THE EFFECTS OF THE TRADITIONAL FEMININE PERSONALITY STEREOTYPE, ROLE DENSITY, AND ANXIETY ON WOMEN'S ILLNESS BEHAVIOR

by

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TABLE OF CONTENTS

CHAPTER PAGE

LIST OF TABLES

CHAPTER I

Introduction

Women vary in the number of illnesses they experience; they also vary in the way they react to symptoms of illness. The purpose of this study is to determine why these differences exist. More specifically, this study is concerned with the questions: (1) To what extent does a woman's identification with a traditional sexual stereotype influence her response to symptoms? (2) To what extent do the number and type of her societal roles influence her response to symptoms? (3) Is anxiety related to the traditional feminine personality stereotype and to societal roles in affecting women's illness behavior?

These three factors, sexual identification, conflicting role expectations, and anxiety have been implicated as influencing women's symptom responses by past research seeking to account for observed differences in health service utilization rates between men and women (Cole, P., 1974; Nathanson, 1975).

Consistently, women have been found to exhibit more illness behavior than men (Verbrugge, 1976). One explanation advanced for this finding is that it is culturally more acceptable for women to manifest illness behavior than for men. This suggests that the ethic of health is masculine and that women may be held to a lesser standard of health than men. It also suggests that women are stigmatized less than men for

departures from the state of health, and hence may be willing to exhibit deviance from that standard (Phillips & Segal, 1969). If this be the case, by extrapolation one might predict that women who identify strongly with the traditional feminine sex role stereotype would exhibit more illness behaviors than women who do not so identify.

A second explanation for differences among women in their responses to symptoms posits that a woman's illness behavior is largely determined by the extent to which it conflicts with her other role obligations (Nathanson, 1975). Supporters of this explanation note that most studies of women's health and illness behavior seem to indicate that women with more role obligations or greater "role density," as it is termed, exhibit less illness behavior than women with fewer role obligations, or lesser role density. Thus women with small children and women who are employed seem to engage in less illness behavior than women with fewer such responsibilities (Rivkin, 1972).

The relationship between anxiety and illness behavior has received much attention from investigators. Generally, it has been found that psychologically distressed persons use a disproportionately greater amount of medical services. The reasons for this relation remain unclear. Some have suggested that psychological distress increases one's susceptibility to illness, thereby increasing actual physiological disease (Hinkle & Wolff, 1957; Holmes & Raye, 1967).

It has also been suggested that psychological distress directly affects medical service utilization, in that persons who are having difficulty coping with problems attempt to alleviate their distress by seeking help through the medical care system (Tessler, Mechanic, & Dimond, 1976). Such persons have been termed the "worried well" (Garfield, 1970). Stress and the resulting anxiety viewed in this manner would result in more illness behavior even without any increases in actual physiologic disease. Anxiety has been further implicated in affecting women's illness behavior by way of interaction with the traditional feminine personality and through anxiety generated by women's societal roles.

The purpose of this study is to explore the relations of traditional feminine sexual identity, role density, and anxiety to women's illness behavior. Women with varying degrees of identification with the traditional female personality stereotype, differing degrees of role density, and differing levels of anxiety will be compared in terms of their self-reported response to several illness states and to health care utilization rates. Additionally, the possible relationships between anxiety and the factors of the traditional feminine personality stereotype and women's social roles will be explored, as they relate to women's illness behavior.

Review of the Literature

In the review of the literature to follow, the relation between the traditional feminine sexual stereotype and illness behavior will be explored. The relations between women's social roles and illness behavior will then be examined and, finally, the literature regarding the relations between anxiety and illness behavior will be considered.

Traditional Feminine Sexual Personality Stereotype, and Illness Behavior

"Frailty, thy name is woman," reads a famous line from Shakespeare's "Hamlet." Hamlet, of course, was speaking of his mother's moral weaknesses. It has been suggested, however, that Hamlet was not alone in believing that women are frail--not only in respect to their morality, but physically and mentally as well. Webster defines feminine as, "having qualities regarded as characteristic of women and girls, as gentleness, weakness, delicacy, modesty, etc." (1960). Barker (1953) states, "Particularly among men, illness is looked upon as a feminine characteristic" (p. 317).

Broverman, Broverman, Clarkson, Rosenkrantz and Vogel (1970) documented a "double standard" of health among mental health therapists. The clinicians' concept of a "healthy" male did not differ from that of a "healthy" adult. However, the typical "healthy" woman was likely

to be described as more submissive, less independent, less adventurous, more easily influenced, less aggressive, less competitive and more excitable in minor crises than the "healthy" male. Thus, the authors concluded, women were held to a less adult standard of mental health than were men.

Phillips and Segal (1969) believe that the ethic of health is masculine and that women are stigmatized less strongly than men for deviating from the normal adult standard of health. Stated another way, it is culturally more acceptable for women to have problems and to be more expressive about their difficulties. In support of this contention, Phillips and Segal found that, among men and women who had an equal number of physical symptoms, women were more likely than men to seek medical care and report emotional symptoms.

Greenberg and Fisher (1977) found that resistance to becoming a patient is linked to anxiety about being passive and controlled by others. Similarly, Phillips (1965) and Hammerschlag, Fisher, DeCosse, and Kaplan (1964) found that persons placing the strongest emphasis on self-reliance are the least likely to indicate a willingness to adopt the sick role. Women have traditionally been characterized as passive and dependent, whereas men have generally been thought to be more aggressive and self-reliant. To the extent that declaring oneself a patient signifies a form of passivity, it is perhaps the dimension of active versus

passive, in the traditional sexual stereotype, which lends credence to Barker's (1953) assertion that illness is a feminine characteristic.

Stanford psychiatry professor, Dr. Leo Hollister, (1977) in a lecture on the treatment of anxiety, has stated that women go to doctors and men go to bars. If, as some contend, it is more socially unacceptable for men to be passively nurtured as a patient (unless they are severely ill) then perhaps men have had to turn to other sources of help in times of trouble.

It appears that traditionally, illness behavior has been more expected of women and that women have tended to express symptoms more readily than men. The question again arises, to what extent does a woman's sexual identity influence her response to symptoms? Do women who strongly identify with the traditional constellation of feminine personality characteristics demonstrate more illness behavior than those who do not so identify? As women become more "liberated" in other spheres will they also become less expressive of health problems and demonstrate less illness behavior than at present?

The Relation Between Women's Social Roles and Illness Behavior

The relation of women's social roles to illness behavior has been considered by several investigators. Glaser (1970) attributes the increased hospitalization rates of

women in modern societies vis-s-vis traditional societies not only to the greater availability of hospitals but to the decreasing burden of household tasks and to fewer social restrictions as well.

Mechanic (1965) speculates that women's illness response patterns are influenced by their rather loosely defined family roles and responsibilities which may afford them the time to obtain bed rest when ill. He predicts that women with small children will respond differently from those without such time-consuming responsibilities.

Parsons and Fox (1952) emphasize the functional importance of the everyday roles in determining the tendency of women to adopt the sick role. They theorize that, since the mother has the major responsibility for the family's social-emotional well-being, her illness should be particularly stressful for the family.

Role Density

The concept of "role density" has been formulated by Rivkin (1972) to tap the compatibility of everyday role obligations with the sick role. The concept refers not only to the number of roles the individual enacts, but also to the relative salience of these roles for the individual, and the individual's expendability as role performer. Rivkin has identified a number of factors as influential in determining the role density of women--namely, employment,

marital status, the presence of chronic illness among family members, the number and age of children and the presence or absence of role substitutes for the mother. In Rivkin's opinion, most important of these was the number of young children in the home. Some support for this emphasis on the presence of young children as a measure of role density may be derived from Epstein (1970) and Lopata (1972).

Cynthia Epstein (1970) states that a woman's duties as mother override most other role obligations, her duties as a wife are second, and other status obligations are usually a poor third. Lopata (1972) asked housewives to list the roles of women in order of importance and found that the role of mother ranked first, followed by wife, housewife, care of family, community member, friend, daughter and finally obligation to self.

Role density has been implicated as affecting women's sick role adoption. Thus Rivkin (1972) hypothesized that the greater the role density, the less the tendency to adopt the sick role. As an example, a single woman, with young children and no substitute readily available, might continue to perform her functions as a mother despite symptoms, whereas another woman with no children might visit the doctor, engage in bed rest and medications, or otherwise exhibit sick role behavior.

Rivkin (1972) found that, in terms of social roles,

the women most likely to report being ill are: (1) women with less demanding family structures (older children and women not presently married) and (2) women who are not working. However, in examining alternative responses to illness among the sub-sample of women who reported some illness, Rivkin found evidence somewhat contrary to her hypothesis. She found that women with young children reported more disability days spent in bed than women with older children. Among unmarried women, those with children were more likely to have physician visits for their own health care than women with no children. Similarly, working women with children were also more likely to have physician visits than those without children.

