RETURN TO NORMAL ROLE FUNCTIONING AFTER ILLNESS

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by

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Abstract

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One of the underlying assumptions of Parsons' (1951) sick role concept was that, after a period of time, the sick person would return to a state of health. Further, while the person occupied this sick role, he/she was exempted from normal role and task obligations. Presumably, when the person exited from this sick role, normal role functioning was resumed. Since this formulation was advanced most research has focused on the parameters of entering the sick role. Little attention has been directed at exiting from this role. To this end, the present study was aimed at investigating the role of certain socioenvironmental, and disease specific variables upon three sets of roles: work, leisure and household. These three sets of roles were viewed as a package of the person's obligations and it was postulated that the person would reassume the package as a whole.

A questionnaire was administered to patients in three active treatment general hospitals who fell into certain selected diagnostic and/or surgical categories.

These categories covered a range of acute ailments or acute phases of chronic ailments requiring surgical intervention. This questionnaire was used to determine pre-morbid levels of functioning and obtain demographic information. A follow-up interview was conducted three weeks post-discharge and post-morbid levels of functioning assessed.

Of the six factors studies: occupation, education, age, sex, nature of the ailment, service category; none were instrumental in effecting return to the total package of role obligations. Rather, a pattern of differential resumption of roles emerged. The key factors in determining return to functioning were salience of the role for the individual and degree of initial involvement in the role.

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CHAPTER I

INTRODUCTION

In recent years, the health action process has been the focus of considerable research in medical sociology. Specific attention has been directed to factors which might predict an individual's response to disease. Polgar (1963) has defined the health action process as a single analytical framework to incorporate: "the procedures used by laymen and specialists to promote health, prevent sickness, and remedy sickness." Social, demographic and psychological factors have been investigated and their impact weighed. Most of the research, however, has dealt with one aspect of the health process, that of becoming sick and the person's reactions once sick. Virtually no research has been done on the aspect of recovery from illness.

Since the early fifties, various explanations of the processes of health and illness have been advanced. Parsons (1951) advanced what was probably the initial explanation of the social aspects of illness. This formulation deals with the effects of illness upon a person's usual role and task performance. Once a person has become ill, his ability to perform his usual roles and tasks becomes impaired and society provides him with an alternate role, the sick role, which is socially legitimate. The rights and obligations associated with the sick role as outlined by Parsons are:

1. This incapacity is interpreted as beyond his powers to overcome by the process of decision-making alone; in this sense he cannot be "held responsible" for the incapacity. Some kind of "therapeutic" process, spontaneous or aided, is conceived to be necessary to recovery.
2. Incapacity defined as illness is interpreted as a legitimate basis for the *exemption* of the sick individual, to varying degrees, in varying ways and for varying periods according to the nature of the illness, from his normal role and task obligations.
3. To be ill is, thus to be in a partially and conditionally *legitimated* state. The essential condition of its legitimation, however, is the recognition by the sick person that to be ill is inherently *undesirable*, that he therefore has an obligation to try to "get well" and to cooperate with others to this end.
4. So far as spontaneous forces, the *vis medicatrix naturae* cannot be expected to operate adequately and quickly, the sick person, and those with responsibility for his welfare, above all, members of

> his family, have an obligation to *seek competent help* and to cooperate with competent agencies in their attempts to help him get well; in our society, of course, principally medical agencies. The valuation of health, of course, also implies that it is an obligation to try to prevent threatened illness where this is possible.

A temporary role has thus been created which is entered when somatic illness prevents the individual from performing usual roles and tasks.

In addition to Parsons', a number of other explanations of health action have been proposed. Some of the major ones are: Szasz and Hollender's (1956) model of behavioral implications of organic symptoms; Freidson's (1961) structural model of illness; Mechanic's (1962a) concept of illness behavior; Kasl and Cobb's (1966) synthesis of health behavior, illness behavior and sick role behavior; Gerson and Skipper's (1972) model of the health action process; and Twaddle's (1974) concept of health status. All of these models have used Parsons' as a departure point, either to expand on some aspect of that model, or roundly condemn it and propose an alternative.

One of the most critical attacks has come from Freidson (1961) who contends that Parsons' analysis emanates from the limited perspective of the physician. Furthermore,

it fails to take account of the expectations of all members of the "role-set" (as developed by Merton, 1957).

> "Attention must be paid to the social structure in which those perspectives are located, and there must be systematic specification of the variable situation and position of influence in which doctors and patients find themselves".

In a later article Freidson (1962) suggests that there are several sick roles and that Parsons' configuration is but one. This has also been supported by Twaddle (1969) who found that Parsons' formulation described the modal response of older males when the elements were treated discretely, but a different conclusion was reached when the elements were treated together. The configuration depended in part on cultural values and on whether the respondent defined himself as sick.

Parsons' formulation has also been criticized because it does not describe the patient's response to chronic illness. Parsons' formulation, however, had been conceived from observations of acutely ill patients. Kassebaum and Baumann (1965) point out that the Parsonian model is not strictly applicable in studies limited to populations of chronically ill. They contend that chronic illness violates certain of the assumptions of the sick role model: chronic illness is not temporary; role incapacity may only be partial; chronic illness is not randomly distributed but is related to advanced age. The reality may be that the sick

role configuration is determined by the type of illness. Parsons' sick role applies to patients with somatic illness, under which the assumption that the individual will get better is valid. As Kassebaum and Baumann point out, such is not the case with chronic illness.

