

SEX ROLES, SELF-ESTEEM AND
LEVEL OF DEPRESSION IN UNIVERSITY STUDENTS

by

Patricia M. Hyatt

B.A.(Hons.), Concordia University, 1977

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
in the Department
of
Psychology

© Patricia M. Hyatt 1980

SIMON FRASER UNIVERSITY

October, 1980

All rights reserved. This thesis may not be
reproduced in whole or in part, by photocopy
or other means, without permission of the author

Approval

Name: Patricia M. Hyatt

Degree: Master of Arts

Title of Thesis: Sex Roles, Self-esteem and Level of
Depression in University Students

Examining Committee:

Chairperson: Dennis L. Krebs

Phillip G. Wright
Senior Supervisor

Marilyn L. Bowman

Ellen Kimmel
External Examiner
Visiting Professor
Department of Psychology
Simon Fraser University

Date Approved:

10/31/80

PARTIAL COPYRIGHT LICENSE

I hereby grant to Simon Fraser University the right to lend my thesis or dissertation (the title of which is shown below) to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users. I further agree that permission for multiple copying of this thesis for scholarly purposes may be granted by me or the Dean of Graduate Studies. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Title of Thesis/Dissertation:

SEX ROLES, SELF-ESTEEM AND LEVEL
OF DEPRESSION IN UNIVERSITY STUDENTS

Author: _____

(signature)

PATRICIA M. HYATT

(name)

10 Dec., 1980

(date)

Abstract

There is a considerable body of research suggesting a higher incidence of depressive illnesses among women. This is true whether one considers clinical depression among psychiatric patients, or simply depressed mood among non-psychiatric, normal subjects.

A review of psychological, sociological and feminist literature suggests that men and women have different psychological traits. These different traits and behaviors can be viewed in terms of sex roles, or levels of masculinity and femininity. The feminine traits considered appropriate for women may make them more likely to adopt behavior patterns of dependency and submissiveness, and to feel a lack of control or power over reinforcements. In short, the greater incidence of depression in women may be due to their sex roles, rather than gender per se.

Several studies have suggested that a relationship exists between masculinity and self-esteem. It is also known that low self-esteem is a major factor in depression, perhaps a causal factor. The purpose of the present study was to investigate the relationship between levels of masculinity and femininity, and level of depression, considering the effect of self-esteem as a mediating variable. A related purpose was to determine whether the Masculinity scale on the sex role measure was truly a pure measure of

of masculinity, or whether it reflected, to a large extent, a measure of self-esteem.

Accordingly, 93 university students (49 females and 44 males) completed the Beck Depression Inventory as a measure of depth of depression, the Personal Attributes Questionnaire as a sex roles measure, and the Texas Social Behavior Inventory as a self-esteem index.

The results showed that:

1. There was no sex difference in level of depression.
2. There was a negative relationship between masculinity and level of depression for both men and women.
3. There was a positive relationship between masculinity and self-esteem for both men and women.
4. There was a negative relationship between femininity and depression, and a positive relationship between femininity and self-esteem, for women only.
5. A large proportion of the relationship between masculinity and depression was due to the shared variance with self-esteem.

In sum, while a relationship was demonstrated between sex roles and depression, this result must be interpreted in terms of the measures of masculinity and femininity used, and how these relate to the moderating variable, self-esteem.

Acknowledgements

I would like to express my appreciation to Dr. Phillip G. Wright for his constant encouragement, guidance and patience during the planning and execution of the study, and preparation of the manuscript.

Table of Contents

Approval	ii
Abstract	iii
Acknowledgements	v
List of Tables	viii
List of Figures	ix
Chapter 1. Introduction	1
1.1 Depression	1
1.2 Depression and Gender	5
1.3 The Difference as an Artifact	7
1.4 Biological Susceptibility	9
1.5 Psychosocial and Role Factors	14
1.6 Sex Roles: Measurement and Research	22
1.7 The Present Study	27
Chapter 2. Method	29
2.1 Subjects	29
2.2 Measuring Instruments	29
2.3 Procedure	31
2.4 Analysis of Results	31
Chapter 3. Results (including Tables and Figures)	33
3.1 Sex Differences in Depression	33
3.2 Analysis of Variance on Depression Scores	33
3.3 Correlational Analysis	35
Chapter 4. Discussion	44

Appendix A. Personal Attributes Questionnaire	51
Appendix B. Number and Percentage of Subjects in Each Sex Role Category; Males and Females	53
Appendix C. Beck Depression Inventory	54
Appendix D. Texas Social Behavior Inventory	55
Appendix E. Analysis of Variance on TSBI Scores	58
Appendix F. Means and Standard Deviations for TSBI Scores by Sex and Sex Role Category	59
Appendix G. Analysis of Covariance on BDI Scores with TSBI Scores as Covariate	60
References	61

List of Tables

Table 1. Means and Standard Deviations for BDI Scores by Sex and Sex Role Category, Original and Transformed Data	37
Table 2. Analysis of Variance on BDI Scores	38
Table 3. Simple simple main effects on BDI Scores for M at High and Low F: Males	39
Table 4. Simple simple main effects on BDI Scores for M at High and Low F: Females	40
Table 5. Correlations among BDI, TSBI, M and F, for Males and Females	41
Table 6. Partial Correlations Between BDI and M, and Between BDI and F, Controlling for Self-esteem (TSBI)	42

List of Figures

Figure 1. M x F Interaction on BDI Scores, for
Males and Females

43

Chapter 1

The following review first considers the definition of and distinctions between depression and the depressive states. After briefly examining the literature on sex differences in depression, several theories purporting to explain this imbalance are reviewed. Finally, the thesis is set forth that the greater propensity to depression found in women is related to certain social and sex role expectations and behaviors of women.

1.1 Depression

One of the most common psychological ailments of our time is depression; indeed, a well-known researcher in this field has referred to recent years as the "age of melancholy" (Klerman, 1979). The extent of the problem is illustrated by some of the prevalence figures quoted in the literature. One estimate suggests that 4 to 8 million people a year in the U.S. suffer from debilitating depression (Miller, Rosellini & Seligman, 1977). Lifetime risk for depression is estimated at about 5% for men and 10% for women (Woodruff, Goodwin & Guze, 1974). A report on depression compiled by the National Institute of Mental Health in 1973 cited the prevalence of depression as 15% of American adults, between the ages of 18 to 74, at that point in time (NIMH, 1973). Incidence figures are equally disturbing. Paykel, Klerman and Prusoff (1970) reported that 20% of consecutive

admissions to various hospital settings (including a veteran's hospital, a hospital psychiatric ward and a state mental hospital) received a diagnosis of depression. Although most epidemiological studies have been conducted in the United States or Europe, Canadian figures are comparable. The most recent figures available from Statistics Canada are from 1977, and of first admissions to all mental institutions and psychiatric wards, 10.7% were in the diagnostic category of affective psychosis, 31.3% were in the category of neurosis, which would include neurotic depression (Statistics Canada, 1977).

The term "depression" has been used to refer to "a mood, a symptom, a syndrome, and a disease entity" (Silverman, 1968, p. 1). Definition, diagnosis and classification of depressive states is difficult because of lack of agreement on distinguishing and etiological factors. Diagnostic criteria differ widely from one study to another and from one treatment facility to another. Because of these difficulties, epidemiological data and research findings may not always be directly comparable. In one discussion of the controversy surrounding the nosology of depression, Mendels (1968) listed 19 qualifiers or subtypes of depression. Agreement between clinicians on specific diagnoses is notoriously low. Beck, Ward, Mendelson, Mock and Erbaugh (1962) found about 70% agreement on broad divisions (neuroses

vs. psychoses), while more specific diagnoses resulted in an inter-rater agreement of only 56%. The diagnostic categories used in the study were those in the Diagnostic and Statistical Manual of the American Psychiatric Association, Second Edition (DSM II; American Psychiatric Association, 1968). The DSM III (1980), recently published, attempts to make diagnostic agreement and diagnostic categories more reliable by reducing the number of sub-classifications and making diagnostic criteria more specific and behaviorally-based. Data available on factors such as onset, course and treatment is taken into account.

One of the ongoing debates in the classification issue centers on the question of whether unhappiness or "normal depression" is on a continuum with the more severe depressive illnesses (differing only in degree), or whether severe and "normal" depressions differ qualitatively. Pointing out differences in treatment responses as only one factor to consider, many researchers stress the qualitative difference between normal sadness and depressive illnesses (Akiskal & McKinney, 1975). However, Klerman (1971) has taken the position that "there are no adequate quantitative and validated criteria for distinguishing between pathological depression ...(and)...normal mood swings" (p. 309).

In support of the continuum hypothesis, it should be noted that many of the major signs and symptoms of depression

are similar regardless of the specific diagnosis, and there is widespread agreement that depression is a disorder involving cognitive, affective, motivational and physiological components (Akiskal & McKinney, 1975). Symptoms include dysphoric mood, crying, low self-esteem, hopelessness, paralysis of the will, lowered libido, appetite disturbances and weight changes, altered sleep patterns, fatigue, and inability to concentrate (Beck, 1975; Seligman, 1975; Silverman, 1968). Some researchers consider the difference between sadness and clinical depression to be a difference only in number, intensity and duration of symptoms (Beck & Young, 1978 ; Silverman, 1968). Funabiki, Bologna, Pepping and FitzGerald (1980) have suggested that it is important to study depression "in the context of a continuity between normal mood states and depressive phenomena" (p. 194). Similarly, Blatt, D'Afflitti and Quinlan (1976) stated that such research in non-clinical samples "may provide leads into dimensions that are important in the predisposition to depression and are not readily apparent in the severe symptomatology of the clinical state" (p. 388).