Rivkin interpreted these findings as indicating that a woman with dense role responsibilities (children and working) will be more anxious about her illness, presumably because it creates more role conflicts, and thus will tend to enter the medical care system rather than prescribe for herself.

Two studies appear to support the contention that women with greater role density will exhibit less illness behavior than women with less role density. First, Cole and Lejeune (1972) found that welfare mothers with pre-school children were less likely to define themselves as in poor health than were welfare mothers with older children. Second, Geertsen and Gray (1970) reported that mothers of large families

including two or more pre-school children, were less likely to adopt the sick role than mothers with small families and with only one pre-school child.

Geertsen and Gray (1970) also noted that mothers expressing high "familism" attitudes consistently showed greater inclination to adopt the sick role than those expressing low "familism." (Familism was defined as the extent to which family members are expected to render mutual assistance in time of need.) The investigators concluded that the importance of the wife-mother role in affecting sick role behavior was directly related to the number of small children, to family size, and to perceived availability of others who may substitute in an emergency. They further concluded that women who experience the greatest difficulty in withdrawing from normal activities because of their many role responsibilities, will be least likely to adopt the sick role.

By contrast, Berkman (1969) failed to find that role conflict disinclines one to adopt the sick role. He found higher rates of physical illness among mothers without husbands than among married mothers. Spouseless mothers presumably experience high levels of role conflict in that they have many responsibilities and no husbands to help perform their roles in emergencies. Hence Berkman's finding may indicate that when the stresses of many role obligations are compounded, one may engage in more sick role behavior

rather than less.

Employee Role

Studies which have focused on specific roles other than the parental role have identified the roles of employee and wife as influencing illness behavior in women. Employment appears to exert the most positive effect on women's illness behavior of any variable identified above, although this effect is modified by women's other roles of parent and wife.

Marian Rivkin's (1972) study of female responses to illness indicated that employed women reported less morbidity, fewer disability days, and less anxiety than women who did not work outside the home. Similarly, Feld (1963) found that employed mothers reported fewer physical symptoms than did housewives.

However, Myrdal and Klein (1956) cite two studies in which employed married women, especially those with children, appeared to manifest a much higher rate of absenteeism from work than single women. In one study, the higher rate of absenteeism among married women was attributed to women's staying home because of health problems of their husband and children. The married women actually had a lower rate of personal illness than did single women.

In contrast to the above studies, Myrdal and Klein (1956) cite a third which reported a higher rate of illness among married women teachers in Sweden than among unmarried teachers.

In explanation, it was speculated that married women had husbands and/or servants to look after them when they were ill.

Wife Role

Some differences in illness behavior among women have been attributed to their marital status and to satisfaction with this status. Married women report themselves to be healthier than separated or divorced women, according to a study by Renne (1971). However, unhappily married women tend to perceive themselves as less healthy than separated or divorced women. Rivkin (1972) also found lower reported morbidity among married women than among either single or once-married women.

Mortality differences between never-married and once-married women have been analyzed by Zalokar (1960). She concluded that the favorable mortality rates of married women may be primarily related to the disinclination of ill persons to marry. She further noted that once-married women appear to be more susceptible than never-married women to certain cardiovascular diseases as well as to diabetes and cirrhosis of the liver, suggesting the possibility of adverse environmental factors in marriage.

Gove (1972) compared rates of mental illness by sex and marital status and concluded that, in terms of mental illness, marriage is more protective or advantageous to

men than to women. However, he did find that married women have lower rates of mental illness than single women and attributed this difference to both the protective effect of marriage and to the selective processes which keep unstable persons from marrying.

Somewhat contrary to Gove's (1972) assertion that stresses within the housewife role make marriage less protective of women's mental health than men's, a study by Meile, Johnson and St. Peter (1976) suggests that socioeconomic factors interact with marital status to produce a relatively high prevalence of mental illness among women.

In summarizing the data available regarding the influence of social roles on women's illness behavior, much of the literature suggests that women with young children, employed women, and women with satisfactory marriages may be less inclined than their counterparts to engage in illness behavior. The literature further suggests that mothers of small children and employed women engage in less illness behavior than women with fewer roles because illness behavior is incompatible with their other role obligations.

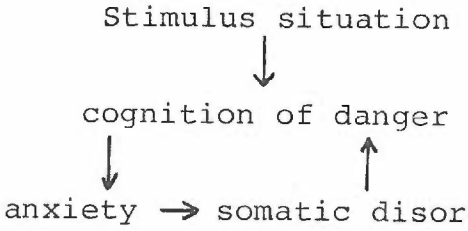
However, one study suggests the possibility of a curvilinear relationship between role density and illness behavior. In other words, when a woman's role obligations or her role density is greatly increased, she again engages in more illness behavior, because her capacity to cope with the demands of the various roles interacts with role density to cause a new increase in illness behavior.

The Relations Among Anxiety, Illness Behavior, Feminine Personality Stereotypes and Women's Roles

Anxiety is the third factor to be considered as contributing to women's illness behavior, either directly or through its relations to the traditional feminine personality stereotype or women's social roles. The review of the literature to follow will describe (1) the relation of anxiety to illness behavior; (2) the relation of anxiety to the traditional feminine personality stereotype; and (3) the relation of anxiety to womens' roles.

Anxiety and Illness Behavior

Beck (1972) has developed a model of psychosomatic illness which views illness as a consequence of anxiety. In his model, anxiety is seen as a cause of somatic disorders which then feed back danger signals which, in turn, produce further anxiety.



Selye (1976), and Holmes and Rahe (1967) have also implicated stress and the resulting anxiety as causing or increasing susceptibility to illness.

The latent function of medical care in meeting the needs of psychologically distressed persons has been studied

by Tessler, Mechanic, and Dimond (1976). They found a positive relation between distress and physician utilization, which persisted even when factors such as health status, propensity to use services, and attitudes receptive to the use of physicians' services were controlled.

Two other studies which focus on illness and anxiety in women should be mentioned. Goldstein (1964) compared 21 chronically anxious women with normal subjects and found that anxious women differed significantly on measures of muscle tension and autonomic responses of blood pressure, respiration and heart rate. She concluded that chronically anxious persons differ physiologically from people who normally function at lower levels of anxiety. Nemhoff (1954) found that pain reactivity in female subjects was a positive function of anxiety. He concluded that psychological insecurity was directly related to one's pain threshold.

If one can accept for the moment the proposition that anxiety may indeed result in increased illness behavior, then it follows that an inquiry into the sources of anxiety in women may further elucidate some of the factors which influence women's illness behavior.

The Relation of Anxiety to the Traditional Feminine Personality Stereotype

Some believe that women are inherently vulnerable to mental disorders. Freud (1933/1965) seemed to imply this

in his lecture entitled, "The Psychology of Women," wherein the theory of penis envy is discussed. "The anatomical distinction between the sexes must, after all, leave its mark in mental life . . ." The study previously mentioned by Broverman et al. (1970) seems to indicate that some psychotherapists believe that women are seldom capable of achieving the degree of mental health attained by men.

The Relation of Anxiety to Women's Roles

In contrast to the above view of the source of women's anxieties, Gove (1972) and others (cf. Bernard, 1971; Epstein, 1970), attribute women's discontent to the frustrations inherent in their social roles. They contend that women's traditional sex roles are conflictual and tension-producing, and that this tension results in psychosomatic symptoms among women who internalize their frustrations rather than blame the external social structure.

Komarovsky (1946), Epstein (1970), and Bernard (1971) have written extensively about the contradiction and conflicts inherent in the traditional feminine sex role. The problem of job discrimination, the society's encouragement of achievement but discouragement of women's competing against men, and the dependence of women upon men for economic and social status, are cited as some of the sources of women's discontent. The focus in their writings is primarily upon conflicts between women's various roles of mother,

wife, and worker.

Rene Levy (1976) studied psychosomatic symptoms and feminist protest attitudes as alternative reactions to structural tensions inherent in the traditional family role settings. Psychosomatic symptoms were found to emerge with the greatest frequency in instances where women living in traditional role settings (where household tasks were allocated according to traditional sex stereotypes) held norms that legitimated their situations.

In summary, the literature reviewed above has dealt with anxiety as a causative factor both in illness behavior and actual illness. The sources of anxiety have been attributed to the alleged inherent susceptibility of women to mental disorders and to the stress associated with women's societal roles.

In conclusion, this review of the literature may be summarized by the following statements: (1) Illness behavior is more compatible with the traditional feminine personality stereotype than with the traditional masculine personality stereotype. (2) The societal roles of wife, parent, and employee affect the frequency and type of illness behavior exhibited by women. (3) Anxiety is associated with illness behavior. The sources of anxiety among women remain unclear. Both inherent susceptibility to mental disorders resulting from women's patterns of psychosexual development and stress resulting from their societal roles have been implicated as

being major sources of anxiety among women.

