (inclusion) interaction and association, and love and affection. Therefore, depressed college students desire to initiate interpersonal interactions (social relationships) and close involvement with others to a lesser degree than do nondepressed college students.

Research Question Two. Is there a difference in the wanted scores on (a) inclusion, (b) control, and (c) affection, as measured by the FIRO-B between subjects in the depressed group and subjects' scores in the nondepressed group?

Using MANOVA as the statistical analysis and examining

three dependent variables simultaneously (wanted inclusion, wanted control, and wanted affection), significant differences were found on these scores between depressed college students and nondepressed college students. Results of the post hoc ANOVAs showed significant differences in the wanted control scores (2b) between college students in the depressed group and college students in the nondepressed group. However, there were no significant differences in the wanted inclusion scores (2a) and the wanted affection scores (2c) between depressed and nondepressed college students. Depressed students scored lower on wanted inclusion and lower on wanted affection but higher on wanted control. These results indicate that depressed college students have less of a desire for others to establish and maintain satisfactory relationships with them with respect to interaction and association (inclusion), and love and affection. Therefore, the degree to which depressed college students want others to initiate interpersonal interactions (social relationships) and the degree they desire others to initiate close involvement with them is less in relation to nondepressed college students.

However, depressed students scored significantly higher on wanted control. This indicates that depressed students have a greater desire for others to initiate and maintain satisfactory relationships with respect to control and power. Therefore, the extent to which depressed college students want others to assume responsibility and make

decisions is greater than nondepressed students' desire to have others assume responsibility and make decisions for them.

Research Question Three. Is there a difference in the (a) total expressed score, (b) the total wanted score, and (c) the social interaction index score as measured by the FIRO-B between those subjects in the depressed group and those subjects in the nondepressed group?

Examining these three dependent variables simultaneously, using MANOVA, the total expressed score, total wanted score, and the social interaction index score (total expressed score plus the total wanted score), no significant difference was found between depressed college students and nondepressed college students. Results of the post hoc examination (ANOVA) also showed no significant differences.

However, by examining their mean scores, depressed students' total expressed scores were lower than nondepressed students. The total wanted scores (group means) for the depressed and nondepressed groups were almost identical. For the social interaction index score or the amount of social interaction desired (either expressed or wanted), the depressed group had a lower group mean than the nondepressed group.

Research Question Four. Is there a difference in the sum scores (the expressed score plus the wanted score) on

(a) inclusion, (b) control, and (c) affection scores as measured by the FIRO-B between those subjects in the depressed group and those subjects in the nondepressed group?

Significant differences were found in the sum scores for inclusion (4a), the sum scores for control (4b), and the sum scores for affection (4c) between college students in the depressed group and college students in the nondepressed group. Post hoc univariate analysis (ANOVA) revealed significant differences for the sum scores of inclusion, the sum scores of control, and the sum scores of affection between depressed and nondepressed college students. Depressed students' sum scores (expressed needs and wanted needs) were lower for inclusion and affection but higher for control. Therefore, depressed college students indicated less of a desire to establish and maintain satisfactory relationships in regard to interpersonal interaction (inclusion), love, and affection. However, depressed college students indicated a greater desire than nondepressed college students to establish and maintain satisfactory relationships with respect to control, assuming responsibility, and decision-making.

Research Question Five. Is there a difference in the difference scores (the expressed score minus the wanted score) of (a) inclusion, (b) control, (c) affection, and (d) the total difference score as measured by the FIRO-B

between those subjects in the depressed group and those subjects in the nondepressed group?

With both MANOVA and post hoc ANOVA procedures there were no significant differences in the difference scores of inclusion (5a), control (5b), affection (5c), and the total difference scores (5d) between depressed and nondepressed college students as measured by scores on the FIRO-B.

By examining the mean scores of both groups it was also evident that very little difference in the difference scores (expressed score minus wanted score) existed between the depressed students and the nondepressed students. However, a greater difference was noted between the total difference score for the depressed group and the total difference score for the nondepressed group. Comparison of the group means of the total difference scores revealed a tendency for nondepressed college students to be more consistent in what they expressed and wanted in relation to inclusion, control, and affection. Depressed students showed greater discrepancies between what they expressed (willing to initiate) and what they wanted (wanted others to initiate).

