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**Social Cognition and Mood:
Relationships between Depression, Self-Esteem,
and Evaluations of Other People.**

**A thesis presented in partial fulfilment of the
requirements for the degree of Master of Arts
in Psychology, Massey University.**

Les Conway

1990

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Abstract

This study examined the relationships between depression, self-esteem, and evaluations of other people. Three major hypotheses were addressed. The first hypothesis involves the extent to which people with low self ratings give low ratings to others. Secondly, the hypothesis that depressed men perceive women as more competent and powerful than men is investigated. Thirdly, the hypothesis that self-esteem mediates the relation between depression and social cognition is explored. Additional issues addressed were first, whether the evaluations of other people made by depressed subjects differ as a function of the sex of others and secondly, whether there is utility in differentiating components of self-esteem in studies of depression and social cognition. 262 non-student subjects, aged 16 to 'over 60' years responded to a questionnaire incorporating three forms (self, female others, and male others) of an evaluation rating scale. Limited support was obtained for the first two hypotheses. Mediator variable analysis refutes the hypothesis of a strong mediating effect of either self-acceptance or social confidence in the relationship between social cognition and depression. Implications of these findings for social comparison processes, studies of stereotypic biases, and further research on depression are discussed.

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CHAPTER ONE

Introduction

The purpose of this study is to investigate the role of social cognition in depression. The first part of the investigation involves a review of the literature in the areas of cognition, interpersonal behaviour, gender differences, stereotypes, social comparison with its relevance to self evaluations, and social cognition. In addition, studies of self-esteem are examined for relevance to the relationship between depression and social cognition. The second part involves an analysis of responses to a questionnaire devised to test hypotheses about the interactions among these variables.

In many fields of study in psychology, research is conducted using result-centered or theory-centered methods. Result-centered methods entail designing research on the basis of prior empirical studies in order to explore and increase the available knowledge within the field in question. Theory-centered methods entail research designs based on theoretical formulations of what is occurring in specific fields and the research is designed in such a way as to test hypotheses that support or refute the theoretical formulation. The present study employs a result-centered

orientation and as such the research is not designed as a test of specific theories. The advantages and disadvantages of these research orientations have been the subject of recent evaluation (Greenwald, Pratkanis, Leippe & Baumgardner, 1986; Greenwald & Pratkanis, 1988; Moser, Gadenne & Schroder, 1988). Greenwald et.al. (1986) note that the result-centered methods may often advance theory more effectively than theory-centered methods.

Cognitive theorists define social cognition as our understanding of our social worlds and the process by which we come to understand our own and others behaviour in social situations. The specific area of social cognition investigated in the present study is how depressives differ from non-depressives in the general evaluations they make of male and female others. The present study reviews social-cognition research in order to provide the basis for formulating hypotheses and more explorative research questions.

One area of the social-cognition research not given 'full' attention in the review presented below is that of attribution theory which states that following negative events, the nature of causal attributions about the event influences the onset and severity of depressive reactions (Hargreaves, 1985; Mikulincer, 1986; Brewin, 1985; Brewin & Furnham, 1986; Metalsky, Halberstadt & Abramson, 1987; Brown, 1988; Brown & Siegal, 1988; Baucom, Sayers & Duhe, 1989; Firth-Cozens & Brewin, 1988). Hodgeson

(1988) notes that attributions have been conceived too narrowly, that the research designs have not been sufficiently sophisticated, and that while there does appear to be a relation with current depression the research findings are inconsistent. Ganellen (1988) makes the point that self-evaluation processes following negative events may be more relevant to depression than explanations concerning the causes of an event.

Depression Models and Definition

Numerous prior researchers and theorists have defined depression in terms of a wide array of aetiological models. "Hopelessness" researchers have defined depression in terms of expectations of highly desired outcomes being unlikely to occur, highly aversive outcomes as likely to occur, and that no response available will change this likelihood (Alloy, Abramson, Metalsky and Hartlage, 1988; Abramson and Alloy, 1981). A central element in this formulation is loss of control (Brown and Siegal, 1988) and the closely related helplessness models entail negative events being given internal, stable and global explanations (Abramson, Seligman and Teasdale, 1978; Seligman, Castellon, Cacciola, Schulman, Luborsky, Ollove and Downing, 1988).

The long standing cognitive models entail a definition of depression where the syndrome of depression is, at least in part, a distortion in thought processes and content. The dysfunctional processing of information is thought to produce excessively negative evaluations of the self, the environment, and the future (Beck, Epstein and Harrison, 1983; Beck, 1964,1967,1976; Beck & Greenberg, 1974; Beckham, Leber, Watkins, Boyer and Cook, 1986). More recent interactional models entail conceptualizing depression in terms of a self perpetuating system where symptoms have a mutually maintaining relationship with the social environment (Coyne, 1976; Hammen and Doyle Peters, 1978; Mcniel, Arkowitz and Pritchard, 1987).

The Behaviourist conceptions of depression have included reductions in response contingent positive reinforcement (Lewinsohn and Hoberman, 1982), avoidance or otherwise aversively caused activities pre-empting positively reinforced behaviours (Ferster, 1973) or as Hollon and Beck (1979) have noted, low reinforcement, high punishers or the removal of discriminative stimuli for response-reinforcer sequences. Control theory definitions include depression characterized by specific deficits in self management (Rehm, Kaschow and Rabin, 1987), or as the result of dysfunctional self monitoring, self evaluations or self reinforcement as components of self regulation (Kanfer, 1971; Rehm, 1977). A further control theory definition entails negative self evaluations being a consequence of excessively high personal standards and selective self monitoring of negative information (Rehm, 1982; Kanfer and Zeiss, 1983).

While this array of models appears diverse they are certainly not mutually exclusive. Most researchers acknowledge at least some degree of overlap and many are placing greater emphasis on the common elements of the models rather than emphasizing their differences (Musikanth and Fourie, 1983; Hyland, 1987; Lewinsohn, Hoberman and Rosenbaum, 1988). As Musikanth & Fourie (1983) note, "The observations are made from different conceptual frameworks, but the behaviour that is observed is the same." (p119).

Hyland (1987) presents a hierarchical control theory\ metatheory as the core into which the various models are integrated. The selection of 'control' as the core however remains arbitrary. The use of metatheory to account for uniformity of symptoms and to emphasize a broader conception of depression e.g. "the evidence suggests that all these (precipitating) mechanisms do operate, at least for some people and some of the time"(p118), has utility for a more comprehensive understanding of depression and hence, further research.

Musikanth and Fourie (1983) undertook a similar task in advocating a broader perspective and placed their emphasis on the mutual complementarity of models. A substantial difference from Hyland was that the interactional model was treated as being more central to depression. For example,

"if one adopts an interpersonal/systems approach to depression and one recognizes that biological, intrapsychic and behaviouristic elements can readily be identified in the complex process that brings about and maintains depression one is truly taking the broader context view"(p124).

These attempts at an integration of depression models do come closer to attaining metatheory status. It may be useful however to avoid a profligation of metatheories, each with a bias toward specific underlying theories, by attributing greater equality to the different theories; at least until the research evidence provides more insight as to the relative validity of the models. Klerman (1983) notes that research is yet to demonstrate fully the various causative pathways and as such asserts that an open minded approach is called for.

The broader perspective appears preferable as it accords a more comprehensive consideration of the factors involved in depression and of the manner in which they interact. From this context the definition of depression adopted in the present study involves reference to the correlates of depression rather than specific theoretical formulations. Depression is conceptualized in terms of a multitude of variables in cyclical interaction, not only between the depression syndrome and specific correlates but as noted

by Hyland (1987) between the correlates themselves. Rather than assuming unidirectional causal relationships requiring covariance (usually assumed to be linear) and longitudinal analysis to identify which variable temporally precedes another (Ganellen, 1988), the cyclical interaction is considered sufficiently dynamic over time that interdependency rather than dependency becomes the primary assumption. The interdependent relationships are not restricted to direct influences but include relationships between variables occurring, at least in part, as a function of one or more mediating or moderating (Baron & Kenny, 1986) variable(s) that may or may not be linear correlates themselves. Kraus & Redman (1986), similarly note that interactional perspectives place emphasis on recursive patterns of depression maintaining behaviours rather than simple linear causality. For example, Kraus & Redman view social interaction, cognition, and neurohormonal physiology as all influencing each other in a circular manner.

Rather than refuting the presence of specific unidirectional causes in individual cases or groups, the application of this conception entails differentiating between causality of onset and the cause of the disorders maintenance. While factors associated with onset are important (e.g. Gotlib, Whiffen, Mount, Milne & Cordy, 1989), with specific implications for treatment, it also needs to be noted that the specific causal factors associated with onset need not necessarily be present or relevant to the ongoing presence of depression.

In the present study depression is defined in terms of being primarily present as dysphoric affect. For some it is expressed as anhedonia with or without dysphoric affect and the disorder is associated with a wide array of correlates typically involving dysfunction across many aspects of a depressed person's life. The correlates variously include cognitive negativity, apathy, irritability, interpersonal difficulties and somatic symptoms (Mathew, Weinman and Mirabi, 1981; Hankin and Locke, 1983; Mazure, Nelson and Price, 1986). The presence, extent and duration of the correlates along with extent and duration of dysphoric affect is taken as the measure of the depression syndrome's presence, severity and chronicity.

Depression and Cognition

As indicated in the models outlined above the role of cognition in depression has long been considered a major factor in the etiology and maintenance of depression. The literature provides abundant discussion of the role of cognitive factors including pessimism (Beck, Weissman, Lester & Trexler, 1974; Alloy & Ahrens, 1987), negative self evaluation (Beck, 1967, 1976; Blatt, Quinlan, Chevron, McDonald & Zukoff, 1982; Carver & Ganellen, 1983; Wenzlaff & Grozier, 1988; Peitromonaco & Markus, 1985; Dent & Teasdale, 1988), cognitive distortion and irrationality (Beck & Greenberg, 1974; Beck, et. al., 1983; Garber & Hollon, 1980; Beckham, et. al., 1986), children's cognitive errors (Leitenberg, Yost & Carroll-Wilson, 1986),

abstractive performance (Donnelly, Waldman, Murphy, Wyatt & Goodwin, 1980), time perception (Hawkins, French, Crawford & Enzle, 1988), and specificity of dysfunctional cognition to depression (Ingram, Kendall, Smith, Donnell & Ronan, 1987).

Significant relationships are apparently normal in studies of the cognitive factors, with the exception of studies into cognitive vulnerability models (e.g. Blackburn & Smyth, 1985; Zeiss & Lewinsohn, 1988).

Conflicting findings (Golin, Terrell & Johnson, 1977; Golin, Terrell, Weitz & Drost, 1979; Golin, Jarrett, Stewart & Drayton, 1980; Lewinsohn, Mischel, Chaplin & Barton, 1980; Alloy & Abramson, 1979; Abramson & Alloy, 1981) have however led to re-evaluation of the cognitive theory assumptions and the earlier studies have been the subject of several reviews. Layne (1983) reviewed research into expectancies, perception, self monitoring, memory, and attributions. The findings were that experiments consistently showed depressed people to suffer significantly less cognitive distortion than non-depressed persons. Ruchman, West, & Pasahow, (1985) reviewed research into evaluative tendencies in the areas of contingency judgments, causal attributions, expectancy estimates, and self reference.

Mild/moderately depressed persons were found to display relatively unbiased evaluative response patterns, severely depressed persons displayed negative evaluative response biases and non-depressed persons showed positive response biases. These findings contrast with earlier interpretations where normal (adaptive) responding was assumed to be objective and

rational. The interpretative tendency in analysis of deviations from normal has been to consider the responses irrational and illogical, and as such the results were considered consistent with the cognitive theory of depression.

The idea of people generally being cognitively distorted is neither a novel nor recent conception. Biases are reported in abundance in most introductory psychology texts and are particularly apparent in our 'self-talk' following the purchase of lottery tickets. As early as 1932 theorists were examining the utility and functions of tendencies toward self-deceit and Cabot (1932) notes that in avoiding discomfort we act as if the comfortable were true. Cabot also notes that self-deceit "denies what it excludes", suggesting that these cognitions are less than conscious in nature. It is only in the last decade that research has linked observations of cognitive self-deception with the depression syndrome; depressed persons show a significantly reduced tendency to utilize the cognitive self-protective biases.

Those studies that call cognitive theory into question do not extend their criticism to the optimism-pessimism dimension. The support for a strong relationship between depression and pessimism is conclusive (Alloy & Ahrens, 1987). Modification of cognitive theory appears 'overdue', specifically where depressives are assumed to be irrational, illogical, and lacking in objectivity.

Depression, Cognition and Self Esteem

The relationship of self esteem to depression has recently taken a higher profile in the literature with regard to its implications for the cognitive research. Numerous studies have given support to the presence of a strong negative relationship between self esteem and depression with some suggesting a causal rather than correlational relationship (Coleman, 1975; Wilson & Krane, 1980; Golin, Hartman, Klatt, Munz & Wolfgang, 1977; Altman & Wittenborn, 1980; Cofer & Wittenborn, 1980; Beer, 1987; Leitenberg et.al. 1986; Sturkie & Flanzer, 1987). Recent studies have been designed to elucidate the role of self esteem in the attributions of depressed people. Researchers suggest that self esteem rather than depression is more central in explaining variances between depressive's and non-depressive's attributions (Tennen, Herzberger & Fisher Nelson, 1987; Feather, 1987).