Statement of the Problem

The general purpose of this research is to explicate why some women engage in illness behavior and use medical services more than other women. Since it has been stated that women are more expressive of their problems than men and that illness behavior is more consistent with the feminine sexual stereotype than with the masculine sexual stereotype, the present investigator was interested in determining if women who strongly identify with the traditional feminine sexual stereotype have a greater tendency to enter the sick role than those who do not so identify.

It has also been hypothesized that reacting to symptoms of illness by assuming the sick role is more compatible with women's other role obligations than with men's other role obligations. This suggests that women with dense role configurations would be less likely to assume the sick role than those with fewer responsibilities.

This study is intended to test these alternative hypotheses in order to discover the relative strength of the factors of role density and sexual identification in their ability to influence illness behavior.

The third area of interest concerns the effect of anxiety on illness behavior and the possible relation of anxiety to women's roles and to the traditional feminine

personality stereotype in affecting women's illness behavior.

As was stated earlier, both an inherent susceptibility to mental disorder and the frustrations inherent in women's societal roles have been implicated as sources of anxiety for women. Despite the ambiguity of the literature as to the sources of women's anxiety, it seems worthwhile to explicate the relations among women's anxiety levels, their illness behavior, their identification with the traditional feminine personality stereotype, and their societal roles. More specifically, the investigator is interested in learning; (1) Will women with high scores on a measure of anxiety report a greater tendency to respond to symptoms of illness than women with low anxiety scores? (2) Do women who strongly identify with the traditional feminine personality stereotype experience more anxiety than women who do not so identify? (3) Do women with high role densities, those that combine several roles, experience more anxiety than women with low role densities? (4) Does anxiety act as an intervening variable between women's role densities and the traditional feminine personality stereotype in affecting women's responses to symptoms of illness?

In order to evaluate the relative influence of sexual identity, societal roles, and anxiety on women's responses to symptoms of illness, the relations between measures of these psychological and sociological variables and four

indicators of women's illness behavior are examined in this study.

Hypotheses

Three hypotheses have been formulated on the basis of information obtained through the review of the literature.

(1) Women who strongly identify with the traditional feminine personality stereotype will report a greater tendency to engage in illness behavior than women who weakly identify with the traditional feminine personality stereotype.

(2) Women with greater role density will report a lesser tendency to engage in illness behavior than women with lower levels of role density.

(3) Women with higher levels of anxiety will report a greater tendency to engage in illness behavior than women with lower levels of anxiety.

Justification for the Study

In the United States, women consume the largest proportion of health care services, averaging about 50% more doctor visits each year than men (U.S.D.H.E.W. 1975). In apparent contradiction of women's unfavorable morbidity rates, women live an average of 7.4 years longer than men.

The complexity of the female reproductive system may partially account for the difference in utilization rates between men and women. Need for contraception, cervical

and breast cancer screening, menstrual disorders, infections of the reproductive system, and perinatal care may bring many relatively healthy women to the physician's office. Yet even when all conditions relating to the reproductive system are excluded from computations, women persist in showing higher rates of illness behavior (Nathanson, 1975; Lewis, 1977).

Despite the fairly extensive research on women's utilization of health services and their biological basis, relatively little is known about the social and psychological determinants and modifiers of women's illness behavior which appear to account for some of the difference in utilization rates among women and between men and women.

With the impending advent of some form of national health insurance, accurate prediction of health care costs and utilization becomes imperative. Accuracy of these predictions may be greatly enhanced if social and psychological determinants and modifiers of illness behavior can be identified. Women's societal roles, and perhaps even their traditional feminine stereotypes are changing. If, as is suggested by the literature, these factors do affect women's illness behavior patterns, knowledge of the extent and direction of their effects will assist in predicting future trends of utilization of health care resources by women.

Additionally, the study may yield information about which societal roles and constellations may be more problematic

for women, in that they are conducive to illness or illness behavior. Information of this nature is greatly needed at a time when women are assessing their place in society and considering alternative roles. Furthermore, such information may suggest resources more appropriate and effective than physicians' offices for women whose role obligations become problematic.

CHAPTER II

Methods

Subjects and Setting

The subjects for this study were women who were members of Cascade Health Care, a pre-paid comprehensive health care system located in Portland, Oregon. It provides health care for approximately 9,000 persons. Of these persons, nearly 4,460 (one-half) are enrolled as members of various employer group plans ranging from employees of the State of Oregon, Multnomah County and the City of Portland; students of Multnomah School of the Bible, Western Baptist Seminary, Mt. Hood Community College, and Portland Community College; members of the Legal Aid Society and Multnomah Bar Association; employees of Portland Adventist Hospital; and members of the Teamsters' and Butchers' Unions. Approximately 3,000 subscribers to the health plan are considered medically indigent and their premiums are subsidized by the federal government through the Family Health Center plan or Project Health. Additionally, about 1,200 fee-for-service patients receive medical care from Cascade Health Care.

Out-patient services are provided at two clinic locations in Southeast Portland. Patients requiring hospitalization are admitted either to Portland Adventist Hospital

or Providence Hosptial.

The criteria for inclusion in this study were as follows: only Caucasian women between the ages of 20 and 45 years were eligible. In order to control the effect of economic factors on illness behavior, only women enrolled under a union or employer group were selected, whereas those whose care was subsidized by the government were eliminated.

Design and Procedure

The design of the present study is correlational and comparative. The aim of the study is to explore relations between illness behavior and role density, sexual identification, and anxiety.

From a pool of approximately 700 women meeting the age and economic criteria, 100 women from the patient population of Cascade Health Care were selected to participate in the study, by means of a table of random numbers. A second random sample of 100 was drawn in order to provide substitutes for subjects in the first sample who refused to participate or whose responses were incomplete. The goal was to obtain a completed sample size of 100 women.

Each selected person received a letter and numbered questionnaire stating that she had been chosen as a subject for a study of women's illness patterns. The letter informed the subject of the nature of the participation desired,

namely that it would involve completion of an enclosed questionnaire requiring approximately 30 minutes of her time. Those who did not respond within two weeks were contacted by telephone to ascertain their willingness to participate in the study. Those who declined to participate in the study or who failed to return the questionnaire after being contacted by phone were replaced by subjects drawn from the second random sample.

Data and Data Gathering Instruments

The data for this study were obtained through the use of patient records and a self-administered questionnaire. The questionnaire included three instruments: Spence's short version of the Personal Attributes Questionnaire (1974), Spielberger's Trait Anxiety Instrument (1970), and Mechanic's Response to Illness Questionnaire (1965)). It also included a general information sheet providing descriptive data on the sample. (See Appendix B for copy of total questionnaire.)

Measurement of the Dependent Variable

Four measures of illness behavior were used in this research. First, Mechanic's (1965) Measure of Response to Illness was selected since it has been widely employed as a measure of one's tendency to adopt the sick role. The respondent is asked what she would be most likely to do in four hypothetical illness situations. For each situation

the respondent can choose among four different responses or any combination of responses. Mechanic reported that the measure appears to have some validity and reliability in that, of subjects with high scores (18-32), 55% were frequent users of a health service, whereas only 30% of subjects with low scores used a health service with similar frequency. (See Appendix C for copy of instrument and scoring key.)

Two additional measures of illness behavior were obtained from the patient's medical records: total number of office visits, and number of visits initiated by the patient. The counting of patient-initiated visits was patterned after the method used by Tessler, et al. (1976) wherein visits for diagnosis and treatment of symptoms were counted only if the medical record gave no indication that the visit had been suggested by a physician at the time of a previous consultation. Tessler et al. suggested that this measure was more sensitive than total visits to patient behavioral variables. In the present study it also served to eliminate the frequent pre-natal visits recommended by the physicians, which greatly increased the number of women's office visits in this study.

A fourth measure of the dependent variable consisted of the patient's response to questions regarding the number of health-related visits made both within the pre-paid system and outside the system during the prior 12 months. This measure was added as a check on the accuracy of medical

records as assessments of the patient's total illness behavior. Medical records cover only visits within the system, and fail to reflect the number of visits made to physicians outside the Cascade Health Care System and to alternative health care providers such as naturopaths and chiropractors.

Measurement of the Independent Variables

To estimate identification with the traditional feminine sexual stereotype, Spence's Personal Attributes Questionnaire-(Short Version) was selected (Spence, Helmreich, & Stapp, 1974). Earlier established measures of femininity, such as the M-F scale of the Minnesota Multiphasic Personality Inventory and the Terman-Miles' Attitude Interest Analysis Test, have recently come under attack. (See Constantinople's, 1973, review of psychological masculinity-femininity tests.) These earlier tests conceptualized masculinity and femininity as end-points of a single bi-polar continuum, with most men falling at one end and most women at the opposite end. The test of validity of these measures has been their ability to distinguish between homosexuals and heterosexuals, and between males and females.