The current study, and much of the research cited herein, is concerned with depressive states of non-clinical proportions in normal subjects, drawn from a university population. The growing problem of depression in university students has been pointed out recently by several researchers.

Oliver, Croghan and Katz (1976) found 23% of college students to be at least mildly depressed as measured by a standard depression inventory, higher than the 15% prevalence rate in adults noted above. A more recent study using similar criteria found that 17% of a sample of college students scored at least mildly depressed (Oliver & Burkham, 1979), equivalent to the prevalence in non-students. It has been suggested that depression may be the leading psychiatric disorder on campus (Seligman, 1973), with suicide rates 50% higher in college students than non-students of the same age (Beck & Young, 1978).

1.2 Depression and Gender

Whether defined as a clinical disorder such as depressive reaction, psychotic or bipolar depression, or as a negative affective state or mood, and regardless of type of facility reporting the figures, researchers agree that women predominate among depressives (Mayo, 1976; Silverman, 1968). An extensive literature review conducted by Weissman and Klerman (1977) examined various sources, including observations of patients receiving treatment, community surveys and studies of suicide victims and attempters, and concluded that women experience depression at approximately twice the rate of men. They reported data from several countries, and with few exceptions, women outnumbered men. Figures for the U.S. and Canada are fairly consistent over all

sources, with a ratio of about 2:1 (Weissman & Klerman, 1977, p. 99). Other researchers have reported similar findings. According to one source, in the years 1966-68, women in a variety of medical and psychiatric settings diagnosed as psychotic depressive, manic depressive, and psychoneurotic outnumbered men approximately 2:1. Averaging over all depressive illnesses, 68% were female, 32% were male (NIMH, 1966-68).

Another review dealing with sex differences in psychopathology separated the affective disorders (severe forms of depression) from the neuroses (including neurotic or reactive depression), and again revealed the 2:1 ratio (Mayo, 1976). In examining the data reported for community surveys conducted in various countries, Weissman and Klerman reported ratios from 1.6:1 to 3.8:1 (1977, p. 101). The authors of DSM III concluded from studies conducted in Europe and the U.S. that "approximately 18% to 23% of (adult) females and 8% to 11% of males have at some time had a major depressive episode" with about one-third of that number being severe enough to require hospitalization (American Psychiatric Association, 1980, p. 217). The 1977 Statistics Canada figures for first admissions to all mental institutions and psychiatric wards reveal a similar pattern. In the diagnostic category of affective psychosis, 38% were male and 62% were female. In the category of neurosis, including

neurotic depression, 36% were male, 64% were female. The male:female ratios are 1.6:1 and 1.8:1 respectively (Statistics Canada, 1977).

A number of explanations have been proposed to explain the sex difference in depression. Some have suggested that the difference is artifactual; others, concluding that the gender difference is real, have espoused theories of biological susceptibility in women; and still others have attempted to explain the imbalance via psychosocial role theories.

1.3 The Difference as an Artifact

Supporters of this theory argue that women are more willing than men to report and seek help for symptoms of various kinds, including depression, and hence, are more often labelled "depressed", resulting in an overestimation of the female to male ratio. There is some evidence that women cope with various health problems by visiting doctors and seeking help more (Mazer, 1974). It may be more difficult for men to seek treatment due to conflicts in medical facility and employment hours, and due to the interpretation of the sick role as a sign of weakness. While a bias in help-seeking may have some effect in studies of treated or hospitalized depressives, as noted previously, the gender difference in depressive symptoms holds up in community surveys, where subjects are not identified as needing treatment, and are selected by a disinterested researcher (Gove & Tudor, 1973).

Some research has suggested that men are lower in "self-disclosure", i.e. are less likely to reveal personal matters to others than women (Jourard, 1964). Clancy and Gove (1974) were interested in whether sex differences in various response biases might affect reporting of psychiatric symptoms. They examined three types of bias: perceived desirability of various psychiatric symptoms, the need for social approval, and naysaying. While each form of bias was related to the number of symptoms reported, they found this to be equally true for males and females. Thus, it does not seem likely that a simple difference in level of self-disclosure can explain the sex difference in reported depressive symptoms.

An alternate hypothesis suggests that depressive states in men are expressed in different ways; that men are more likely to become alcoholics or law breakers. Male alcoholics greatly outnumber female alcoholics (Mayo, 1976). It has been suggested that depression and alcohol abuse are "parallel" disorders; that alcohol is used by men to deal with depression. Another expression of this view is that psychiatric disorders in women tend to take the form of "turning against the self" (depression, inadequacy, guilt), whereas disorders prevalent among men take the form of "turning against others" (breaking societal conventions regarding drugs and alcohol, low impulse control) (Phillips

& Rabinovitch, 1958). Although depressive symptoms are often found in alcoholics, it is not clear at this point which is primary and which is secondary (Mayo, 1976; Weissman & Klerman, 1977). It is possible that a proportion of depressed men become identified as alcoholics or end up in the correctional system (Mazer, 1974), but this hypothesis remains to be tested.

In sum, it remains to be shown that differences in help-seeking or symptom reporting account for the preponderance of female depressives. The possibility exists that some male alcoholics are "really" depressives, but the difficulty lies in accurate assessment, due to the need to consider the time sequence of onset of symptoms, and it is not yet known to what degree this problem might affect the sex ratio. At present, the gender difference must be viewed as real, and other explanations must be considered.

1.4 Biological Susceptibility

Genetic theories. Some of the difficulties in the classification and diagnosis of depression discussed previously have hindered research in the area of genetic analysis. A recent literature review pointed out the difficulties posed by the low frequency of the disorder in relatives of ill probands, and the multiple forms the disorder may take within families (Gershon, Bunney, Leckmann, Eerdewegh, & DeBauche, 1976).

In spite of these problems, most researchers agree that there is increased risk for certain affective disorders in relatives of diagnosed depressives, as compared with the general population. Studies of twins show a concordance rate for affective illness of between 33 and 92% for monozygotic twins, compared with 0 to 23% for dizygotic twins (Gershon et al., 1976, p. 234). Price (1968) reported a rate of 67% in MZ twins reared apart. Family studies show an increased risk for affective illnesses in first-degree relatives (parents, offspring or siblings), with average risk ranging from 8 to 21%, depending on sex of proband and sex of relative (Gershon et al., p. 241). The risk for female relatives of probands is significantly greater than that for males. This finding has led to the hypothesis that there is a sex-related liability threshold; that is, while the liability to depressive illnesses exists in every person, the higher prevalence in females is due to a lower threshold (Kidd et al., 1975, cited in Gershon et al., 1976). Another hypothesis suggests that there is a directly sex-linked dominant transmission (Mendleweicz & Fleiss, 1974).

The first of these hypotheses would mean that there is a lower threshold for the illness in the sex with a higher prevalence. Thus, for a male to manifest the illness would imply greater liability, as the higher threshold would have been passed. In this case, the relatives of an ill male,

having exceeded the higher threshold, would have a greater liability to the disorder than relatives of an ill female. The second hypothesis implies that there would be less male-to-male transmission, as the link is to the X-chromosome. Neither hypothesis was supported in a recent study by Gershon, Mark, Cohen, Belizon, Baron and Knobe (1975). Gershon et al. (1976) concluded that femaleness appears to be a random, rather than familial component of liability to affective illness. Gershon, Baron and Leckman (1975) noted the possibility that "sex plays the role of an environmental determinant of liability" to affective disorders (p. 312).

Hormonal theories. Female susceptibility to depression has also been discussed in relation to various hormonal influences: the menstrual cycle, postpartum hormonal changes, and menopause.

Some studies have found greater irritability and depression, along with heightened feelings of helplessness and anxiety in both normal and neurotic women pre-menstrually and during menstruation (when estrogen and progesterone levels fall) than at midcycle (Coppen & Kessell, 1963; Ivey & Bardwick, 1968; Shainess, 1961), while others have failed to find any changes (Sommer, 1972). Using a projective measure (subjects were asked to talk for 5 minutes on a memorable life experience), Ivey and Bardwick (1968) found significantly more themes of hostility, anxiety, depression

and noncoping premenstrually, compared to mid-cycle. However, the same study demonstrated the effect of learning on menstrual behavior, in that subjects who had received little "sick role" gratification as children reported fewer premenstrual symptoms than those who had been rewarded.

There is some evidence that women on certain types of contraceptive pills (with estrogen and progestin combined in one pill) experience consistently high anxiety and hostility, with low self-esteem, throughout the cycle (Bardwick, 1974). Bardwick, and Paige (1971) have suggested that progestin (synthetic progesterone) influences the CNS by raising levels of the enzyme Monoamine Oxidase, which in turn inactivates brain catecholamines (neurotransmitters). Low levels of catecholamines are commonly associated with depression. This is not to say that the depression is solely attributable to the effect of contraceptives on MAO levels, but they may have some impact. Indeed, non-pill women and those on other forms of pills do not experience this pattern; rather, depression levels increase primarily during the high progesterone phase. Bardwick points out, however, that "socialization or experience, or behavior, or affect may influence the physiology of the organism" as well as the converse (p. 48). Similarly, Paige (1971) notes that "menstruation is a social, as well as physiologic, event (p. 516).

Weissman and Klerman (1977) in their review of the data, concluded that the degree of depression in women which is due to psychopharmacologic effects of oral contraceptives, and to hormonal cycle fluctuations in general, is small. Indeed, as discussed in the foregoing, it would be difficult to determine the extent to which mood variations are due to physiological, social or psychological causes.