In Tennen et.al's (1987) initial study with students subjects, self esteem was found to be a better predictor of attributional style for negative events than was depression. In their second study using psychiatric inpatients, both self esteem and depression were highly correlated with attributional style, however, controlling for self esteem, eliminated the relationship between depression and the depressive attributional style. In a separate study, Tennen & Herzberger, (1987) provided further support for

their claim that self-esteem predicts the vast majority of 'conceptually relevant criteria'. Tennen & Herzberger note,

"It now seems clear that the tendency to make internal attributions for failure and external, unstable, and specific attributions for success is characteristic of individuals with low self esteem, independent of depression status" (p77).

Similarly, in Feather's (1987) study, self esteem was a reliable predictor of positive and negative event attributions when depression was controlled in regression analysis. Feather notes that self esteem may have a mediating role in the 'rosy glow' effect of positive self esteem and suggests that the greater realism/accuracy observed in the responses of depressives on cognitive tasks (and usually considered a consequence of depression) may, to some extent, be misplaced. The evaluation of self esteem as a central pervasive factor in the relationship between cognition and depression is also consistent with research in the area of self concept where researchers have proposed self esteem as the central ingredient of the self concept (Greenweld, Bellezza & Banaji, 1988; Crocker, Thompson, McGraw & Ingerman, 1987).

The assessment of self esteem in the research has been criticized (Demo, 1985), on the grounds that few studies have employed more than one self esteem instrument and that little attention has been given to self

esteem measurement problems. Demo reports findings consistent with viewing self esteem as a multidimensional conception requiring a variety of methods to provide adequate assessment. Based on the Shavelson, Hubner & Stanton, (1976) self esteem construct, Fleming & Watts (1980) employed factor analysis to identify the components of the multidimensional construct. Social confidence, school abilities and self regard were identified as central components of self-esteem, and the researchers suggest that the school abilities factor may vary in different samples. In Fleming & Watts study, school abilities were relatively independent of the other two factors.

These studies in cognition bear relevance to social cognition studies in that first, research in specific areas (e.g. negative self evaluations), has direct implications for social comparison processes. Second, the studies involving mediator variables, e.g. self-esteem, have substantial implications for the design of research in social cognition. Third, in the absence of an objective point of comparison, these studies provide reason for applying caution with regard to the interpretation of results.

Depression and Interpersonal Behaviour

Studies in social cognition can serve a variety of functions. One example is that they enable us to better understand the way in which we gain knowledge of ourselves via the social comparison processes (Morse & Gergen, 1970). A second major function involves providing the basic data from which inferences as to the nature of interpersonal behaviours, and how these may vary as a function of depression, can be drawn. Coyne, (1976) advanced an interactional description of depression which has encouraged further research into the interactional context within which the depressive behaviour occurs. Coyne conceptualized depression as a self-perpetuating interpersonal system where interactions between people collude to create a system where feedback is not received, and efforts at resolution have the effect of maintaining the system.

Research investigating responses from others in interaction with depressed targets has yielded conflicting results. Hokanson, Sacco, Blumberg & Landrum, (1980) employed a modified Prisoner's Dilemma task and obtained a response pattern that elicited increased ingratiating behaviours in the depressives' partners. Hammen & Doyle Peters, (1978) used telephone interactions with student subjects enacting depressed and non-depressed roles. The 'depressed' telephone interactions elicited significantly more depression in the listeners. In contrast, Stephens, Hokanson & Walker, (1987) failed to elicit negative reactions in subjects

when female confederates enacted a depressed role and McNiel et.al., (1987) identified no characteristic patterns in responses to depressed patients in matched same sex dyadic face to face interactions. Evaluation of these studies indicates that effects consistent with Coyne's hypothesis may be situation specific. However the methodologies employed in the above four studies leave substantial doubt as to the generalisability of these results to non-experimental situations.

Studies of couples in established relationships have tended to employ more naturalistic methodologies and have yielded more consistent results. The spouses of depressed patients and spouses with distressed partners exhibit significantly more negative affect, depression symptoms and negative behaviours (Coyne, Kessler, Tal, Turnbull, Wortman & Greden, 1987; Baucom et.al., 1989; Biglan, Hops, Sherman, Friedman, Arthur & Osteen, 1985; Hops, Biglan, Sherman, Arthur, Friedman & Osteen, 1987; Krantz & Moos, 1987). In the Coyne et.al. study, multiple regression analysis showed the greater psychological distress to be almost entirely accounted for by the burdens associated with the depressed partner. This finding tends to discount the assortative marriage hypothesis.

In a review of the literature pertaining to psychosocial functioning (Barnett & Gotlib, 1988), marital distress and low social integration\social isolation are suggested as aetiological factors in depression. This review provides many suggestions as to the way in which multiple factors may

interact as antecedents or sequelae to depression. Barnett & Gotlib concur with the observation made above, that there is little empirical support for cognitive vulnerability as a aetiological factor in depression and note that there is substantial evidence for social factors as antecedents. One of the goals of studies in social cognition, through the inferences that may be drawn from social cognitive data, is to provide further indications as to the way in which cognitive and social factors may interact.

Depression, Sex Differences, and Stereotypes

While there is considerable variability within both males and females with regard to most behaviours, and situational factors may frequently override gender differences (Deaux, 1985) there still remain substantial differences in the presence and expression of depression as a function of sex. Friedrich, Reams & Jacobs, (1988) note, firstly, that life stress was more important in depressed male students and secondly, several types of social support were more important in depressed female students. Lopez, Campbell & Watkins, (1986) identified psychological separation (from parents) as significantly negatively related to depression for females, and depressed males were found to be significantly more independent of their parents than were depressed females. Funabiki, Bologna, Pepping & Fitzgerald, (1980) employed a large sample of students to rate their degree

of participation in specific behaviours and cognitions if depressed. Distinct differences in patterns of interpersonal behaviour and cognitive styles for coping with depression were identified.

The social-cognitive theory appears useful for suggesting or delineating areas where sex differences may interact with depression. This theory asserts that, in the absence of alternative sources, depression occurs with events that disrupt roles by which people define their worth. Oatley & Bolton note that reactive depression symptoms occur in three sets, first cognitive symptoms due to damage to the sense of self, second, a set of intense emotions and third, a set of interpersonal strategies. As the roles differ substantially for males and females in relation to parents (Lopez et.al., 1986), behaviours (Funabiki et.al., 1980) and parenting role differences e.g. pregnancy and primary care giver roles (Gotlib, et. al., 1989; Forehand, Brody, Slotkin, Fauber, McCombs & Long, 1988; Caplan, Cogin, Alexandra, Mordecai Robson & Kumar, 1989; Ryan, 1986; Hobfoll & Leiberman, 1987) it is perhaps inevitable that differences occur in the symptom presence and expression of depression.

Of particular relevance to the present study is the presence and function of sex role stereotypes. For example, it is not solely the actual sex differences but the perception of sex differences that may have substantial effects in the social cognition of depressives. Snyder, Tanke & Berscheid, (1977) note that their research suggests that stereotypes "can and do

channel dyadic interactions so as to create their own social reality" (p663). An appraisal of sex role stereotypes (Broverman, Vogel, Broverman, Clarkson & Rosenkrantz, 1972) identified that females are perceived as less competent, independent, objective and logical than males while males are perceived as lacking sensitivity, warmth and expressiveness. Broverman et.al. also report that both sexes incorporate positive and negative stereotypes into their self concepts, which when accounting for the differential value of the traits, results in a tendency for females to have more negative self concepts than males. McDermott, (1987) reports that depression exists with greater frequency and intensity in women and Lewinsohn, et. al. (1988) include 'being female' as a risk factor for developing an episode of unipolar depression.

Prior studies have tended to show that more feminine traits are attributed to depression (e.g. Hammen & Doyle Peters, 1978). Where self esteem is the dependent variable, the strongest positive relationship is between esteem and masculinity with little or no relationship with femininity (Long, 1986, 1989; Marsh, Antill & Cunningham, 1987). Given the inverse nature of the relationship between self esteem and depression, these studies show reasonable consistency.

Not all studies have been supportive of sex differences in depression. Perris, (1984) obtained no interactive effect of sex in the life event and depression relation. A meta-analytic study by Swim, Borgida, Maruyama &

Myers, (1989) evaluating 123 studies assessing stereotype effects on evaluations concluded that there are negligible differences. Swim et.al's comprehensive review centers on Goldberg's (1968) "classic paradigm" and is limited for this reason. Some support, however, was obtained for lower ratings of women when less information is presented. Swim et.al. note that sex biased evaluations do occur but the complexity of the conditions under which such evaluations occur must be taken into consideration.

Depression and Social Comparison

Swallow & Kuiper, (1988) comment that dysfunctional social comparisons could assist in explaining the interactional difficulties experienced by depressed individuals. Hammen & Doyle Peters, (1978) report that depressed persons are rejected more often, especially by the opposite sex. A further study, Kuiper, Olinger & Swallow, (in print, cited by Swallow & Kuiper, 1988) report that depressives receive less social support, are liked less and experience greater rejection.

As noted earlier depressed persons make significantly more negative self evaluations than non-depressed persons. Many researchers and theorists in the areas of depression, self-esteem, and self concept, assert that self evaluations are formed in a social context where comparison with

others is a central factor (e.g. Morse & Gergen, 1970; Coyne, 1976; Shavelson et.al., 1976; Swallow & Kuiper, 1988). Swallow & Kuiper note that social comparison is an inevitable part of any social environment and state,

"For the depressed individual .. social comparison has likely often been damaging to self-esteem the depressed person may begin to anticipate further negative evaluative consequences"(p71).

As such, avoidance of social situations is seen as a logical response. Numerous studies confirm social withdrawal and low social support as symptomatic of depression (Eisemann, 1980, 1984, 1985; Billings, Cronkite & Moos, 1983; Dunkel-Schetter, Folkman & Lazarus, 1987; Ganster & Victor, 1988; Phiffer & Murrell, 1986; Stone, 1987; Ryan, 1986; Cole, Lazarick & Howard, 1987; Peitromonaco & Rook, 1987).

In this conceptualisation of depression in the context of social comparison, Swallow & Kuiper, (1988) report that the pervasive and automatic nature of social comparison may account for some previously unidentified precursors of endogenous depression and that decreased self-esteem may mistakenly be attributed to other unspecified non-situational factors. A central factor in the social comparison process in depression is the use of inappropriate comparisons e.g. failure to use discounting principles in choosing appropriate others with whom to compare (Swallow &

Kuiper, 1987). A second related factor is whether comparisons are made with general stereotypic others or with similar significant others (Swallow & Kuiper, 1988; Shapiro, 1988).

Swallow & Kuiper (1988) suggest an association between depression and "weaknesses in the self protective mechanisms of engaging in social comparison"(p73). This point is highly consistent with the results of cognitive studies where it was found that a major feature of depressive's cognitions is the absence (or reduced level, Vazquez, 1987) of the non-depressive's optimistic biases in self reference (Layne 1983; Ruehlman, et. al., 1985).

Social Cognition; Selected Studies

Martin, Abramson & Alloy, (1984) tested the relationship between susceptibility to an 'illusion of control', and depression. Martin et.al's methodology was complex and entailed having collaborators pose as subjects. The use of male and female collaborators enabled analysis of differences occurring as a function of the sex of the other. Most prior studies have only examined subject sex differences at a single direct (e.g. subject's sex) level. Judgments of control were found to be a function of subject's sex, subject's mood state and collaborator's sex. The main effects observed were first that depressives held an illusion of control for others but not for

themselves, second, that non-depressed subjects overestimated personal control, third, that female non-depressed subjects overestimated control for others, and that male non-depressed subjects rated other females control with greater accuracy than did depressed males.

The first and second effects are consistent with studies showing reduced self serving biases in depressives. Martin et.al. point out the implicit assumptions of Beck's cognitive theory and note that they look forward to reformulation to take account of the non-depressives optimistic biases. An interesting point is that while researchers are, with few exceptions, now integrating these findings into new research designs, there appears as yet to be little flow on effect into treatments. In particular, it is important to evaluate the perhaps unnecessary assumptions about social cognition in depression (e.g. irrationality, illogicality; Beck & Greenberg, 1974) and the effect of these assumptions on client's self-esteem.

The third effect found was that non-depressed males rated control in females more accurately (lower). This finding is consistent with prior studies of social stereotypes. These authors also found that non-depressed female subjects overestimated other's control. This finding has implications for the social comparison process and negative self evaluations. Perhaps the addition of being female and being depressed is compounding and the relationship with social comparison processes may (at least in part) account for the greater intensity of depression in females.

The finding that depressed males did not rate control in females lower was an unexpected finding in Martin et.al.'s study. These authors state,

"In complete contrast to sex role stereotypes, depressed males appeared to view women as more competent and powerful than men, at least on the achievement oriented task used in this study. Future work is necessary to elucidate the intriguing relationship between depression and the reversal of sex role stereotypes in males" (p134).

Martin et.al. question whether the same results would be obtained if different dependent variables were used and notes that "conceptual replication" is in order. Given that this finding has implications for the interactions of depressed males with females it is perhaps surprising that the present writer has been unable to identify studies expanding upon this finding in the more recent literature.

A recent study of evaluation of others (Shapiro, 1988), while not drawing a distinction regarding the sex of the other, expanded upon prior studies investigating the application of negative bias toward the self and generalisation to others. Shapiro used a 36 item person-descriptive adjective measure broadly referring to four domains; moral values, achievement, social skills and well-being. In addition the Depressive Experiences

Questionnaire (D.E.Q.) was used to separately measure the dependency, self criticism and efficacy dimensions of depression. While for males, there was a small yet significant relationship between overall depression and negative perceptions of others, no relationship occurred for females. Further analysis showed that high self critical scores for males and high dependency scores for females were significantly negatively correlated with ratings of others on the adjective measure. In explaining a relatively weak relationship of these evaluations of others with overall depression, Shapiro notes that the significant versus general other dimension was not assessed.