A more recent tendency has been to move toward an alternate conceptualization suggested by Constantinople, which is that masculinity and femininity are separate dimensions, each present in varying degrees in both men and women.

Bem (1975), Block (1973), and Spence et al. (1973) have supported this conceptualization of masculinity and femininity. Utilizing this bi-dimensional perspective, Bem constructed a measure of "androgyny" connoting a balance of both masculine and feminine traits within one's personality.

Spence, et al. (1974) devised a similar scale, the Personal Attributes Questionnaire (PAQ) using descriptors from the Sex Role Stereotype Questionnaire of Rosenkrantz, Vogel, Bee, Broverman, and Broverman (1968). Spence et al. refined the definition of androgyny to mean the possession, to a high degree, of both masculine and feminine traits, rather than a simple balance between the traits within an individual. In Spence's measure, items valued as feminine consist predominantly of expressive characteristics, while items valued as characteristically masculine are more instrumental in nature. This is consistent with the constructs of masculine-instrumental and feminine-expressive roles, as formulated by Parsons and Bales (1955).

The short version of Spence's Personal Attributes Questionnaire, as used to measure masculinity-femininity, consists of 16 bi-polar attributes which are presented on a five-point scale. Subjects are asked to rate themselves in terms of these personality characteristics. Each subject receives a masculinity score, which may vary from 0 to 32 (32 representing the most masculine response) and a femininity

score which may also vary from 0 to 32, with 0 representing the most feminine responses. (See Appendix D for copy of instrument and scoring key.)

According to Spence et al. (1974), the scales show satisfactory internal reliability, with Alpha coefficients of .73 and .91 for men and women, respectively. A second analysis of internal consistency involved part-whole correlations computed between each item and the sub-scale to which it was assigned. Within each sex, items tended to correlate satisfactorily with the individual's "masculinity" or "femininity" as reflected in his or her over-all score.

Reliability as determined by the test-retest method was adequate. Correlation coefficients of .80 and .91 were obtained for men and women respectively, between initial scores and scores upon retest, 13 weeks later.

In regard to the validity of this measure, the influence of social desirability on responses to the PAQ was determined by use of the Marlowe Crown Social Desirability Questionnaire. Correlations between the PAQ and the Social Desirability Questionnaire were of low magnitude, the highest being .36 on female-valued items as rated by female respondents.

Several relations between the Spence PAQ and other indices of effective functioning have been found. Highly significant positive correlations between masculinity and self-esteem were also found in both men and women.

A finding that androgynous persons (persons who score high on both masculinity and femininity) manifest lower incidence of childhood illness has also been reported (Spence et al. 1973).

Measure of Role Density

Since it was hypothesized that women with greater role density would report less tendency to respond to symptoms of illness than women with less role density, it was necessary to construct a measure of role density. Twenty female employees of Cascade Health Care, who were not potential study subjects, were asked to participate in ranking all possible role combinations of marital status, employment status, presence of children in the home, and presence of pre-school aged children, in order of decreasing responsibility of the women involved. The rank numbers, as assigned by the 20 women, were averaged. The results of the ranking of the 16 role combinations, from the greatest responsibility to the least, were as follows:

(1) employed, unmarried, pre-school and school-aged children
(2) employed, married, pre-school and school-aged children
(3) employed, unmarried, pre-school children
(4) employed, unmarried, school-aged children
(5) non-employed, unmarried, pre-school and school-aged children
(6) employed, married, pre-school children
(7) employed, married, school-aged children

(8) non-employed, unmarried, pre-school children

(9) non-employed, married, pre-school and school-aged children

(10) non-employed, unmarried, school-aged children

(11) non-employed, married, school-aged children

(12) non-employed, married, pre-school children

(13) employed, married, no children

(14) employed, unmarried, no children

(15) non-employed, married, no children

(16) non-employed, unmarried, no children

On the basis of information obtained on the General Information Sheet, a role density score of 1 (most dense) to 16 (least dense) was assigned to each subject.

Measure of Anxiety

Spielberger's Trait Anxiety Index (Spielberger, Gorsuch, & Luchshene, 1970) was chosen to measure anxiety. Anxiety trait refers to a relatively stable personality characteristic which reflects an individual's tendency to perceive situations as threatening. Those who are highly anxious, as measured by the Spielberger Trait Anxiety Index, should react to a wider range of situations as dangerous or threatening. The Index is a 20 item rating scale. Scores range from 20 to 80, with higher scores indicating greater anxiety.

Validity of the Spielberger Trait Anxiety Index was demonstrated by moderately high correlations with established measures of anxiety. Reliability as measured by test-retest

correlations were reasonably high, ranging from .73 to .86 (Spielberger, 1970).

Instructions on the Trait scale require that the examinee report how she generally feels. It has been demonstrated that anxiety trait scores reflect relatively static individual differences that are unresponsive to situational stress. (See Appendix E for a copy of the instrument and scoring key.)

Additional Data

Questions regarding the subject's date of birth, last grade completed in school, racial background, marital status, employment status, and the number and ages of children living in the home were included on the general information sheet of the questionnaire. The subject's type of work or, if not employed, the husband's type of work was requested so that an estimation of the subject's socio-economic status could be made, according to the Duncan-Reiss estimate of Occupational Prestige (NORC Transformation). In cases where the occupation of both the woman and her spouse were known, the occupation having the highest prestige was used.

In addition to the above background data, the subjects were also asked, "Who takes over household responsibilities when you are ill?" in order to determine if the presence of household help influenced the subject's illness behavior.

Analysis of Data

The first step in the data analysis was to examine the intercorrelations of the various measures of illness behavior in order to assess both their independence and the extent to which they measure similar dimensions of illness behavior. The second step was to determine the amount of association of each independent variable with each dependent variable. The third step was to assess the relative predictive power of each independent variable with reference to each of the dependent variables, and also to estimate their combined effects. The technique of multiple regression analysis was used for this purpose. It should be noted that not all of the assumptions of regression analysis were met, such as normal distributions, equal variances, and linear relationships between variables; therefore, the exploratory nature of this portion of the study must be emphasized (Gardner, 1975; Labovitz, 1967, 1971; Mayer, 1971).

CHAPTER III

Results and Discussion

Description of the Sample

The sample included 100 Caucasian women between the ages of 26 and 45, with a mean of 30.9 years. The education level of the women ranged from 9 to 19 years, with a mean of 14.6 years. Seventy-two of the 100 were employed at least part-time. Seventy-six were married.

Sixty-four of the women had children living in the home. The number of children ranged from one to seven, with most mothers having two children. Forty mothers had children of pre-school age. Twenty women reported having no help with household responsibilities when ill. The sample included women with socioeconomic indices ranging from 10 to 93 with a mean of 50.9, indicating a largely middle class population.

Findings Regarding the Independent Variables

The role density score, the measure used to determine which women held the most responsibilities, ranged from 1 to 16, with a mean of 9.6. (See Table 1.) This value corresponds with the level of responsibility experienced by a woman who is married, non-employed, and the mother of both school-aged and pre-school children. (Note that the lower scores signified the greater number of responsibilities.)

Table 1: Range of Scores of the Major Independent Variables (n=100)

Independent Variables	Low Scores	High Scores	Mean Scores	Standard Deviation
Role Density	1	16	9.6	4.1
Anxiety	20	69	36.6	9.5
Femininity	1	19	8.5	4.1
Maxulinity	11	31	19	4.6

The anxiety score, as measured by Spielberger's Trait Anxiety Inventory, ranged from 20 to 69, with a mean of 36.6 and a standard deviation of 9.5. These data correspond closely to Spielberger's data for female college undergraduates, with a mean score of 38.2 and a standard deviation of 9.14, and indicate that the study sample was a relatively non-anxious group.

The femininity score, derived from Spence's short version of the Personal Attributes Questionnaire, ranged from 1 to 19, with an average score of 8.5. The distribution was highly skewed toward high femininity, in that scores could, in principle, range from 0 to 32, with lower values signifying greater femininity. This may have been due, in part, to the influence of social desirability on the responses to feminine items. The masculinity score, also derived from Spence's measure, ranged from 11 to 31, with an average score of 19. (Higher scores denote a greater degree of masculinity.)

The subject population was split at the median on both the masculinity and femininity scales, and cross-classified into four groups: (1) high feminine-high masculine (androgynous); (2) high feminine-low masculine; (3) low feminine-high masculine; (4) low feminine-low masculine. These categories differentiate among those scoring low on the characteristics of one sex but not of the other sex, and those scoring high on the characteristics typical of both sexes.