Psychiatric reactions of the postpartum period, during which various hormonal changes occur, are primarily depressive in nature, ranging from "new baby blues" to more severe disorders. Yalom, Lunde, Moos and Hamburg (1968) found more crying, and higher self-rated depression in the first 10 days postpartum compared to a 10-day period in the third trimester or eight months postpartum. Although other reasons for crying besides depression were found, the most common experiential state in the women studied was a feeling of increased vulnerability. The findings were discussed in terms of the complex interaction during this period between emotional and endocrine factors. While this study found the condition to be self-limiting and mild, other researchers have reported more severe and longer-lasting depressive disturbances (Melges, 1968).

Another period of time during which women are commonly thought to be at greater risk for depression is the menopause. Winokur (1973) however, found that risk for affective

disorders was no greater during the menopause than at other times of the life span. This conclusion has been supported by other researchers (see Rosenthal, 1968).

In sum, it may be concluded that endocrinological disturbances, especially during childbearing years, may account in part, but not entirely, for the sex difference in depression. Research to date has failed to separate endocrinological factors from their social and psychological concomitants, thus rendering etiological conclusions difficult, if not impossible.

1.5 Psychosocial and Role Factors

More recently, psychologists, sociologists and especially feminist writers have been turning to psychosocial theories of depression. These theories are concerned with the disadvantages of women's social status, or what might be termed "learned helplessness" in women; that is, learned behavior patterns of dependency and submissiveness (Beck & Greenberg, 1974; Bernard, 1973; Gove & Tudor, 1973; Radloff, 1975).

Radloff and Rae (1979) examined the sex difference in depression by distinguishing between susceptibility or predisposition and precipitating factors. With support from current learning theories, they suggest that susceptibility need not be biological, but can be affected by the differential learning histories of men and women. They collected extensive

mental health interview data on symptoms of depression, physical symptoms, and various factors presumed to be related to depression, including marital and job status, economic situation and early parental loss. Some sex differences in precipitating factors were found. While women were exposed more to certain of the precipitating factors than men, the pattern was reversed for other factors. However, these stresses were related to depression in the same way for both sexes, and when they were controlled, the sex difference did not change. Radloff and Rae concluded that the difference must be due to predisposing or susceptibility factors, perhaps partly biological and partly learned. They discussed the cognitive dimension of depression as a learned susceptibility factor, which differs for men and women. They described the difference in learning histories of men and women. Radloff and Monroe (1978) concluded that men and boys receive more contingent reinforcement for their actions and more emphasis on the importance of personal control. Women often receive no consequences for their actions, or inconsistent feedback; both punishment and reward. This may result in an impoverished response repertoire, less overt responding, and a lack of successful problem solving on the part of women.

Radloff and Rae discussed their findings in terms of

some current theories of depression: the reinforcement model (Lewinsohn, 1974) focussing on lower rates of rewarded behavior in depressives; Seligman's (1975) learned helplessness model dealing with perceived lack of control over reinforcements; and Beck's (1967) cognitive model, focussing on irrational or dysfunctional beliefs. In discussing these same three models, McLean (1976) has also suggested that all may be operative when, for example, (1) repeated goal frustrations (lack of rewards) lead to (2) feelings of loss of control (helplessness) and (3) anticipation of failure (dysfunctional cognitions), resulting in such depressive symptoms as loss of self-esteem, depressive ruminations, and dysphoria.

The integrative model proposed by McLean may be useful in explaining the higher rates of depression in women. Other writers have drawn on one or more aspects of this model for the same purpose. Weissman and Klerman (1977) concluded in their literature review that elements of the female role may contribute to depression, either through learned or real helplessness. Similarly, Bart (1975) has suggested that the learned helplessness model may be applicable in understanding depressogenic features of the female role related to powerlessness.

Typically, the feminine role involves less real control over concrete rewards and outcomes. Women traditionally have

had less access to monetary and political power and business and educational opportunities. They have been portrayed and treated as dependent, submissive and incompetent, and indeed have been rewarded for displaying these characteristics (Radloff & Monroe, 1978). It has been suggested that the goals of femininity and competence have been treated as a contradiction in terms, and that competence, especially intellectual competence, has never been seen as a valid goal for women (Sherman, 1976). Males have been socialized to the instrumental or agentic role (aggressive, unemotional, active) and females to the expressive or communal role (nurturant, emotionally responsive, dependent) (Bakan, 1966; Parsons & Bales, 1955). Women who display "masculine" assertiveness or competence may be seen as pushy or deviant, are punished by peers or husbands, and are seen as less likeable (Costrich, Feinstein, Kidder, Marecek & Pascale, 1975; Johnson, 1976; Wolman & Frank, 1975).

While men gain a large portion of their self-esteem and identity from concrete sources, such as financial resources or occupational status, women have had to depend both financially and emotionally on their husbands, often living vicariously, gaining identity and status only as "other" in relation to male figures or children. Roles allotted to women have generally been restricted to the home, involving low prestige tasks such as housekeeping, child care, and

maintaining family harmony; tasks which often result in boredom, lack of social contacts, low self-esteem and dissatisfaction.

According to Marecek (1978), married women, especially homemakers, are the most heavily represented group in psychiatric treatment. Marriage may exacerbate the stressful effects of lack of autonomy. Lack of role diversity for women within marriage may serve to restrict sources of self-esteem and identity. Illustrative of a woman's lack of identity in marriage is Bernard's (1973) finding that it is more often the wife who adapts to her husband's life-style, socioeconomic status or career changes, rather than vice-versa, and the fact that women typically adopt their husband's surname, even when not legally required to do so. This is confirmed by Barry's (1970) finding that husbands and wives agree that wives make more concessions and modifications in values and personal qualities in marriage than their husbands.

It is not surprising, in view of the foregoing, that women often fail to achieve or set goals for themselves, see themselves as lacking in power or control over their own lives, and anticipate failure. Beck and Greenberg (1974) believe that events which trigger depression are "sex typed"; that women are more vulnerable to depression due to their subordinate posture in relation to men, and their limited sources of emotional and intellectual sustenance. Similarly,

patterns of depression appear to be different for men and women, with men more often reporting an inability to cry, loss of social interest and a sense of failure, and women reporting indecisiveness and self-dislike, as indicated by responses on the Beck Depression Inventory (Hammen & Padesky, 1977).

Even when seeking treatment for depression, women may find their negative self-image and dependency reinforced (Chesler, 1972). Broverman, Broverman, Clarkson, Rosenkrantz and Vogel (1970) found that mental health professionals reported different standards for a healthy man and a healthy woman. Healthy women were described as submissive, dependent, emotional and easily hurt. Feminists have criticized the mental health field, especially psychiatry, as male-oriented and as perpetuating male-dominated theories. Stearns, Penner and Kimmel (1980) have recently questioned the validity of the earlier studies, and indeed, it appears from their research that the likelihood of sex stereotyping is lowered as more information on background, symptomatology and current stress is provided. They did find a tendency among psychotherapists to see males as more distressed than females seeking help for the same problems, suggesting some difference in how male and female clients are perceived. To date, while this research is not conclusive, it appears possible that sex biases may still be operating.

Men are more likely to experience depression as a reaction to career setbacks or status issues, whereas women seek treatment for depression in relation to failure in interpersonal relationships, feelings of loneliness and powerlessness in relation to others (Williams, 1977) or feelings of inadequacy, inferiority or guilt (Chevron, Quinlan & Blatt, 1978; Marecek, 1978). These findings are consistent with differential expectations of the feminine and masculine roles.

Responding to interpersonal or other kinds of failures with depression may result from inability to cope with such events due to lack of effectance or competence. Also, due to socialization patterns, women have a much greater investment in their relationships with others; when these fail in some way, there are no alternate sources of self-worth or satisfaction. Scarf (1980) concluded after interviewing 150 depressed women, that the female preponderance to depression is due to the greater weight given to emotional attachments by women. She describes women as "needing love and approval from others to confirm their sense of self" (cited in The Vancouver Sun, Sat., Sept. 13, 1980).

Marecek (1978) hypothesizes that the result of conforming to strict sex-role stereotyped behavior by women is a lowered ability to cope with a broad range of stressful events. According to McLean (1976), "depression is the

consequence of ineffective coping techniques used to remedy situational life problems" (p. 96). A recent study suggests that men may attempt to actively alleviate depressive symptoms by getting involved in new activities, whereas women are more likely to cope at a cognitive level, for example, by trying to talk themselves out of their depression (Funabiki et al., 1980). Behavioral theories of depression would predict, in this instance, that the more active, involved male would be less likely to remain, or even to become depressed, than the more inactive female.

The discrepancy between changes in role restrictions, rising expectations and access to new opportunities, on the one hand, and old behaviors and expectations of friends and family, on the other hand, results in distress or role conflict for many women. In her recent study, Scarf notes the puzzle with which women are faced: a modern society which says they should be autonomous and independent, and an upbringing which encourages them to be feminine and dependent (cited in *The Vancouver Sun*, Sat., Sept. 13, 1980). As noted in the literature on subjective well-being or satisfaction, negative mood states are more likely to result when possibilities for change are perceived, but a discrepancy remains between expectations and reality (Cantril, 1965). While, theoretically, women have access to many more opportunities and role choices than ever before, in practice, women are

often subtly pressured to remain in traditional roles.