The undifferentiated general other and specific significant others with affective involvement constitute two ends of a continuum in person perception. As such, specification of male and female others can be seen as a step (albeit small) toward the more specific. Hodgins & Kalin (1985) found social category information to be less significant when personal information about stimulus persons is provided. Further research is needed to clarify the role of this distinction in person perception.

Shapiro's findings (with 'overall' depression as the independent variable), that negative self evaluations tended not to generalise to others, is consistent with a number of prior studies. Peitromonaco & Markus (1985), found negativity to be restricted to thoughts about oneself and Bradley & Mathews (1983), similarly reported negative bias in recall applying only in self referent experimental conditions. Alloy & Ahrens (1987), found that

depressives showed neither positive or negative social comparison biases in forecasting outcomes. Finally, Lobitz & Dee Post (1979), found that depressed subjects rated others 'more positively' than did non-depressed subjects.

A number of studies, however, have obtained conflicting results. Karoly & Ruehlman (1983), and Kuiper & McDonald (1983), found depressives to make more pessimistic ratings of others. In addition, Shapiro identified more critical evaluations of others when self-criticism in males and females and dependency in females, rather than overall depression, were the dependent variables.

Both Martin et.al. and Shapiro used students as subjects which raises doubt as to the generalisability of these findings to the general population. The social environment of students differs, often dramatically, from that of the general population and the influence of these differences on person perception is unknown. Male and female students share equivalence in their roles as students which almost inevitably will be reflected in their ratings of male and female others. As this equivalence of roles tends not to be maintained outside the social environment of the university, it appears entirely inappropriate to generalise from student to general populations when investigating the evaluations people make of other people.

SUMMARY OF RESEARCH DESIGN AND RESEARCH QUESTIONS

A primary aim of the present study is to conduct a "conceptual replication" of Martin et.al's study using different methodology and dependent variables, as was recommended by these authors. The research is also designed to test for the presence and generality of reversed stereotype effects in depressed males. As Feather (1987) has identified self-esteem as a central mediating variable in the relationship between depression and cognition, a further aim of this research is to explore the proposition that self-esteem is an important mediating variable in the relationship between depression and social cognition.

The evaluation scale used by Shapiro to assess person perception was subjectively developed and, as yet, has not been validated. The scale is nevertheless appealing as a useful means of investigating Martin et.al's findings. As the scale has not been previously validated some license was taken in modifying it for use in the present study. The four basic domains categorised by Shapiro (Achievement, Moral Values, Social Skills, and Well-Being) include items that could be re-classified into adjective lists referring to self-concept (Shavelson et.al., 1976) or self-esteem (Flemming & Watts, 1980) as additions to Shapiro's groupings. This reclassification was made. Further adjectives were also included in order that the dimension of 'control' (the central variable in Martin, et.al.'s study) be represented. Finally, the scale was presented in three forms (self, same sex and opposite sex) to

allow a comprehensive analysis of the role of sex differences in evaluations of others. A copy of the modified scale used in the present study is included in appendix A.

On the basis of the research findings presented in the literature review, the following five research questions were formulated to address questions arising from these studies. First, it has been noted that although there is some support for the view that, in depression, negative self evaluations generalise to evaluations of others, research to date is generally inconclusive on this issue (Shapiro, 1988). It is therefore proposed to investigate the hypothesis that evaluations of self and others made by depressed subjects will differ from those made by non-depressed subjects.

In the light of the importance of evaluations of others in the social comparison process it seems important to investigate whether evaluations of others differs as a function of the sex of the other being evaluated. The second research question addresses the question of whether ratings of others made by depressed subjects differ from those of non-depressed subjects as a function of the sex of the other.

The third research question, which is closely related to the second question, is derived from Martin et. al.'s unexpected finding that depressed male subjects exhibited a reversal in sex role stereotypes when evaluating females. If this finding is supported in further studies it could be considered

as a substantive element with important implications for the social interactions of depressed males. It is hypothesised that, in the present study, depressed males will rate females higher than non-depressed males rate them.

An important allied question is to ascertain whether this hypothesised higher rating will be found only for specific domains or whether it will be found for all the domains included in the assessment of social cognition.

Baron & Kenny (1986) report on the moderator / mediator variable distinction and review the statistical considerations when testing for mediator variable effects. The fourth research question in the present study, entails investigation of the findings by Feather (1987) where self-esteem is identified as having a mediating function in the relation between depression and cognition. The aim is to test this hypothesis in the relationship between depression and social cognition. The methods advocated by Baron & Kenny to test for mediator variable effects are employed to test the hypothesis that self-esteem mediates the relationship between depression and the evaluations people make of others.

As researchers (e.g. Demo, 1985) have noted that self-esteem is a multidimensional construct, for the purpose of this study self-esteem was differentiated into its two major components; social confidence and self acceptance. The dimension of academic confidence (Flemming & Watts,

1980) was not included as this was considered less relevant in a general population study with very few students. It is important to determine whether the distinction between social confidence and self-acceptance is an important one for research investigating social cognition in depression. The hypothesis is that the factors, social confidence and self-acceptance, are differentially related to depression, social cognition, or the relationship between depression and social cognition. If one factor (e.g. social confidence) has a weaker relationship with these variables, the resulting coefficients may be artificially low, thereby obscuring the relationship with the other component of self-esteem (e.g. self-acceptance).

CHAPTER TWO

METHOD

The present study was part of a larger investigation, undertaken by the present writer, into leisure activities, friendships, and mood states. The 'evaluation of others' scales were the final components of a questionnaire taking between forty and sixty minutes to complete. The questionnaire was designed to investigate a wide array of questions arising out of studies in depression. The diversity of areas investigated was such that it is inappropriate to present all findings in a single thesis or report.

SAMPLING

The sampling employed in the present study differed substantially from more usual approaches. Fully randomized sampling from the general population is considered optimal where the aim is to generalise the results to the general population. In practice many studies have employed students due to availability and practical ease in conducting the research. A major limitation associated with using students is the reported difference in prevalence in these populations. Bumberry, Oliver, & McClure (1978) note

that prevalence of at least mild depression may be 50 percent higher in college students than in American adults aged between 18 and 74 years. In addition, as noted above the use of students is considered inappropriate as the social environments are dissimilar across student and general populations.

Refusal to participate is frequently high in fully random sampling and may interact with the social withdrawal aspects of depression. Contrasting hypotheses are readily generated, for example, awareness that the research topic includes depression may increase the likelihood of depressed persons participating as it may be perceived as more personally relevant. Whichever is the case, the main point is that reducing subject mortality is desirable in order to obtain a representative sample.

In the present study the researcher sought a compromise between the alternative methods of sampling. The sampling strategy decided upon entailed sampling a diverse range of subject groups with the diversity of sub-samples being employed to 'approximate' a random sample. Volunteers, associates of the researcher, received brief training in the presentation and distribution of questionnaires. Volunteers then distributed the questionnaires among their work associate, family, and social networks. Twenty one sub-samples contributed to the total sample, one of which was comprised of questionnaires completed by those distributing the questionnaires; completed prior to their further involvement in this study. The sub-samples ranged in

size from two to thirty six (mean = 12.5: s.d. = 9.5) and sub-samples were obtained from five New Zealand cities and three rural towns. Specific sub-samples include hospital staff, airforce personnel, university non-academic staff, business personnel, adult part-time counselling course students, and a variety of less readily defined samples entailing work associates, family and friends of those distributing the questionnaires.

A limitation of this approach to sampling is that highly isolated individuals may be less likely to be included. Whether random sampling accesses these individuals any better is questionable. To avoid confounding this factor, no group whose primary or secondary function included social goals (e.g. friendship clubs, Rotoract) for participants were targeted in sampling. As such, the majority of subjects received a personal approach from a 'known' individual and the acceptance rate is estimated at ninety percent of those approached.

SUBJECTS

262 subjects (107 male, 155 female) from five N.Z. cities and three rural towns completed the questionnaire. Subjects were 16 years or over (mean = 35: s.d. = 11.5). Minority cultures were not well represented in this sample with 237 being European or Pakeha. A demographic summary is provided in appendix two.

MEASURES

The questionnaire included measures of self-esteem (self-acceptance and social confidence), a depression scale, a self evaluation rating scale, an evaluation rating scale referent to others of the same sex, and an evaluation rating scale referent to others of the other sex. Subjects were also asked to report on the presence of depression in the past year, and after completing the evaluation of others scales, reported whether their answers on these scales were predominantly referent to 'specific or general' others.

SELF-ESTEEM

To assess components of self-esteem (Fleming & Watts, 1980), self-acceptance/self-regard and social confidence were assessed separately. Bachman, Omalley, & Johnston, (1978) modified the Rosenberg (1965) self-esteem scale. Robinson & Shaver (1973) note that the scale measures the unidimensional self-acceptance factor of self-esteem and in the present case this feature, along with the brevity of the scale, is a strength rather than a weakness. The Rosenberg scale has good reliability (Test-Retest r values = .71 & .75; Robinson & Shaver, 1973; Bachman et.al., 1978) and validity (Bachman et.al., 1978; Demo, 1985). The ten items are scored on a five point scale from 'almost always true' to 'never true', four negative items are scored in the reverse direction, and administration takes less than five minutes.

To obtain a similarly brief assessment of social confidence a scale emphasizing social-esteem was derived from forms A and B of the Texas Social Behaviour Inventory, T.S.B.I.(Helmreich & Stapp, 1974). Items referring to self-regard outside a directly social context were excluded and the nine items selected were scored on a ten point scale, in accordance with the standard response format, from 'not at all like me' to 'very much like me'. Three negative items were scored in the reverse direction.

The T.S.B.I. is a 16 item scale predominantly referent to self-esteem in social contexts. As the modifications made too this scale were substantial, the normative data as well as reliability and validity estimates are not applicable.

DEPRESSION

The Beck Depression Inventory (B.D.I.: Beck, Ward, Mendelson, Mock, & Emery, 1961) revised (Beck, Rush, Shaw, & Emery, 1979), is a 21 'symptom' inventory with items scores 0 to 3 in terms of intensity. The BDI is a self-report scale with more than 25 years of application with diverse range of subject groups (Beck, Steer, & Garbin, 1988). The scale has high internal consistency (mean = .81; range =.73 to .92) and good test-retest reliability ranging from .60 to .83 with non-psychiatric subjects (Beck et.al., 1988). Reasonable predictive and concurrent validities were obtained with both psychiatric and non-psychiatric subjects.

Conflicting reports regarding both reliability and validity are available in the literature. Construct validity is considered high and discriminant validity with generalised anxiety disorder is reasonable (Beck et.al., 1988). Discriminant validity with student samples is considered questionable (Tanaka-Matsumi & Kameoka, 1986). Boyle (1985) notes that test-retest reliability may be 'too' high and also questions discriminant validity.

The use of the B.D.I. in previous studies, including that of Martin et.al., (1984), facilitates comparison of results. While the recommended cutoff for mild depression is ten (Kovacs & Beck, 1977) and a cutoff of nine is used in the majority of studies with college students (Martin et.al., 1984), a cutoff of eight was employed in the present study in order to meet quartile analysis requirements.

EVALUATION SCALES

The instrument to measure evaluations of self, female others, and male others was a modification of Shapiro's (1988) evaluation scale. Shapiro's scale of 38 person descriptive adjectives were broadly referent to four domains. The first category was referent to morality/kindness toward others (e.g. selfish and helpful). The second adjective set refers to achievement-related abilities (e.g. intelligent and efficient). The third set of adjectives refers to social skills (e.g. likable and charming) and the fourth refers to subjective well-being (e.g. contented and sad). An additional set of ten items referent to control (e.g. independent and easily persuaded) were interspersed in the scale and the various domains were not separated. Subjects provided ratings on a 0 to 10 scale and adjectives designating negative attributes were scored in the reverse direction. Subjects provided ratings on all items on three administrations. On the first, subjects were asked to rate others 'the same sex as yourself', the second entailed

reference to others not of the same sex and on the third, (items were modified to be 1st person referent) subjects rated themselves on the list of adjectives.

PROCEDURE

Volunteer training included directions pertaining to selection, e.g. that subjects be non-students and over 16 years of age, and directions pertaining to the completion and return of the questionnaires. Directions were provided verbally and in written form. Coversheet directions included requests to answer in the order provided without referring back to earlier sections and to not discuss items prior to completing the questionnaire. Assurances of confidentiality were given to all subjects and many elected to return questionnaires in sealed envelopes. Pilot testing identified that subjects with English as a second language had difficulty with the scoring direction on some scales; these subjects were asked to note this on the questionnaire.

Subjects were asked to return questionnaires at their earliest convenience and methods of non-assertive follow-up were discussed with volunteers. In addition, subjects were encouraged to provide feedback to the researcher. A small percentage of subjects (7.3%, $n = 19$) did not complete the 'evaluation of others' scales. A number of subjects expressed discomfort

in answering these questions, noting that, while they acknowledge having 'general' views of others, they disliked expressing generalizations in this manner. The most frequent criticism entailed the absence of provision for more positive responses on the BDI. Subjects expressed a wide variety of responses to the questionnaires and the general positive response identified in pilot testing was also evident in the main study.

The questionnaire included provision to request feedback. An informal summary of results for the three sections investigated, leisure, friendships, and social cognition, were distributed to all subjects providing a postal address. The feedback letter included appreciation to subjects for their participation. Many subjects requested feedback via the volunteers distributing the questionnaires. Accordingly, further copies of the feedback were disbursed via those distributing the questionnaires.

CHAPTER THREE

RESULTS

ANALYSIS

The SPSS-X program, including manova, anova and ancova, independent groups and paired samples t-tests, as well as correlations were employed in the analysis of results. Comparison of group means across upper/lower quartiles was the preferred basis for analysis to maintain consistency for purposes of interpretation with prior studies and to enhance clarity in interpretation. Use of manova was also suggested by the high covariance between dependent variables, i.e. the same sex, other sex referent rating scales.

