DIFFERENCES IN SICK ROLE BEHAVIOR OF MALE AND FEMALE PATIENTS WITH CHRONIC BACK PAIN

by

Phyllis F. Flowers, R.N., B.S.

A Clinical Investigation

Presented to
The Oregon Health Sciences University
School of Nursing
in partial fulfillment
of the requirements for the degree of
Master of Nursing

June 10, 1983

APPROVED:

[redacted]

Julia S. Brown, Ph.D., Professor, Clinical Investigation Advisor

[redacted]gist, First Reader

[redacted]

Katherine Crabtree, M.S., Associate Professor, Second Reader

[redacted]

Carol A. Lindeman, Ph.D., Dean, School of Nursing

This study was supported for one quarter by a traineeship from the United States Public Health Service Grant Number 2 A11 NU 00250-03

For: your many struggles,

your prayers,

your example,

your undying faith,

your hopes,

your tears,

your altruism,

your perserverance,

your wisdom,

your continuous encouragement,

your perpetual caring,

your generous sharing,

YOUR UNCONDITIONAL LOVE.

I dedicate this work to MAMA

whose

eternal being transcends death.

ACKNOWLEDGEMENTS

To my family, with the legacy of love, hope, determination, and survival, guided by the Divine Creator, let us move onward, together.

To my cohort, whose love, strength and steadfastness nourished my essence.

To Dr. Julia S. Brown, for your excellence in research knowledge, enthusiasm, dedication and sharing.

To Dr. Leonard P. Yospe, mentor and friend.

To Katherine Crabtree.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

Numerous studies indicate that women engage in more illness behavior, accept the sick role more readily, and utilize health services more frequently than men. In comparison with men, women report more mental and physical problems, report more disability days and sick dependency days, seek more medical consultations, visit health care facilities more frequently, and experience more hospitalizations (Nathanson, 1977; Verbrugge, 1976). The reason for these sex differences is not clear. The explanation would seem not to lie in biological and physiological differences, since women live longer than men, and show a greater resistance to both acute and long-term diseases (Nathanson, 1975; 1977). It is more likely that the explanation lies in cultural and social factors.

Three such interpretations have been widely discussed. First, it is thought to be culturally more acceptable for women than for men, to express feelings and emotions, including those of pain and discomfort, to seek help and to be dependent upon others. Men are expected to be more stoical, active and independent (Phillips & Segal, 1969). Second, it is suggested that the sick role is more compatible with women's other social roles than with men's roles (Mechanic, 1966; Nathanson, 1975). Traditionally, the demands of women's work, particularly within the home, are more flexible than the demands of men's work. Work may be slowed down, or left undone, permitting more opportunity for rest. Third, health professionals, insofar as they share stereotypical views of women as more passive,

dependent and emotional than men, may tolerate and encourage these qualities in women and legitimatize their entry into the sick role more frequently and easily than men.

If these claims have merit, and if indeed adoption of the sick role is more acceptable for women and less interfering with women's other roles, then it might be predicted that women should enact the sick role differently than men, and should relinquish it less readily. However, few data exist presently which would permit the testing of this proposition. The behaviors of men and women in the sick or patient role have not been systematically compared. It is not known, therefore, whether women are indeed more expressive of their emotions as patients, manifest pain or discomfort more openly, or request help more frequently than men. It is not known whether women recover less rapidly, are more passive, comply with prescribed regimens less wholeheartedly, or resume activities less rapidly in anticipation of return to full normal role functioning.

It is the purpose of the present investigation to explore this issue by describing and comparing the sick role behaviors of male and female patients with the same health problems. Specifically, this study will be conducted on patients hospitalized for the treatment of chronic back pain, and will focus on the patient's expression of pain, dependence on medications, and compliance with the prescribed treatment regimen.

Review of the Literature

The following review will commence with a discussion of the concept of the sick role, then proceed to identify those variables

which are presumed to affect enactment of the sick role. Next, the evidence will be assessed for the view that males and females differ in sick role behavior. Finally, the review will shift to a consideration of current treatment regimens for patients with chronic back pain.

The Sick Role Concept

In 1951, Parsons formulated the concept of the sick role in which he viewed sickness as deviance by the individual from normative behavior. The sick person withdraws, and neglects to perform normal social roles. This withdrawal is dysfunctional not only for the individual, but for the larger society. Sickness poses a particularly critical problem for societies such as our own, where a complex division of labor requires close interdependence among members. Such societies cannot tolerate the disruption of a high incidence of illness. Hence, they develop an institutionalized sick role in order to contain sickness and to control entry into the sick role.

Parsons acknowledged that some individuals may anticipate and receive certain benefits from the sick role, such as attention from loved ones, security, an escape from threatening or unpleasant work, and even financial profit. These gains may motivate some persons to become ill. To counter such motivation, the institutionalized sick role carries two rights and two obligations for the individual: namely, (1) to be exempt from normal role responsibilities; (2) to be exempt from responsibility for the incapacity; (3) to recognize that illness is undesirable and try to get well; and (4) to seek competent help in an attempt to get well.

As stated, these rights and obligations are abstract in nature, referring to expectations. However, these abstract expectations may be translated into specific sick role behaviors, or activities undertaken for the purpose of getting well by those who consider themselves ill (Kasl & Cobb, 1966). These activities include medication-taking, submission to various procedures and cooperation with treatment regimens prescribed by appropriate therapists. Also included are complaints about discomfort and pain, and a whole range of dependent behaviors such as requests for help with everyday activities, and pleas for reassurance and support (Parsons & Fox, 1952; Aguilera & Messick, 1974; Derdiarian & Clough, 1976; Clough & Derdiarian, 1980). Simultaneously, individuals enacting the sick role neglect to some degree their usual tasks and duties.

According to Parsons, in our society, the individual's assumption of the sick role is legitimized mainly by the health practitioner. In analyzing the nature of the interaction between patient and professional, Parsons described the role of the professional as entailing support, permissiveness, manipulation of rewards, and denial of reciprocity. The therapist gives temporary support to the patient, contingent upon the patient's efforts to get well. The therapist is permissive, making allowances for the sick person's deviant behavior with the justification that illness is the reason for the deviance. The therapist accepts the confidences and disclosures of the patient, but does not reciprocate in kind, thus maintaining control over the patient and helping the patient get well. The practitioner is initially supportive and permissive to the sick person, but gradually

changes this stance so as to encourage the patient to resume independence, and to return to health. This, in turn, benefits both patient and society.

The Parsonian paradigm has been criticized, reassessed and modified over the years. There have been several major criticisms. First, it has been argued that Parsons's assumption of a universal model fails to recognize the possibility that different segments of our society may hold somewhat different expectations, and therefore enact the sick role somewhat differently. Views of the sick role and appropriate behaviors may vary by ethnicity, age, socioeconomic class, and possibly by sex (Segall, 1976). The validity of this criticism may be determined through empirical investigations.

A second criticism holds that Parsons's formulation is less useful when applied to psychiatric or chronic illnesses than when applied to physical or acute illnesses. Thus Kassebaum and Baumann (1965) claimed that our expectations for the chronically ill differ from those for the acutely ill. Acute illness is temporary, whereas chronic illness, by definition, is not. The acutely ill person may look forward to improvement and a return to pre-illness functioning. The chronically ill person must adjust to a continuing and permanent impairment, and depending on the extent of this impairment, may find a return to pre-illness social roles unrealistic.

Third, Parsons has been criticized for assuming relatively more patient passivity and more physician dominance than is usual in chronic illness. In their analysis of the patient-practitioner relationship, Szasz and Hollender (1956) distinguished three basic

models of care. These models predicated a passive-dominant relationship for an acute traumatic illness, a cooperative model for the acute infectious case, and a mutual participation model for chronic illness and disability, in order to bring about the highest level of success.

The present investigation will deal not with abstract expectations, but with the actual performance of persons in the patient role. In the patient population here studied (i.e., patients with chronic pain problems), passivity is not encouraged, despite the fact the sick role is being enacted in a hospital setting. Rather, cooperation in treatment means involvement and activity. This study will consider the patient's progress during treatment to the goal of better health, and in accord with Parsons's model, will note the shift over time from dependency (as, for example, on medication) and inactivity (as in bedrest) to independence and activity. While patients in this setting are not expected to return to perfect health, they are nevertheless expected to strive to maximize recovery and ability to perform usual roles.

Factors Affecting Sick Role Behavior

Among the variables presumed to affect the manner in which the sick role is enacted are ethnic background, socioeconomic status, age and sex. The published evidence regarding these relationships is summarized below.

Ethnic background. While many investigators have commented on apparent differences among ethnic groups in their definitions, perceptions and responses to symptoms of psychiatric or physical

illness, few have specifically examined variations in the sick role performance of patients from differing ethnic backgrounds. Zborowski (1952) observed that patients from Jewish and Italian backgrounds responded more emotionally to pain than patients from Irish or Anglo-Saxon backgrounds. The Irish tended to deny pain, and the Anglo-Saxons tended to be stoical. Zola (1973) agreed that Irish patients denied pain, but noted that they nevertheless expressed concern over impairments. Zola also reported, in accord with Zborowski's findings, that Italians complained loudly of pain. Somewhat in contrast, Segall (1976) found no significant difference between Jewish and Anglo-Saxon Protestant housewives in their expectations during illness. However, the Jewish women were more willing to adopt the sick role. Segall interpreted this fact as reflecting the greater distaste of the Anglo-Saxon women for the dependency component of the sick role. Overall, these research results suggest that some differences may exist with respect to sick role enactment among members of these ethnic groups.

Less is known regarding differences in sick role behavior of Blacks and Whites. Mersky and Spear (1964) studied the pain responses of a small sample of Black and White medical students of similar age. They found no significant difference. Winsberg and Greenlick (1967) found no difference between Black and White obstetrical patients of similar social class in cooperation with treatment, pain response, and degree of pain as inferred by physicians and nurses. On the other hand, a study by Fabrega, Moore and Strawn (1969) suggested that differences may exist between Blacks and Whites. Those authors

found that physicians perceived Anglo-Saxon patients to be more anxious, and thereby require more medication, than Black patients.

Socioeconomic status. As was the case with research linking the sick role to ethnicity, few studies linking the sick role with socioeconomic status have dealt directly with differences in the enactment of the role. Most focused on variations among social classes with respect to their definitions of illness, criteria for legitimizing their sick status, willingness to adopt the sick role, and willingness to be dependent (Arluke, Kennedy, & Kessler, 1979; Levine & Kozloff, 1978). However, the findings of at least some of these studies indirectly suggest the manner in which patients carry out the sick role.

For example, Davitz and Pendleton (1969) reported that nurses inferred greater suffering in hospitalized patients from lower and middle classes than in patients from the upper classes. One might conjecture that the inference was derived from behavioral cues, that upper class patients may tend to express pain less readily than other patients. As a second example, Arluke et al. (1979) found that better educated persons were more likely to agree that they had a duty to get well, and lower income persons were more likely to claim the right not to be held responsible for contracting their illnesses. Again, it is possible these attitudes are reflected in differences among groups in their efforts to cooperate with therapeutic regimens, and in dependent behaviors.