In spite of the social changes which are slowly taking place in terms of equality for men and women, there is a certain "unconscious ideology" or expectancy, the accumulation of many decades, even centuries, of being treated, responded to, and behaving in certain ways which may be too deeply ingrained for women to simply shrug off overnight (Bem & Bem, 1977). In terms of Rogerian "self" theory, incongruence between perceptions of self and ideal self, or between self and social expectations, may lead to conflict (Rogers, 1951), negative affect, and thus, possibly depression.

1.6 Sex Roles: Measurement and Research

Measurement. The conceptualization and measurement of masculinity and femininity have undergone major revisions in recent years (see Constantinople, 1973). Masculinity and femininity were originally thought of and measured as opposite ends of a bipolar scale, correlating with biological sex. The ideal state was considered to be femininity for women (expressive, communal role), and masculinity for men (instrumental, agentic role) (Bakan, 1966; Parsons & Bales, 1955). However, not all men are stereotypically masculine, nor all women stereotypically feminine. Some men and women display both masculine and feminine behaviors in different situations. Taking this into account, more recent formulations of sex roles view the dimensions of masculinity and femininity as

independent or orthogonal, each present in varying degrees in both men and women (Bem, 1974; Spence & Helmreich, 1978).

One of the measures of sex roles which was developed within this framework is the Personal Attributes Questionnaire (PAQ; Spence & Helmreich, 1978), a pencil and paper self-report inventory. The PAQ (short form) consists of twenty-four items, comprising three scales of eight items each: Masculinity (M), Femininity (F) and Masculinity-Femininity (MF). Items are presented on a 5-point Likert-type scale, anchored at both ends by a self-descriptive phrase, for example, "not at all independent" to "very independent". The three subscales were empirically derived, with the masculinity and femininity scales being perceived by a sample of college students as socially desirable attributes for both men and women, but with significant differences between sexes in the typical level of the attribute. The MF scale is not employed in the current study. Only the M and F scores contribute to the assigning of individuals to sex role categories, on the basis of median splits, as follows (Spence & Helmreich, 1978):

		Masculinity	
		Above Median	Below Median
Femininity	Above Median	Androgynous	Feminine
	Below Median	Masculine	Undifferentiated

As shown above, subjects with a balance of masculine and feminine traits are classified as androgynous (high on both) or undifferentiated (low on both). Subjects who score high on one scale but not the other are classified as either masculine or feminine.

Another recently developed measure, the Bem Sex Role Inventory (BSRI), was administered in this study (Bem, 1974). Correlations between corresponding masculinity and femininity scales on the two measures were high; .78 and .63 respectively. The pattern of results was essentially the same, so only the results for the PAQ scale will be reported.

Research. As noted, while it was once thought that traditional sex typing led to psychological well-being, this assumption has been under attack as a result of the androgyny research. The research on sex roles and adjustment has employed various definitions of well-being, one of which is the concept of behavioral flexibility. To date, the only direct evidence of greater behavioral flexibility in androgynous persons derives from studies conducted by Bem and her associates. Bem reported that androgynous persons display masculine independence when pressured to conform and feminine nurturance when interacting with a kitten. She also found masculine males to be low in nurturance, and feminine females to be low in both independence and nurturance (Bem, 1975). A further study showed that the female's low nurturance did

•

not apply to interactions with a baby (Bem, Martyna & Watson, 1976). It was found that persons low in both masculinity and femininity (undifferentiated) were low in both characteristics. They concluded that androgynous persons (high in both M and F) will display more behavioral flexibility than persons low in one or both traits.

The relationship between behavioral flexibility and androgyny was supported in a study employing pencil and paper measures of behavioral adaptability. Orlofsky and Windle (1978) found that subjects who identified strongly with both masculine and feminine roles scored higher on tests of emotional expressivity (feminine task) and assertiveness (masculine task). Sex typed subjects did well only on the task which was congruent with their measured sex role.

Most of the androgyny research has attempted to correlate measures of sex roles with various indices of psychological well-being, adjustment or personality. Jones, Chernovitz and Hansson (1978) examined the relationship between sex roles and measures of introversion-extraversion, locus of control, self-confidence and learned helplessness. On the whole, they found flexibility and adjustment to be associated with masculinity rather than androgyny for both males and females. This contradicts the results of the early research by Bem and her colleagues, and the Orlofsky and Windle study cited above, and illustrates some of the current confusion in research

dealing with sex roles. Jones et al., and others (Deutsch & Gilbert, 1976; Biaggio & Nielsen, 1976) suggest that sex typing in women is associated with poor adjustment, higher anxiety, lack of confidence, self-effacement and insecurity. Undifferentiated subjects (low M, low F), both male and female, appear to score lowest on measures of adjustment, including behavioral flexibility and self-esteem. Self-esteem scores were found to be higher for androgynous men and women by Spence and Helmreich (1978) when they developed their sex role inventory. Using a different measure of masculinity and femininity, Stericker and Johnson (1977) found higher self-esteem to be correlated with a masculine orientation. Erdwins, Small and Gross (1980) also concluded that it is the presence of masculine traits, not a balance of masculinity and femininity, that contributes to personal adjustment. They found that masculine subjects reported lower anxiety levels, and both masculine and androgynous subjects reported better self-concepts than feminine or undifferentiated subjects. These findings have led to programs designed to increase masculine behavior in women, with a view to improving self-esteem (Gulanick, Howard & Moreland, 1979).

As low self-esteem is one of the central components of depression, and since some theorists claim that depression results from a loss of self-esteem, one might expect that individuals with higher self-esteem (androgynous or masculine)

might be less prone to depression, and vice versa. Wiggins and Holzmuller (1978) came to this conclusion when they found that androgynous men and women were less likely to endorse negative self-statements. Ray and Bristow (1978) found feminine sex-typing significantly more often than androgyny or masculine sex-typing among depressed women.

One study which examined directly the relationship between traditional sex role characteristics and depressive experiences contradicts the view that androgyny is the ideal state, confusing the issue further. It was found that the usually female-valued traits of warmth and expressiveness were related to different depressive experiences in males and females. Females describing themselves as low in these traits scored higher on a depression scale (Chevron, Quinlan & Blatt, 1978). For men, higher warmth-expressiveness scores seemed to be associated with depressive feelings related to dependency. This study, however, did not use a measure of masculinity and femininity per se, but rather a list of trait descriptions which the authors described as representing warmth-expressiveness and competency. In contradiction to this, Hyatt (1979) found no relationship between depression and femininity, though depression and masculinity were found to be negatively related for both males and females. The same study found that the masculinity scale items which predicted depression level were self-esteem items, such as

"feels superior", suggesting some overlap of masculinity and self-esteem, in their relationship to depression.

1.7 The Present Study. In sum, it is still a moot point as to whether traditional sex-typing, or androgyny, or masculinity is related to depressive feelings or well-being in men and women. There also seems to be a link between these variables and self-esteem, and it is not clear how these factors interact.

The current research was undertaken in order to clarify the nature of the relationships among these variables. In particular, in view of the rather strong negative association found previously between masculinity and level of depression (Hyatt, 1979), it was of interest to know whether this relationship was due only, or in part, to the influence of the moderator variable, self-esteem. In other words, is the relationship between depression level and masculinity any more than what we already know to exist, i.e. a relationship between depression level and self-esteem?

Chapter 2

Method

2.1 Subjects

Subjects were 93 students enrolled in various undergraduate psychology courses at Simon Fraser University. The 49 females ranged in age from 17 to 47, with a mean age of 23.5, and the 44 male subjects ranged in age from 17 to 32, with a mean age of 20.7

2.2 Measuring Instruments

Sex Roles. The Personal Attributes Questionnaire (PAQ) was employed to measure masculine and feminine sex role traits (see Appendix A). The method for assigning individuals to categories was that suggested by Spence and Helmreich (1978) for unequal numbers of males and females. The mean of the medians for the two sexes was used as the cut-off point for each scale. In this study, these values were 22 for masculinity and 23 for femininity (out of a possible total of 32). This compares to the original norms of 21 and above for the M scale, and 23 and above for the F scale. Appendix B summarizes the number and percentage of males and females falling into each category.

Depression. The depression scale used in this research was the Beck Depression Inventory (BDI; Beck, 1967), a clinically validated self-report measure of current depth of depression. A copy of the inventory is included as Appendix C.

The BDI taps the major components of the depressive syndrome, including negative affect, low self-esteem, motivational deficits and physiological symptoms. Each of 21 items on the scale consists of 4 or 5 statements reflecting severity of a particular symptom. The subject selects the statement which describes his/her current state, with each item having a score of 0 - 3. The range of scores on the BDI is 0 - 63, with scores of 0 - 9 being categorized in clinical populations as not depressed, 10 - 15 as mildly depressed, 16 - 23 as moderately depressed, and 24 - 63 as severely depressed (Beck, Ward, Mendelson, Mock, and Erbaugh, 1961).

Although the BDI was developed for use with a clinical population, it is typically used as an indicator of depression level in normal populations (Calhoun, Cheney & Dawes, 1974; Hammen & Padesky, 1977; Prociuk, Breen & Lussier, 1976; Radloff & Rae, 1979). The BDI has been validated against psychiatric ratings of depth of depression for survey use with a college population (Bumberry, Oliver & McClure, 1978).