Manova was employed to test for main and interaction effects across sex of others, level of depression, and sex of subjects (2x3x2). Anova was employed to investigate main effects within same sex others and other sex others categories and to test for interaction effects across level of depression and sex of subjects (3x2) within these categories. Ancova, to test for change in significance levels of differences in group means identified with anova when adjusted for covariables, were employed to examine possible mediator variable roles. Paired samples t-tests were employed to test differences in specific group means between same sex\other sex categories across and within the domains on which others were rated. Independent

groups t-tests were employed to test the remaining differences in specific group means across groups and correlations were used to assess strengths of relationships between variables.

The emphasis on manova as the primary analysis has been subject to recent criticism in that it's function in controlling for type 1 error is considered more mythological than real. Huberty & Morris (1989) somewhat bluntly conclude that,

"to require Manova as a prerequisite of multiple Anovas is illogical, and the comfort of statistical protection is an illusion"(p307).

In accordance with these views emphasis is placed on the use of anovas and the more specific t-tests.

The mediator variable analysis is presented in the context of Ancovas in order to optimize clarity in portraying the relative roles of the different variables. However as the anova format is considered 'limited' (Baron & Kenny, 1986) for identifying mediator variables, results are also examined using regression analysis.

Primary Factor Correlations

Table 1
Correlation matrix of primary factors assessed
for male subjects.

	Dep	S-A	S-C	K-S	KSS	KOS
S-A	-.60 ^{***}					
S-C	-.29 ^{**}	.37 ^{***}				
K-S	-.48 ^{***}	.60 ^{***}	.34 ^{***}			
KSS	-.18 [*]	.11	.14	.36 ^{***}		
KOS	-.11	.11	.11	.46 ^{***}	.70 ^{***}	
PrD	.53 ^{***}	-.45 ^{***}	-.13	-.30 ^{**}	-.05	-.07

Note. ^{*} = p<.05; ^{**} = p<.01; ^{***} = p<.001.

Key (Tables one and two)

Dep	Depression (BDI)
S-A	Self Acceptance (Rosenberg)
S-C	Social Confidence (TSBI)
K-S	Self Ratings on Evaluation Scale (Shapiro)
KSS	Evaluations of Same Sex Others
KOS	Evaluations of Other Sex Others
PrD	Prior Depression

Table 2
Correlation matrix of primary factors assessed
for female subjects.

	Dep	S-A	S-C	K-S	KSS	KOS
S-A	-.59 ^{***}					
S-C	-.24 ^{**}	.50 ^{***}				
K-S	-.60 ^{***}	.66 ^{***}	.53 ^{***}			
KSS	-.29 ^{***}	.23 ^{**}	.09	.52 ^{***}		
KOS	-.20 ^{**}	.16 [*]	.04	.49 ^{***}	.68 ^{***}	
PrD	.57 ^{***}	-.40 ^{***}	-.27 ^{**}	-.32 ^{***}	-.23 ^{**}	-.06

Note. ^{*} = p<.05; ^{**} = p<.01; ^{***} = p<.001.

In tables one and two self-acceptance is more strongly related to depression than is social confidence and all correlations are in the expected directions. The overall trend when comparing tables one and two is for correlations to be higher with female subjects than with male subjects. Evaluations of same sex others is significantly correlated with self-acceptance and negatively correlated with prior depression for female and not male subjects. Evaluations of the other sex are significantly correlated with depression and social confidence is significantly correlated with prior depression, also only with female subjects. For both males and females the correlations between the evaluation of others scales and the depression, self-acceptance, and social-esteem scales are low.

Quartile Divisions

Table 3

Upper/lower quartile divisions. Subject numbers, mean depression scores, standard deviations, and percentages are presented for each group (Cutoff for the non-depressed category is a BDI score equal to or less than one and cutoff for the depressed group is a score equal to or greater than eight).

	Upper Quartile	Mid 50%	Lower Quartile
Male			
Number =	35 (3)	52 (5)	18
mean =	.37	4.0	11.9
stand. dev =	.5	1.5	4.5
percentage =	33.3	49.5	17.4
Female			
Number =	39 (2)	69 (6)	49 (3)
mean =	.31	3.9	13.7
stand. dev =	.47	1.6	6.7
percentage =	24.8	43.9	31.2
Totals			
Number =	69	110	64
mean =	.34	3.94	13.2
percentage =	28.2	46.2	25.6

Note. (x)= n of missing data pertaining to evaluation of others ratings.

The greater number of female subjects in the sample and the higher incidence of depression in females results in disproportionate cell sizes in the depressed groups. The level of depression in the lower quartile is not significantly higher for females.

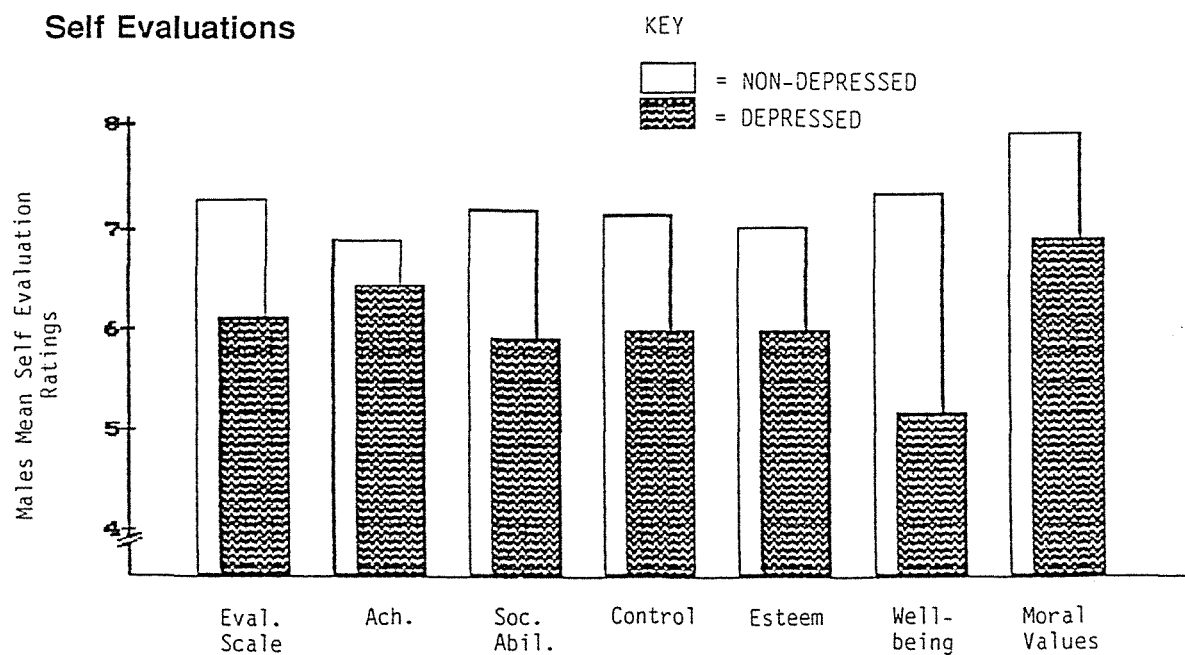


Figure 1

Upper/lower quartile comparison of 'self' evaluations, both overall and for specific domains, for depressed and non-depressed males.

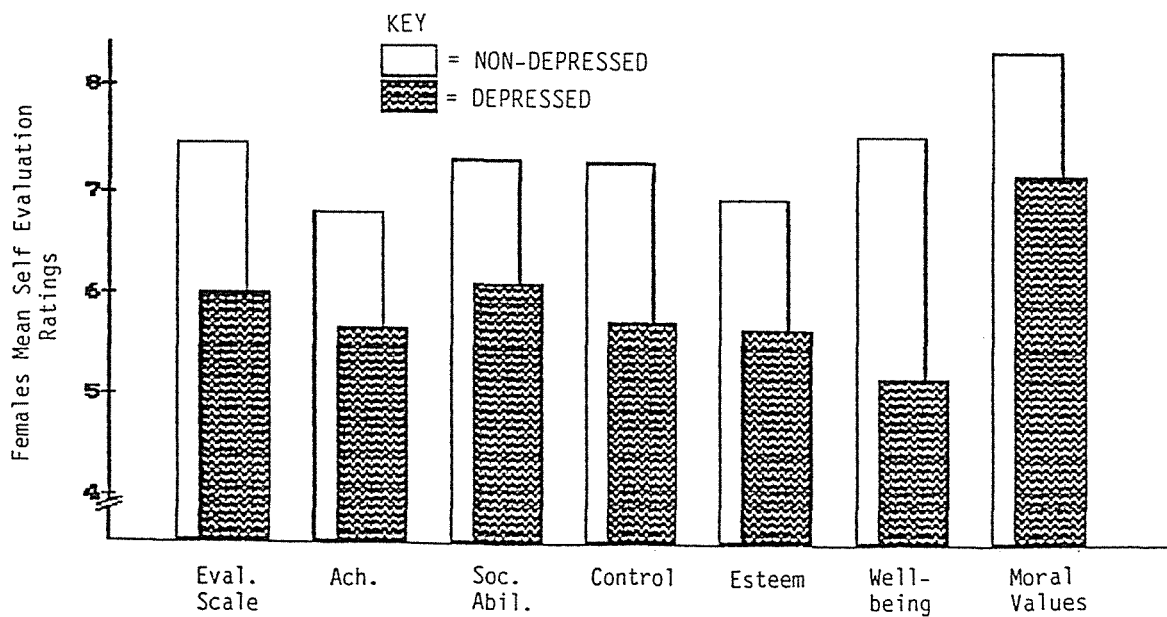


Figure 2

Upper/lower quartile comparison of 'self' evaluations, both overall and for specific domains, for depressed and non-depressed females.

As shown in figure 1 depressed males rate themselves significantly lower ($p < .01$) in esteem and moral values, significantly lower ($p < .001$) in well-being, control, and social abilities, and not significantly lower in achievement. In figure 2 depressed females rate themselves significantly lower ($P < .001$) than non-depressed females in all domains assessed. The overall evaluations made by depressed males and females are highly significantly lower ($P < .001$) than evaluations made by non-depressed subjects.

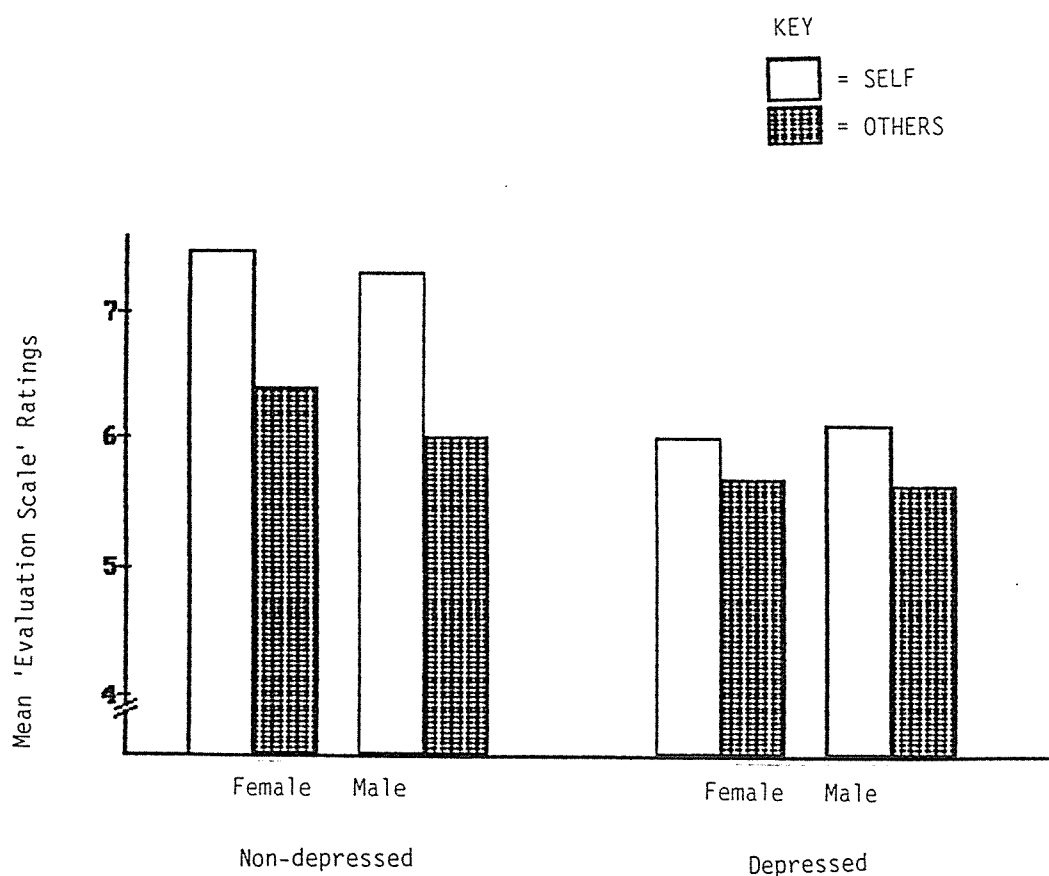


Figure 3

Mean evaluation scales, self and others, ratings obtained by male and female subjects with upper or lower quartile depression scores.

While both ratings of self and others are significantly lower in the depressed sample the effect is substantially greater with self evaluations. Non-depressed subjects rated others significantly ($P < .001$) lower than their self ratings and depressed subjects rated others significantly lower ($P < .05$).