With regard to this last speculation, the existing evidence is ambiguous and contradictory. Several authors (Rosenblatt & Suchman,

1964; Gordon, 1966; Petroni, 1969a) noted that persons of lower socio-economic status more readily accepted dependency in the sick role than did persons of higher status. Somewhat to the contrary, Kassebaum and Baumann (1965) claimed that chronically ill blue collar workers were more "concerned" with dependency and inability to fulfill role obligations than were white collar workers. Ossenberg (1962) reported that the lower the social class position of hospitalized patients, the greater the patients' experience of deviance in the sick role. Middle class patients, once they were hospitalized, appeared to feel legitimately excused from performing their instrumental tasks. Finally, Berkanovic (1972) found no difference in the views of craftsmen, clerks and middle managers with respect to dependency and exemption from normal role responsibilities in illness.

The different conclusions arrived at in the cited studies may be attributable in part to the fact that different measures of socioeconomic status were employed. It is also possible that the differences in sick role attitudes and behaviors of different classes may be small and difficult to measure. Some support for this latter interpretation is derived from the work of Gordon (1966) and of Arluke et al. (1979) who concluded that all socioeconomic groups shared highly similar sick role expectations, and the differences that existed were of minor significance.

Age. Older persons have been found to be more concerned with the role performance component of the sick role (Kassebaum & Baumann, 1965), to perceive themselves as having the right not to be held responsible for their illnesses (Petroni, 1969b; Arluke et al., 1979),

to score higher on denial of illness (Kassebaum & Baumann, 1965), and to accept the responsibility of seeking competent help (Arluke et al., 1979). Arluke et al. also found that younger patients, more than older patients, agreed they had an obligation to get well.

Perceived suffering and perceived need for medication have also been shown to be correlated with age. Fabrega et al. (1969) found an inverse relation between the patient's age and the patient's need for medication, as perceived by the patient's physician. Nurses also have been shown to perceive older patients as suffering less than younger patients (Davitz & Pendleton, 1969). This finding is further supported by data indicating that older surgical patients receive fewer analgesics than younger patients (Lindeman, 1972; Brown, Buchanan, & Hsu, 1978).

Sex. National Health Interview Surveys provide further evidence that the sexes differ in illness and assumption of the sick role. Females consistently report more physical and mental symptoms, more days per year of restricted activity due to illness, and more days of bed disability (Nathanson, 1975; Verbrugge, 1976). While males do manifest higher partial work disability due to health, and more severe mobility problems from chronic conditions, women are more likely to experience complete work disability and house confinement due to chronic conditions (Verbrugge, 1979; U.S. DHEW, 1980).

Sources other than the national health surveys provide some indirect evidence that the sexes may differ as well in sick role behaviors involving dependency, expression of pain, and the consumption of medication. Thus, women have been repeatedly described as more

dependent than men (Chesler, 1972; Fabrega et al., 1969; Phillips & Segal, 1969; Cooperstock, 1971; Tagliacozzo & Mauksch, 1972; Nathanson, 1975). Kassebaum and Baumann (1965) also reported that men appeared to be more concerned with the dependency aspect of the sick role than were women. Finally, Tagliacozzo and Mauksch (1972) indicated that passivity was viewed as being more acceptable in women than in men.

Expressive behavior is also culturally more acceptable in women than in men (Phillips & Segal, 1969; Cooperstock, 1971; Chesler, 1972; Nathanson, 1975). One might expect then that women would express pain both verbally and nonverbally more readily than men, and be considered more anxious and emotional when ill than men. In support of this view, Tagliacozzo and Mauksch (1972) observed:

> In our society men and women are generally not expected to respond in an identical fashion to pain nor are they expected to react identically to illness. We expect that expressive behavior (complaining or moaning) should be more controlled by men, and we frown less when women appear to exploit the illness role... (p. 178).

Contrariwise, Davitz and Pendleton (1969) found that nurses perceived men and women to experience pain equally. Clearly, more evidence is needed to resolve the contradiction.

The taking of prescribed medications is commonly viewed as a badge of illness (Wolinsky & Wolinsky, 1981) and a clear indicator that the sick role is legitimized. Ceasing to take medication, then, may be viewed as relinquishing the sick role and returning to a well

state. If women find the sick role less repugnant than men, and if they do in fact express pain more freely than men, it might be predicted that they would receive more medication, and for a longer period, than men during a sickness episode. If women also express anxiety and emotional distress more readily than men, it might be expected that they would be given more mood-modifying drugs as well.

Some evidence exists for these predictions. First, Rabin and Bush (1974) remarked that evidence from studies in many areas is consistent in showing that adult females use medicines, both prescribed and nonprescribed, to a greater extent than males. Cozby (1973) and Fabrega et al. (1969) noted that women were given more tranquilizers for anxiety problems than men. Lorber (1975) indicated that "problem patients" (i.e., patients whom nurses and doctors did not see as definitely ill, but nevertheless acted as if they were) were administered more tranquilizers than others. Cooperstock (1971) documented the higher prevalence of use of mood-modifying prescription drugs by women. She also indicated that men received a disproportionate share of minor tranquilizers containing a muscle relaxant compared to the general purpose minor tranquilizers. Finally, she cited evidence that physicians expect women to need such psychoactive drugs. On the other hand, Wolinsky and Wolinsky (1981) reported no significant differences on the basis of sex regarding either expectations for prescribed medications, or receipt of such prescriptions upon visiting their physicians. Also, Brown, Buchanan and Hsu (1978) found no difference between sexes in receipt of medications during hospitalization following open-heart surgery.

With respect to still another aspect of the sick role, compliance with treatment, the research literature has produced contradictory findings. Markson (1971) and Lorber (1975) found no differences between the sexes in compliance. Tagliacozzo and Mauksch (1972) claimed women were less concerned with problems of cooperation and Christensen (1978) reported women to be less compliant than men in taking prescribed medications.

Finally, no differences were noted between the sexes in the extent to which they experienced deviance in the patient role (Ossenberg, 1962), in recovery time (Elms, 1972; Brown, Buchanan & Hsu, 1978), or in the extent to which they perceived legitimacy in the sick role (Petroni, 1969b).

Summary. Most of the literature reviewed examined differences among segments of the population in illness behavior and in the tendency to adopt the sick role. The relatively few studies which examined differences in the way different groups enacted the sick role suggest that these differences tend to be small. There is some evidence that ethnic groups may differ in their sick role behavior. There is also some evidence that older persons may consume less medication than younger persons, and may be more concerned with the dependent aspects of the sick role than younger persons. With respect to the effect of socioeconomic status on sick role behavior, the results are mixed, but usually the conclusion is reached that all socioeconomic groups share quite similar role expectations. Sex differences in sick role enactment have not been systematically examined to date. This almost total lack of research into the impact

of sex on sick role behavior is surprising in view of the many investigations which have pointed to differences between the sexes in illness behavior and sick role adoption. It is the purpose of the present investigation to help fill this gap in the research literature by describing and comparing the enacting of the sick role by males and females.

Treatment of Persons with Chronic Back Pain

Chronic back pain. Chronic pain is estimated to be the third largest health problem in the United States ranking after cancer and heart disease. Back pain is the most common type of chronic pain reported (Young & Hisgen, 1980). It has been estimated that on any given day, 6.5 million Americans are suffering from back pain and 2 million are unable to work because of back problems (Friedman & Cassvan, 1981). Back injuries account for one in five of the nation's work related injuries. The translation of these figures into dollars for treatment and compensation yields enormous amounts. Friedman and Cassvan noted that in 1976, $14 billion were spent for treatment and compensation with insurance companies paying an amount of $6,500 for the average back claim. Pace (1976) reported the cost of back injuries to American industry to be approaching $3 billion annually.

Despite the enormous expenditure on treatment, the back pain problem has not been solved. Existing technical procedures have not been successful in eliminating pain, patients continue to complain, and health care teams experience frustration. In view of the costs of the illness, and in view of the lack of success in traditional modes of treatment, alternative ways of dealing with pain have been

sought. The so-called "pain center" is one of the more promising developments today.

Traditional treatment. Traditional treatment of the patient with a benign chronic pain problem has been described by Sternbach (1974) as one beginning with an evaluation by the family physician. The physician places the patient on medications, with instructions to return for follow-up. If the initial treatment fails to alleviate the problem, other medications may be prescribed. Often these too fail. Eventually the patient is sent to a specialist. By this time the patient may have been hospitalized on several occasions for extensive diagnostic procedures, and may have undergone surgery. Throughout the treatment course the patient would have received frequent pain medications which did not eliminate the pain, but only reduced it slightly. Upon each return visit to the physician, more medication would have been requested, more would be needed to give any relief, and soon no medications would seemingly be effective in alleviating pain. Sternbach described the patient at this point as becoming desperate to attain pain relief, while the physician's concern would include not only the patient's pain problem, but now the patient's problem of addiction. Readmission to the hospital would again be required, this time to detoxify the patient, and continue to search for a diagnosis, cause, and a treatment for the problem. Sternbach suggests that in this latter phase one of the consultants would probably be a psychologist or psychiatrist to determine if the pain is psychosomatic. Few recommendations would result from the psychiatrist, and the patient would be sent home with

new prescriptions, more follow-up appointments, and the cycle would be repeated.

It is no wonder that chronic pain patients caught in such cycles more often than not experience feelings of hopelessness, worthlessness, and despair. Pace (1976) described the anger and hostility which lead patients to attack those they love and need most. They find fault with the spouse, the children, as well as with the employer, the insurance company, the physician, the nurse and the physical therapist. They also turn their anger inwards. Their self esteem becomes nonexistent, and depression is common. Indeed the chronic pain patient who does not experience depression is thought to be the exception (Fordyce, 1974; Sternbach, 1974; Pace, 1976). Patients with chronic low back pain have been reported to score higher in the abnormal range of depression measures than patients with acute pain problems (Sternbach, Wolf, & Akeson, 1973). Sternbach (1974) noted that there is a definite relationship between pain and depression with pain "masking" the depression. It is recognition of the relationship between pain and depression which has led, in recent years, to the addition of a psychological component to the treatment regime.

Pain centers. To deal with this enormous problem, pain centers have been established. These centers have been in existence over 20 years, with the establishment of the first clinic in 1962 at the University of Washington (Young & Hisgen, 1980). These centers represent a multidisciplinary team approach for treatment of chronic pain. The members generally include physical therapists, occupational therapists, vocational therapists, orthopedists, neurologists, nurses

and psychologists. Treatment emphases are on activity and exercise, on weaning patients from narcotic pain medication, and on learning techniques and skills which will enable individuals to cope more effectively with their pain problem. Behavior modification is the theoretical framework which is most often used. Once pain is expressed either verbally or behaviorally in actions such as facial grimaces, limping, abnormal gait or posture, or guarding, it becomes a behavior which is subject to influences by persons in the immediate environment (Pace, 1976; Fordyce, 1976; Sternbach, 1974; Newman, Seres, Yospe & Garlington, 1978).

Activity and exercise have been found to play vital roles in the treatment of the patient with chronic pain. A medically supervised exercise regime which is gradually increased serves to strengthen a person physically. It also tends to decrease pain behavior, and presumably, the person's subjective experience of pain as well. This is because exercise is incompatible with pain behavior, and because others respond positively when pain behavior is diminished (Fordyce, 1976). Pace (1976) and DHEW (1979) claimed that increased performance improves the person's self esteem, counteracts depression, and thereby diminishes the person's subjective experience of pain.

Drug addiction is a common problem among patients with chronic pain. Addiction leads to a physical tolerance which necessitates larger and larger doses of analgesics to produce the same degree of pain control (Sternbach, 1974). A psychological dependence also occurs. Sternbach noted that the consistent pairing of pain and analgesic intake results in their mutual reinforcement. It is the

patient's learned association between pain and the need for analgesics which must be restructured in order to break the addiction (Fordyce, 1976; Sternbach, 1974; Pace, 1976).