Table 2: Distribution of Femininity-Masculinity Categories in Spence's Sample and in Sample of Present Study

Femininity-Masculinity	Distribution by Percentage Present Sample (N=100)	Spence's Sample[a] (N=270)
High Feminine-High Masculine	25%	29.6%
High Feminine-Low Masculine	28%	38.5%
Low Feminine-High Masculine	17%	11.1%
Low Feminine-Low Masculine	30%	20.7%

[a]Spence, et al. (1974) Table 8.

In Table 2, the four-fold distribution for this sample may be compared with the distribution of Spence's sample. It may be seen that in both samples, the least common category is that which conceptually represents cross-sex typing (high masculine-low feminine women.) However, Spence's sample contained a greater proportion of women with high feminine-low masculine scores and a smaller proportion of undifferentiated women (i.e. those possessing few characteristics of either sex.)

Descriptive Data on Measures of Illness Behavior

As previously described, the dependent variable of illness behavior was operationalized in the following four ways: (1) number of clinic visits recorded in the medical record; (2) number of patient-initiated clinic visits recorded in the medical record; (3) number of appointments with health care providers as reported by patients; and (4) Mechanic's Response to Illness Questionnaire. Table 3 presents mean scores and ranges on these measures. It may be noted that the mean number of office visits per year, as reported by the patient, was 4.3, which is less than the national average of 6.3 physician visits per year for women between 25 and 45 years of age (U.S.D.H.E.W., 1975). Tessler et al. (1976) obtained a mean of 2.4 self-reported visits. In the present sample, examination of the medical records revealed a mean of 3.0 patient-initiated visits, and a mean of 4.0 total office visits per year. Tessler's sample subjects made 2.1

Table 3: Range of Scores of Sample on the Dependent Variables (N=100)

Dependent Variables	Low Scores	High Scores	Mean Scores	Standard Deviation
No. of Appt. Initiated by Subject	0	30	3.0	3.5
No. of Appt. in Medical Record	0	18	4.0	3.6
No. of Appt. Reported by Subject	0	30	4.3	5.0
Mechanic's "Response-to-Illness" Measure	4	27	13	4.6

Table 4: Intercorrlation of Dependent Variables: Pearsonian Coefficients(N=100)

Dependent Variables	No. of Appt. Initiated by Subject	No. of Appt. in Medical Record	No. of Appt. Reported by Subject	Mechanic's "Response to Illness" Measure
No. of Appt. Initiated by Subject				
No. of Appt. in Medical Record	.398*			
No. of Appt. Reported by Subject	.126	.506*		
Mechanic's "Response to Illness" Measure	-.020	-.048	-.078	

* $p < .001$

office visits per year, according to the medical record.

The intercorrelations of the dependent variables are presented in Table 4. From the relatively low magnitudes of the correlation coefficients it is obvious that the measures of illness behavior are not redundant, nor truly interchangeable. They measure different phenomena. The two measures of illness behavior most strongly related were the number of appointments noted in the medical record, and the number of appointments reported by the subjects ($r=.506$, $p<.001$).

The next strongest relation existed between the number of clinic visits noted on the medical record and number of patient-initiated visits ($r=.398$). The measure, number of patient-initiated visits was included in this study since Tessler suggested it might be a more sensitive indicator of patient behavioral variables, such as anxiety and willingness to seek help for problems, than total number of clinic visits. However, in this research, patient reports of the number of appointments may have been a more sensitive indicator of behavioral variables. This possibility was suggested by the finding that, in some cases the number of visits noted on the medical record were exceeded by the health care provider visits reported by the patients. Further inquiry revealed that this discrepancy was most often due to individuals' seeking mental health counseling outside the pre-paid health care system.

Mechanic's measure showed no association with other measures of illness behavior, suggesting that patients' responses to hypothetical illness situations may not be predictive of their actual behavior when symptoms are present. Thus, the present findings represent a challenge to the validity of Mechanic's instrument.

In summarizing the findings regarding the four measures of illness behavior, it may be stated that, in the present study, patient's reports of clinic visits closely reflected actual behavior as documented in clinic records. In this study, patient-initiated visits did not provide additional predictive information regarding women's illness behavior. Mechanic's Measure of Response to Illness which purports to measure one's tendency to assume the sick role, did not, in fact, prove to be an accurate predictor of clinic visits in the present study.

In the discussion to follow, major reliance will be placed on two variables, the number of visits recorded in the medical record and number of health care provider visits reported by the patients, since these appeared to be the most direct measures of illness behavior.

The Feminine Personality Stereotype and Illness Behavior

The first hypothesis states that women who strongly identify with the traditional feminine personality stereotype will report a greater tendency to engage in illness

behavior than women who weakly identify with the traditional feminine personality stereotype. It can be seen from Table 5 that no significant correlations exist between femininity, as measured by Spence's Personal Attributes Questionnaire, and any of the measures of illness behavior. Thus the first hypothesis was not supported.

A Chi-square median test revealed no significant differences between the illness behavior of androgynous women and other women. This finding does not support the conclusion advanced by Spence et al. (1973) that androgynous persons function more effectively than others. They based their conclusion on their findings that androgynous persons compared favorably with others on a number of indices of personal and social effectiveness, among which was the finding that androgynous persons reported a lower incidence of childhood illness.

It is interesting to note that the masculinity rating of subjects in this study was significantly and negatively correlated with the two major measures, namely, number of appointments noted in the medical records ($r=-.211$), and number of appointments with health care providers as reported by patients ($r=-.171$).

As mentioned earlier, recent investigators have suggested that masculinity and femininity are not mutually exclusive personality traits, but are separate dimensions which may both be present to a varying degree in men and women (Bem, 1975;

Table 5: Selected Demographic, Social, and Personality Correlates of the Four Measures of Illness Behavior in Women

Independent Variable	No. of Appt. Initiated By Subject	No. of Appt. in Medical Record	No. of Appt. Reported By Subject	Mechanic's Response to Illness Measure
Age	-.006	-.076	-.038	-.075
Education	-.201*	-.125	.039	.139
Help when Ill	-.143	.180*	.162	.040
Role Density	.072	-.095	-.198*	.103
Masculinity	.001	-.211*	-.171*	-.039
Femininity	-.064	-.141	-.068	-.108
Anxiety	-.084	.152	.214*	.010

*p <.05

Block, 1973). If this conceptualization is accurate, then perhaps it is not the variation in femininity, but the variation in masculinity which may partially account for both differences among women and differences between men and women in their propensity toward illness behavior. Stated another way, a woman may possess many of the traditional feminine traits and still not engage in illness behavior, for it will be the degree to which she simultaneously possesses masculine personality traits which will determine her tendency to engage in illness behavior.

The historical association of femininity to illness behavior, noted in past literature is understandable in view of the conceptualization, until recently, of femininity and masculinity as opposite ends of a single bipolar scale. However, the findings of this study suggest that the statement of Phillips and Segal (1969) that the ethic of health is masculine, is more accurate than Shakespeare's poetic proclamation, "Frailty, thy name is women."

Role Density and Illness Behavior

The second hypothesis states that women with greater role density will report a lesser tendency to engage in illness behavior than women with lower levels of role density. Table 5 shows significant inverse correlation of role density with the patient's report of the number of her health care provider visits ($r=-.198$). In other words, the more responsibilities a woman had, the greater number of contacts she reported with health care providers. The number

of appointments recorded in the medical record did not show a significant correlation with role density, but the relationship between them was in the same direction as numbers of health care provider visits reported by patients (r=-.095). The findings, then are opposite to the predicted relationship, and the second hypothesis must be rejected.

In that role density is comprised of four components, (marital status, presence of children, presence of pre-school children, and employment status) it was decided to analyze the effects of each separate component, as well as the effects of pre-natal visits, on the measures of illness behavior. This was done by means of multiple regression analysis. The presence of pre-school children had a significant positive effect on the number of clinic visits recorded in the medical record (r=.408), but not on the number of visits reported by the patients (r=.130).

Employment, marital status, and presence of children of all ages in the home did not prove to be significant factors in influencing either numbers of appointments recorded in the medical record or the number of appointments to health care providers reported by the patients. It might be noted that pregnancy was far more important than the components of role density in influencing the number of clinic visits (r=.580), accounting for 34% of the variance of the number of appointments recorded in the medical record.

The findings of the present study are contrary to those

reported by Cole and Lejeune (1972), and Geertson and Gray (1970), who suggest that employment and the presence of small children in the home disincline one to engage in illness behavior. The present study does, however, support Rivkin's speculation (1972), that women with dense role responsibilities will be more concerned about their illness, because of greater role conflicts, and will therefore tend to utilize the medical care system rather than attempt self-treatment.