Summary

For this study, the effect of depression was shown to have an impact on reported interpersonal interactions in college students. Depressed college students were significantly different from nondepressed college students. Depressed students indicated less of a desire to

initiate satisfactory interpersonal interactions with respect to association and affection. Depressed college students also indicated a decreased desire to have others initiate social interaction toward them in respect to association and affection. However, depressed students showed an increased desire to establish and maintain social relationships with respect to control, responsibility, and decision-making.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

This chapter consists of four sections. The first section summarizes the purpose, methods, and results for this study. The second section relates the conclusions drawn from this study. The third section presents a discussion of the implications for professionals. The final section includes recommendations for further research.

The purpose of this study was to examine the effect of depression on interpersonal interaction variables of college students. Interpersonal interactions have a significant impact on the mental health of any individual. Interpersonal interactions in the form of social support and intimate relationships have been found to be preventative measures and ameliorative agents for depression.

The interaction style of an individual is affected by the personal characteristics of the individual. Specifically, this study has shown that affective state impacts reported interpersonal interaction variables. Therefore, interaction styles may change as the direct

result of depression on personal characteristics. Consequently, depression and interpersonal interactions are an important concern for counselors working with college students during their developmental and adjustment processes.

The subjects in this study were 139 volunteer college students between the ages of 16 and 27. After signing consent forms, the two groups of depressed and nondepressed subjects were administered the Beck Depression Inventory (BDI), the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) profiles, and the demographic information forms. The nondepressed group were volunteers from undergraduate psychology classes. The depressed group were students receiving counseling for various reasons at the campus counseling center. Both groups consisted of college students attending a moderate size university in a large metropolitan community in the Midwest.

The subjects were classified as depressed (the independent variable) by a score of 19 or greater on the BDI. Subjects with a score of 0 to 6 were classified as nondepressed. All subjects with a score of 7 to 18 were eliminated from this study in order to make a clear delineation of the depressed and nondepressed students (Beck & Steer, 1987).

A multivariate analysis of variance (MANOVA) was performed to test for significant differences between depressed and nondepressed college students on the dependent

variables. The dependent variables for research question one were expressed inclusion, expressed control, and expressed affection. The dependent variables for research question two were wanted inclusion, wanted control, and wanted affection. The dependent variables for research question three were the total expressed score, the total wanted score, and the social interaction index score. The dependent variables for research question four were the sum scores for inclusion, the sum scores for control, and the sum scores for affection. The dependent variables for research question five were the difference scores for inclusion, the difference scores for control, the difference scores for affection, and the total difference scores. Univariate analyses of variance (ANOVAs) were employed as post hoc procedures.

The dimensions of reported interpersonal interactions were the focus of this study. The interpersonal needs, as measured by the FIRO-B, were inclusion, control, and affection. For each dimension, two scores were obtained: expressed and wanted. Expressed behavior is that which is observable and is directed from self toward others. Wanted behavior is that which is preferred from others and directed toward self.

Inclusion means the need to establish and maintain satisfactory relationships with people, with respect to interaction and association. The need to be included relates to an individual's pursuit of attention,

acknowledgment, identity, prominence, and participation. The Inclusion scale measures the degree to which a person moves toward or away from people.

Control means the need to establish and maintain satisfactory relationships with people, with respect to decision-making and power. The need to control or be controlled is evidenced by desire for power, superiority, and authority, or conversely, avoidance of responsibility and submissiveness. The Control scale measures the extent to which a person wants to assume responsibility or make decisions.

Affection means the need to have satisfactory relationships with others with respect to love and intimacy. Affection behavior refers to intimate, personal, and emotional feelings between two persons; whereas, both inclusion and control may occur in dyads or between any number of others. The Affection scale measures the degree to which a person becomes closely involved with others.