Abrupt withdrawal from medications is not encouraged. Rather, a gradual weaning is advised which stresses a time-contingent schedule (Fordyce, 1976). The schedule is designed to decondition or unlearn the pain-analgesic association, which in most cases has become disproportionate to the amount of pain. The time-contingent schedule also removes the need for staff-patient interaction to assess the patient's pain and to justify dispensing the medication which can become very elaborate as described by Wiener (1975).

Success in the program is not evaluated in terms of relief from pain, but rather is an increase in performance which enables the patient to live a more productive life. Decreased pain is also frequently achieved once the criterion of increased performance is established.

Summary. Chronic back pain has become an enormously taxing problem not only for the individuals suffering from it, but also for health care practitioners attempting to provide treatment. In addition, society suffers because of the financial burden occasioned by the compensation for the health care, and the loss of a member from the work force. Traditional treatment has not been successful in dealing with the problem. Hence, 'pain centers' have developed which emphasizes several new treatment modalities.

Statement of the Problem

Considerable evidence exists that women differ from men in engaging in more illness behavior, in using more health services, and in adopting the sick role more readily. These differences have intrigued a host of investigators, and attempts to interpret them have led to the generation of a number of hypotheses. Whether or not the sexes differ in their enactment and in their relinquishment of the sick role has not been specifically studied. Hence, it is not known at present whether men and women, once their sick status has been legitimatized, embrace the rights and perform the duties associated with the sick role in similar or in different ways.

Among the explanations advanced for sex differences in illness behavior, health care utilization, and adoption of the sick role, three in particular stand out -- the stress hypothesis, the socialization hypothesis, and the sex-role hypothesis. The first argues that women, perhaps because of the stressfulness of their lives, suffer from more health problems than men. The socialization hypothesis claims that in our culture, women to a greater extent than men, are permitted to express feelings of discomfort and pain, to seek help, and to be dependent. The sex-role hypothesis argues that women's sex roles in our culture permit women more time and opportunity to adopt the sick role.

If the socialization and sex-role hypotheses hold merit, if women in our culture indeed find the sick role less incompatible with their other roles than do men, and if women are indeed socialized to be more expressive and dependent than men, then it would appear

plausible to assume these tendencies continue to be manifested throughout enactment of the sick role. It might be anticipated therefore, that in enacting the sick role, women more than men, would complain of pain and discomfort, require medication, be dependent upon others, and appear less anxious to relinquish the sick role. However, it is also possible to argue that once the sick role has been legitimized, and individuals enter treatment, the situation is changed. At that point, the same expectations may hold for men and women. Men, once it is recognized they indeed are sick, may be permitted to express discomfort, request medications, and be dependent to the same extent as women. Women, like men, may be expected to comply with treatment, consider illness undesirable, and cooperate in getting well as soon as possible. Either of these possibilities -- the persistence of behavioral differences between the sexes, or the disappearance of these differences -- seems equally plausible.

The purpose of this study, then, was to explore this question. The sick role behaviors of male and female patients with the same chronic health problem were examined to determine whether patients enacted the sick role in a basically similar or significantly different way. More specifically, the extent of activity, the amount of pain reported, and the amount of medication consumed by male and female patients under treatment for chronic back pain were compared.

CHAPTER II

METHOD

Setting

The setting for this study was a northwest pain center located in a private hospital of a metropolitan area. The pain center has been in existence since 1973 and has operated from a 30-bed unit in this hospital for the past three years. The Center had established a 3-week inpatient program to treat patients with intractable pain problems. The immediate goal of the Center was to teach people the skills and techniques which would enable them to cope more adequately with their pain problems, and thereby live more effective and fulfilling lives. The ultimate goal was to teach patients to live as normal lives as their condition would allow without the need for prescriptive (or addictive) analgesic medications, and without overutilization of medical resources.

The Center treated over 300 patients a year who were referred by physicians. Sixty-five percent of these patients suffered from chronic low back pain. The next most frequent complaints were headache and cervical pain problems. Other problems included post laminectomy and fusion pain, upper back pain, neuralgias, amputations and phantom limb pain.

The patient population consisted largely of individuals with industrial injuries. Many were receiving compensation from industrial insurance and had been unemployed for months or years. An analysis of 100 consecutive patients with low back pain admitted in 1976 to this center (or NWPC) revealed the following facts: On the average they

had been ill 6.3 years. There were three males to every female in the program. In age, patients ranged from 16 to 75 years, with a median of 45. The typical patient had completed the second year of high school. A large percentage had been married more than once. With respect to surgical histories, patients had experienced from 0 to 21 surgical procedures for their pain problems, with an average of 2. The majority of the people seen at the Center had a history of long term use, and sometimes abuse, of narcotic analgesics (Seres & Newman, 1976).

The program differed from traditional pain management in that it was a multidisciplinary one. This multidisciplinary approach utilized rehabilitation medicine, neurology, nursing, clinical psychology, physical therapy, occupational therapy, and biofeedback therapy. The staff included 1 neurosurgeon, 3 clinical psychologists, 14 registered nurses, 4 physical therapists, 2 occupational therapists, and 2 biofeedback technicians. The multidisciplinary team closely coordinated its activities by frequent meetings to ensure consistency throughout the program.

The program involved the following:

(1) Patient Education: Daily lectures were given concerning the anatomy and physiology of the body, and exploration of the chronic pain cycle.

(2) Physical Therapy: Individual and group sessions were held with a physical therapist. All patients progressed through a regimen of exercises (unless contraindicated) with the rate of advancement being individualized.

(3) Occupational Therapy: Individual and group sessions were held to teach the use of proper body mechanics in performing activities of daily living.

(4) Autonomic Control Skills: Individual and group sessions were held to teach muscle relaxation and physiological control as an adjunct in breaking the chronic pain cycle. Biofeedback, Jacobson's method of relaxation, and autogenics were all employed.

(5) Communication Skills: The individual and the family were taught skills to allow for improved communications in their relationships.

(6) Behavior Modification: Sick behavior was discouraged through manipulating the reward system.

(7) Psychotherapy: Group and individual sessions were held.

(8) Medication Reduction: Patients were "weaned" from their medications gradually. The length of time required was based on their dependency and type of medication.

(9) Trancutaneous Nerve Stimulation: A battery operated device was used by the patient as needed in an attempt to mask and/or block pain pathways so as to interfere with "pain messages" to the brain.

The criteria for admission to the Center were: referral by a physician, expressed willingness by the patient to participate, and the presence of chronic pain. Less than 2% of the patients referred were rejected using those criteria. Of the 98% accepted, 85% completed the program (Seres & Newman, 1976).

The program was a self-help one. Patients were not passive recipients of treatment, but rather active and involved participants. Patients did not lie on their beds during the day, but were actively involved in classes and exercises throughout the day. The staff's role was to teach, counsel, and encourage. It was the responsibility of the patient to take the knowledge and integrate it into his/her rehabilitation for everyday life.

Subjects

The subjects for this study were persons selected from those attending the Center from 1977 through 1980. This time constraint ensured that all had been treated in the same setting, and avoided the contaminating effects of the change in hospital settings which occurred in 1976. The group selected may be considered representative of patients in any chronic low back treatment setting in that the patient had continued to suffer pain in spite of repeated attempts through conventional methods to alleviate it; family members had become involved in the pain cycle; vocational, social, and recreational activities were likely to have been altered (Hancock, 1978). In summary, paradoxically the chronic pain patients' lifestyle had been disrupted and very possibly shattered while the boundaries of their world continued to shrink (Fordyce, 1976; Sternbach, 1974).

Patients were randomly selected through the use of a table of random numbers until a sample of 50 females and 50 males who met the following criteria was obtained:

(1) Pain problem diagnosed at least 6 months prior to entry into the program.

(2) No surgery for the problem in the last 6 months. This criterion controlled for post-operative pain problems.

(3) Between the ages of 20 and 65 years. The majority of patients admitted were within this range, although the Center did on occasion admit teenagers with chronic problems.

(4) Completion of a 3-week in-patient program. Eliminated from the sample were the few persons who attended as day patients and returned home at night.

(5) Chief complaint of low back pain. This was the most frequent category of complaint.

(6) Complete records and charts kept by the patient during the second and third weeks of the program.

(7) Those with an open workman's compensation claim. This stipulation attempted to keep constant the possible motivation to display sick behavior in order to obtain compensation payment. Obtained differences in sick behavior may be attributed to factors other than this motivation.

Data

The data for this study were derived from patient records. These data included information on demographic and background characteristics, and information on amount, type and time of patient medications, and behavior during treatment.

Measurement of Major Variables

The independent variable in this study was the sex of the patient, determined from the patient's record. In the analysis, a female was assigned the value of "0" and a male, the value of "1".

The dependent variables in this study selected to measure sick role behavior concerned the patient's activity and mobility, reported pain level and receipt of medications.

The activity or mobility of each patient was estimated by four measures:

(1) Hours per day spent sitting

(2) Hours per day spent walking

(3) Number of laps covered per day

(4) Miles per day on an exercycle

Although sitting may be considered inactivity for some populations, for a population of chronic pain patients, it may be considered an achievement, in that it takes more effort than bedrest.

These data were obtained from charts maintained daily by patients as a part of the program regimen (See Appendices A-D, for copies of these charts). Data were recorded from Day 4 in the program, using this day as the baseline, to Day 17. A mean was obtained on each measure for this span of time.

Three pain level estimates were recorded daily:

(1) Worst pain per day

(2) Average pain per day

(3) Least pain per day

Pain level ranged from a possible score of 0 to 100, with "0" being no pain and "100" being the worst possible pain. These data were recorded daily by patients (See Appendix E for a copy of the Pain Level chart). A mean score for each of these pain level assessments was obtained using data of Days 4 to 17 of the program.

Pain medication data were obtained from hospital records kept by the nursing staff. Medications issued by the patient's referring physician were continued as prescribed for the first days, and then gradually a weaning process was established on an individualized basis during the treatment period.

Pain medications were classified as narcotic and non-narcotic in accordance with the Physician's Desk Reference. Most patients entered the program on mild narcotics such as Empirin #3, Tylenol #3, and Ascriptin #3. Non-narcotic pain medications used were Aspirin, Tylenol, and Fiorinal plain. Fiorinal plain has both analgesic and muscle relaxant properties.

Psychotropic medications are frequently used for depression, which is often an underlying problem. For most patients, these anti-depressants were prescribed during the program treatment. Examples of psychotropic medications utilized are: Elavil, Sinequan, Tofranil, and Triavil.

Additional Data

The following demographic and medical data were collected from the patients' medical records: age, marital status, occupation, education, diagnosis, injury date, last work date, and number of surgeries.

Analysis

The first task in the analysis was to determine whether men and women differed significantly in their sick role behavior. To this end, Grand Mean Scores for members of each sex were calculated for each of the four activity measures (sitting, walking, laps, exercycle miles)

during the period from Day 4 through Day 17. The significance of the difference in these Grand Mean Scores was determined by t-test. Likewise, Grand Mean Scores for the pain levels reported were calculated for males and females, and the differences subjected to analysis by t-test.