Self-esteem. The instrument used to evaluate self-esteem was the Texas Social Behavior Inventory (TSBI), short form, which consists of sixteen items designed to assess an individual's self-confidence and competence in social situations (see Appendix D). An example of the items on the inventory is the statement, "I am not likely to speak to people until they speak to me". Each item is given a score

of 0 - 4, on a scale from "not at all characteristic of me" to "very much characteristic of me". Possible total scores range from 0 - 64, with high scores associated with higher self-esteem (Helmreich & Stapp, 1974). While three factors may be identified on the long form of the TSBI (self-confidence, social dominance and social competence), the inventory is said to assess a unitary concept of social self-esteem. In a sample of college students, the correlation between the long and short forms was .96 (Spence & Helmreich, 1978).

2.3 Procedure

The questionnaire battery was administered to subjects in small laboratory or tutorial groups. The study was presented as an investigation of people's self-perceptions. Subjects were informed that, for those who were interested, results could be obtained from the researcher at a later date. Subjects required approximately 45 minutes to complete the questionnaires.

2.4 Analysis of Results

The study was intended to examine the relationships among level of depression (measured by the Beck Depression Inventory), sex roles (masculinity and femininity, measured by the Personal Attributes Questionnaire) and self-esteem (measured by the Texas Social Behavior Inventory). The possible role of self-esteem as a moderator variable in this

relationship was of special interest. Two main approaches were employed to analyse the results. Firstly, a three-way Analysis of Variance (sex X M X F) was conducted on BDI scores, examining main effects of and interactions among the variables. It was possible to treat M and F as two independent factors in the analysis since the scales were empirically derived as orthogonal scales (Spence & Helmreich, 1978). An Analysis of Covariance was then conducted on BDI scores, with self-esteem (TSBI) as the covariate. Secondly, correlations and partial correlations were computed on the same data to determine the proportion of shared variance between masculinity and self-esteem.

Chapter 3

Results

3.1 Sex Differences in Depression

Mean depression scores on the BDI were 5.29 (SD = 4.52) for men, and 5.65 (SD = 5.52) for women. Sex differences on the BDI were not significant. Mean BDI scores by sex and sex role category are presented in Table 1. On examination of the data, a high correlation was noted between group means and standard deviations. In order to eliminate this correlation, a log transformation was carried out on the BDI scores (plus 1, to eliminate zero scores). Thus, the ANOVAs and F tests reported were computed on the transformed BDI data. The means and standard deviations of the transformed data are also presented in Table 1.

3.2 Analysis of Variance on Depression Scores

In order to examine the relationship between sex roles and depression level, a 2(sex) x 2(high vs. low masculinity; i.e. M) x 2(high vs. low femininity, i.e. F) ANOVA was conducted on the BDI scores (regression approach; Nie, Hull, Jenkins, Steinbrenner & Bent, 1975). As can be seen from the summary table (Table 2), there was a significant main effect for M, $F(1,85) = 20.327$, $p < .001$, a marginally significant interaction between M and F, $F(1,85) = 3.232$, $p < .07$; and a significant three-way interaction between sex, M and F, $F(1,85) = 7.455$, $p < .008$.

The main effects and two-way interaction are clarified by examination of the higher order interaction. An F test for simple interaction effects was conducted on the interaction between M, F and sex (Winer, 1962). The interaction between M and F was significant for females, $F(1,85) = 10.734$, $p < .005$, but not for males, $F(1,85) < 1$, ns (see Figure 1).

To examine further the situation for males, simple simple main effects for M at high and low F were computed. This was significant at high F, $F(1,85) = 6.54$, $p < .025$, and at low F, $F(1,85) = 4.14$, $p < .05$ (see Table 3). In other words, androgynous and masculine males (high M) reported lower depression levels than feminine and undifferentiated males (low M).

To examine the situation for females, simple simple main effects for M at high and low F were computed. The effect for M was significant at low F, $F(1,85) = 16.752$, $p < .001$, but not at high F, $F(1,85) < 1$, ns (see Table 4). This indicates that masculine females reported significantly lower depression levels than undifferentiated females, whereas androgynous and feminine females did not differ.

In order to examine differences between all possible pairs of groups, within each sex, a post hoc comparison was conducted using the Scheffé procedure, with the probability adjusted to .10, considering the stringency of the test. For males, there were two significant pairwise

differences. Androgynous (high M, high F) males were less depressed than both feminine (low M, high F) and undifferentiated (low M, low F) males. For females, only one pairwise post hoc comparison was significant; masculine (high M, low F) females had lower depression levels than undifferentiated (low M, low F) females.

3.3 Correlational Analysis

In order to determine the patterns of correlations between depression level, self-esteem and M and F respectively, all possible correlations were computed separately for males and females.

Masculinity and depression (BDI) were significantly and negatively correlated for both males, $r(43) = -.467$, $p < .001$, and females, $r(48) = -.358$, $p < .01$. Femininity and depression were significantly and negatively correlated for females only, $r(48) = -.367$, $p < .01$.

Masculinity and self-esteem (TSBI) were significantly and positively correlated for both males, $r(43) = +.623$, $p < .001$, and females, $r(48) = +.658$, $p < .001$. Femininity and self-esteem were significantly correlated for women only, $r(48) = +.273$, $p < .03$ (all correlations are presented in Table 5). This suggests that, whereas masculinity, but not femininity is related to depression level and self-esteem for men, both masculinity and femininity are related to depression level and self-esteem for women. The relationship

between M and self-esteem is confirmed by the results of an ANOVA conducted on self-esteem scores by sex, M and F. The summary table of this ANOVA is included as Appendix E. Mean self-esteem scores by sex and sex role category are included as Appendix F.

In order to determine whether the relationship between depression level and M was strictly due to the shared variance with self-esteem, partial correlations were computed. It was found that, controlling for self-esteem, correlations between M and BDI were considerably reduced for both males, $r(43) = -.274$, $p < .04$, and females, $r(48) = -.179$, ns, while correlations between F and BDI were attenuated little, if at all. Partial correlations are summarized in Table 6 for males and females. This suggests that there is a large proportion of shared variance between M and self-esteem. This result is confirmed in an Analysis of Covariance conducted on depression scores, with TSBI as a covariate. The effect of the covariate, TSBI, is significant, reducing the main effect for M. The summary table is included as Appendix G.

Table 1: Means and Standard Deviations for BDI Scores
by Sex and Sex Role Category, Original and
Transformed Data

Original Data						
Sex		High M		Low M		Total
		High F	Low F	High F	Low F	
		1	2	3	4	
Males	M	3.083	3.833	8.286	7.077	5.295
	SD	3.872	3.069	5.908	4.212	4.522
	n	12	12	7	13	44
Females	M	4.765	1.9	5.385	11.889	5.653
	SD	3.784	1.729	4.482	7.607	5.525
	n	17	10	13	9	49
Log Transformation on BDI + 1						
Males	M	.449	.581	.858	.855	.670
	SD	.385	.342	.366	.223	.364
Females	M	.674	.378	.656	1.01	.671
	SD	.293	.299	.424	.349	.388

- 1 Androgynous
- 2 Masculine
- 3 Feminine
- 4 Undifferentiated

Table 2: Analysis of Variance on BDI Scores

Source of Variance	SS	df	MS	F	p
Main effects					
Sex	0.001	1	0.001	0.007	ns
M	2.302	1	2.302	20.327	.001
F	0.048	1	0.048	0.426	ns
Two-way Interactions					
Sex x M	0.006	1	0.006	0.053	ns
Sex x F	0.006	1	0.006	0.054	ns
M x F	0.366	1	0.366	3.232	.07
Three-way Interactions					
Sex x M x F	0.844	1	0.844	7.455	.008
Explained	3.282	7	0.469	4.140	.001
Residual	9.628	85	0.113		
Total	12.910	92	0.140		

Table 3: Simple simple main effects on BDI scores for
M at High and Low F: Males

Femininity		Masculinity		F	p
		High	Low		
High	M	3.083 ¹	8.286 ³	6.54	.025
	n	12	7		
Low	M	3.833 ²	7.077 ⁴	4.14	.05
	n	12	13		

- 1 Androgynous
- 2 Masculine
- 3 Feminine
- 4 Undifferentiated

Table 4: Simple simple main effects on BDI scores for
M at High and Low F: Females

Femininity		Masculinity		F	p
		High	Low		
High	M	4.765 ¹	5.385 ³	< 1	ns
	n	17	13		
Low	M	1.9 ²	11.889 ⁴	16.752	.001
	n	10	9		

- 1 Androgynous
- 2 Masculine
- 3 Feminine
- 4 Undifferentiated

Table 5: Correlations among BDI, TSBI, M and F,
for Males and Females

Males			
	F	BDI	TSBI
M	+.23	-.467****	+.623****
F		-.107	+.016
BDI			-.441****

Females			
	F	BDI	TSBI
M	+.007	-.358***	+.658****
F		-.367***	+.273*
BDI			-.353****

*p < .03

**p < .02

***p < .01

****p < .001

Table 6: Partial Correlations Between BDI and M,
and Between BDI and F, Controlling for
Self-esteem (TSBI)

	$r_{1,2.3}$	P
Males		
BDI/M	-.274	.04
BDI/F	-.111	ns
Females		
BDI/M	-.179	ns
BDI/F	-.301	.02