Evaluation of Others

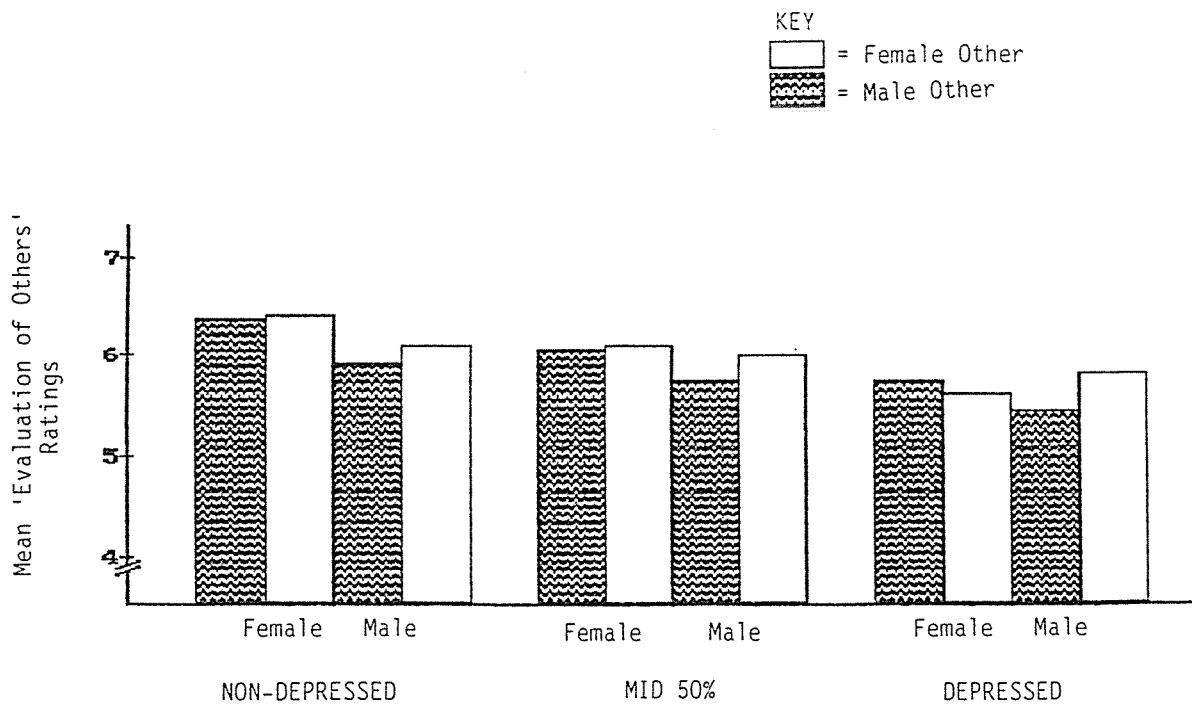


Figure 4

Males and females evaluations of male and female others at the three levels of depression.

Anovas for the same sex and other sex categories across level of depression showed highly significant differences ($P < .001$ & $P < .01$, respectively). More specific independent group t-test analysis showed the anova results to be attributable primarily to females rating of others. Females ratings of other females were significantly ($P < .001$) lower as a function of depression as were females ratings of males ($P < .01$). Males ratings of other males and females did not significantly differ ($P = .06$ & N/S, respectively) as a function of depression. T-tests across across same sex\other sex categories within each group show depressed males rating females significantly ($P < .05$) higher than other males while these differences for females and non-depressed male groups were not significant.

Figure four shows differences as a function depression and subjects sex across the domains assessed in the evaluation scales. Anova, where same sex and other sex conditions are combined, identified significant main effects for depression ($P < .001$) and sex ($P < .05$). Anovas within same sex and other sex categories show an absence of interaction effects between sex and depression while significant main effects were obtained for both sex ($P < .01$) in the same sex condition and depression (same sex, $P < .001$; other sex, $P = .002$). Manova, to investigate differences across the same sex/other sex category similarly identified no interaction effect and supported the main effects for depression and subjects sex identified by anovas within same sex and other sex categories.

Sub-scale Analysis

Figures five to ten show differences as a function of subject's sex, depression and other's sex within domains assessed in the evaluation scales. Anovas within these domains consistently showed an absence of an interaction effect (all $P > .05$) between sex and depression. Sex differences are present in the moral value subscale (Table 9) for both same sex and other sex categories, in the control subscale (Table 10) for the other sex category, and in the social abilities, achievement, and esteem subscales (Tables 5-7) for the same sex category. Significant differences as a function of depression are present in the social abilities, well-being, moral values, and control subscales (Tables 7-10) for both same and other sex categories, and for the same sex category of the esteem subscale.

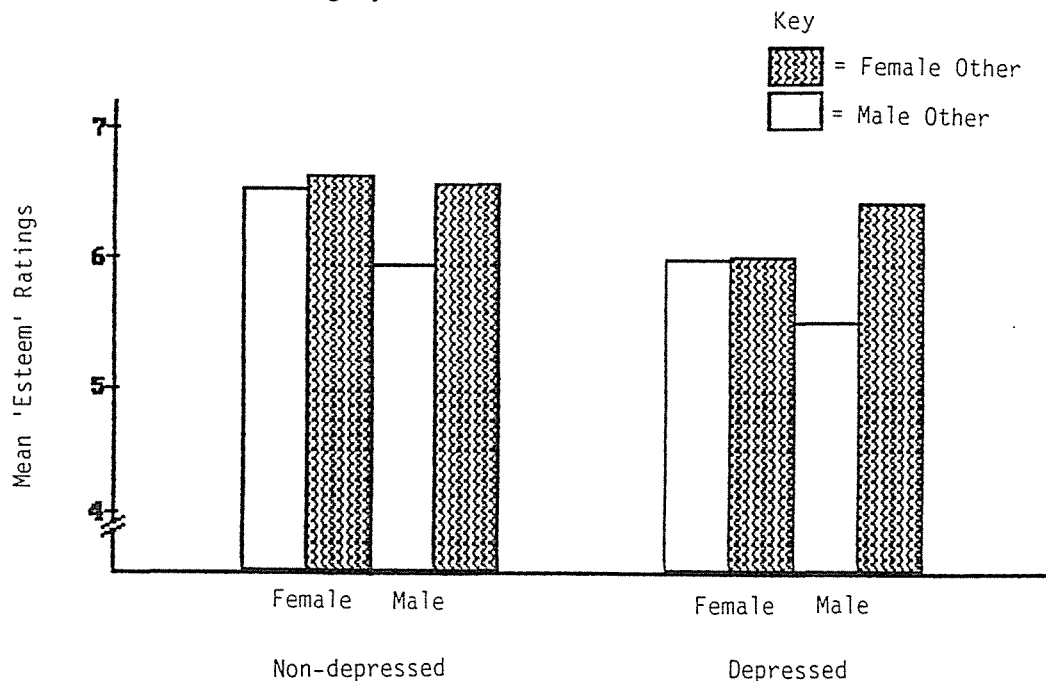


Figure 5

Mean Esteem ratings for male and female others as a function of male and female subject's mood state.

As shown in figure five the male subjects rate other males lower than females in esteem. Anovas in the esteem subscale for same sex and other sex categories showed main effects for depression to be significant ($P=.004$) for the same sex category and not significant for the other sex category. Similarly, the main effect for subjects sex was not significant in the other sex category and significant ($P<.001$) for the same sex. The more specific independent groups t-tests identified females rating other females significantly ($P<.01$) lower and other males significantly lower ($P<.05$) as a function of depression. Males ratings of others did not significantly differ as a function of depression. Paired samples t-tests identified males rating other males significantly lower than other females whether depressed ($P<.001$) or non-depressed ($P<.01$). Females ratings of other males and females did not significantly differ in either depressed or non-depressed groups.

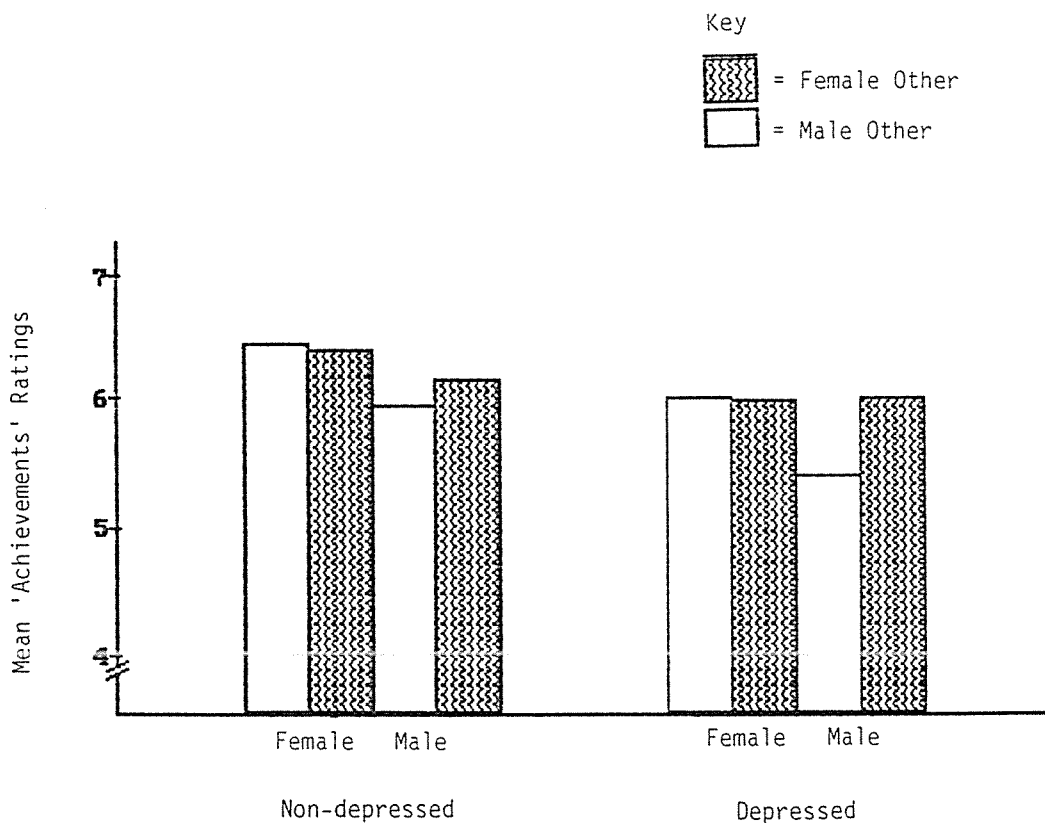


Figure 6

Mean Achievement ratings for male and female others as a function of male and female subject's mood state.

The main features shown in figure six is that males rate other males lower than females in achievement and differences as a function of depression are not significant. Anova for the same sex category in the achievement subscale showed depression main effects to be not significant ($P=.058$) and subjects sex main effects to be highly significant ($P<.001$). In the other sex category the subject sex and depression main effects were not

significant. The only difference to reach significance when using the more specific t-test analysis was where depressed males rated other males significantly ($P < .01$) lower than their ratings of females.

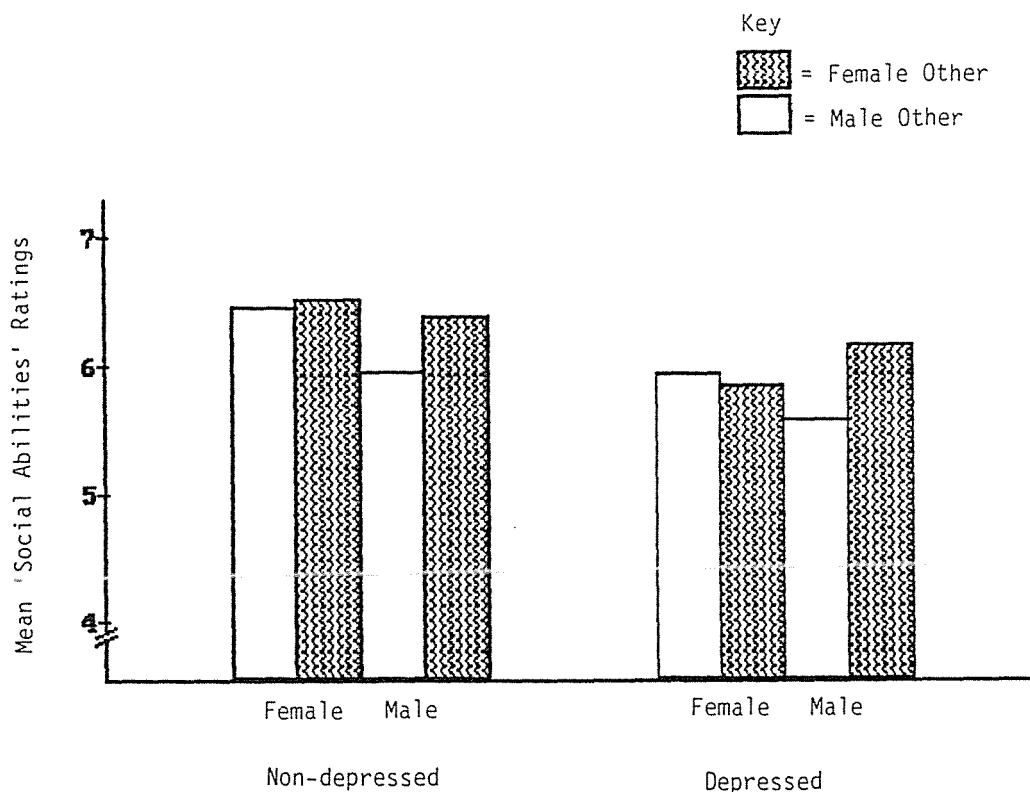


Figure 7

Social Abilities ratings for male and female others as a function of male and female subject's mood state.