To note the possibility of differential improvement by sex, contingency tables were constructed indicating, for each sex, the number whose activity level increased over the period (Day 4 through Day 17) and the number whose activity remained constant or decreased. The chi-square technique was used to determine the significance of the difference in distributions for the two sexes. Likewise, chi-square was used to determine whether or not the number of males differed substantially from the number of females who reported pain levels to decrease over the treatment period (Day 4 through Day 17). Finally, chi-square was used to determine if differences existed between the sexes in the proportion receiving narcotics, non-narcotic medications, and psychotropic drugs.

Still another set of analyses sought to determine the relationships among the various sick role measures (activity levels, pain levels, receipt of medications). Finally, analyses were undertaken to determine the relationships of demographic factors other than sex (age, number of surgeries, education, occupation, months since last worked, length of illness) to sick role behaviors, namely activity levels, pain levels and medications, and to see if these relationships differed systematically between the sexes.

CHAPTER III

RESULTS AND DISCUSSION

In this chapter, first the sample is described. Then, the sick role behaviors of male and female patients are analyzed. These behaviors include the amount of daily activity, levels of pain reported, and the amount of medication received. Next, the relationships among these sick role measures are examined. Finally, the relationships between the sick role behaviors and selected demographic factors are identified and discussed.

Description of the Sample

The sample consisted of 100 patients, 50 males and 50 females. The mean age for the sample was 42.7 years. All patients had received injuries on the job, and these injuries had been sustained, on the average, three years previously. All but one were currently unemployed, and had been unemployed an average of 2½ years. These figures suggest that many patients had indeed returned to work for a time after their injuries, but then had quit. The patients had been engaged in a wide range of occupations, from unskilled to professional. However, the majority were semiskilled workers, such as truck drivers, machine operators, and mill workers. In line with their occupational status, the mean educational level was 11 years (See Table 1).

The patients may be considered representative of those attending any pain center, in that all had a chronic pain problem, unresolved by traditional medical care. The present sample also resembled, in age and number of surgeries, two earlier samples of patients evaluated in the same pain center in 1976 and 1977. It differed from those earlier

Table 1

Selected Characteristics of Patients with Chronic Pain: by Sex

Characteristic	Male (N=50)	Female (N=50)
Age		
Mean	43.5	41.9
SD	9.9	8.7
Marital Status		
Married	49	39
Other	1	11
Education (years)		
Mean	11.0	11.8
SD	2.4	1.7
Occupational Status[a]		
Mean	29.6	25.4
SD	20.0	19.2
Employed		
Yes	1	0
No	49	50
Time since last worked (months)		
Mean	28.4	30.4
SD	19.3	23.2
Number of surgeries		
Mean	1.0	1.2
SD	1.2	1.7
Length of illness (months)		
Mean	36.6	36.7
SD	39.5	22.1

[a] Duncan-Reiss Socioeconomic Index (SEI). See Reiss (1961).

two samples in that its members had been ill a shorter period of time (3 years versus 6.3 years).

From Table 1 it may be noted that the males and females of this sample did not differ significantly in age, education, number of surgeries, length of illness, employment status, occupational status, or time since last employment. They differed significantly only with regard to marital status, with fewer females being married than males. In view of this overall similarity, none of the selected demographic characteristics, except marital status, can explain any differences between the sexes in their enactment of the sick role.

Comparison of Sick Role Behavior of Males and Females

The review of past research and theory clearly suggested that women adopt the sick role, and use health services, more readily than men. On the basis of this evidence, it was hypothesized that women might be less assiduous than men in performing the duties of the sick role in order to get well, and might be less ready to release the sick role. Inasmuch as women presumably display more dependency and passivity, exercise less, express their emotions more readily, including feelings of discomfort and pain, and consume more medication, it was also anticipated that the women in this chronic pain patient sample would be less active during the treatment program than the men, would report higher levels of pain, and would receive more medications. Evidence relating to these expectations is presented below.

Activity Levels

The data presented in Table 2 permit a comparison of the amount of activity between male and female patients during the treatment

TABLE 2

Activity Scores of Patients with Chronic Pain

on Day 4, Day 17, and Mean for Treatment Period: by Sex

Activity	Mean Scores					
	Baseline (Day 4)		Program End (Day 17)		Mean for Period	
	Males	Females	Males	Females	Males	Females
Hours Sitting/Day						
Mean	7.4	6.8	7.3	7.0	7.5	7.0
SD	2.7	2.0	1.8	1.8	1.9	1.4
Hours Walking/Day						
Mean	4.8[a]	5.8[a]	5.5	6.1	5.2	5.9
SD	2.4	2.3	2.3	2.4	2.1	2.0
Number Laps/Day						
Mean	23.6[b]	18.8[b]	33.1	26.0	29.8[d]	23.9[d]
SD	15.5	13.4	15.3	16.8	13.7	14.1
Number Exercycle Miles/Day						
Mean	2.6[c]	0.8[c]	3.0	3.0	2.0	1.5
SD	4.1	1.3	5.6	4.9	2.7	1.8

[a]Difference between sexes statistically significant ($p \leq .05$), 2-tailed test, $t(98)=2.10$

[b]Difference between sexes statistically significant, 1-tailed test, $t(98)=1.65$

[c]Difference between sexes statistically significant, 1-tailed test, $t(98)=2.93$

[d]Difference between sexes statistically significant, 1-tailed test, $t(98)=2.09$

period. First, the baseline data indicate that at time of entry into the program men spent significantly less time walking than women. However, they appeared to be more energetic in the endeavor, in that they tended to cover more laps per day ($t=1.65$). They also exercycled more miles per day than women ($t=2.93$). This greater participation in more strenuous forms of exercise is congruent with the lesser tendency of women generally to engage in sports that has been reported in the literature (Belloc, 1973; Pratt, 1976; DHEW, 1979).

Once enrolled in the treatment program, both sexes increased their activity levels. As may be noted in Table 3, both men and women significantly increased the number of laps covered, and the number of miles cycled per day. Men also significantly increased their hours of walking. Apparently all patients, both male and female, conformed to the expectations of staff, by cooperating with the prescribed regimen.

When the treatment period was considered as a whole, did the males appear to have been more active than the females? Mean scores for males and females for the 14-day period were entered into the last two columns of Table 2. Only one significant difference was found. Men covered a significantly greater number of laps a day then women. On the basis of this one difference, however, it would be difficult to claim that women enacted the sick role differently, by being less cooperative, or less willing to work to get well.

Pain Levels Reported

As stated earlier, each day each patient in the clinic estimated the extent of his or her pain (worst, average, and least) on a 100-

Table 3

Change Over Treatment Period (Day 4 to Day 17) in Amount of Activity of Patients with Chronic Pain: by Sex

Activity	Males (N=50)	Females (N=50)
Hours Sitting/Day		
More	25	26
Same	2	2
Less	23	22
Hours Walking/Day		
More	31**	20
Same	4	4
Less	15	26
Laps Covered/Day		
More	36**	40**
Same	4	2
Less	10	10
Miles Exercycled/Day		
More	21*	22*
Same	19	22
Less	10	6

*Change was statistically significant by Signs Test, $p < .05$

**Change was statistically significant by Signs Test, $p < .01$

point scale. These scores were averaged over the 14-day treatment period. The means of these averaged scores for males and for females are presented in Table 4. The scores of male and female patients are remarkably similar. Clearly, the prediction that the women would report more pain than the men during their enactment of the sick role was not upheld. Perhaps the view expressed in the literature is correct, that it is culturally more acceptable for women than for men to express their feelings, to manifest emotionality, including pain (Phillips & Segal, 1969; Cooperstock, 1971; Chesler, 1972; Nathanson, 1975; Tagliacozzo & Mauksch, 1972). Perhaps it is also the case that the cultural taboo against expressiveness in men is lifted, once the sick role is legitimatized as suggested by the 1980 DHEW report. If so, men diagnosed as sick, and entering treatment, may be permitted to express pain equally with women.

Table 5 presents data regarding the number of males and females who reported pain levels which decreased, remained the same, or increased, from the day treatment commenced (Day 4), until its termination (Day 17). A strong trend may be noted for patients to report a decrease in pain. There appears to be little difference, however, in the strength of that trend between the sexes. Both sexes appeared to benefit about equally. It may be inferred, therefore, that the pain program was indeed effective in reducing pain for the majority of patients.

Receipt of Medication

Wolinsky and Wolinsky (1981) have described medication-prescription as a legitimation of the sick role, and medication-taking as a "badge

Table 4

Pain Levels Reported by Patients with Chronic Pain: by Sex

Pain Level Reported	Males (N=50)	Females (N=50)
Worst Pain (0-100)		
Mean Score	67.7	65.6
SD	16.3	17.7
Average Pain (0-100)		
Mean Score	53.6	52.0
SD	19.5	16.9
Least Pain (0-100)		
Mean Score	41.2	40.5
SD	23.4	18.7

Table 5

Change Over Treatment Period (Day 4 to Day 17) in Pain Levels Reported by Patients with Chronic Pain: by Sex

Pain Level Reported	Males (N=50)	Females (N=50)
Worst Pain		
More	11	11
Same	4	4
Less	35**	36**
Average Pain		
More	11	11
Same	8	4
Less	31**	35**
Least Pain		
More	14	12
Same	10	1
Less	26*	37**

*Change was statistically significant by Signs Test, $p < .05$

**Change was statistically significant by Signs Test, $p < .01$

of illness." On the assumption that women find the sick role somewhat more compatible than do men, it was anticipated that the women in this sample would receive more medication than the men. Table 6 provides no support for that prediction. Men and women received narcotics, pain medications, and psychotropic drugs in almost identical proportions. The finding of no difference in medication consumption by the sexes is in agreement with the findings of Brown, Buchanan, and Hsu (1978), and of Wolinsky and Wolinsky (1981). However, the finding that men and women received psychotropic medication to an equal extent flies in the face of the evidence that, generally speaking, women are prescribed mood-modifying medications more frequently than men (Cooperstock, 1971; Cozby, 1973; Fabrega et al., 1969), and that physicians judge the need of women for such drugs to be greater than the need of men (Cooperstock, 1971). Lorber (1975) has described the "problem patient" as one who freely expresses anxiety and pain, and suggests such patients may be administered valium and psychotropic drugs more frequently than non-problem patients. In the present sample, the women may not have been viewed as problem patients to any greater extent than the men, in that their reported pain levels were so similar. Then, too, the expressed intention of the staff to wean all patients from medications may have overridden any tendency to give more medication to one group or the other.

In summary, the above data, by indicating only minimal differences in activity levels, pain levels or medication-taking of males and females, provide no support for the theoretical notion that women find the sick role more compatible than do men while under treatment. Once

Table 6

Receipt of Medications during Treatment Period by Patients with Chronic Pain: by Sex

Receipt of Medication	Males (N=50)	Females (N=50)
Narcotics		
Yes	33	33
No	17	17
Non-narcotic pain medication		
Yes	42	47
No	8	3
Psychotropic drugs		
Yes	29	29
No	21	21

the sick status of the individual has been legitimatized, then the sick role appears to be enacted similarly, regardless of sex, in accord with universal expectations.

Relationships Among the Sick Role Measures

Did chronic pain patients who engaged more in one form of activity also engage more in other forms of activity? Were those patients more active who experienced less pain? Were those patients more active who received more medications? Did those patients experience less pain who received more medications? Tentative answers to these questions lie in the data presented in Tables 7 and 8.