As an alternative explanation for the findings, perhaps the mother of young children, the arranger of health services for her family, has become quite familiar with the medical care system because of the numerous perinatal, well-child care appointments, and appointments for her children's illnesses (Lewis, 1977). Thus she may have a greater tendency to seek care for her own illnesses via a physician than someone who has not previously established a relationship with a health care provider.

Geerston and Gray have observed that the perceived availability of an alternate who may substitute in case of illness affects one's inclination to adopt the sick role. This observation was supported by the finding, in the present study, that those who had help with household responsibilities when ill were more likely to have a greater number of clinic appointments than those who did not have help (r=.180).

Anxiety and Illness Behavior

The third hypothesis stated that women with high levels of anxiety will report a greater tendency to engage in illness behavior than women with low levels of anxiety. In Table 5, it may be seen that anxiety correlated with illness behavior only in the measure of the number of health care provider visits reported by patients (r=.214). As stated earlier, the stronger relationship between anxiety and this measure than between anxiety and number of visits on the medical record (r=.152) may be due to the fact that patients tended to seek mental health therapy outside the Cascade Health Care System.

It was further questioned whether anxiety interacted with social roles or identification with the traditional feminine personality stereotype in affecting women's illness behavior. Anxiety demonstrated a strong negative correlation with masculinity, (r=-.390) but showed no relationship to femininity (r=.057), or to occupancy of the positions of wife (r=.070), mother (.015), or employee (.075). Neither was there any significant correlation between the measure of role density and anxiety (r=.038).

The traditional male personality stereotype defines masculinity in terms of independence, ability to make decisions easily, activity, confidence, ability to withstand pressure. Therefore, the obtained negative correlation (r=-.390) between anxiety and masculinity suggests that the

person with these traits perceives fewer situations as threatening. Perhaps this is because such a person has the skills to deal with conflicts so as to produce an outcome favorable to self. This possibility is alluded to in some of the popular literature regarding assertiveness training for women who, it is said, have a long tradition of being helpless victims of life's events and other's demands (Jakubowski, 1977). Cohen (1966) states that there is considerable incompatibility between society's definition of an individual's sexual role and his/her optimal development as a person. For the woman, emphasis on dependency and passivity interferes with her functioning. This view is consistent with Grodner's (1977) observation that, as assertiveness of the psychiatric patient increased, anxiety decreased.

The negative correlation between masculine traits and illness behavior further suggests some interaction between masculine traits and anxiety in affecting illness behavior. Perhaps traits associated with masculinity, such as independence and strength, tend to decrease one's perception of symptoms of illness as cause for alarm, thereby decreasing the likelihood of contacting a health care provider.

Demographic Variables and Illness Behavior

The factors of age and education did not significantly affect the number of appointments reported by the patients

(r=-.038, and r=.039, respectively) or number of appointments noted in the medical record (r=-.076 and r=-.125 repectively). These results may be due in part to the limited variability observed in the subjects along the dimensions of age and education. Variability in age was limited due to the selection of subjects from the age range of 20 to 45 years. Variability in education may have been limited by the exclusion from the sample of women who were not associated with an employer or union group. This implied the exclusion of women on welfare and the medically indigent.

Results of the Multiple Regression Analyses

Multiple regression analyses were conducted to determine the effects of the independent variables (age, education, role density, femininity, masculinity, anxiety, and help when ill) on each of the illness behavior variables. The selected variables were not very useful as predictors of the variance in women's illness behavior as measured by number of patient-initiated appointments (R=.317, cumulative variance explained = 10%), and as measured by Mechanic's "Response to Illness" (R=.198, cumulative variance explained =4%). They were somewhat more useful as predictors of illness behavior, measured by number of clinic visits, and by number of appointments reported by subjects. From Tables 6 and 7, it may be seen that, in both instances, a multiple R of .376 was obtained. While explaining an identical amount of

Table 6: Multiple Regression Analysis of Independent Variables on Number of Appointments Recorded in the Medical Record

Dependent Variables	Zero Level Correlation	Multiple (R)	Cumulative Variance	Partial Correlation	Beta
Masculinity	-.211*	.211	.049	-.161	-.175
Femininity	-.141	.281	.079	-.186*	-.180
Help When Ill	.180*	.333	.110	.180	.179
Education	-.125	.345	.119	-.123	-.130
Anxiety	.152	.359	.129	.117	.124
Age	-.076	.375	.141	-.117	-.118
Role Density	-.098	.376	.141	-.019	-.021

*$p < .05$

Table 7: Multiple Regression Analysis of the Independent Variables on the Number of Appointments Reported by Subjects

Dependent Variables	Zero Level Correlation	Multiple (R)	Cumulative Variance	Partial Correlation	Beta
Anxiety	.214*	.214	.046	.183*	.196
Density	-.198*	.298	.089	-.216*	-.245
Help When Ill	.162	.326	.106	.121	.119
Education	.039	.343	.118	.112	.119
Age	-.038	.355	.126	-.087	-.088
Femininity	-.068	.367	.135	-.115	-.109
Masculinity	-.171	.376	.141	-.083	-.090

*$p < .05$

variance (14%) in illness behavior, the order of emergence of the several independent variables as predictors of the two measures of illness behavior was quite different. Again this would indicate the nonequivalence of the two measures. In the case of recorded clinic visits, masculinity, femininity and availability of help emerged first in the analysis, to explain 11% of the variance. The greater effect of these variables on the illness measure was also demonstrated by the larger beta-values obtained for them than for the other four variables. In the case of reported appointments, anxiety, and role density emerged first in the analysis, and again their larger beta-values testify to their greater influence on the measure. It is difficult to interpret these differences. However, inasmuch as reported visits exceeded recorded visits at least in part because of the use of mental health resources outside the prepaid clinic, it is reasonable to assume that anxiety might be an important factor in determining the number of visits reported. Conversely, anxiety should not be a factor explaining variance in recorded visits.

What other factors might be responsible for the 86% of the variance left unaccounted for by the selected variables? One obvious factor was pregnancy. For this sample, pregnancy accounted for 34% of the visits noted in the medical record. Other factors might include personality characteristics not tapped by the present research, and differences in the absence or presence of disease as such (by which is meant

objectively determined pathology).

In view of the ambiguous and unsatisfactory results of this research, the question remains whether the theory is incorrect, or whether the measures and design were inadequate to test the theory. It is possible that the particular measures chosen to assess adherence to the feminine role stereotype did not adequately reflect tendency to admit to weakness and to seek help, or express sensations of illness. It should also be noted that the variability along this dimension was quite restricted, with the great majority of women scoring quite high on femininity. A broader range of values would have been desirable, and might have been achieved by including in the sample women from a broader range of backgrounds, both women on welfare and women from higher socioeconomic classes.

The possible adverse effect of social desirability on the range of femininity scores may be diminished in future research as improved measures of masculinity and femininity are developed.

It should be noted again that illness measures were not highly correlated with one another. This suggests the possibility that illness behavior is a multidimensional concept and that a tool should be developed which more adequately reflects the domain of content, and includes items covering the several dimensions and components of the concept.

Finally, while the findings of this investigation

do not indicate great utility of the theoretical formulations in explaining differences among women in illness behavior, it is still possible that those theoretical formulations would prove useful in explaining differences between men and women.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Advances in medical technology and improved access to medical care have greatly increased the health of our population, and yet not all segments of the population have benefited equally from these advances, in terms of longevity. It has been suggested that in order for these benefits to be more equitably distributed, new insights into the behavioral variables which influence health must be gained. One phenomenon in need of explanation is the disparity between women's higher rates of morbidity, as reflected in health care utilization and disability, and the contrasting higher mortality rates of men. Although biological differences between men and women account for some of the disparity, it has been suggested that further understanding of the differences between men and women's health care utilization rates may be gained through elucidation of behavioral factors which influence illness behavior. Sexual identification, role conflicts, and anxiety have been implicated as affecting women's illness behavior through observations of health care utilization patterns and by past research seeking to account for observed differences in health service utilization rates between men and women.

It was the purpose of this study to explore the relative impact of the traditional feminine personality stereotype,

role density, and anxiety in affecting women's illness behavior. In addition, the study was concerned with the interaction among these three factors. The hypotheses tested were: (1) Women who strongly identify with the traditional feminine personality stereotype will report a greater tendency to engage in illness behavior than women who weakly identify with the traditional feminine personality stereotype. (2) Women with greater role density will report a lesser tendency to engage in illness behavior than women with lesser role density. (3) Women with higher levels of anxiety will report a greater tendency to engage in illness behavior than women with lower levels of anxiety.