As shown in figure seven depressed males rate other males significantly lower ($P < .01$) than their ratings of females as do non-depressed males ($P < .05$). Anovas for the social abilities subscale in the same sex and other sex categories showed main effects for depression to be significant ($P = .001$ & $P < .001$, respectively) in both categories. The main effect for

subjects sex was highly significant ($P < .001$) in the same sex category and not significant in the other sex category. Independent groups t-tests identified females rating other females significantly lower ($P < .01$) and males significantly lower ($P < .05$) as a function of depression. Males ratings did not significantly differ as a function of depression. Paired sample t-tests identified depressed males rating other males significantly ($P < .01$) lower than their ratings of females and non-depressed males similarly rated other males significantly lower ($P < .05$). The differences for depressed and non-depressed females ratings of others were not significant.

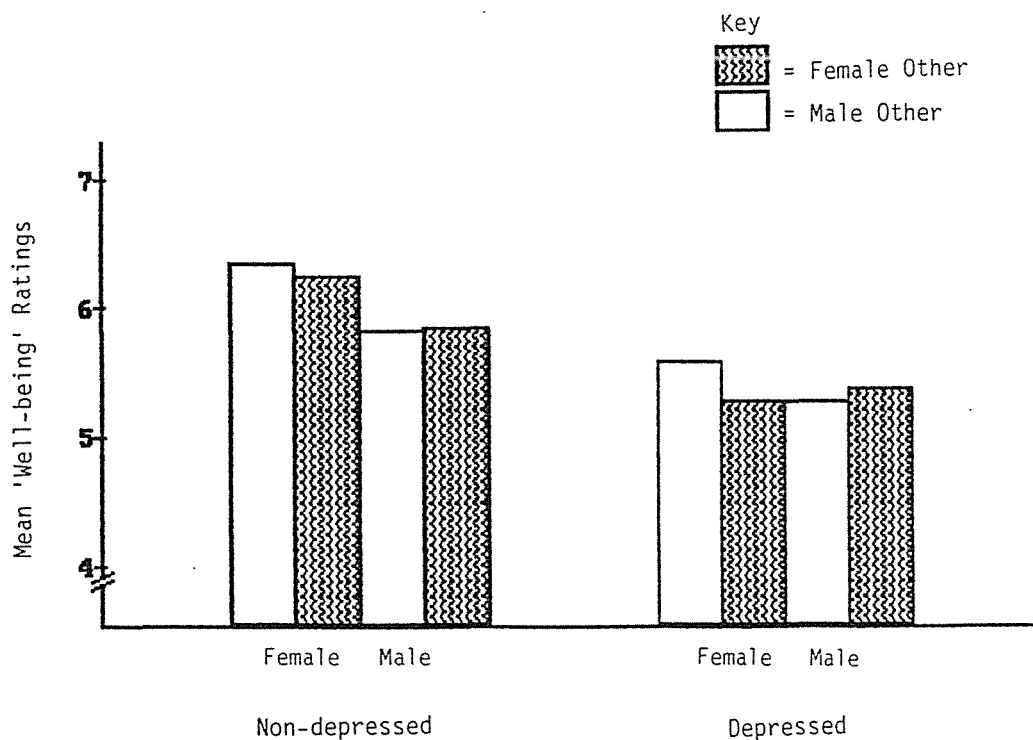


Figure 8

Mean Well-Being ratings for male and female others
as a function of male and female subject's mood
state.

As shown in figure eight females rated others significantly lower as a function of depression and depressed females rated males higher than other females. Anovas for the well-being subscale in the same sex and other sex categories showed main effects for depression to be highly significant ($P < .001$ & $P = .001$, respectively) in both categories. The main effects for subjects sex was not significant in the same and other sex categories ($P > .05$: $P = .051$, respectively). T-tests identified females rating others significantly lower ($P < .001$) as a function of depression, while these differences for males are not significant. Paired samples analysis identified depressed females rating males significantly higher ($P < .05$) than other females. Within the non-depressed male and female, and depressed male groups, subjects did not significantly differ in their ratings of other males and females.

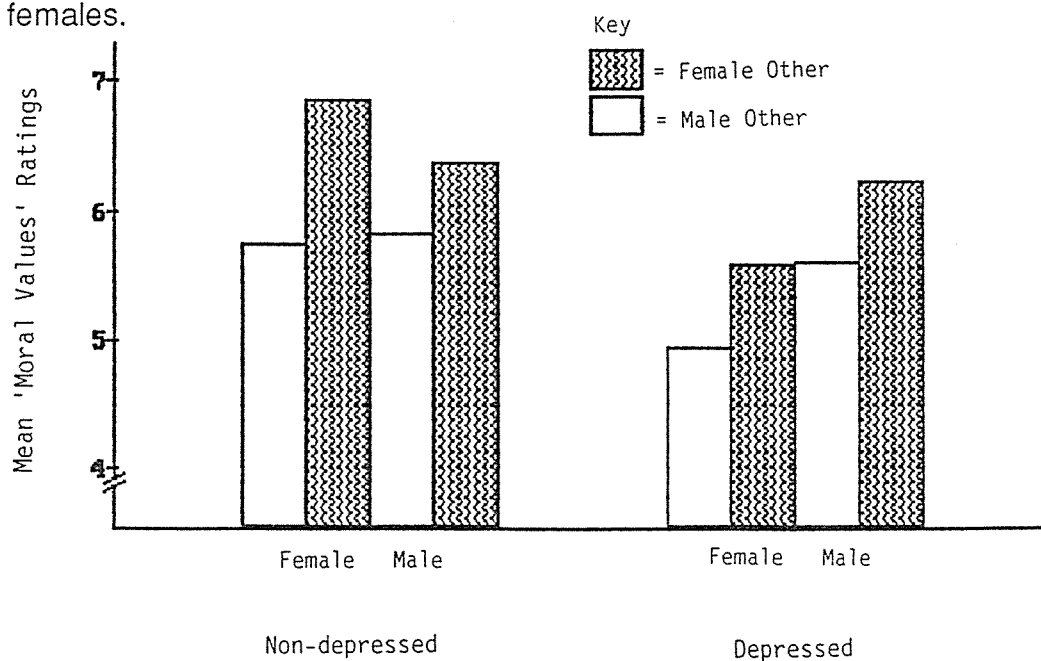


Figure 9

Mean Moral Values ratings for male and female others as a function of male and female subject's mood state.

As shown in figure nine female subjects rated males lower than other females and differences as a function of depression, for females, are highly significant. Anovas for the moral values subscale in same sex and other sex categories showed main effects for subjects sex to be highly significant ($P < .001$). The depression main effect is highly significant ($P = .001$) in the same sex category and significant ($P < .05$) in the other sex category. Independent groups t-tests identified depressed females rating other females and males significantly lower ($P < .001$ & $P < .01$, respectively) than non-depressed females. Males did not differ significantly in their ratings of others as a function of depression. As identified by paired sample t-tests the major trend is for all subjects to rate females higher in moral values than males. These effects were significant for depressed and non-depressed females ($P < .01$ & $P < .001$, respectively), significant ($P < .05$) for non-depressed males, and not significant for depressed males.

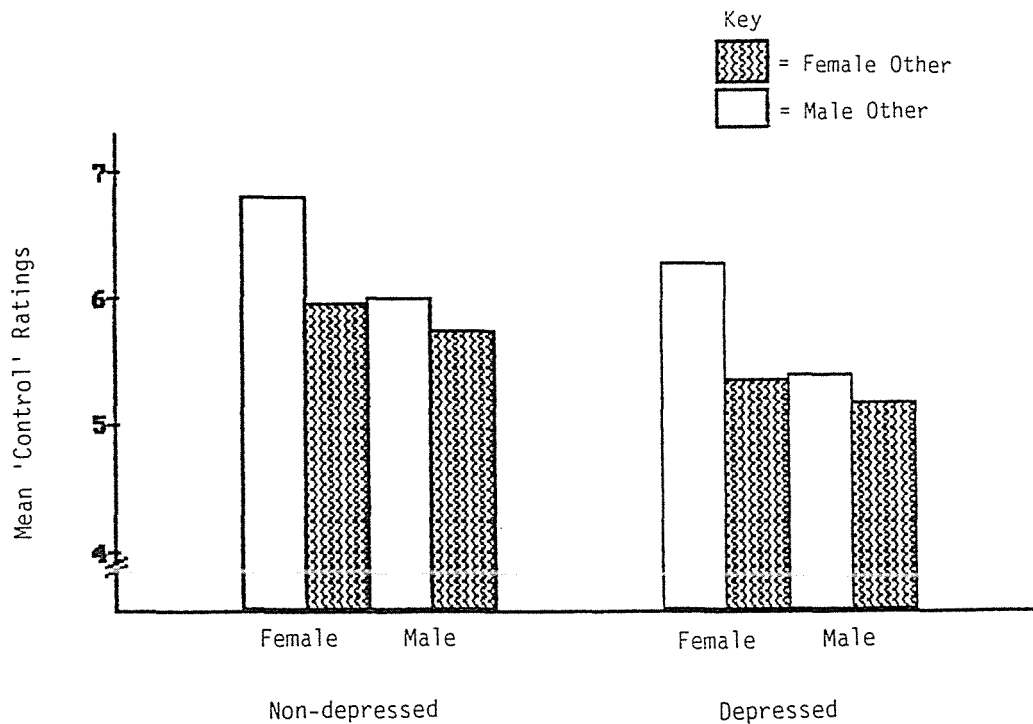


Figure 10

Mean Control ratings for male and female others as a function of male and female subject's mood state.

As shown in figure 10 females rated males higher in control than did males. Anovas for the control subscale in same sex and other sex categories showed main effects for depression to be significant ($P=.004$). The main effect for subjects sex is significant ($P<.001$) in the other sex category and not significant in the same sex category. Females ratings of

others and males ratings of males, as identified by independent group t-tests, are significantly lower as a function of depression while males ratings of females do not significantly differ. Paired sample t-tests show depressed and non-depressed females rating males significantly higher ($P < .01$ & $P < .001$, respectively) than other females. The ratings provided by males of other males and females did not significantly differ.

TABLE 4

Significance of 'F' values for depression main effects in the evaluation of others scales obtained from anovas and ancovas, e.g. with and without adjustment for covariables.

RATINGS OF OTHERS							
	SAME SEX			OTHER SEX			
	A	B	C	A	B	C	
Esteem*	.004	.120	.017	.096	.682	.271	
Achievement	.058	.482	.132	.270	.740	.360	
Social Ability	.001	.037	.011	.017	.326	.090	
Well-Being	.000	.004	.000	.001	.006	.001	
Control	.004	.009	.002	.004	.001	.002	
Moral Values	.001	.011	.003	.050	.155	.056	
Across Sub-scales	.000	.004	.000	.004	.040	.007	

Note. * esteem items are derived from other sub-scales.

Key

A = Anova without covariable

B = Ancova, self-acceptance as covariable

C = Ancova, social confidence as covariable

Table 4 portrays the self-acceptance covariable having a weak moderating effect in the relation between depression and evaluation of others, to the extent that significance levels are reduced in column B. Exceptions are the control and well-being sub-scales where little or no covariable effect was obtained. A similar effect was not obtained when adjusted for the covariable, social confidence. A similar analysis performed across subjects sex differences showed no influence of covariables in both same sex and other sex categories.

A regression mediator analysis where overall evaluations of others is dependent on depression and self acceptance is treated as the mediating variable shows the mediating effect of self acceptance to be negligible. This is due to first, a low direct relationship between evaluations of others and depression ($R=.047$). Second, the standard error of self acceptance as a function of depression is high given that the first assumption in mediation analysis is that the standard error be 0. Third, the coefficient of the independent variable in the multiple regression is smaller in absolute terms than the coefficient of the independent variable in the regression without the mediator. Finally, the coefficient of the mediator in the multiple regression is not significant.

CHAPTER FOUR

DISCUSSION

Generalisation of self negativity.

The generalisation hypothesis states that depressed people exhibit a broadly based negativity that generalises from self to others. An alternative explanation is that even a bias against the self (Beck, 1979) exists as a special case of depressives' generally negative manner of evaluating persons (Shapiro, 1987).

To address this question it is first important to establish whether the self evaluations of depressed subjects are, in fact, lower than those of non-depressed subjects. In the present study the self evaluations of both depressed males and females were found to be lower than those of non-depressed subjects across the domains assessed with the exception of self achievement scores for males.

Comparison of evaluations of others made by depressed and non-depressed subjects reveals a number of important differences. For example,

overall the ratings given to others by depressed females were found to be significantly lower than those given by non-depressed females. The results for depressed males are not so clear cut. Although their evaluations of same sex others were lower than those made by non-depressed males this difference did not reach significance. No differences were found between between depressed and non-depressed males in their evaluation of females.

It is important to note in comparing the present study with the study by Shapiro, that there were differences in the measures used to assess depression. Whereas in the present study the B.D.I. was used to assess levels of depression, Shapiro used the D.E.Q. for this purpose.

This difference does not however seem sufficient reason to account for the fact that the results of the present study do not support Shapiro's finding that, as a function of depression, evaluation of others was significantly lower for males while for females the variables were unrelated. For example, the relationship between depression (as assessed on the B.D.I.) and ratings of others was found to be significant for female subjects in the present research but not for males. The lower or more critical evaluations of others made by depressed females supports the hypothesis that negative self-evaluations generalise to others. The only subscale where depressed males evaluated others significantly lower was the 'control' subscale and therefore this hypothesis is not supported for male subjects. These results do, however, tend to be consistent with Shapiro's finding that

self critical subjects and 'dependent' females tended to make lower evaluations of others.

In interpreting the results of the present study one cannot exclude the possibility that the hypothesis would have been supported for males given equivalent levels of depression. It is important to note, however, that depression scores for male subjects, while lower, are not significantly lower.