First, in the case of female patients, none of the activity measures correlated significantly with any other. Those women who spent more time walking did not necessarily cover more laps, nor use the exercycle more. To some extent, they did sit less, but even the relationships of sitting to walking, to laps covered and to miles exercycled were not statistically significant. In the case of male patients, the only significant correlation was between the number of laps covered and miles exercycled ($r = .39$). Those males who exercycled more also covered more laps. These findings suggest there may be no tendency to be active generally, but that individuals are selective in the activities they perform. Males may have a slightly stronger tendency than females to engage in the more strenuous forms of exercise.

Second, the amount of activity in which patients engaged was related to the pain they experienced. It appeared that women who estimated their pain to be greater spent more time sitting, than did

TABLE 7

Intercorrelations among Measures of Activity, Pain Levels Reported and Receipt of Medications: for Female Patients in Pain Clinic (N=50)

	ACTIVITY LEVEL			PAIN			MEDICATIONS		
VARIABLES	2	3	4	5	6	7	8	9	10
1. Sitting	-.14	-.11	-.19	.35*	.39*	.34*	-.24	-.07	-.13
2. Walking		.18	-.07	.16	.03	-.05	.11	.15	-.03
3. Laps			.24	.08	.06	-.02	.10	.06	.02
4. Exercycle				-.30*	-.21	-.13	-.11	-.03	.16
5. Worst Pain					.92*	.73*	.20	.11	.06
6. Average Pain						.92*	.07	.18	-.01
7. Least Pain							-.05	.15	-.03
8. Narcotics								.35*	.16
9. Pain Medications									.30*
10. Psychotropic Drugs									--

* $p \leq .05$

TABLE 8

Intercorrelations among Measures of Activity, Pain Levels Reported and Receipt of Medications: for Male Patients in Pain Clinic (N=50)

	ACTIVITY LEVEL			PAIN			MEDICATIONS		
VARIABLES	2	3	4	5	6	7	8	9	10
1. Sitting	-.18	-.16	.01	.08	.05	.01	-.06	-.06	-.02
2. Walking		.15	-.15	.09	.05	.09	-.10	-.06	-.20
3. Laps			.39*	-.20	-.23	-.24	.03	-.05	.19
4. Exercycle				-.23	-.32*	-.28*	.09	.00	.22
5. Worst Pain					.87*	-.76	.25	.26	.26
6. Average Pain						.95	.34*	.30*	.19
7. Least Pain							.31*	.26	.13
8. Narcotics								.61*	.07
9. Pain Medications									-.04
10. Psychotropic Drugs									--

* $p \leq .05$

women who estimated their pain to be less. Possibly, also, those women with greater pain exercycled less than women with less pain, as is indicated by the negative coefficient values. A similar relationship held for males in that those males exercycling less reported more pain. It is possible that performance of vigorous exercise inhibited pain, as Fordyce (1976) and Pace (1976) have argued. It is, of course, equally plausible that pain acted as a deterrent to engaging in vigorous exercise.

Third, no difference was found in the activity levels of those patients receiving more, and those receiving less medication. This finding was obtained for both males and females. The receipt of narcotics, pain medications or psychotropic drugs did not seem to result in either slowing down or decreasing activity, nor in encouraging patients to become more active.

Fourth, for women, there appeared to be no relation between amount of pain they reported and the receipt of medication. Those with more medication reported as much pain as those with less medication. For women, then, this might explain why activity was not greater for those with more medication -- they were suffering to the same extent as those who received less medication. For males, however, there appeared to be a weak relationship between medication received and pain experienced. Men who reported more pain received more narcotics and pain medications. The question then arises: Did the staff take the complaints of pain by men more seriously than complaints by women, and hence tend to acquiese to their requests for medications? The data of this study cannot provide an answer to this question.

However, the possibility of such a tendency runs counter to the allegation found in the literature that health professionals tend to medicate women more than men (Rabin & Bush, 1974).

Relations of Selected Demographic and Medical Variables to Sick Role Behavior

Inasmuch as differences in the sick role behaviors of this sample of patients with chronic pain cannot be adequately explained on the basis of sex, can the differences be explained by other demographic and medical variables such as age, education, occupation, time since last employed, length of illness, or number of surgeries? Tables 9 and 10 present Pearson correlation coefficients for the relationships of these variables to the sick role measures, for males and for females.

First, with regard to females, none of the selected variables correlated significantly with any of the sick role measures. The closest approximation to significance was noted in the relation of number of surgeries to pain experienced, with more pain reported by persons who had undergone more surgeries, and in the greater tendency of older females to receive more pain medications. No such relationship was noted for males between number of surgeries and pain, and the reverse situation was noted with respect to medications. Older males received fewer narcotics. A few of the findings for males were statistically significant. Males who had experienced more surgeries, and had been injured for a longer period of time, tended to sit less. Older males, also spent less time sitting. The only plausible explanation for these findings is that such individuals may have

TABLE 9

Correlation Coefficients of Sick Role Behavior Measures with Selected Demographic and Medical Variables: for Female Patients in Pain Clinic

Sick Role Behavior	Correlation of Sick Role Behavior Measure with					
	Age	Education	Occupation	Number of Surgeries	Length of Illness	Months Since Last Worked
Activity						
Sitting	.17	.12	-.10	.09	-.06	-.01
Walking	-.05	.04	.06	.09	-.01	-.07
Laps	.08	-.15	-.24	-.18	-.09	-.03
Exercycle	-.09	-.12	.19	.04	-.13	-.10
Pain						
Worse	-.04	.01	.02	.26	.04	.01
Average	-.09	.10	.04	.25	.07	.03
Least	-.10	.12	.09	.20	.05	.01
Medication						
Narcotics	.08	-.15	-.07	.14	.06	.11
Pain medications	.26	-.03	.11	.07	-.02	-.05
Psychotropic	.07	-.17	.20	.15	.10	.11

TABLE 10

Correlation Coefficients of Sick Role Behavior Measures with Selected Demographic and Medical Variables: for Male Patients in Pain Clinic

Sick Role Behavior	Correlation of Sick Role Behavior Measure with					
	Age	Education	Occupation	Number of Surgeries	Length of Illness	Months Since Last Worked
Activity						
Sitting	-.28*	.21	-.23	-.34*	-.28*	-.16
Walking	-.08	-.17	-.05	.21	-.21	.07
Laps	.03	.23	.01	-.10	-.03	-.02
Exercycle	-.16	.06	-.08	-.26	-.03	-.16
Pain						
Worst	-.21	.07	.17	-.08	-.27	-.00
Average	-.21	.15	.21	-.06	-.11	.14
Least	-.25	.14	.17	-.03	-.04	.18
Medications						
Narcotics	-.26	.36*	.16	.09	.09	.11
Pain medications	-.15	.39*	.19	.06	.10	.27
Psychotropic	.15	.12	.34*	.06	.09	.02

* $p \leq .05$

spent more time lying down, in as much as they did not walk more, cover more laps, or exercycle more. It may be noted, in addition, that individuals with more education received significantly more narcotics and pain killers than individuals with less education; and that persons of higher occupational status received distinctly more psychotropic drugs. Could it be that males of higher socioeconomic status hold less conventional values, and have less fear of being stereotyped as feminine for verbalizing discomfort, frustrations and psychological disturbance? Or is the best interpretation of these "significant" findings that they are simply a consequence of chance alone?

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This investigation was undertaken to provide an initial test of the proposition that males and females differ in their enactment of the sick role. Specifically, 50 males and 50 females under treatment for chronic back pain in a hospital pain center were compared with respect to extent of activity, amount of pain reported, and amount of medication received. From the literature review, it was anticipated that males would comply with the exercise aspect of the treatment regime more than would females. It was also anticipated that females would report more pain, and therefore be likely to receive more pain and psychotropic medication.

Minimal evidence was found in support of these expected relationships. Both sexes increased their activity levels during the treatment period. Males showed significantly greater activity than females only with respect to the number of laps covered per day. This one significant finding is not sufficient to warrant the conclusion that males are indeed more active (or less passive) than females in the sick role.

Both sexes reported that their pain decreased during the treatment period, giving credence to the effectiveness of the program of the pain center under study. Females did not report pain levels any greater than those reported by males, despite the claims made in the literature that females are more expressive of discomfort and emotions. Medication consumption, also, did not differ between the sexes. Males who are presumed to be more stoical received just as much pain and psychotropic

medication as females. In general, for this population of patients with chronic back pain, males and females appeared to enact the sick role in a quite similar fashion.

When the relations among the sick role measures were considered, several conclusions were reached. First, females active in one respect were not necessarily active in other respects; however, males who exercycled more also covered more laps per day suggesting that males were more vigorous in their activity as is indicated by the literature on sex difference in exercise. Second, for both sexes, activity levels were related to pain levels, with those persons reporting more pain who exercised less. This finding may be interpreted as supporting the claims of Pace (1976), Fordyce (1976) and Sternbach (1974) that activity shifts attention away from a pain problem, enhances self-esteem, and thereby decreases pain behavior, and presumably pain itself. The finding may alternatively be interpreted as supporting the proposition that pain leads to inactivity. From the data available in this study, either interpretation is as plausible as the other. Third, no relationship was found between the sick role measures of activity and medication. Activity did not vary with amount of medication received, for either males or females. Fourth, reported pain did not appear to be associated with the medication consumption of females. However, males who reported more pain received more medication.

When sick role behaviors were examined with relation to background characteristics of the patients, no significant findings were obtained in the case of females. However, older males, males who had experienced

more surgeries, and males who had been injured for a longer period of time, spent less time sitting than other males. Since they clearly did not spend more time walking, exercycling or doing laps, they must have been reclining. Their lesser extent of activity is hardly a remarkable finding. The only other significant finding was that males of higher socioeconomic status, as measured by education or occupation, tended to receive more medication than males of lower socioeconomic status.

What may be concluded from these findings and analyses? Does the failure to obtain significant differences between males and females in sick role behavior reflect the reality of the situation, or is it attributable to limitations of the methods employed in this investigation? Perhaps the proposition that women settle into and retain the sick role more readily than men has not been given an adequate test because of the selected measures, sample and setting. The measures may not have been sufficiently sensitive or valid indicators of the sick role qualities of passivity, dependency and expressivity. Amount of physical activity may not have reflected adequately passivity and dependency; the daily reporting of degree of pain on charts may not have adequately measured the willingness of patients to express discomfort; and the surrender of medications may not have been an appropriate indicator of increasing independence.

In the particular setting studied, little latitude was permitted patients with regard to these behaviors. Activity was required of all, although, of course, some patients complied more energetically than others. All patients were expected to be weaned from medications,

so requests for analgesics might have gone unheeded by staff. Finally, all patients were required to maintain pain charts. This regulation made it legitimate for males, as well as females, to express pain through this medium. Males understood it was all right to admit to pain through this somewhat private manner. In view of these characteristics of the treatment setting, it is understandable that variation in the selected sick role behaviors might be less apparent than in other settings. Expectations regarding their behaviors may have resulted in a convergence, whereby females became more active and less expressive, in order to demonstrate compliance with treatment, whereas males felt free to become more expressive.

A second reason for failure to obtain significant results may lie in the nature of the sample chosen. The males and females of this sample may well have been more alike than randomly selected samples of males and females. For instance, this sample represents only women who have been in the work force, and who have for the most part worked in blue collar occupations. As a group, then, these women might be less traditional in their sex role orientation, and might be somewhat more masculine than a group of women randomly selected from the total population. In the latter, women would be included who were not members of the work force such as housewives, and women who were employed in more traditional white collar and clerical occupations. In addition, the males in this sample might have been somewhat less masculine, overall, than males in the general population, because of their long period of illness, a situation which engenders dependency. Moreover, many had been motivated to seek help and to express their

discomfort in order to retain workmen's compensation claims. Finally, their chronic condition may have resulted in a change in sense of identity, from viewing themselves as strong, aggressive and masculine, to viewing themselves as weaker and somewhat impaired.