Women who were enrollees of a prepaid health care system were compared with each other in terms of their identification with the traditional feminine personality stereotype, role density, and levels of anxiety. Identification with the traditional feminine personality stereotype, and anxiety were measured respectively by Spence's Personal Attributes Questionnaire and Spielberger's Trait Anxiety Scale. A measure of role density, which included the components of marital status, employment, presence of pre-school and/or school-age children was devised.

The prediction that women with strong identification with the traditional feminine personality stereotype would engage in more illness behavior was not upheld. However, some evidence was obtained that identification with the

traditional masculine personality stereotype is inversely related to illness behavior. Women with greater role density demonstrated a greater tendency to engage in illness behavior than women with lower levels of role density, a finding which was opposite that predicted. Finally, the hypothesis that women with higher levels of anxiety will report a greater tendency to engage in illness behavior than women with lower levels of anxiety received partial support. Anxiety was also found to be inversely related to the traditional masculine personality stereotype, suggesting an interaction between masculinity and anxiety in affecting illness behavior.

It was concluded from these data that femininity, as defined by Spence's Personal Attributes Questionnaire, is not related to illness behavior, but that masculinity may influence illness behavior. It was further concluded that although role density was related to illness behavior, the measure used was not adequate in explaining the complex dynamics of the relation between women's societal roles and illness behavior. The data further suggest that anxiety is related to illness behavior, and may interact with masculine traits in producing women's illness behavior.

It is suggested that future research be directed toward analyzing the factors within masculinity which affect health-related behaviors. Perhaps a study which includes both men and women in the sample would be helpful in this regard.

The complex relationship between illness behavior and women's roles requires further exploration. The present study does not rule out the possibility of a curvilinear relationship between role density and illness behavior wherein a woman's illness behavior decreases as her responsibilities increase, until her capacity to cope with the demands of her various roles is exceeded. The resulting stress may then lead to an increase in illness behavior.

It is further suggested that aspects of the relationship between illness behavior and women's roles, other than role density, be explored. For example given the current concerns regarding the problems of women's roles (Komarovsky, 1946; Epstein, 1970; Bernard, 1971), research relating satisfaction with one's roles and illness behavior would be useful. The relation between a woman's perception of herself as the family health care mediator, or arranger, and her illness behavior also needs explication.

Finally, at some point, the question must be posed of what is optimum health behavior. Does increased health care utilization, as reflected in office visits, hospitalization, and disability days, reflect a greater incidence of illness among women, or does it reflect an attitude of concern about oneself which serves to prolong one's life? Is willingness to assume the sick role beneficial in terms of longevity, or does it merely increase health care costs?

A line from a current television advertisement for a woman's iron tonic states, "I take care of myself. I eat right, get plenty of rest and take Geritol." If women do indeed "take care" of themselves, and this concern with themselves is reflected in their favorable mortality role, what may we predict for women's future health status as they assume some of the personality traits and social roles which have been traditionally reserved for men? Will changes such as the increased rate of lung cancer in women, which appears to be related to the increase in smoking among women, become more commonplace? Answers to these questions must be found if we are to effectively intervene in behavioral variables which affect the health of men and women.

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APPENDICES

APPENDIX A

Women's Illness Behavior Study Permit Form

WOMEN'S ILLNESS BEHAVIOR STUDY PERMIT FORM

I, _____, hereby agree to participate as a subject in the investigation named, Women's Illness Behavior. The investigation, conducted by Mary Kathryn Thompson, R.N., under the supervision of Dr. Julia Brown, Ph.D., explores the social and personal variables which influence women's illness behavior.

It is my understanding that I will be asked to answer questions about my health, my social roles and my personal attributes. The time required of me is about one-half hour.

I understand that Mary Kathryn Thompson, and possibly persons working directly under her supervision in this investigation, will know that it was I who gave certain information. I understand, however, that Mary Kathryn Thompson will exercise the greatest care practical to preserve the confidentiality of my contribution and prevent any other person from learning what information it was which I gave in the investigation.

I may not receive any direct benefit from participating in this study, but understand that my contribution will help increase our knowledge about women's health care needs.

With the understanding that my contributions will be kept anonymous in all public reporting, I agree that the information I give in participating in this investigation may be used in reporting the investigation results and for other research and educational purposes.

Mary Kathryn Thompson has offered to answer any questions I might have about the tasks required of me in this study. I understand I am free to refuse to participate or to withdraw from participation in this study at any time and it will in no way affect my relationship with Cascade Health Care.

Cascade Health Care, Inc., (CHC) has agreed to cooperate with Ms. Thompson and to make facilities available to her for the investigation. However, CHC is not in any way responsible for any aspect of the investigation or statements about the investigation, which is solely the project of Ms. Thompson. Ms. Thompson is not acting as the employee or agent, or under the supervision of CHC in connection with the investigation. I agree to make no claim against CHC or its employees or board members arising in connection with this investigation.

I have read the foregoing statements.

_____
(Subject's Signature)

_____
(Witness)

_____
(Date)

APPENDIX B

Study Questionnaire

Dear

I am writing to request your help in a study concerning women's illness behavior. It is hoped that this study, which is being done for my Master's thesis, will provide information regarding social and personal factors which affect women's health care needs. You were chosen to participate in this study by means of a random sample of Cascade Health Care enrollees. Your participation would involve the answering of a questionnaire which requires approximately 30 minutes to complete.

All information contained in the questionnaire will be handled confidentially. The measures taken to protect your confidentiality have been approved by Cascade Health Care and the University of Oregon Health Sciences Center Committee on Human Research.

Enclosed is a study permit form and the study questionnaire. Please indicate your willingness to participate in the study by signing the study permit form. I would appreciate your enclosing the completed questionnaire and study permit form in the stamped envelope which has been provided and returning it to me within one week. Please contact me at 777-4461 or 224-9934 if you have any questions regarding the study. I sincerely appreciate your help.

Kate Thompson
Nurse Practitioner
Cascade Health Care

General Information Sheet

Questionnaire_____

Date of birth_____ Sex: Male_____ Female_____

Grade in school you completed: 1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18

What is your racial background?_____

What is your marital status? Single Married

Widowed Divorced

Separated Living with companion

Are you presently employed? Not at all

Part-time

Full-time

If employed, please state employer:_____

Type of work or position:_____

If not employed, please state husband's employer:_____

_____

Type of work or position:_____

Do you have any children living in the home? Yes No

If so, what are their ages? a) e)
b) f)
c) g)
d) h)

Who takes over household responsibilities when you are ill?

Husband Children

Relative No one

Have you had any appointments with an M.D., nurse practitioner, psychologist, psychiatrist, chiropractor, or naturopath in the last year?_____

If so, how many appointments did you have?_____

Have you been ill during the past two weeks? Yes No

Circle one or more responses to each of the following questions.

What would you be most likely to do when you have been feeling poorly for a few days?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

What would you be most likely to do when you have a temperature of about 100 degrees?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

What would you be most likely to do when you have a bad cold?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

What would you be most likely to do if you have a temperature of about 101 degrees?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

The following are a series of five-point scales which describe a variety of psychological characteristics. For each one, you are to rate yourself on that characteristic. For example, how artistic are you? Not at all? Not very? Average? Somewhat? Very?

1. Not at all independent — Very independent
   A____ B____ C____ D____ E____

2. Not at all emotional — Very emotional
   A____ B____ C____ D____ E____

3. Very passive — Very active
   A____ B____ C____ D____ E____

4. Not at all able to devote self completely to others — Able to devote self completely to others
   A____ B____ C____ D____ E____

5. Very rough — Very gentle
   A____ B____ C____ D____ E____

6. Not at all helpful to others — Very helpful to others
   A____ B____ C____ D____ E____

7. Not at all competitive — Very competitive
   A____ B____ C____ D____ E____

8. Not at all kind — Very kind
   A____ B____ C____ D____ E____

9. Not at all aware of feelings of others — Very aware of feelings of others
   A____ B____ C____ D____ E____

10. Can make decisions easily — Has difficulty making decisions
    A____ B____ C____ D____ E____

11. Gives up very easily — Never gives up easily
    A____ B____ C____ D____ E____

12. Not at all self-confident — Very self-confident
    A____ B____ C____ D____ E____

13. Feels very inferior — Feels very superior
    A____ B____ C____ D____ E____

14. Not at all understanding of others — Very understanding of others
    A____ B____ C____ D____ E____

15. Very cold in relations with others — Very warm in relations with others

A____ B____ C____ D____ E____

16. Goes to pieces under pressure — Stands up well under pressure

A____ B____ C____ D____ E____

A number of statements which people have used to describe themselves are given below. Read each statement and then indicate how you generally feel after each statement by circling the number which corresponds to the appropriate phrase. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.
Use the following code:

1 Almost never 2 Sometimes 3 Often 4 Almost always

1. I feel pleasant 1 2 3 4
2. I tire quickly 1 2 3 4
3. I feel like crying 1 2 3 4
4. I wish I could be as happy as others seem to be 1 2 3 4
5. I am losing out on things because I can't make up my mind soon enough 1 2 3 4
6. I feel rested 1 2 3 4
7. I am "calm, cool, and collected" 1 2 3 4
8. I feel that difficulties are piling up so that I cannot overcome them 1 2 3 4
9. I worry too much over something that really doesn't matter 1 2 3 4
10. I am happy 1 2 3 4
11. I am inclined to take things hard 1 2 3 4
12. I lack self-confidence 1 2 3 4
13. I feel secure 1 2 3 4
14. I try to avoid facing a crisis or difficulty 1 2 3 4
15. I feel blue 1 2 3 4
16. I am content 1 2 3 4

17. Some unimportant thought runs through my mind and bothers me 1 2 3 4

18. I take disappointments so keenly that I can't put them out of my mind 1 2 3 4

19. I am a steady person 1 2 3 4

20. I get in a state of tension or turmoil as I think over my recent concerns and interests 1 2 3 4

APPENDIX C

"Response to Illness" Instrument and Scoring Key

(Mechanic, 1965)

Circle one or more reponses to each of the following questions.