- 1 BDI
- 2 M or F
- 3 TSBI

Figure 1

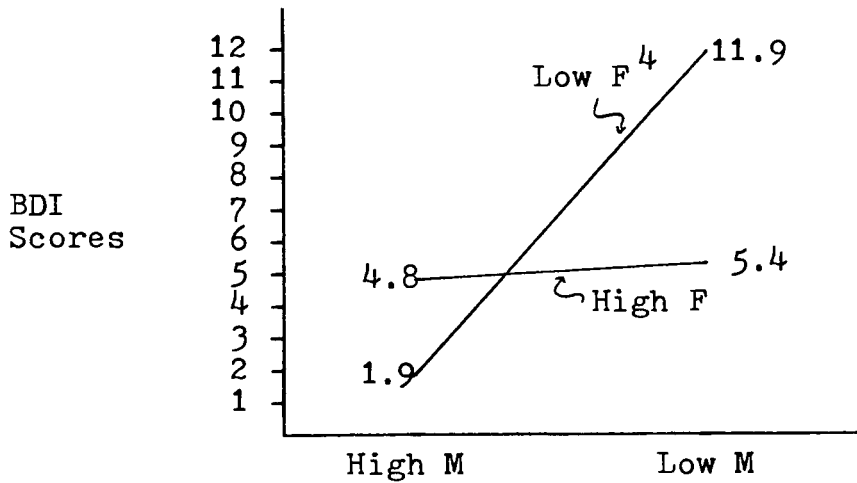
M X F Interaction on BDI Scores for Males ¹



¹n = 44

²F(1,85) < 1, ns

M X F Interaction on BDI Scores for Females ³



³n = 49

⁴F(1,85) = 10.734, p < .005

Chapter 4

Discussion

This study was designed to clarify the nature of the relationship between sex roles and depression level in a normal sample, with special attention being given to the moderating influence of self-esteem. Firstly, there was no difference in depression level between males and females, as is usually reported. Secondly, as predicted, there were differences in depression levels related to sex roles, but the pattern was different for males and females. This seems to support the view of, among others, Jones et al. (1978), that masculinity and femininity have different implications for men and women.

For males, the pattern of results was quite straightforward. Males who described themselves as high on the masculinity scale (i.e. masculine and androgynous), reported lower depression levels than males who described themselves as low on the scale (i.e. feminine and undifferentiated). For males, then, it would seem to be important to be high in masculine, or "sex-typed" traits, whereas their level on the femininity scale did not relate to depression level.

For females, the pattern is more complex. Women who described themselves as being high on the masculinity scale tended to have lower levels of depression than women who described themselves as low on the scale. However, this

trend was significant only at low femininity, where the effect of masculinity appears to be most important. Thus, masculine women had significantly lower depression levels than undifferentiated women. It should also be noted that masculine women obtained the lowest mean depression scores on the BDI among all groups. Masculine, feminine and androgynous women did not differ significantly in their level of depression.

What are the implications of these results for the original thesis? The argument was developed that the greater incidence of depression in women was connected with their sex role characteristics. Women are socialized to be more submissive, dependent and "other-concerned" than men. They have fewer sources of identity and self-esteem, and are not socialized to develop masculine traits such as assertiveness, intellectual competence, or independence. Because of this, it was thought that feminine sex-typed women would have higher levels of depression than masculine or androgynous women. There are at least two possible explanations for this not being the case.

Firstly, it might be that high levels of either set of traits in women are reinforcing to a sufficient extent to provide for a positive self-image and for a high degree of effective behavior. In terms of behavioral views of depression, it would only be the women low on both traits

.

who would be unable to obtain sufficient rewards or achieve personal goals. It should also be noted that the PAQ measures (as it was designed to) only positive traits associated with masculinity and femininity. Perhaps the questionnaire does not tap those dimensions of femininity which are associated with greater depression in women, such as feelings of lack of control or of being in a subordinate position. Further, one might assume that women who see themselves as low on both scales have generally poor self-concepts, which would contribute to depressive feelings. In support of this, undifferentiated subjects obtained the lowest self-esteem scores on the TSBI.

This brings us to the second, and perhaps more important point in terms of the current study. There was a large proportion of shared variance between masculinity and self-esteem for men and women (and between femininity and self-esteem for women). Thus, to some extent, when we say that women with low masculinity and low femininity have higher depression levels, we are also saying, in effect, that women with low self-esteem have higher depression levels. In other words, the measures of masculinity and femininity are not pure measures. To some extent, the PAQ scales are poor measures of these concepts, inasmuch as they are highly related to other concepts. Indeed, there may be no way of tapping these variables without considerable overlap with

.

other concepts, such as self-esteem. One way of approaching this problem would be, as noted above, to take into account negative as well as positive aspects of sex roles. It might be useful to discover more about the relationship between self-esteem and masculinity, and about the construct of masculinity per se. This research has demonstrated a high relationship between the two.

It must be remembered that this study does not deal with diagnosed depression, but with self-reported depression levels in normal university subjects. As such, caution must be exercised in generalizing results to other populations. The results may not be strictly comparable to demographic data on depression which reports sex differences. The composition of the sample might be quite different from other samples. University women may be more achievement oriented, and have higher levels of various masculine traits, than women in the general population. Men and women at university may be more homogeneous in their psychological make-up and personality traits than men and women elsewhere, who might be engaged in more sex-typed pursuits (e.g. male heads-of-household, female homemakers). Further, twenty year old students may not have been exposed to the results of stereotyped sex roles to the extent of an older sample. It would be informative to repeat the present study with both a normal sample of non-students, and a population of

clinically depressed subjects, to discern whether the same pattern of results holds in other populations.

What are the implications of the current results for the treatment of depression in women? Any comments in this vein must be purely speculative, since many more factors contribute to depressive feelings in women than simply their masculine or feminine traits or behaviors. Also, clinical forms of depression are complex and varied, and any treatment must be planned with the needs of the particular individual or group in mind. Is it logical to focus on changes in sex-role orientation in planning treatment programs for women? Gulanick et al. (1979) designed a program to increase androgyny in feminine women. It was intended to make up deficiencies in masculine behaviors such as assertiveness and independence, and to improve self-esteem. They found that women who completed the program were more assertive, more androgynous on a sex role measure and more satisfied with their level of functioning on personal goals. They suggested that this may be an effective way of mitigating some of the negative consequences of feminine sex-typing. Although the women who took part in the program were not identified as needing therapy, this might well be an effective group or individual approach for depressed women. This may be especially useful for women dealing with role conflicts, expectations of others, and self-esteem

.

issues. The Personal Attributes Questionnaire could be employed as a way of identifying problem areas, as a treatment tool for discussion purposes, and as a measure of therapeutic change. Again, the high correlation between masculinity and self-esteem is worthy of note in this context. Increasing masculine traits, while perhaps improving coping skills in terms of becoming more active and competent, also serves to improve self-esteem.

The current results shed some light on the argument as to whether androgyny, masculinity or femininity is associated with adjustment in men and women. For men, the important variable is masculinity, so that androgynous or masculine males are better adjusted; i.e. higher masculinity is associated with both lower depression and higher self-esteem. For women, both masculinity and femininity are associated with lower depression levels, but only higher masculinity is associated with higher self-esteem.

Appendix A:

PERSONAL ATTRIBUTES QUESTIONNAIRE

The following items inquire about what kind of a person you think you are. Each item consists of a pair of characteristics, with the letters A to E in between. For example:

Not at all artistic A...B...C...D...E Very artistic

Please circle the letter that best describes you as you actually are.

- | | | |
|--|-------------------|--|
| 1. Not at all aggressive | A...B...C...D...E | Very aggressive |
| 2. Not at all independent | A...B...C...D...E | Very independent |
| 3. Not at all emotional | A...B...C...D...E | Very emotional |
| 4. Not at all dominant | A...B...C...D...E | Very dominant |
| 5. Not at all excitable in a major crisis | A...B...C...D...E | Very excitable in a major crises |
| 6. Very passive | A...B...C...D...E | Very active |
| 7. Not at all able to devote self completely to others | A...B...C...D...E | Able to devote self completely to others |
| 8. Very rough | A...B...C...D...E | Very gentle |
| 9. Not at all helpful to others | A...B...C...D...E | Very helpful to others |
| 10. Not at all competitive | A...B...C...D...E | Very competitive |
| 11. Very home oriented | A...B...C...D...E | Very worldly |
| 12. Not at all kind | A...B...C...D...E | Very kind |
| 13. Indifferent to others approval | A...B...C...D...E | Highly needful of others approval |
| 14. Feelings not easily hurt | A...B...C...D...E | Feelings easily hurt |

- | | | |
|--|-------------------|------------------------------------|
| 15. Not at all aware of feelings of others | A...B...C...D...E | Very aware of feelings of others |
| 16. Can make decisions easily | A...B...C...D...E | Has difficulty making decisions |
| 17. Gives up very easily | A...B...C...D...E | Never gives up easily |
| 18. Never cries | A...B...C...D...E | Cries very easily |
| 19. Not at all self-confident | A...B...C...D...E | Very self-confident |
| 20. Feels very inferior | A...B...C...D...E | Feels very superior |
| 21. Not at all understanding of others | A...B...C...D...E | Very understanding of others |
| 22. Very cold in relations with others | A...B...C...D...E | Very warm in relations with others |
| 23. Very little need for security | A...B...C...D...E | Very strong need for security |
| 24. Goes to pieces under pressure | A...B...C...D...E | Stands up well under pressure |

Appendix B: Number and Percentage of Subjects in Each
Sex Role Category: Males and Females

		Males		Females		
		Masculinity		Masculinity		
		Above	Below	Above	Below	
Femininity	Above	n	12 ¹	7 ³	17 ¹	13 ³
		%	27.3	16.0	34.5	26.5
	Below	n	12 ²	13 ⁴	10 ²	9 ⁴
		%	27.3	29.4	20.5	18.5
Total	n	44		49		

1 Androgynous

2 Masculine

3 Feminine

4 Undifferentiated

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. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

- 1 0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.
- 2 0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.
- 3 0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.
- 4 0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.
- 5 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.
- 6 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.
- 7 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.
- 8 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.
- 9 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but 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 anymore 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 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 and can't 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 lose weight by eating less.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds. Yes_____ No_____
- 20 0 I am no more worried about my health than usual.
1 I am worried about physical problems, aches and pains, upset stomach or constipation.
2 I am very worried about physical problems, it's hard to do much else.
3 I am so worried about physical problems I can't think of 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.