What is the effect of depression on interpersonal interactions in college students? The results of this study suggest that depressed college students' interpersonal interactions are inhibited in initiating social behaviors, specifically, social behaviors related to social interaction and association. Depressed students also indicat less of a desire for others to initiate social behaviors toward them. Taken together, this information supports the notion of depressed people being socially withdrawn. Factors

related to depression include having smaller social networks, fewer social contacts, fewer close relationships, and less supportive relationships. A depressed person's tendency toward social isolation contributes to the maintenance of depression, and makes escape from this vicious cycle more difficult.

College students are confronted with a myriad of changes in adjusting to new situations of university life. Some of these new situations are leaving home, forming new friends, increased academic competition, new or different living arrangements, increased financial responsibility, employment, academic and career choices, and developmental issues. These life changes and adjustments can become overwhelming, and may contribute to a young person becoming anxious or depressed. Unfortunately, depressed students may become socially withdrawn at a critical time when social support could enhance their adjustment process.

The present study suggests that depressed college students have a greater desire to establish and maintain satisfactory relationships with respect to control and power than do nondepressed college students. This study also shows that depressed students are more willing for others to assume responsibility and make decisions for them than are nondepressed college students. Therefore, depressed college students have greater expressed and wanted desires for control, responsibility, and decision-making. One possible explanation for this finding could relate to the depressed

being socially withdrawn. When one is more socially isolated, fewer people are automatically involved in the decision-making process, leaving a depressed person more isolated in their decision-making. Furthermore, if a person feels out of control in relation to his/her affective state, a possible compensation is to seek other areas for control.

In relation to depressed college students indicating a greater desire for others to initiate control and decision-making in relation to nondepressed students, this may relate to their feelings of dependency and helplessness. Characteristics of depressed individuals include a greater degree of pessimism, an increased sense of failure, more dissatisfaction, more self-criticism, indecisiveness, more difficulty with work, and decreased energy levels. It would be natural, with this perspective, to want others to be responsible or make decisions. This attitude may contribute to depressed individuals blaming others for their predicament or waiting on others to change their circumstances instead of being self-motivated. This avoidance pattern for problem-solving could leave the depressed person frustrated by their own ineffective coping style.

The nondepressed may also resent the burden placed on them to assume responsibility for the depressed person. Due to this resentment the nondepressed person may withdraw, leaving the depressed person alone and unhappy. Consequently, these relationships may be characterized in

negative terms because nondepressed individuals may resent the impossible position of trying to alleviate the depressed person's suffering.

This study revealed differences between depressed and nondepressed college students' needs for affection. Depressed students indicated less desire to initiate close personal interaction and less desire for others to initiate intimate social interactions with them. These results are consistent with the depressed students' decreased desire for social interaction. It is consistent that if one desires fewer social contacts, he/she is likely to experience fewer intimate relationships. This is another factor that would contribute to a depressed person's social withdrawal and isolation. This lack of social support and intimacy once again contributes to the maintenance of depression.

Good social relationships protect against depression. As stated earlier, women who lacked a confiding relationship were three times more likely to become depressed in the face of a life event. Having a good intimate relationship tended to diminish other risk factors for depression. Common sense suggests that neither the risk factors nor the affective disorder would be eliminated if one is avoiding those close relationships that ameliorate the condition of depression. Consequently, lack of social support and intimacy has an effect on depressive symptoms and depression maintenance, and depression has an effect on interpersonal interaction styles.

This study also revealed differences in the total difference scores between the depressed group and the nondepressed group. The depressed college students had greater discrepancies between their expressed need for inclusion, control, and affection, and their wanted needs. Nondepressed students were more congruent with what they were willing to initiate and what they wanted others to initiate. This is consistent with the theory supporting the FIRO-B: the greater the difference scores, the greater the anxiety the individual will experience in fulfilling their interpersonal needs (Schutz, 1966).

The demographic information indicates that females outnumbered males two to one in the depressed group. The majority of this sample were Caucasians in their first or second year of college. The mean age for the depressed students was approximately 20 years. Forty-three percent of those in the depressed group contributed 76% or more to their college expenses. A tentative hypothesis is that financial responsibilities may have been a contributing factor. However, this is a very small sample. Ninety percent of the depressed group reported a previous history of depression.