To the extent that such speculation bears merit, it might be assumed that neither the men nor the women in this sample manifested wide variability along the masculinity-femininity dimension, but rather that both sexes tended to converge toward middle positions. Insufficient variability, in turn, would weaken the test of the postulated relation between sex and the qualities of expressivity, dependency and passivity associated with sick role behavior. With males being less masculine, and females less feminine, differences in enactment of the sick role would be unlikely to emerge.

Such limitations of method may account for the present failure to support the proposition that women find the sick role more acceptable and relinquish it less readily than men. However, it is also possible that the findings reflect the true situation, and that the logical reasoning or theory underlying that proposition are at fault. First, it is possible that today, cultural differences between the sexes with respect to activity/passivity, dependence/independency, and expressivity/nonexpressivity are quite muted. Second, it may be that, such differences to the extent they still prevail, become irrelevant, once sickness is diagnosed and made legitimate by health professionals. The labeling of an individual as sick may constitute a rite of passage, and in the new role, the old taboo against expressing discomfort or emotional distress may be lifted for men.

In short, illness may be "feminizing". Third, it is possible that criteria for treatment are applied by professionals universally to patients with a given problem, and that expectations for compliance with treatment are universal for all patients with a given diagnosed condition. Fourth, it is possible that the hypothesis of differences between the sexes holds only for illnesses which are acute, and clearly physiologically based, but not for chronic illnesses, or illnesses where the physical pathology is not so evident.

In the present instance, it is impossible to determine whether the failure to find differences in sick role behavior was a result of limitations of theory or of method. It should be emphasized that this study was a pioneering study. Very few empirical data have been published in the literature regarding enactment of the sick role. Those data which exist also failed to find sex differences. Still, it is recognized that negative findings can not be interpreted as proof of lack of relationship. Clearly, more research is needed before the issue can be resolved. It is recommended, therefore, that in future research, different or additional sick role measures be developed, that behavior be studied directly by observational techniques as well as indirectly through interviews and records; that the proposition be tested with samples that manifest a wide variability in femininity and masculinity; and that sick role behavior of males and females be compared for different health problems, both of an acute and chronic nature. If negative results are obtained over tests employing a variety of methods and over a range of samples, then the proposition may be laid to rest. If, as is more probable,

sex differences are found to exist under some conditions, but not under others, then these conditions may be made explicit, and the theory refined, specified and elaborated. In either case, health professionals will be better able to understand when to apply the same or different strategies in therapy with males and females presenting similar health problems.

References

Aguilera, D. C., & Messick, J. M. Crisis intervention: Theory and methodology (2nd ed.) St. Louis: C. V. Mosby Co., 1974.

Arluke, A., Kennedy, L., & Kessler, R. Reexamining the sick role concept: An empirical assessment. Journal of Health and Social Behavior, 1979, 20, 30-36.

Belloc, N., Breslow, L., & Hochstim, J. Measurement of physical health in a general population survey. American Journal of Epidemiology, 1971, 93, 328-336.

Belloc, N., & Breslow, L. Relationship of physical health status and health practices. Preventive Medicine, 1972, 1, 409-421.

Berkanovic, E. Lay conceptions of the role. Social Forces, 1972, 51, 53-64.

Brown, J. S., Buchanan, D., & Hsu, L. Sex differences in sick role behavior during hospitalization after heart surgery. Research in Nursing and Health, 1978, 1, 37-48.

Chesler, P. Women and madness. New York: Doubleday, 1972.

Christensen, D. Drug taking compliance: A review and syntheses. Hospital Research and Education Trust, 1978, 171-186.

Clough, D., & Derdiarian, A. Patient's dependence and independence levels on the prehospitalization postdischarge continuum. Nursing Research, 1980, 29, 55-58.

Cooperstock, R. Sex differences in the use of mood modifying drugs: An explanatory mode. Journal of Health and Social Behavior, 1971, 12, 238-244.

Cozby, P. Self-disclosure: A literature review. Psychological Bulletin, 1973, 79, 73-91.

Davitz, L. J., & Pendleton, S. H. Nurses' inferences of suffering. Nursing Research, 1969, 18, 100-107.

Derdiarian, A., & Clough, D. Patient's dependence and independence levels on the prehospitalizational postdischarge continuum. Nursing Research, 1976, 25, 27-32.

Elms, R. A. Recovery room behavior and post-operative convalescence. Nursing Research, 1972, 21, 390-397.

Fabrega, H., Jr., Moore, R. J., & Strawn, J. P. Low income medical problem patients: Some medical and behavioral features. Journal of Health and Social Behavior, 1969, 10, 334-344.

Fordyce, W. E. Behavioral methods for chronic pain and illness. St. Louis: C. V. Mosby, 1976.

Friedman, L. W., & Cassvan, A. Guide to evaluation of low back pain and sciatica. Hospital Medicine, 1981, 17, 9.

Gordon, G. Role theory and illness: A sociological perspective. New Haven, CT: College University Press, 1966.

Hancok, E. "I don't want to face another day of pain". John Hopkins Magazine, 1978, 14-24.

Jack., S., U. S. Department of Health, Education, and Welfare. Current estimates from the national health interview survey. (Series 10, number 139, p. 24). National Center Health Statistics, Rockville, Maryland, 1980.

Kasl, S., & Cobb, S. Health behavior, illness behavior, and sick role behavior, Part I. Archives of Environmental Health, 1966, 12, 246-266.

Kasl, S., & Cobb, S. Health behavior, illness behavior, and sick role behavior, Part II. Archives of Environmental Health, 1966, 12, 531-541.

Kassebaum, G. G., & Bauman, B. O. Dimensions of the sick role in chronic illness. Journal of Health and Human Behavior, 1965, 6, 16-27.

Levine, S., & Kozloff, M. The sick role assessment and overview. Annual Review of Sociology, 1978, 4, 317-343.

Lindeman, C. A. Nursing intervention with pre-surgical patients: Effectiveness and efficiency of group and individual pre-operative teaching-phase 2. Nursing Research, 1972, 21, 196-209.

Lorber, J. Good patients and problem patients: Conformity and deviance in a general hospital. Journal of Health and Social Behavior, 1975, 16, 213-224.

Markson, E. W. Patient semeiology of chronic disease: Rheumatoid arthritis. Social Science and Medicine, 1971, 5, 159-167.

Mechanic, D. H. Response factors of illness, the study of illness behavior. Social Psychiatry, 1966, 1, 11-20.

Merskey, H., & Spear, F. G. The reliability of the pressure algometer. British Journal of Social and Clinical Psychology, 1964, 3, 130-136.

Nathanson, C. A. Illness and the feminine role: A theoretical review. Social Science and Medicine, 1975, 9, 57-62.

Nathanson, C. A. Sex, illness, and medical care: A review of data theory, and method. Social Science and Medicine, 1977, 11, 13-25.

Newman, R., Seres, J., Yospe, L., & Garlington, B. Multidisciplinary treatment of chronic pain: Long term follow-up low-back pain patients. Pain, 1978, 4, 238-292.

Ossenberg, M. A. The experience of deviance in the patient role: A study of class differences. Journal of Human and Health Behavior, 1962, 3, 277-282.

Pace, J. Pain a personal experience. Chicago: Nelson-Hall, Inc., 1976.

Parsons, T. The social system. New York: The Free Press, 1951.

Parsons, T., & Fox, R. Illness therapy and the modern urban American family. Journal of Social Issues, 1952, 8, 2-3, 31-44.

Petroni, F. A. Social class, family size, and the sick role. Journal of Marriage and the Family, 1969, 31, 728-735. (a)

Petroni, F. A. The influence of age, sex, and chronicity perceived legitimacy to the sick role. Sociology & Social Research, 1969, 53, 180-193. (b)

Phillips, D. L., & Segal, B. Sexual status and psychiatric symptoms. American Sociological Review, 1969, 29, 679-687.

Physician's Desk Reference (36th ed.). Oradell, N. J.: Litton Publications, 1982.

Pratt, L. Family structure and effective health behavior. Boston: Houghton Mifflin, 1976.

Reiss, A. J., Jr., Duncan, O. D., Hatt, P. K., & North, C. C. Occupations and social status. Glencoe, Ill.: The Free Press, 1961.

Rabin, D. L., & Bush, P. J. The use of medicines: Historical trends and international comparisons. International Journal of Health Service, 1974, 46, 61-87.

Rosenblatt, D., & Suchman, E. Blue-collar attitudes and information toward health and illness. In A. Shostak, & W. Gomberg, (Ed.), Blue-collar world: Studies of the American worker. Englewood Cliffs, N. J.: Prentice-Hall, 1964.

Segall, A. The sick role concept: Understanding illness behavior. Journal of Health and Social Behavior, 1976, 17, 163-169.

Seres, J., & Newman, R. Results of treatment of chronic low back pain at the Portland pain center. Journal of Neurosurgery, 1976, 45, 32-36.

Sternbach, R. Pain patients: Traits and treatment. New York: Academic Press, 1974.

Sternbach, R. A., Wolf, S. R., Murphy, R. W., & Akeson, W. H. Aspects of chronic low-back pain. Psychosomatics, 1973, 14, 52-56.

Szasz, T., & Hollender, M. H. A contribution to the philosophy of medicine: The basic models of the doctor-patient relationship. Archives of Internal Medicine, 1956, 97, 586.

Tagliacozzo, D. L., & Mauksch, H. O. The patient's view of the patient's role. In E. Jaco (Ed.), Patients, physicians and illness (2nd ed.). New York: Free Press, 1972.

U. S. Department of Health, Education, and Welfare. Health people. (Public Health Service No. 79-55071). Washington, D. C. Government Printing Office, 1979.

Verbrugge, L. M. Females and ilness: Recent trends in sex differences in the United States. Journal of Health and Social Behavior, 1976, 17, 387-403.

Verbrugge, L. M. Female illness rates and illness behavior: Testing hypotheses about sex differences in health. Women and Health, 1979, 4, 61-79.

Wiener, C. L. Pain assessment on an orthopedic ward. Nursing Outlook, 1975, 23, 508-516.

Winsberg, B., & Greenlick, M. Pain response in Negro and White obstetrical patients. Journal of Health and Social Behavior, 1967, 8, 222-227.

Wolinsky, F., & Wolinsky, S. Expecting sick-role legitimation and getting it. Journal of Health and Social Behavior, 1981, 22, 229-242.

Young, W., & Hisgen, J. Pain clinics: The treatment of the future? Health Education, 1980, 11, 16-18.

Zborowski, M. Cultural components in responses to pain. Journal of Social Issues, 1952, 8, 16-30.

Zola, I. K. Pathways to the doctor - from person to person. Social Science and Medicine, 1973, 7, 677-689.