What would you be most likely to do when you have been feeling poorly for a few days?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

What would you be most likely to do when you have a temperature of about 100 degrees?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

What would you be most likely to do when you have a bad cold?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

What would you be most likely to do if you have a temperature of about 101 degrees?

(1) do nothing
(2) consult a physician
(3) take bed rest
(4) take medication

Scoring Key for Mechanic's "Response to Illness" Instrument

1 - no action

2 - self-medication

3 - bed-rest

4 - bed-rest and self-medication

5 - physician visit

6 - physician visit and medication

7 - physician visit and bed-rest

8 - physician visit, medication, and bed-rest

High response	18-32
Intermediate response	11-17
Low response	4-10

Scoring Key for the Personal Attributes Questionnaire

The items are scored in a "masculine" direction, that is, the most masculine response is scored 4 and the least masculine response is scored 0. The scores for each of the sub-scales is obtained by adding up the items for each sub-scale. Note that a high score on the feminine-valued items represents a more masculine response, not a more feminine response. Persons who score high-masculine high-feminine are considered androgynous.

Masculine-valued subscale			Feminine-valued subscale		
Item (1)	A=0	E=4	Item (2)	A=4	E=0
Item (3)	A=0	E=4	Item (4)	A=4	E=0
Item (7)	A=0	E=4	Item (5)	A=4	E=0
Item (10)	A=4	E=0	Item (6)	A=4	E=0
Item (11)	A=0	E=4	Item (8)	A=4	E=0
Item (12)	A=0	E=4	Item (9)	A=4	E=0
Item (13)	A=0	E=4	Item (14)	A=4	E=0
Item (16)	A=0	E=4	Item (15)	A=4	E=0

APPENDIX D

Personal Attributes Questionnaire and Scoring Key

(Spence et al., 1974)

The following are a series of five-point scales which describe a variety of psychological characteristics. For each one, you are to rate yourself on that characteristic. For example, how artistic are you? Not at all? Not very? Average? Somewhat? Very?

1. Not at all independent — Very independent
   A___ B___ C___ D___ E___

2. Not at all emotional — Very emotional
   A___ B___ C___ D___ E___

3. Very passive — Very active
   A___ B___ C___ D___ E___

4. Not at all able to devote self completely to others — Able to devote self completely to others
   A___ B___ C___ D___ E___

5. Very rough — Very gentle
   A___ B___ C___ D___ E___

6. Not at all helpful to others — Very helpful to others
   A___ B___ C___ D___ E___

7. Not at all competitive — Very competitive
   A___ B___ C___ D___ E___

8. Not at all kind — Very kind
   A___ B___ C___ D___ E___

9. Not at all aware of feelings of others — Very aware of feelings of others
   A___ B___ C___ D___ E___

10. Can make decisions easily — Has difficulty making decisions
    A___ B___ C___ D___ E___

11. Gives up very easily — Never gives up easily
    A___ B___ C___ D___ E___

12. Not at all self-confident — Very self-confident
    A___ B___ C___ D___ E___

13. Feels very inferior — Feels very superior
    A___ B___ C___ D___ E___

14. Not at all understanding of others — Very understanding of others
    A___ B___ C___ D___ E___

15. Very cold in relations with others — Very warm in relations with others

A___ B___ C___ D___ E___

16. Goes to pieces under pressure — Stands up well under pressure

A___ B___ C___ D___ E___

APPENDIX E

Trait Anxiety Index and Scoring Key

(Spielberger et al., 1970)

A number of statements which people have used to describe themselves are given below. Read each statement and then indicate how you generally feel after each statement by circling the number which corresponds to the appropriate phrase. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel. Use the following code:

1 Almost never 2 Sometimes 3 Often 4 Almost always

1.	I feel pleasant	1	2	3	4
2.	I tire quickly	1	2	3	4
3.	I feel like crying	1	2	3	4
4.	I wish I could be as happy as others seem to be	1	2	3	4
5.	I am losing out on things because I can't make up my mind soon enough	1	2	3	4
6.	I feel rested	1	2	3	4
7.	I am "calm, cool, and collected"	1	2	3	4
8.	I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
9.	I worry too much over something that really doesn't matter	1	2	3	4
10.	I am happy	1	2	3	4
11.	I am inclined to take things hard	1	2	3	4
12.	I lack self-confidence	1	2	3	4
13.	I feel secure	1	2	3	4
14.	I try to avoid facing a crisis or difficulty	1	2	3	4
15.	I feel blue	1	2	3	4
16.	I am content	1	2	3	4
17.	Some unimportant thought runs through my mind and bothers me	1	2	3	4
18.	I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
19.	I am a steady person	1	2	3	4
20.	I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

Scoring Key for Spielberger's Anxiety Trait Index

The score on the Anxiety Trait Scale may be calculated as follows:

(1) Determine the sum of the weighted scores for the direct-scored items. +____

(2) Subtract the sum of the weighted scores for the reversed items. -____

(3) Add the appropriate constant. +35

(4) The total equals the Anxiety Trait subscale score. Score _____

The reversed items on the Trait Index are 1, 6, 7, 10, 13, 16, and 19.

AN ABSTRACT OF THE THESIS OF

MARY KATHRYN THOMPSON

For the MASTER OF NURSING

Date Receiving this Degree:

Title: The Effects of the Traditional Feminine Personality Stereotype, Role Density, and Anxiety on Women's Illness Behavior

Approved: [redacted]
Julia Brown, Ph.D. Thesis Advisor

The purpose of this descriptive study was both to explore the relative influence of the traditional feminine personality stereotype, women's social roles, and anxiety on women's illness behavior, and to study the inter-relationships of these three variables. The hypotheses tested were (1) Women who strongly identify with the traditional feminine personality stereotype will report a greater tendency to engage in illness behavior than women who weakly identify with the traditional feminine personality stereotype. (2) Women with greater role density will report a lesser tendency to engage in illness behavior than women with lower levels of role density. (3) Women with high levels of anxiety will report a greater tendency to engage in illness behavior than women with low levels of anxiety.

Women who were enrolled in a pre-paid health care system were compared with each other in terms of their

identification with the traditional feminine personality stereotype, role density, and levels of anxiety. Identification with the traditional feminine personality stereotype, and anxiety were measured respectively by Spence's Personal Attributes Questionnaire and Spielberger's Trait Anxiety Scale. A measure of role density, which included the components of marital status, employment, presence of pre-school and/or school-age children was devised.

The prediction that women with strong identification with the traditional feminine personality stereotype would engage in more illness behavior was not upheld. However, some evidence was obtained that identification with the traditional masculine personality stereotype is inversely related to illness behavior. The hypothesis that women with greater role density demonstrated a greater tendency to engage in illness behavior than women with lower levels of anxiety received partial support. Anxiety was also found to be inversely related to the traditional masculine personality stereotype, suggesting an interaction between masculinity and anxiety in affecting illness behavior.

It was concluded that femininity is not related to illness behavior. It was further concluded that although role density was related to illness behavior, the measure used was not adequate to explain the complex dynamics of the relation between women's societal roles and illness behavior. The data further suggested that anxiety is related

to illness behavior, and may interact with masculine traits in producing women's illness behavior.

It was suggested that future research be directed toward analyzing dimensions of masculinity which might affect health related behaviors. It was further suggested that research of the relation between illness behavior and women's roles include consideration of the possibility of a curvilinear relationship between role density and illness behavior. Consideration might also be given to the relation between satisfaction with one's roles and illness behavior. Finally, the question was posed of what is optimum illness behavior as it relates to the effect of health care utilization on longevity.