Conclusion

The results of the statistical findings warrant the following conclusions. In regard to the first research question, a difference was found in the expressed scores on

inclusion, control, and affection between depressed college students and nondepressed college students, as measured by scores on the FIRO-B. The expressed scores for depressed students were significantly different than the expressed scores for nondepressed students. This indicates that depressed students are less likely to initiate social relations or to include a great number of people in their social activities. These scores also indicate that depressed students are less likely to become closely involved with others in comparison to nondepressed college students.

In relation to research question two, a significant difference was found in the wanted scores on inclusion, control, and affection between depressed and nondepressed college students, as measured by the FIRO-B. This indicates that depressed students in comparison to nondepressed students have less desire for others to initiate social relations toward them. These scores also indicate that depressed students have less desire for others to initiate intimate social relationships toward them. However, depressed students did indicate a greater desire for others to initiate decision-making, assume responsibility, and control. Therefore, depressed students seem more willing to be submissive, passive, dependent, and indecisive. These characteristics may generate an attitude of helplessness.

In relation to research question three, no significant differences were found between depressed and nondepressed

college students in the total expressed score, the total wanted score, and the sum of these two scores or the social interaction index score. However, by comparing the mean scores between the depressed and the nondepressed groups there is a tendency (based on comparing the total expressed scores) that nondepressed students are more willing to initiate social interaction. The total amount of social interaction desired (social interaction index score) is not that much different. Therefore, both depressed and nondepressed college students desire a comparable amount of social interaction. However, the difference appears to be that the nondepressed are more willing to initiate social behaviors where the depressed are less willing to initiate social behaviors.

In relation to research question four, a significant difference was noted between the sum scores for inclusion, control, and affection between depressed and nondepressed college students, as measured by the FIRO-B. Because sum scores are the total of expressed score plus wanted scores, the results here are consistent with the combination of the results on research question one and two. Therefore, depressed students are less likely to initiate social relationships and less likely to initiate becoming intimately involved with others in comparison to nondepressed college students. However, depressed students did indicate a greater desire to establish and maintain satisfactory relationships with respect to control, power,

decision-making, and responsibility.

In relation to research question five, there was no significant difference found in the difference scores of inclusion, control, affection, and the total difference between depressed and nondepressed college students, as measured by the FIRO-B. However, by examining the mean scores, two observations may be made. For all students (both depressed and nondepressed), their wanted scores were greater on the average than their expressed scores. Therefore, the college students tested in this study had a tendency to desire others to initiate social interaction. The second observation relates to Schutz' theory of interpersonal interaction. Schutz (1966) reported that the greater the difference scores, the more the individual will experience emotional turmoil in satisfying interaction needs. The depressed college students have a greater total difference score than nondepressed college students.

Implications for Professionals

The different FIRO-B profiles of depressed and nondepressed college students have implications for counselors. Depressed and nondepressed college students differed on both expressed inclusion and expressed affection. Depressed students tend to be more socially withdrawn when it comes to initiating social behaviors and intimate relationships. Depression is seen as being characterized by interpersonal impoverishments, social

skills deficits, and intimacy deficits. Both social support and close personal relationships have been shown to diminish the impact of depression. Therefore, depression may be perpetuated by inept social interactions due to lack of motivation or deficits in social skills. Consequently, a therapeutic relationship would have immense value in impacting these patterns of behavior.

Depressed and nondepressed college students also differed on wanted inclusion and wanted affection. Depressed students tend to become socially isolated by their decreased desire for others to initiate social behaviors and intimate relationships with them. Depression is characterized by negative social interactions. Not only are the depressed individuals unable to initiate social interactions, but they are also less willing for others to initiate social encounters toward them. This self-preoccupation and social avoidance may generate unbalanced relationships resulting in subsequent resentment and rejection by others. The deterioration of relationships of depressed persons maintains and deepens their emotional turmoil.

Depressed college students indicated an increased desire for others to initiate decision making and for others to assume responsibility and control. These desires may lead to aspects of rebellion, resistance, submissiveness, passivity, indecisiveness, and dependency. In the therapeutic relationship, counselors have an option of

assuming a great deal of control over the relationship or encouraging independent behavior. Assuming too much control may only reinforce the depressive's interpersonal dynamics of submission and dependency. For counselors to be more cognizant of the interpersonal orientations of depressed and nondepressed college students would serve to improve the therapeutic interactions and direction for therapy regardless of one's theoretical orientation.