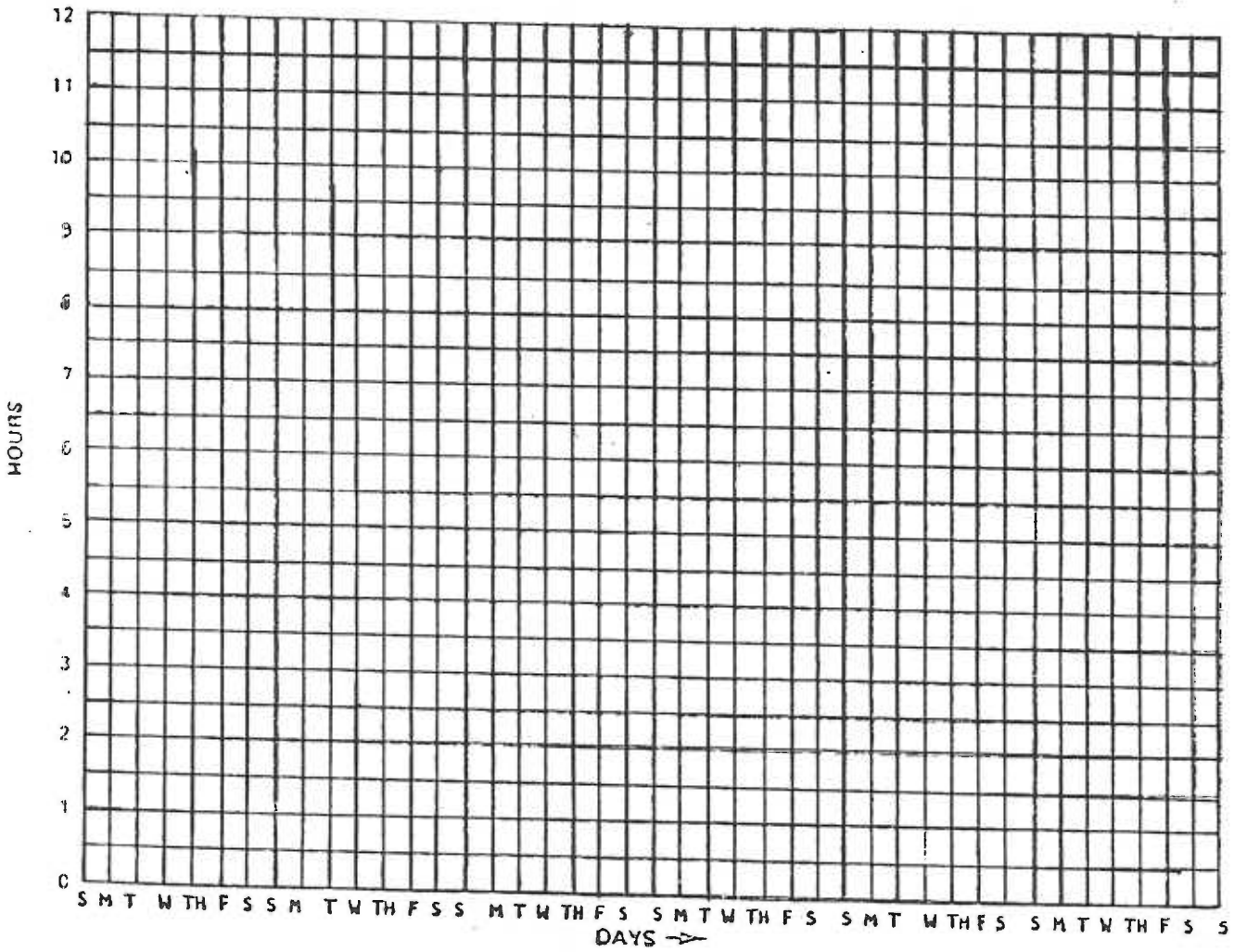
APPENDICES

APPENDIX A

Sitting Chart

NAME: _____

TIME SITTING PER DAY

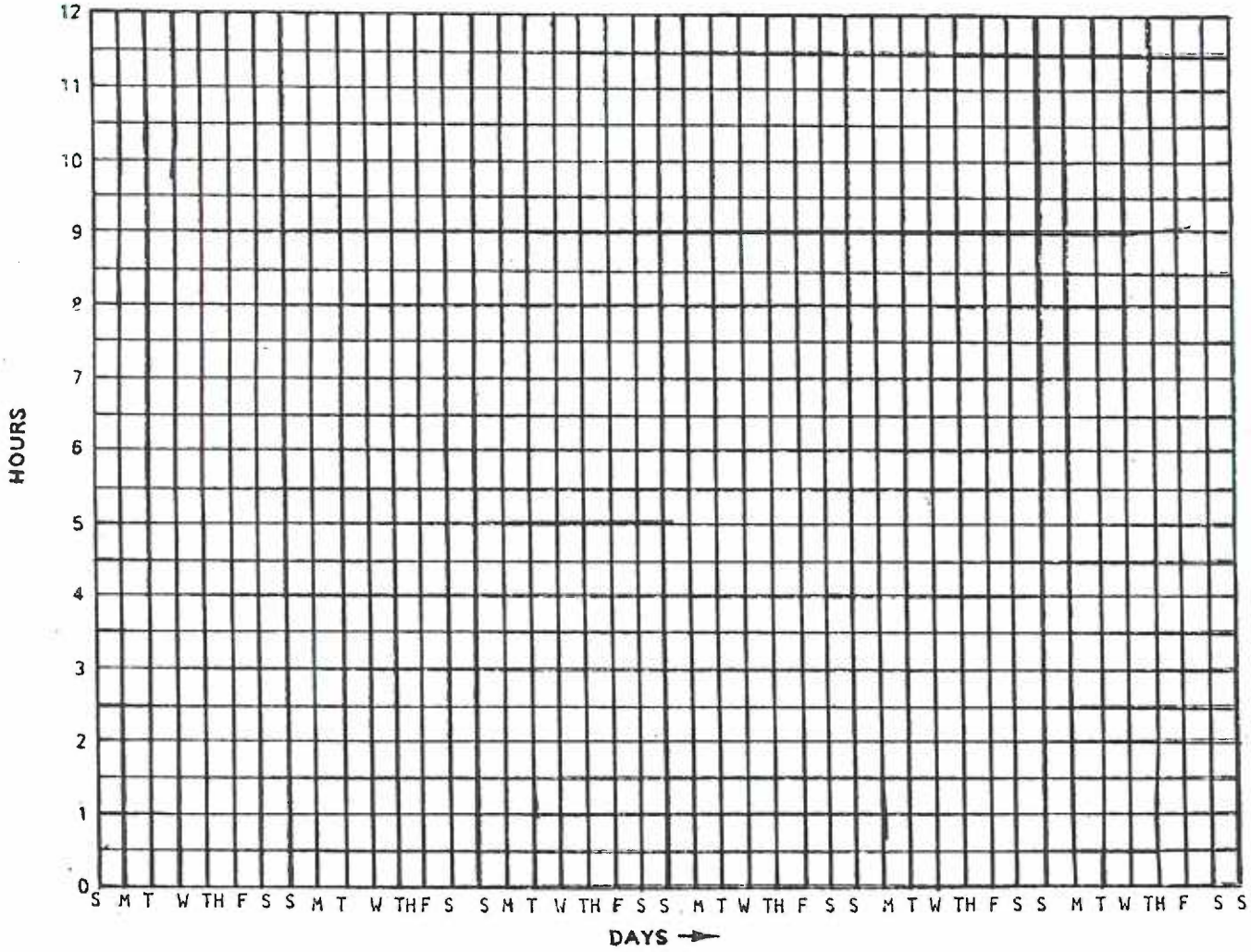


APPENDIX B

Walking Chart

NAME: _____

TIME WALKING PER DAY

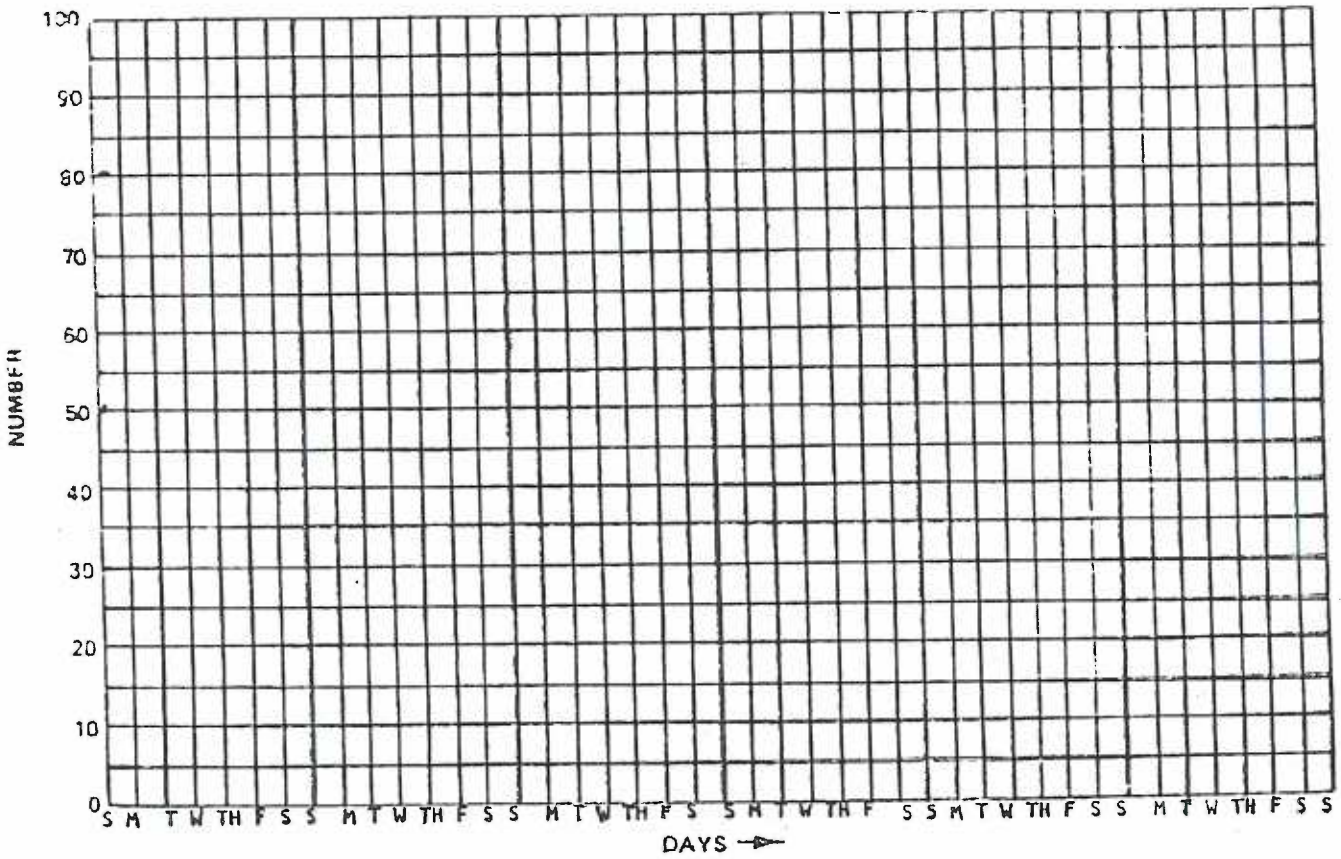


APPENDIX C

Laps Chart

NAME: _____

NUMBER OF LAPS PER DAY
(30 LAPS = 1 MILE)