The Social Behavior Inventory asks you to describe your reactions and feelings when you are around other people. Each item has a scale, marked with the letters A,B,C,D, and E, with (A) indicating "not at all characteristic of me" and (E) "very characteristic of me", and the other letters, points in between. For each item, choose the letter which best describes how characteristic the item is of you.

1. I am not likely to speak to people until they speak to me.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

2. I would describe myself as self-confident.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

3. I feel confident of my appearance.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

4. I am a good mixer.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

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

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

6. When in a group of people, I usually do what the others want rather than make suggestions.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

7. When I am in disagreement with other people, my opinion usually prevails.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

8. I would describe myself as one who attempts to master situations.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

9. Other people look up to me.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

10. I enjoy social gatherings just to be with people.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

11. I make a point of looking other people in the eye.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

12. I cannot seem to get others to notice me.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

13. I would rather not have very much responsibility for other people.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

14. I feel comfortable being approached by someone in a position of authority.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

15. I would describe myself as indecisive.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

16. I have no doubts about my social competence.

A	B	C	D	E
Not at all characteristic of me	Not very	Slightly	Fairly	Very much characteristic of me

Appendix E: Analysis of Variance on TSBI Scores

Source of Variance	SS	df	MS	F	p
Main effects					
Sex	156.313	1	156.313	2.670	ns
M	1518.815	1	1518.815	25.947	.001
F	0.028	1	0.028	0.000	ns
Two-way Interactions					
Sex X M	5.431	1	5.431	0.093	ns
Sex X F	17.912	1	17.912	0.306	ns
M X F	95.667	1	95.667	1.634	ns
Three-way Interaction					
Sex X M X F	122.497	1	122.497	2.093	ns
Explained	2203.719	7	314.817	5.378	.001
Residual	4975.473	85	58.535		
Total	7179.191	92	78.035		

Appendix F: Means and Standard Deviations for TSBI Scores
by Sex and Sex Role Category

Sex		High M		Low M		Total
		High F	Low F	High F	Low F	
		1	2	3	4	
Males	M	40.667	46.000	37.286	33.692	39.523
	SD	6.787	5.737	8.902	7.889	8.473
	n	12	12	7	13	44
Females	M	47.117	45.900	38.000	37.333	42.653
	SD	7.227	7.279	8.544	9.327	8.973
	n	17	10	13	9	49

1 Androgynous

2 Masculine

3 Feminine

4 Undifferentiated

Appendix G: Analysis of Covariance on BDI Scores with
TSBI Scores as Covariate

Source of Variance	SS	df	MS	F	p
Covariate (TSBI)	0.533	1	0.533	4.921	.029
Main effects					
Sex	0.010	1	0.010	0.092	ns
M	0.951	1	0.951	8.783	.004
F	0.047	1	0.047	0.438	ns
Two-way Interactions					
Sex x M	0.010	1	0.010	0.096	ns
Sex x F	0.015	1	0.015	0.137	ns
M x F	0.249	1	0.249	2.300	ns
Three-way Interaction					
Sex x M x F	1.042	1	1.042	9.628	.003
Explained	3.815	8	0.477	4.404	.001
Residual	9.095	84	0.108		
Total	12.910	92	0.140		

References

- Akiskal, H.S., & McKinney, W.T. Jr. Overview of recent research in depression. Archives of General Psychiatry, 32, 1975, 285-305.
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Second Edition (DSM II), 1968.
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM III), 1980.
- Bakan, D. The Duality of Human Existence. Chicago, Rand McNally, 1966.
- Bardwick, J.M. The sex hormones, the central nervous system and affect variability in humans. in V. Frank and V. Burtle (Eds.) Women in Therapy. New York, Brunner/Mazel, Inc., 1974.
- Barry, W.A. Marriage research and conflict: An integrative review. Psychological Bulletin, 1970, 73, 41-54.
- Bart, P.B. Unalienating abortion, demystifying depression and restoring rape victims. Presented at American Psychiatric Association, Anaheim, 1975.
- Beck, A.T. Depression: Clinical, Experimental and Theoretical Aspects. Philadelphia: U. Pennsylvania Press, 1967.
- Beck, A.T. Depression: Causes and Treatment. University of Pennsylvania Press, 1975.
- Beck, A., & Greenberg, R. Cognitive therapy with depressed women. In V. Franks and V. Burtle (Eds.). Women in Therapy, New York: Brunner/Mazel, 1974, 113-131.
- Beck, A.T., & Young, J.E. College Blues. Psychology Today, Sept., 1978, p. 80.
- Beck, A.T., Ward, C.H., Mendelson, M., Mock, J., & Erbaugh, J. An inventory for measuring depression. Archives of General Psychiatry, 1961, 4, 53-63.
- Beck, A.T., Ward, C.H., Mendelson, M., Mock, J.E. & Erbaugh, J.K. Reliability of psychiatric diagnoses: 2. A Study of consistency of clinical judgements and ratings. American J. Psychiatry, 1962, 119, 351-357.
- Bem, S.L. The measurement of psychological androgyny. Journal of Consulting and Clinical Psy., 1974, 42, 155-162.

- Bem, S.L. Sex-role adaptability: One consequence of psychological androgyny. Journal of Personality and Social Psychology, 1975, 31, 634-643.
- Bem, S.L., & Bem, D.J. Homogenizing the American woman: The power of an unconscious ideology. in P.Zimbardo & C. Maslach (Eds.) Psychology for our Times, Scott Foresman & Co., Palo Alto, California, 1977.
- Bem, S.L., Martyna, W. & Watson, C. Sex typing and androgyny: Further explorations of the expressive domain. J. of Personality and Social Psychology, 1976, 34, 1016-1023.
- Bernard, J. The Future of Marriage. New York, Bantam, 1973.
- Biaggio, M.K., & Nielsen, E.G. Anxiety correlates of sex-role identity. J. of Clinical Psychology, 1976, 32, 619-623.
- Blatt, S.J., D'Afflitti, J.P., & Quinlan, D.M. Experiences of depression in normal young adults. Journal of Abnormal Psychology, 1976, 85, 383-389.
- Broverman, I.K., Broverman, D.M., Clarkson, F.E., Rosenkrantz, P.S., & Vogel, S.R. Sex role stereotypes and clinical judgements of mental health. Journal of Consulting Psychology, 1970, 34, 1-7.
- Bumberry, W., Oliver, J.M., & McClure, J.N. Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. Journal of Consulting and Clinical Psychology, 1978, 46, 150-155.
- Calhoun, L.G., Cheney, T., & Dawes, A.S. Locus of control, self-reported depression, and perceived causes of depression. Journal of Consulting and Clinical Psychology, 1974, 42, 736.
- Cantril, H. The pattern of human concerns. New Brunswick, N.J. Rutgers University Press, 1965.
- Chesler, P. Women and Madness, Doubleday & Co., N.Y., 1972.
- Chevron, E.S., Quinlan, D.M., & Blatt, S.J. Sex roles and gender differences in the experience of depression. Journal of Abnormal Psychology, 1978, 87, 680-683.
- Clancy, K., & Gove, W. Sex differences in mental illness: An analysis of response bias in self-reports. American Journal of Sociology, 1974, 80, 205-217.

- Constantinople, A. Masculinity-femininity: An exception to a famous dictum? Psychological Bulletin, 1973, 80, 389-407.
- Costrich, N., Feinstein, J., Kidder, L., Marecek, J., & Pascale, L. When stereotypes hurt: Three studies of penalties for sex-role reversals. Journal of Experimental Social Psychology, 1975, 11, 520-530.
- Coppen, A., & Kessel, N. Menstruation and personality. British Journal of Psychiatry, 1963, 109, 711-721.
- Deutsch, C.J., & Gilbert, L.A. Sex role stereotypes: effect on perceptions of self and others and on personal adjustment. Journal of Counselling Psychology, 1976, 23, 373-379.
- Erdwins, C., Small, A., & Gross, R. The relationship of sex-role to self-concept. Journal of Clinical Psychology, 1980, 36, 111-115.
- Funabiki, D., Bologna, N.C., Pepping, M., & FitzGerald, K.C. Revisiting sex differences in the expression of depression. Journal of Abnormal Psychology, 1980, 89, 194-202.
- Gershon, E.S., Baron, M., & Leckman, J.F. Genetic models of the transmission of affective disorders. Journal of Psychiatric Research, 1975, 12, 301-317.
- Gershon, E.S., Bunney, W.E., Leckman, J.R., Eerdewegh, M., & De Bauche, B.A. The inheritance of affective disorders: A review of data and of hypotheses. Behavior Genetics, 6, 1976, 227-261.
- Gershon, E.S., Mark, A., Cohen, N., Belizon, N., Baron, M., & Knobe, K.E. Transmitted factors in the morbid risk of affective disorders: A controlled study. Journal of Psychiatric Research, 1975, 12, 283-299.
- Gove, W.R., & Tudor, J.F. Adult sex roles and mental illness. American Journal of Sociology, 1973, 78, 812-835.
- Gulanick, N.A., Howard, G.S., & Moreland, J. Evaluation of a group designed to increase androgyny in feminine women. Sex Roles, 1979, 5, 811-827.
- Hammen, C.L., & Padesky, C.A. Sex differences in the expression of depressive responses on the Beck Depression Inventory. Journal of Abnormal Psychology, 1977, 86, 609-614.