Recommendations for Further Research

As a result of this study, the following recommendations are made:

1. The present study provides no information as to causation of the differences between depressed and nondepressed college students. A longer investigation, including a pretest and a post-test would provide information concerning initial differences between the interpersonal orientations of college students and changes related to becoming depressed.

2. The present study included depressed students who were in counseling and nondepressed students who were in undergraduate psychology classes. A replication of this study with a non-client population or with a total client population would allow for greater generalization of findings.

3. Further research employing administration of the FIRO-B to students upon entering counseling and at

termination would provide information regarding the impact of counseling on interpersonal interaction characteristics in this population.

4. In this study, most subjects were in the younger age ranges 16 to 27 years. A replication of this study with older subjects (over 30 years) would provide an interesting comparison to this investigation.

5. Similar studies involving other student populations, such as high school students or graduate students, would provide interesting comparisons.

6. A study using clients with a different mental health issue, such as a thought disorder or eating disorder, would provide information for comparison with those who are suffering from depression. Different mental health issues may impact interpersonal interactions in different ways.

7. A study using a non-student population would provide information for comparison with a student population. Both expressed and wanted needs might be different as developmental needs change.

8. Intrapersonal differences between college students, such as characteristics of introversion and extraversion, may impact interaction styles more than depression. A similar study utilizing measures of both intrapersonal and interpersonal interaction styles would add to the body of knowledge about this population.

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APPENDIXES

APPENDIX A

INFORMED CONSENT FORM

CONSENT FORM

"I, _____, hereby authorize David Wakefield, or associates or assistants of his or her choosing, to perform the following procedures." As a research participant, I agree to:

1. Complete the demographic information sheet.
2. Complete the 54 questions of the FIRO-B.
3. Complete the 21 questions of the BDI.

To complete these two standardized instruments and one demographic sheet will take approximately 30 minutes at the longest. There will be no follow-up procedures or additional testing. This is a single event.

All information will be kept strictly confidential. Sign your name ONLY on this consent form. Do not sign your name on any of the other forms. I understand the questionnaires and my ratings will not be made available to anyone without my written authorization. I understand all information will be stored and reported anonymously; that is, I will not be identified by name in any reports of this data. I understand that there are no risks involved in completing the three questionnaires.

"I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director."

I have read and fully understand the consent form. I sign it freely and voluntary. A copy has been given to me.

Date: _____ Time: _____(a.m./p.m.)

Signed: _____
signature of research participant

"I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it."

Signed: _____
(project director or his/her authorized representative)

If you would like group results of this study indicate by giving your mailing address below (Please print).

_____
Name

_____
Address

_____
City State Zip

APPENDIX B

BECK DEPRESSION INVENTORY

Name: _____ Phone: _____
Date: _____

This questionnaire consists of 21 groups of statements. After reading each group of statements carefully, circle the number (0, 1, 2 or 3) next to the one statement in each group which best describes the way you have been feeling the past week, including today. If several statements within a group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

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 to.

11. 0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I don't get irritated at all by the things that used to irritate me.

12. 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of 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 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 5 pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.

I am purposely trying to lose weight by eating less. Yes _____ No _____

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.

APPENDIX C

DEMOGRAPHIC INFORMATION SHEET

Demographic Information

Please fill out the following information by placing an (X) on the appropriate line. If you have any questions, please ask the person giving you this form.