The lower rating given to both other sexes as a function of depression by females but not males suggests that there is a sex difference in the social cognition of depressed subjects. This difference is particularly important in the evaluations these subjects make of opposite sex others. This contention will be discussed further in the "reversal of stereotypes" section.

Stereotypes: general findings.

Stereotypic biases were apparent on the moral values (social conscience) subscale and were present independent of depression and the subjects' sex. Both males and females rated other females as higher in moral values. This result is consistent with expectations (e.g. Broverman, 1972), that males are perceived to be lacking in social sensitivity. Broverman also reports that both males and females perceive females as less

competent and less independent than males. An unexpected finding was that on the control subscale males rated males and females equivalently on this subscale while females strongly rated males higher than females. On the remaining subscales females tended to rate males and females approximately equivalently while as noted above, males tended to rate females higher than males. In sum, females exhibited greater consistency with prior studies of sex role stereotypes than did males.

In explaining the presence of stereotypic biases, predominantly in females, it appears possible that social pressures and educational emphasis on recognizing and addressing sex role biases have been effectively targeted toward males. In this context it would appear that there has been insufficient recognition that traditional stereotypes have been the province of both males and females. The level of inconsistency found between the results of the present study and those of prior studies suggests that sex role stereotypes are dynamic over time and cannot therefore be assumed in studies of social cognition.

Self versus others.

In comparing the ratings of self made by subjects in the present study to their ratings of others it is interesting to note that non-depressed subjects gave significantly higher ratings to the 'self' form of the scale than they gave to the evaluations of 'others' form. This finding is consistent with the hypotheses suggested by Layne (1984) and Ruehlman et. al., 1985) that non-depressed individuals tend to show optimistic response biases in many aspects of social evaluation and particularly in self reference. The magnitude of the differences between ratings of self and of others found for this group suggests that non-depressed subjects in the present study were characterised by a very high level of optimistic biases in self evaluation. However, as there are no established cutoff points to delineate optimistic or pessimistic response patterns on the rating scales used, and as the self and other forms of the scales are perceived of with very different frames of reference, there is currently no objective way to confirm this impression.

On the basis of the analysis of ratings of self and others it could be argued that non-depressives employ a number of processes to protect and enhance their self-esteem and self concept (e.g. Swallow & Kuiper, 1987). The optimistic bias in self reference would seem to have this function. It is clearly not in one's best interest to evaluate others more highly than oneself. The high levels of positive self evaluations found for non-depressives in the present study indicate that they are not likely to do this. Further research is

needed, however, in order to better understand the function and purpose of high self evaluations in the social cognition of non-depressives.

Although the difference in ratings of others by depressed and non-depressed subjects was found to be highly significant for females, it was not as great as the reductions in self ratings that occurred for both males and females when depressed. That is, self ratings were reduced to a much greater extent than were ratings of others as a function of depression. Research, to date, has not addressed the implications of this finding for the social comparison processes in depression.

Reversal of sex role stereotypes in depression.

Martin et. al., (1984) found that depressed males viewed females as more competent and powerful than males whereas non-depressed males evaluated females in terms of sex role stereotypes (i.e. they rated them lower on these dimensions). In this research non-depressed males did not respond in a manner consistent with sex role stereotypes. Consequently, the point of comparison against which depressed males were to be compared was not consistent with the assumption on which the hypothesis is based. These results are not readily interpreted in the context of Martin et. al.'s study although this was one of the primary aims of the present study. Further analysis, however, reveals important differences between depressed

and non-depressed males in their evaluations of females. As noted in the results section, depressed males rated females as higher than males overall and on the esteem, achievement, and social abilities subscales with the remaining subscales not significantly different. Non-depressed male's evaluations of females were also higher than their evaluations of other males on the moral values, social abilities, and esteem subscales although the effects were weaker and were not significant for the overall scale. On subscales where depressed males rated females higher than males the differences were highly significant.

While these effects cannot be presented in terms of a complete reversal of sex role stereotypes in depressed males, there is a greater contrast between depressed males' ratings of male and female others than there is for non-depressed males' ratings of males and females. This may be due to the fact that depressed males do not lower their rating of females as a function of depression. Although the findings of the present study do not support the presence of this effect across all domains they do provide some support for Martin et. al's finding that depressed males view females as more competent than other males.

These results may suggest that depressed males may have greater difficulty in interpersonal relationships with females than they do with males. Depressed males may be inclined to see themselves as comparatively less worthy in these interactions as their ratings of females remain unaffected by

their lower self ratings when depressed. In contrast, females exhibit lower self ratings and lower ratings of males when depressed.

One specific objective of the present study was to explore the area of sex differences and the possibility that social cognition in depression may be qualitatively different for males and females. This could suggest that a different emphasis is required in interventions with depressed males in contrast to depressed females. For example, the treatment of depressed males for whom social interaction with females seems relatively more important may benefit from a greater emphasis on the issues of relative 'worth' of the depressed male and the female other. This does not entail that the same issues are not important for females in the same circumstances, but only that the social effect may be comparatively greater for depressed males as a function of sex differences in the social cognition of depressed males and females.

The finding that, as a function of depression, males rated other males lower than females overall and on the esteem, achievement, and social abilities subscales suggests that, for males, rather than a 'general manner of evaluating persons' the generalisation may be specific to same sex others. This appears to make reasonable sense given that it is typically with the same sex with whom we 'identify' and compare ourselves.

Based on the fact that a similar finding was not found for females

such a sex difference may entail differences pertaining to the special nature of comparisons to the other sex, varying across the sexes as a function of depression, rather than pertaining to general persons versus same sex evaluations.

Further research is needed to explore both the domains in which these differences (as a function of both depression and sex) occur and to assess whether the effects on actual social behaviour are significant. It is noted above that the magnitude of effects found in this research were not strong and their relevance for the actual behaviours of depressed males remains uncertain. An additional point is that the present results show a high degree of variance for the different subject groups across the subscales. This suggests that future research should be based on hypotheses that are domain specific rather than global assessments of broad dimensions of social cognition such as 'self' and 'other' evaluation.

Self-esteem in social cognition.

Baron & Kenny (1986) note that a given variable may be said to function as a mediator to the extent it accounts for the relation between independent and dependent variables. A perfect mediator would have the effect of eliminating the relation between these variables. As shown in the analysis of covariable effects many relationships remained significant after

adjustment for self-acceptance. The regression analysis suggested a negligible mediation effect for self-acceptance primarily due to the weak overall relation found between evaluations of others and depression. The results of the present study suggest that there is a substantially less than perfect mediating effect of self acceptance in the relation between depression and social cognition.

The self-acceptance variable may nevertheless be an important variable as is indicated by the 'trends' in the analysis showing reduced levels of significance. On all but the control subscale in the other sex category, significance levels in the depression / social cognition relationship were found to be reduced. Baron and Kenny's statement that "a significant reduction demonstrates that a given mediator is indeed potent, albeit not both a necessary and a sufficient condition for an effect to occur" (p1176), appears to be an appropriate evaluation of the present results.

However overall scores and scores on well-being and control subscales for both same sex and other sex categories as well as scores on social abilities and moral values subscales for the same sex category remain significant after adjustment for self-acceptance. In these analyses self-acceptance does not emerge as a variable with major mediating effects between depression and social cognition. Accordingly, there appears more in the depression syndrome contributing to effects on social cognition than an individuals self-esteem.

Mediator variable analysis employing social confidence as mediator identified social confidence having little or no effect in the depression/social cognition relation. That this effect was substantially less than the effects observed for self acceptance supports the practice of differentiating the self-esteem components in studies of social cognition. Scales that do not differentiate these components, e.g. measure self-esteem as unidimensional, may fail to show the strength of relation with one esteem component due to another being unrelated. The results for the self acceptance factor while not supporting a mediation hypothesis, appear sufficient to suggest self-acceptance as a factor that needs to be considered in further studies of social cognition.

Overall, the assertion by Feather (1987) that self-esteem and not depression is the primary factor mediating effects in the cognitions of depressives is not supported in the present study.

Limitations and conclusions.

A limitation of the present study is the self report nature of the assessment used. Socially desirable responses may limit the validity of the interpretation of studies based in self reports. Nevertheless, such responses may correspond with socially desirable responses in social situations. As such the extent that socially desirable responses may limit interpretation is

itself limited. The correlational nature of the present study is similarly not necessarily a limitation when the emphasis is on strengths of relations rather than causal directions. As noted above this approach appears appropriate when the relationships are present as dynamic and circular interactions between the factors of depression, self-esteem, and social cognition.

Several cautions need to be kept in mind when interpreting these results. First, as mean depression scores were below typical clinical levels and self-report assessment only was employed, generalisation to clinical samples is not appropriate. Secondly, there is some doubt as to the social implications of these findings due to the relatively low magnitude of the observed effects. In addition, the observed effects, rather than being general in nature, tended to be specific to the different domains assessed.

This point raises the question of which domains are more important in the context of depression and whether the domains assessed have been sufficiently broad. The domains assessed in the present study include areas with quite obvious relationships to the symptoms associated with the depression syndrome (e.g. wellbeing & control). It is important not to limit the domains investigated to areas with a known association with depression as important elements within the complex relationship between social cognition and depression may be omitted. As such, further research should also include investigation of a wider range of domains, with the aim of establishing a foundation for further studies.

In summary, firstly, the present study provides support for stereotypes being expressed to a greater degree by females, particularly in the domain of 'control'. An important finding in the present study is that, overall, males did not respond in a manner consistent with sex role stereotypes. One implication of these findings is that sex role stereotypes appear to be dynamic over time. Secondly, limited support is obtained for the hypothesis that depressed males view females as more competent and powerful than they rate other males. The present findings suggest that this effect is specific to particular domains rather than general in nature. Thirdly, the practice of differentiating the social-confidence and self acceptance components of self-esteem is supported, as is the utility of including the self-acceptance factor of self-esteem as a variable in studies of social cognition.

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APPENDIX A

A STUDY OF LEISURE ACTIVITIES, FRIENDSHIPS AND MOOD STATES

Please answer all questions in the order provided. Some scales may appear similar to scales you have already answered. When answering these please do not refer back to the earlier sections. Please do not discuss this questionnaire with others before you have completed it.

The researchers are subject to strict rules regarding the treatment of information obtained when conducting research. Strict confidentiality will be maintained regarding all responses on this questionnaire.

Leisure

1. List your main leisure activities AT HOME, then for each activity, please tick one [] box and one () box showing how often and with how many others you do this activity.

	Occasionally	Regularly	with no others	with one other	in a group
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()

2. Are you satisfied with the amount and type of leisure activity you currently have at home? (Please tick the appropriate box)

Completely dissatisfied	Dissatisfied	Satisfied	Completely satisfied
[]-----	[]-----	[]-----	[]

3. Do you belong to a club or social organisation?
Yes [] No []

4. List your main leisure activities OUTSIDE YOUR HOME, and tick the appropriate boxes as you did in question one.

	Occasionally	Regularly	with no others	with one other	in a group
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()
_____	[]	[]	()	()	()

5. Are you satisfied with the amount and type of leisure activity you currently have outside your home?

Completely dissatisfied	Dissatisfied	Satisfied	Completely satisfied
[]-----	[]-----	[]-----	[]

6. Has your overall amount of leisure time reduced or increased during the last twelve months?

Much less now	slightly less now	About the same	A little more now	Much more now
[]-----	[]-----	[]-----	[]-----	[]

Friendships

1. Do you have the possibility to confide in people who live with you, about anything which is worrying you? Yes [] No []
If yes, who are they? (Do not give their names but specify their relationship to you.)

2. Are there persons outside your household you can confide in? Yes [] No []
If yes, who are they? (Give relationship, if family; or other relationship e.g. casual acquaintance, close friend etc.)

3. Do you have close personal friends? Yes [] No []
If yes, please estimate how many close personal friends you have? [____]

How many of these are also family members? [____]

4. Are you satisfied with the number of close friends you have?
Completely dissatisfied Dissatisfied Satisfied Completely satisfied
[]-----[]-----[]-----[]

5. Are you satisfied with the type of relationship you have with your friends?
Completely dissatisfied Dissatisfied Satisfied Completely satisfied
[]-----[]-----[]-----[]

6. Are you satisfied with the amount of time you spend with your friends?
Completely dissatisfied Dissatisfied Satisfied Completely satisfied
[]-----[]-----[]-----[]

7. Do you feel that friendships take effort to maintain?
Yes [] No []

Please circle the number on the scale which best describes how well each statement describes you.

1. I feel secure in social situations

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

2. When in a group of people, I have trouble thinking of the right thing to say

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

3. I enjoy social gatherings just to be with people

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

4. I frequently find it difficult to defend my point of view when confronted with the opinions of others

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

5. I am a good mixer

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

6. I feel I can confidently approach and deal with anyone I meet

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

7. I enjoy being around other people, and seek out social encounters frequently

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

8. I find it hard to start a conversation with strangers

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

9. I have no doubts about my social competence

0 1 2 3 4 5 6 7 8 9
Not at all Very much
like me like me

Please show how often the following statements are true for you.

1 I feel that I'm a person of worth, at least on an equal plane with others.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

2 I feel that I have a number of good qualities.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

3 I am able to do things as well as most other people.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

4 I feel I do not have much to be proud of.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

5 I take a positive attitude toward myself.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

6 Sometimes I think I am no good at all.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

7 I am a useful sort to have around.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

8 I feel that I can't do anything right.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

9 When I do a job, I do it well.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

10 I feel that my life is not very useful.
Almost always Often Sometimes Seldom Never
true true true true true
[]-----[]-----[]-----[]-----[]

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY. Circle the number beside the statement you picked. 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 and 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. I am purposely trying to
2 I have lost more than 10 pounds. lose weight by eating
3 I have lost more than 15 pounds. 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.