- Helmreich, R., & Stapp, J. Short forms of the Texas Social Behavior Inventory, an objective measure of self-esteem. Bulletin of the Psychonomic Society, 1974, 4, 473-475.
- Hyatt, P.M. Sex roles, self-esteem and depression. Unpublished paper, Simon Fraser University, 1979.
- Ivey, M.E., & Bardwick, J.M. Patterns of affective fluctuation in the menstrual cycle. Psychosomatic Medicine, 1968, 30, 336-345.
- Johnson, P. Women and power: Toward a theory of effectiveness. Journal of Social Issues, 1976, 32, 99-110.
- Jones, W.H., Chernovitz, M.E.O'C., & Hansson, R.O. The enigma of androgyny: Differential implications for males and females. Journal of Consulting and Clinical Psychology, 1976, 23, 373-379.
- Jourard, S.M. Self-disclosure and other-cathexis. Journal of Abnormal Social Psychology, 1959, 59, 428-431.
- Kidd, K.K., Reich, T., & Kessler, S. Sex effect and the single gene. Unpublished paper; cited in Gershon, E.S., Bunney, W.E., Leckman, J.F., Eerdewegh, M. and De Bauche, B.A. The inheritance of affective disorders: A review of data and of hypotheses. Behavior Genetics, 1976, 6, 227-261.
- Klerman, G.L. Clinical research in depression. Archives of General Psychiatry, 1971, 24, 305-319.
- Klerman, G.L. The age of melancholy, in Psychology Today, April, 1979, p. 36.
- Lewinsohn, P.M. A behavioral approach to depression. In: R.J. Friedman & M.M. Katz (Eds.), The Psychology of Depression: Contemporary Theory and Research, New York, John Wiley, 1974.
- Marecek, J. Psychological disorders of women: Indices of role strain. In I.H. Frieze, J.E. Parsons, P.B. Johnson, D.N. Ruble, & G.L. Zellman (Eds.) Women and Sex Roles. A Social Psychological Perspective. W.W.Norton and Company, Inc., New York, 1978.
- Mayo, P. Sex differences and psychopathology. In B. Lloyd & J. Archer (Eds.) Exploring Sex Differences. Academic Press, London, 1976.

- Mazer, M. People in predicament: a study in psychiatric and psychosocial epidemiology. Social Psychiatry, 1974, 2, 85-90.
- McLean, P. Therapeutic decision-making in the behavioral treatment of depression. In P.O. Davidson (Ed.) The Behavioral Management of Anxiety, Depression and Pain. New York: Brunner/Mazel, 1976.
- Melges, F.T. Postpartum psychiatric syndromes. Psychosomatic Medicine, 1968, 30, 95-108.
- Mendels, J. Depression: The distinction between syndrome and symptom. British Journal of Psychiatry, 1968, 114, 1549-1554.
- Mendlewicz, J., & Fleiss, J.L. Linkage studies with X-chromosome markers in bipolar (manic-depressive) and unipolar (depressive) illnesses. Biological Psychiatry, 1974, 2, 261-293.
- Miller, W.R., Rosellini, R.A., & Seligman, M.E.P. Learned helplessness and depression, in Psychopathology: Experimental Models, J.D. Mazer & M.E.P. Seligman (Eds.) W.H. Freeman & Co., San Fransisco, 1977.
- National Institute of Mental Health Statistics, U.S. Department of Health, Education and Welfare, 1965-1968.
- National Institute of Mental Health, Special Report: 1973. The depressive disorders. Prepared by S.K. Secunda, M.M. Katz, R.J. Friedman, & D. Schuyler, U.S. Department of Health, Education and Welfare; Health Services and Mental Health Administration, Publ. No. HE 20:2402: D44/4/973. Washington, D.C.: U.S. Government Printing Office, 1973.
- Nie, N.H., Hull, C.H., Jenkins, J.G., Steinbrenner, K. & Bent, D.H. Statistical Package for the Social Sciences, Second Edition, McGraw-Hill, 1975.
- Oliver, J.M., & Barkham, R. Depression in university students: Duration, relation to calendar time, prevalence, and demographic correlates. J. of Abnormal Psychology, 1979, 88, 667-670.
- Oliver, J.M., Croghan, L.M., & Katz, N.W. Prevalence of depression in freshmen and sophomores at four universities as measured in a random sample by the Beck Depression Inventory. cited in Bumberry, W., Oliver, J.M., & McClure, J.N. Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. J. Consulting and Clinical Psychology, 1978, 46, 150-155.

- Orlofsky, J.L., & Windle, M.T. Sex-role orientation, behavioral adaptability, and personal adjustment. Sex Roles, 1978, 4, 801-811.
- Paige, K.E. The effects of oral contraceptives on affective fluctuations associated with menstrual cycle. Psychosomatic Medicine, 1971, 33, 515-537.
- Parsons, T., & Bales, R.F. Family, Socialization, and Interaction Process. Glencoe, Ill.: Free Press, 1955.
- Paykel, E.S., Klerman, G.L., Prusoff, B.A.: Treatment setting and clinical depression. Archives of General Psychiatry, 1970, 22, 11-21.
- Phillips, L., & Rabinovitch, M.S. Social role and patterns of symptomatic behaviors. J. of Abnormal and Social Psychology, 1958, 57, 181-186.
- Price, J. The genetics of depressive behavior. In Coppen, A. & Walk, A. (Eds.) Recent Developments in Affective Disorders, British Journal of Psychiatry Special Publication No. 2, 1968.
- Prociuk, T.J., Breen, L.J., & Lussier, R.J. Hopelessness, Internal-external locus of control, and depression. Journal of Clinical Psychology, 1976, 32, 299-300.
- Radloff, L. Sex differences in depression: The effects of occupation and marital status. Sex Roles, 1975, 1, 249-265.
- Radloff, L.S., & Monroe, M.K. Sex differences in helplessness - with implications for depression. In L.S. Hansen & R.S. Rapoca (Eds.) Career Development and Counselling of Women. C.S. Thomas, Springfield, Ill., 1978.
- Radloff, L.S., & Rae, D.S. Susceptibility and precipitating factors in depression: sex differences and similarities. Journal of Abnormal Psychology. 1979, 88, 174-181.
- Ray, E.P., & Bristow, A.R. Sex-role identities in depressed women. Paper presented at the meeting of the Southwestern Psychological Association, New Orleans, La., April, 1978.
- Rogers, C.R. Client-centered therapy. Boston: Houghton Mifflin, 1951.
- Rosenthal, S.H. The involitional depressive syndrome. American Journal of Psychiatry, 1968, 124, 21-34.

- Scarf, M. Unfinished Business. Pressure Points in the Lives of Women. 1980, cited in The Vancouver Sun, Sat., Sept. 13, 1980.
- Seligman, M.E. Fall into helplessness. Psychology Today, 1973, 6, 43-48.
- Seligman, M.E.P. Helplessness. W.H. Freeman & Co., San Fransisco, 1975.
- Shainess, N. A re-evaluation of some aspects of femininity through a study of menstruation: A preliminary report. Comprehensive Psychiatry, 1961, 2, 20-26.
- Sherman, J.A. Social values, femininity, and the development of female competence. Journal of Social Issues, 1976, 32, 181-195.
- Silverman, C. The Epidemiology of Depression. The Johns Hopkins Press, Baltimore, 1968.
- Sommer, B. Menstrual cycle changes and intellectual performance. Psychosomatic Medicine, 1972, 34, 263-269.
- Spence, J.T., & Helmreich, R.L. Masculinity and Femininity: Their Psychological Dimensions, Correlates, and Antecedents. University of Texas Press, Austin, 1978.
- Statistics Canada, Mental Health Statistics, Volume 1, Catalogue 83-204, 1977.
- Stearns, B.C., Penner, L.A., & Kimmel, E. Sexism among psychotherapists: A case not yet proven. Journal of Consulting and Clinical Psychology, 1980, 48, 548-550.
- Stericker, A.B., & Johnson, J.E. Sex-role identification and self-esteem in college students: Do men and women differ? Sex Roles, 1977, 3, 19-26.
- Weissman, M.M., & Klerman, G.L. Sex differences and the epidemiology of depression. Archives of General Psychiatry, 34, 1977, 98-111.
- Wiggins, J.S., & Holzmuller, A. Psychological androgyny and interpersonal behavior. Journal of Consulting and Clinical Psychology, 1978, 46, 40-52.
- Williams, E.F. Notes of a Feminist Therapist. New York, N.Y. Dell Publishing Co., 1977.

- Winer, B.J. Statistical Principles in Experimental Design. New York, McGraw-Hill, 1962.
- Winokur, G. Depression in the menopause. American Journal of Psychiatry, 1973, 130, 92-93.
- Wolman, C., & Frank, H. The solo woman in a professional peer group. American Journal of Orthopsychiatry, 1975, 45, 164-171.
- Woodruff, R., Goodwin, D., & Guze, S.L. Psychiatric Diagnosis. New York, Oxford University Press, 1974.
- Yalom, I.D., Lunde, D.T., Moos, R.H., & Hamburg, D.A. "Post-partum Blues" syndrome. A description and related variables. Archives of General Psychiatry, 1968, 18, 16-27.