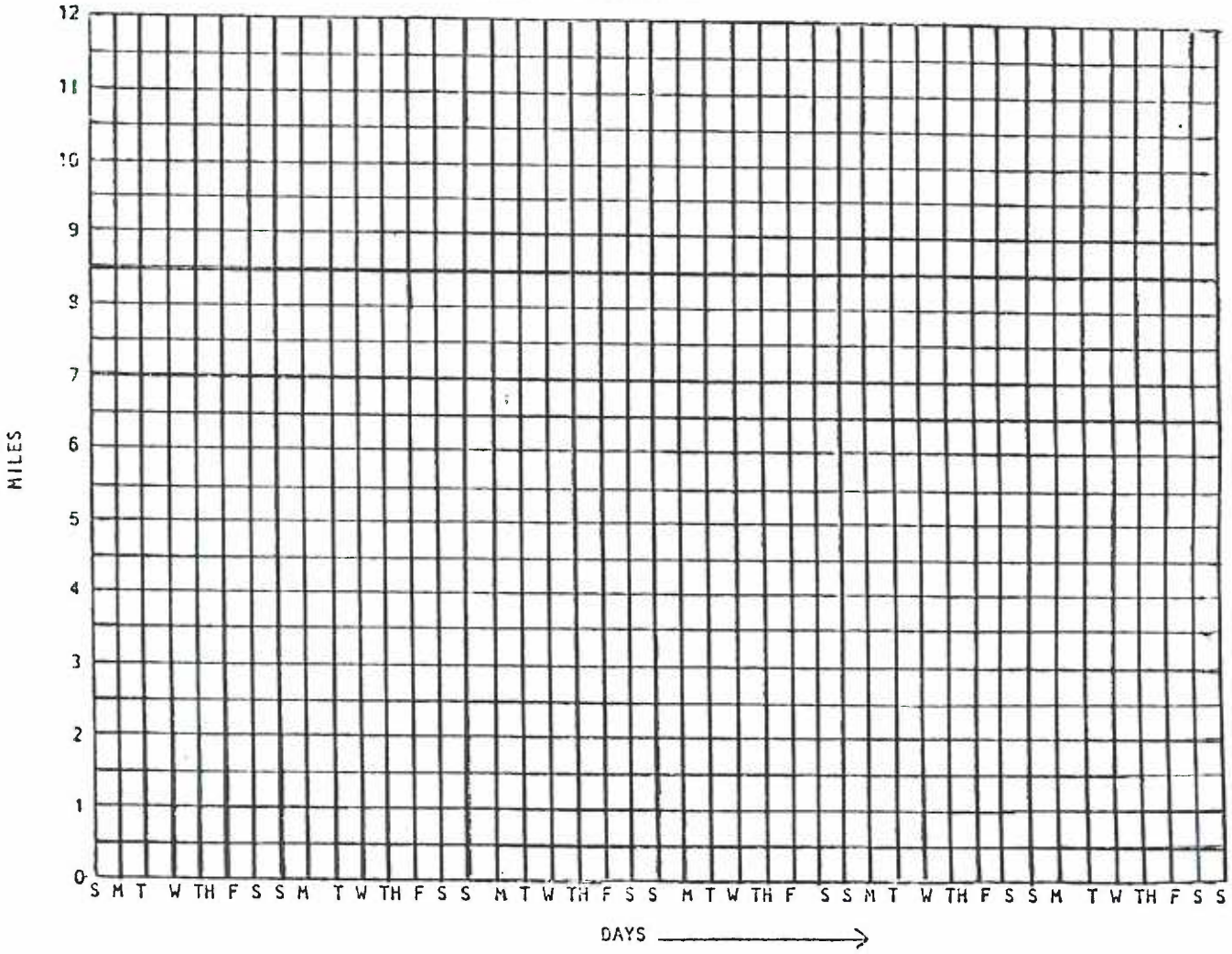


APPENDIX D

Exercycle Chart

NAME: _____

MILES ON EXERCYCLE



APPENDIX E

Pain Level Chart

Name _____

PAIN LEVEL

Admission Date _____

100 represents the worst pain possible, so great that you could not endure it for more than a minute or two

0 represents no pain

Mark an X to show the worst pain you had today which lasted more than a few minutes.

Mark an O to show the least pain you had today lasting more than a few minutes.

Mark a heavy line (—) to show your average pain for most of the day.

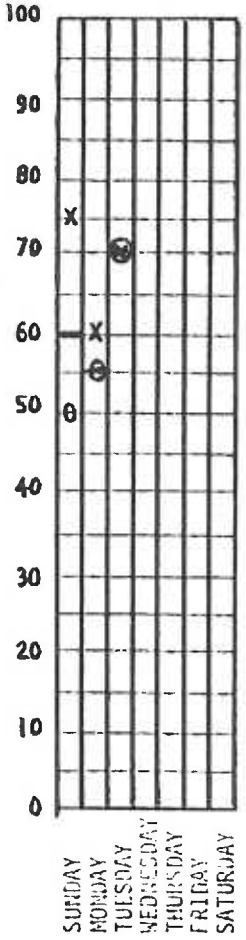
EXAMPLE

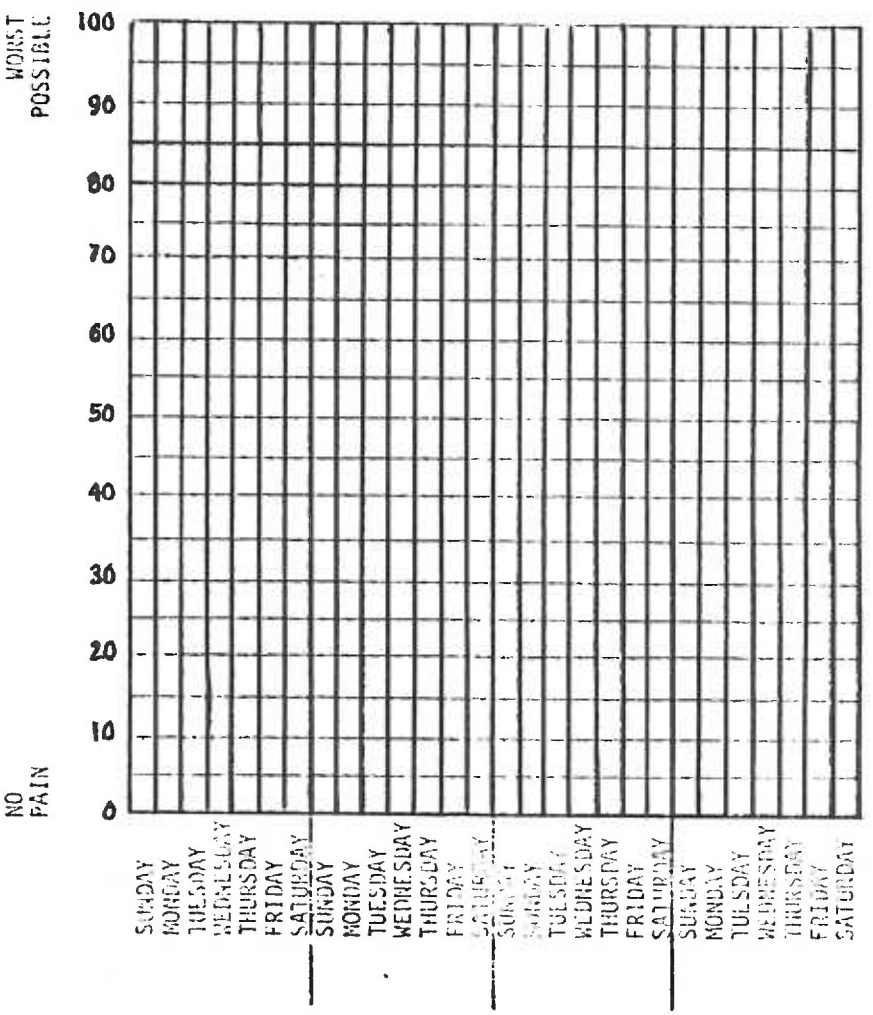
Sunday: Worst Pain 75
Least Pain 50
Most of Day 60

Monday: Worst Pain 60
Least Pain 55
Most of Day 55

Tuesday: Same All Day 70

EXAMPLE





AN ABSTRACT OF THE CLINICAL INVESTIGATION OF

PHYLLIS F. FLOWERS

For the MASTER OF NURSING

Date of receiving this Degree: June 10, 1983

Title: DIFFERENCES IN SICK ROLE BEHAVIOR OF MALE AND FEMALE PATIENTS WITH CHRONIC BACK PAIN

Approved: [redacted]
Julia S. Brown, Ph.D., Clinical Investigation Advisor

Considerable evidence exists that women manifest illness behavior, adopt the sick role, and use health services more freely than men. It has been hypothesized that these differences stem not from women's greater susceptibility to disease than men, but rather from social and cultural factors. It is held that in our culture, it is more acceptable for women than for men to express pain, to seek help, to be passive, and to be dependent on others. It is also held that women's roles are more compatible with the sick role than are men's roles. If these claims hold merit, women should enact the sick role differently than men, expressing more pain as patients, requesting more help, manifesting greater passivity and dependency. It was the purpose of this investigation to explore this issue by describing and comparing the sick role behaviors of male and female patients with the same health problem, and receiving the same treatment from the same professional staff.

The sample consisted of 50 males and 50 females with chronic back pain, randomly selected from all patients enrolled in a 17-day treatment program of a pain center at some time between 1977 and 1980. Data on these 100 subjects were obtained from the center's medical records, and from records kept daily by the patients as part of the treatment regimen.

The specific sick role behaviors examined were amount of activity each day (i.e., hours the patient spent sitting, hours spent walking, number of "laps" covered, number of miles exercycled), pain levels as estimated by the patient each day, and amount of medication received (narcotics, nonnarcotic analgesics, and psychotropic medications). It was anticipated that males would comply with the exercise aspect of the treatment regimen more than females, that females would report more pain, and that females would receive more pain and psychotropic medication.

The data revealed first, that over the treatment period, members of both sexes increased their activity. Second, males showed significantly greater activity than females only with respect to number of laps covered each day. This one significant finding was not considered to be sufficient evidence to warrant the conclusion that males were less passive than females in the sick role. Third, both sexes reported a decrease in pain over the treatment period. Fourth, females did not report any higher pain levels than males. Finally, medication consumption also did not differ across the sexes. In general, then, for this population of patients with chronic back pain, males and females appeared to enact the sick role in a very similar

fashion.

It is possible that these findings are valid, and that women do not find the sick role any more acceptable than do men. In short, the original conceptual formulation may be at fault. Perhaps differences in culture expectations of men and women with regard to passivity, dependency, emotionality have become muted today. Perhaps the differing cultural expectations which prevail for everyday situations become irrelevant once sickness has become legitimated by health professionals. Nevertheless, it must be acknowledged that the negative findings of this first study in the area cannot be interpreted as proof of a lack of relationship between sex and sick role behavior. The proposition may not have been given an adequate test, because of the particular measures, setting and sample selected. The measures may not have been sufficiently sensitive and valid indicators of the sick role qualities of passivity, dependency and expressivity. The setting may have obscured differences in the willingness of patients to be active or passive, or to express pain, and in the ability of patients to influence the receipt of medications. The sample may have provided insufficient variability along the dimensions of masculinity and femininity.

It cannot be determined from this pioneering study whether the failure to obtain significant differences in sick role behavior of males and females was the result of flaws in the methods of the investigation, or flaws in the theoretical formulation. Retests of the proposition, therefore, are essential. Specific suggestions are offered for future research to clarify the complex relationships between sex roles and enactment of the sick role.