1. Sex: ____ Male ____Female

2. Race: ____ African American ____Hispanic
____ Asian American ____Native American
____ Caucasian ____Other
(please specify)
_____

3. Age as of last birthday in years: ____

4. Marital Status: ____Single ____Cohabitation
____Married ____Separated/living
____Divorced apart
____Widowed

5. Number of children: ____

6. Education level:
____Frosh ____Senior
____Sophomore ____Masters
____Junior ____Doctorate

7. Income: What percent of your college expenses are you responsible for? (you pay not your parents)

____0%	____11-33%	____51-75%
____1-10%	____34-50%	____76-100%

8. Mental Health: (check as many as are appropriate

____I have been hospitalized for depression.
____I am currently on medication for depression.
____I have been on medication for depression in the past, but am not on medication for depression now.
____I have been depressed sometime in my life for two weeks or longer.
____I have never been depressed for two weeks or longer.
____currently in counseling
____not in counseling at this time
____never been in counseling

APPENDIX D

CLASSROOM PROCEDURES AND COUNSELING CENTER PROCEDURES

CLASSROOM PROCEDURES

Instructions to all volunteers were the following:

I am David Wakefield, a graduate student in Counseling Psychology. At this time I am conducting research concerning how one's affective state effects one's interpersonal orientation. However, I need subjects in order to obtain this information. There is a consent form to read and sign. This is the only page where your name will appear. All other information will remain anonymous. There is also a demographic information form and two standardized instruments. No one other than myself will see the forms you complete. All materials will be kept confidential. Results of this study will be presented in group form. No individual case studies will be used.

You may, of course, choose not to participate in this study. You may notice that on one standardized instrument many questions are repeated. This is for scoring purposes, not to check your truthfulness or your memory. Results of this study will be available July, 1991. A brief summary of the results of the study will be made available to those requesting them. I will be available to clarify instructions or answer any questions you have.

COUNSELING CENTER PROCEDURES

Dear Participant,

My name is David Wakefield, I am a Doctoral Candidate in Counseling Psychology and a Psychology Intern here at the UMKC Counseling Center. I am requesting your cooperation with an approved research project. This study is investigating the impact one's mood has on one's social interactions. It is our hope that by increasing our understanding of the impact mood has upon behavior, we can better help you and others adjust to this impact.

You are being asked to spend 20 to 30 minutes reading and responding to the attached forms. Your identity, as well as any information you provide, will be considered strictly confidential. You will be provided with a summary of the study's results if requested. I realize that your time and effort are extremely valuable. I am very grateful for your participation.

After you have completed the attached forms, please return them to the person at the front desk. If you have any questions regarding this research project you may contact me at 235-1257. Thank you again for your assistance!

APPENDIX E

TEST SCORE SHEET AND

VARIABLE MAP

FIRO-B TEST SCORE SHEET

	I	C	A	SUM I + C + A
e				
w				
sum (e + w)				Total Sum →
difference (e - w)				Total Difference →

VARIABLE MAP

	Inclusion	Control	Affection	SUM I + C + A
Expressed Scores	Expressed Inclusion	Expressed Control	Expressed Affection	Total Expressed
Wanted Scores	Wanted Inclusion	Wanted Control	Wanted Affection	Total Wanted
Sum (e + w)	Inclusion Sum Score eI + wI	Control Sum Score eC + wC	Affection Score eA + wA	Social Interaction Index Score (Te + Tw)
Difference (e - w)	Inclusion Difference Score eI - wI	Control Difference Score eC - wC	Affection Difference Score eA - wA	Total Difference Score Te - Tw

VITA

David R. Wakefield

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE EFFECT OF DEPRESSION ON INTERPERSONAL INTERACTIONS IN COLLEGE STUDENTS

Major Field: Applied Behavioral Studies

Biographical:

Personal Data: Born in Sturgis, South Dakota, November 6, 1949, the son of Leo G. and Verlyn D. Wakefield. Father of Paul, Ryan, and EvaLynn Wakefield. My wife is Judy Wakefield.

Education: Graduated from Sturgis High School, Sturgis, South Dakota, in May 1968; received Bachelor of Science degree in Business Administration from Oral Roberts University in May 1972; received Master of Divinity degree from Oral Roberts University in May 1980; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in July 1991.

Professional Experience: Teaching Assistant, Department of Business, Oral Roberts University, 1975-1979; Chaplain, City of Faith Hospital, 1981-1989; Clinical Faculty, Oral Roberts University, 1987-1990; Staff Counselor, Oral Roberts University, 1989-1990, Predoctoral Psychology Intern, University of Missouri, Kansas City, 1990-1991.