On the next three pages are identical lists that can be used to describe people. For this page please indicate how you think people, THE SAME SEX AS YOURSELF, in general rate on these characteristics. Use a scale from 0 to 10. A 0 would mean that you think most people have none of the characteristic described by the word. A 10 would mean people, the same sex as yourself in general have a very great amount of this characteristic.

For example, _____ fussy

a rating of 7 to 10 suggests that you feel many are fussy or very fussy, 4 to 6 would suggest you see most as neither high or low in how fussy they are. A rating of 0 to 4 suggests you feel that they are not fussy or only slightly fussy.

- | | |
|-----------------------------|--------------------------------|
| _____ charming | _____ hard working |
| _____ sad | _____ happy with their lives |
| _____ confident | _____ gullible |
| _____ kind | _____ good looking |
| _____ determined | _____ moral |
| _____ creative | _____ in control of themselves |
| _____ good sense of humour | _____ competent |
| _____ hypocritical | _____ efficient |
| _____ friendly | _____ conceited |
| _____ independent | _____ strong minded |
| _____ trustworthy | _____ moody |
| _____ wise | _____ knowledgeable |
| _____ phony | _____ dishonest |
| _____ contented | _____ likable |
| _____ sure of themselves | _____ uncertain |
| _____ attractive | _____ depressed |
| _____ shy | _____ helpful |
| _____ anxious | _____ easy to get along with |
| _____ powerful | _____ selfish |
| _____ cruel | _____ loving |
| _____ fun to be with | _____ easily persuaded |
| _____ intelligent | _____ accomplished |
| _____ happy with themselves | _____ psychologically healthy |
| _____ snobby | _____ talented |

You have already completed this form as it applies to people of the same sex as yourself. For this form please indicate how you think people, NOT THE SAME SEX AS YOURSELF, in general rate on these characteristics. Once again use a 0 to 10 scale, 0 would mean that you think most people of the other sex have none of the characteristic described by the word, and a 10 indicates a very great amount of this characteristic.

_____ charming	_____ hard working
_____ sad	_____ happy with their lives
_____ confident	_____ gullible
_____ kind	_____ good looking
_____ determined	_____ moral
_____ creative	_____ in control of themselves
_____ good sense of humour	_____ competent
_____ hypocritical	_____ efficient
_____ friendly	_____ conceited
_____ independent	_____ strong minded
_____ trustworthy	_____ moody
_____ wise	_____ knowledgeable
_____ phony	_____ dishonest
_____ contented	_____ likable
_____ sure of themselves	_____ uncertain
_____ attractive	_____ depressed
_____ shy	_____ helpful
_____ anxious	_____ easy to get along with
_____ powerful	_____ selfish
_____ cruel	_____ loving
_____ fun to be with	_____ easily persuaded
_____ intelligent	_____ accomplished
_____ happy with themselves	_____ psychologically healthy
_____ snobby	_____ talented

As before, the following words can be used to describe people. For this form please indicate how you think YOU rate on these characteristics. Use the 0 to 10 scale where 0 would mean that you have none of the characteristic described by the word and 10 means you have a very great amount of this characteristic.

_____ charming	_____ hard working
_____ sad	_____ happy with your life
_____ confident	_____ gullible
_____ kind	_____ good looking
_____ determined	_____ moral
_____ creative	_____ in control of yourself
_____ good sense of humour	_____ competent
_____ hypocritical	_____ efficient
_____ friendly	_____ conceited
_____ independent	_____ strong minded
_____ trustworthy	_____ moody
_____ wise	_____ knowledgeable
_____ phony	_____ dishonest
_____ contented	_____ likable
_____ sure of yourself	_____ uncertain
_____ attractive	_____ depressed
_____ shy	_____ helpful
_____ anxious	_____ easy to get along with
_____ powerful	_____ selfish
_____ cruel	_____ loving
_____ fun to be with	_____ easily persuaded
_____ intelligent	_____ accomplished
_____ happy with yourself	_____ psychologically healthy
_____ snobby	_____ talented

1. Have you been seriously depressed in the last 12 months?

Most of the time. At least twice. On one occasion. Not at all.
[]-----[]-----[]-----[]

2. When you were asked to rate people of the same and other sex did you find yourself referring to people you know personally?

Mostly people in general	Both in general and people I know	Mostly people I know
[]-----	[]-----	[]-----

#####

If after completing this questionnaire there are some things you would like to talk about, then please contact the Massey Applied Psychology Unit, phone 69099 ex.8423.

Thankyou for your participation in this study.

If you would like to discuss aspects of this questionnaire with the researcher, please phone PN 67.255. I am usually available in the evenings and would be happy to have feedback and to discuss issues related to this study.

Les Conway

APPENDIX B

Table B-1

Subsample categories and sizes contributing to the overall sample.

Number	Category	Group Size
1	Pilot Study	24
2	Printery Personnel & *	24
3	Airforce Personnel & *	17
4	Support Group	6
5	Barnado's Personnel	11
6	*	2
7	*	3
8	Hairdressers	6
9	Cabinet Makers Staff & *	33
10	Novitiate Members	11
11	Nursing Staff	14
12	Dance Group & *	18
13	Industrial Town *	13
14	*	10
15	Industry Workers	5
16	Trainee Counsellors & *	36
17	Parentline Workers	2
18	South Island *	6
19	University Non-Academic Staff	7
20	*	7
21	*	7

Note. * = Family and friends of volunteers distributing the questionnaires.

Sample number = 262, mean sub-sample size = 12.5, and standard deviation = 9.5.

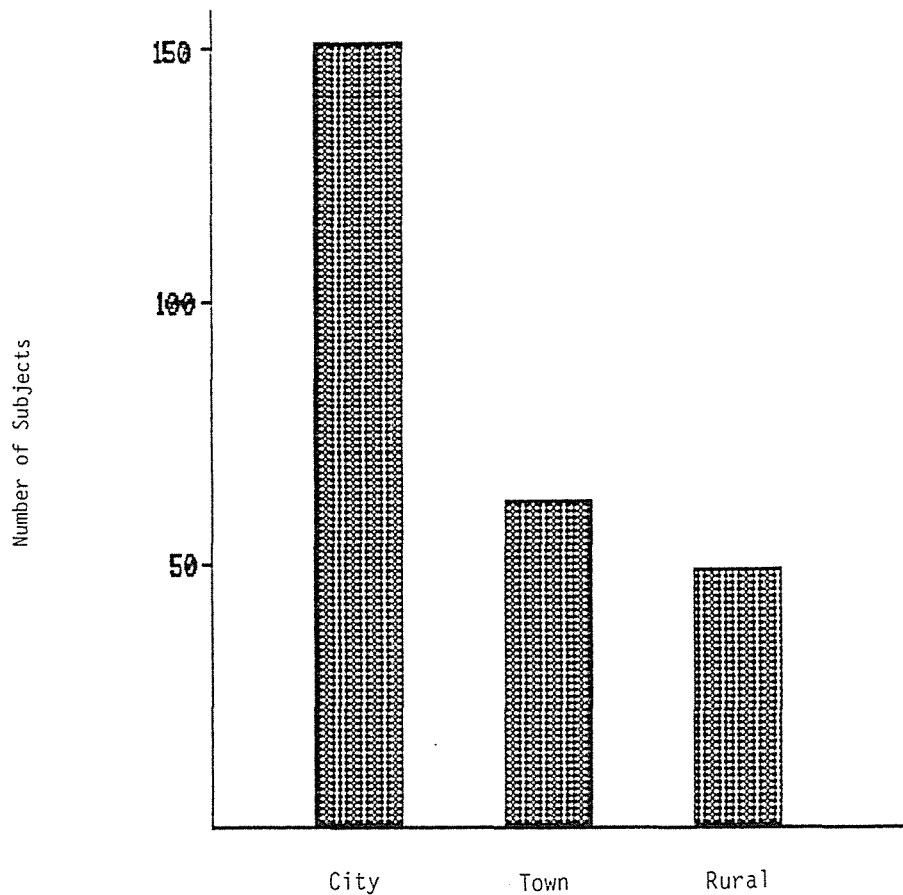


Figure B-1 Distribution by type of Community.

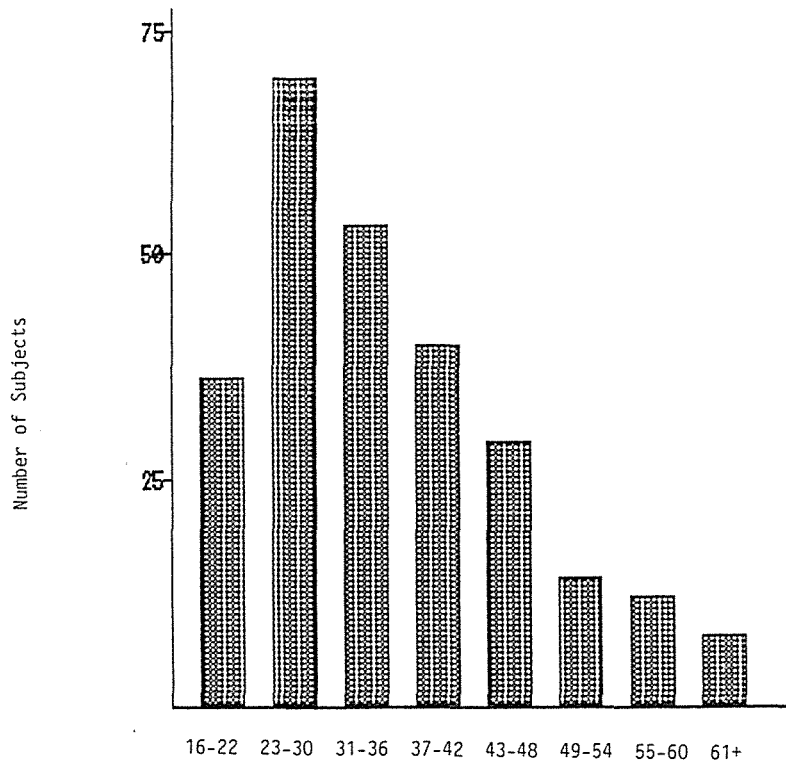


Figure B-2 Age distribution of subjects.
(Note. Categories are not of equal size)

Table B-2

Ethnicity of Subjects

(The sample is heavily biased toward European and pakeha subjects with a less than proportional representation of other ethnic groups).

Group	Number
European\Pakeha	237
Maori	20
Asian	3
Other	2

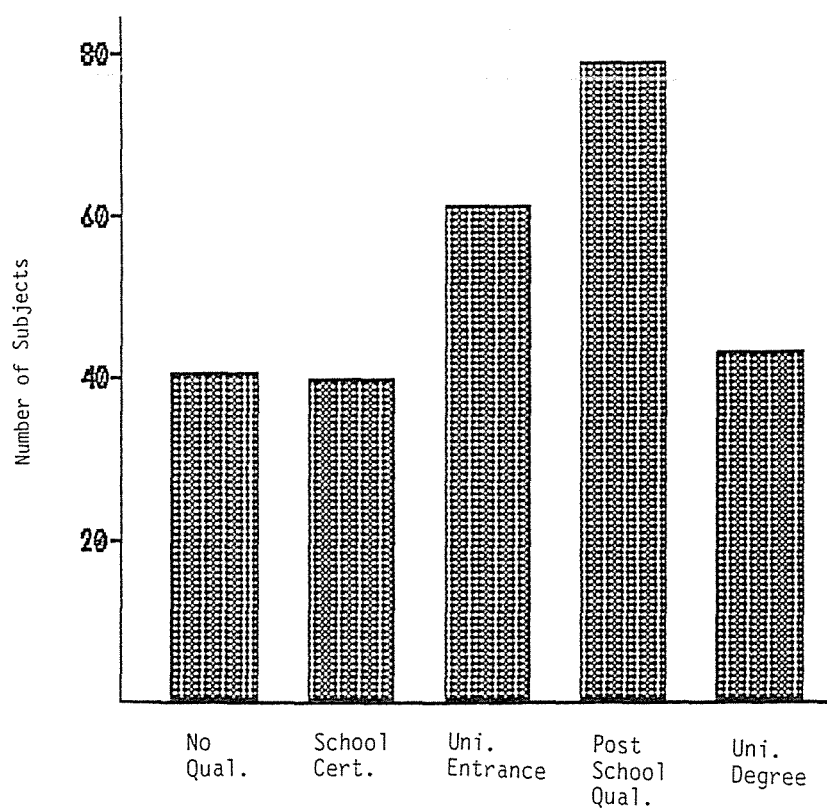


Figure B-3

Self-reported education level.

APPENDIX C

Sub-scale Listings

Achievement

creative
wise
powerful
intelligent
hard working
competent
efficient
knowledgeable
accomplished
talented

Social Ability

charming
good sense of humour
friendly
shy
anxious
fun to be with
snobby
likable
easy to get along with
loving

Control

(additional to original scale)

confident
determined
independent
sure of themselves
gullible
in control of themselves
strong minded
uncertain
easily persuaded

Wellbeing

sad^{*}
contented
attractive
happy with themselves
happy with their lives
good looking
moody^{*}
depressed^{*}
psychologically healthy

Moral Values

(Social conscience)
kind
hypocritical^{*}
trustworthy
phony^{*}
cruel^{*}
moral
conceited^{*}
dishonest^{*}
helpful
selfish^{*}

Esteem

(selected from above scales)
charming
confident
creative
friendly
sure of themselves
attractive
fun to be with
good looking
competent
efficient
likable
easy to get along with
talented

Note. Items marked ^{*} are scored in the reverse direction.