It may well be that there are several sick roles, as Freidson contends. Gerson and Skipper (1972) outline a scheme of sick role responses based on the assumption that different types of disease will have different types of responses. The first distinction to be made is between types of disease: acute, which lasts for a short, defined time; and chronic, which lasts for a longer time. Secondly, some diseases affect the mobility of the person, either forcing him to remain immobile, or permitting some mobility. The interaction of mobility and duration of disease produces the sick role responses outlined in Figure 1.

	Mobility	
Duration	Immobile	Ambulatory
Acute	Transitory	Restricted
Chronic	Disabled	Impaired

Figure I - Alternative Types of Sick Role Responses

Twaddle (1972), revising his earlier thinking, contends that Parsons' model is broad enough to explain sick role variations:

> "It is a statement of a broadly defined set of norms which define central tendencies of expectations held in the society at large for persons defined as sick...the sick role formulation tells us little about detailed variations in the expectations held for sick people within societies...It is clear, nevertheless, that variations are expected... The sick role is intended, then, not just as the best single statement of societal norms, but also as a set of parameters for the description of variations".

Twaddle goes further and criticizes other writers for interpreting any variation from the four expectations as evidence against the formulation itself. Considerable variation in expectations and behavior associated with the expectations is not inconsistent, but rather, the sick role concept is incomplete. Differing methodologies might account in large part for the various configurations which have emerged and been offered as the "true" picture.

Two recent formulations, to varying degrees, have incorporated parts of Parsons' model. Both have focused upon the "process" of health rather than the "phenomenon" of illness. In their article mentioned above, Gerson and Skipper have presented a model of the health process based on the premise that the person's social environment or his perception of dimensions of disease may affect his patterns

of coping with the symptoms of these types of diseases. The model makes the distinction between disease, illness and sickness. The pathological state is called disease; the perceptual interpretation of this state by the actor is called illness; and the actor's behavior in light of this evaluation is termed sickness. These three dimensions interact temporally with a six stage process of health action: 1) pre-morbid, 2) symptom experience, 3) symptom interpretation, 4) assumption of sick role, 5) patient role, 6) exit roles.

Pre-morbid - Prior to encountering symptoms, an individual has expectations, created by the socialization process, of the appropriate responses to any symptom.

Symptom Experience - Just as socialization creates expectations of response to symptoms so it also plays a role in defining a symptom. If the symptom is culturally defined as real, the individual will recognize it.

Symptom Interpretation - Given a definition of a set of symptoms, the occurrence of a state is evaluated and an appropriate course of action or non-action followed.

Assumption of Sick Role - If the person defines himself as ill, the sick role is entered as the socially legitimate alternative to normal role obligations.

Patient Role - Once the person enters the sick role, he must seek competent help, either professional or non-professional, in an attempt to get well. If it is professional

help that is sought, then the person enters the dependent "patient role".

Exit Roles - The assumption under Parsons' model is that the patient will reassume his normal role responsibilities. This is valid, however, only where acute illness is concerned. As pointed out in their scheme of sick role responses, this is but one of a number of possible conditions.

Throughout most of the models discussed, the underlying assumption is that the patient will, after a period of time, leave the patient role and reassume his normal role obligation (either totally or partially). Yet the obligation of the sick person to try to get well has largely been ignored by researchers. It has been demonstrated that social and demographic variations are associated with becoming ill, but the patterns associated with leaving the sick role have yet to be delineated. The reality that most patients recover from an illness experience and some in a shorter time than others has not been dealt with. It is towards a clearer understanding of the factors associated with the exit roles (as defined by Gerson and Skipper, 1972) that the present research has been directed.

The implicit assumption in Gerson and Skipper's scheme of variable sick role responses is that a corresponding set of variable exit role responses exists. This assumption, however, is not developed. A view useful for considering the exit roles is that expressed by Twaddle (1974) in his discussion of the well roles. It is stated that different

roles and tasks require different capacities and, as such, any analysis of the consequences of an impairment must be conducted relative to the specific roles and tasks affected. If this view is accepted as valid, then it must also hold true that the exit roles must be assessed relative to the specific roles and tasks affected. In the present study, attention will focus on three major sets of roles: work roles, leisure roles and household roles. There are obviously other valid sets of roles, but discussion will be directed at those listed above.

In another conceptualization, Twaddle (1974) stated:

> "The process of health status designation can, therefore, be seen as consisting of interaction between an individual and his status definers, in which normative standards of adequacy are applied to the individual in the context of a specific situation, to assess his/capacities for present or future role and task performance".

Much of the literature which has emerged from studies of the sick role concept has dealt with factors which might affect entry into the role. Could it also hold that the exit roles might be influenced by those factors which affect entry into the sick role? Since both entry into and exit from the sick role involve a redefinition of the well roles, common ground must be covered by the range of possible

influences, although not necessarily in the same manner.

In the present study, the decision was taken to utilize a population of hospitalized persons. The illness conditions utilized were either acute or acute phases of chronic ailments which required hospitalization. As such, these groups closely approximated those used by Parsons in his initial formulation. The estimate of movement through the exit role was determined by a measure of functioning at three weeks discharge from hospital.

Exit Role Predictors

The literature dealing with entry into the sick role has investigated a number of factors: age, sex, marital status, education, socioeconomic status, nature and severity of the symptoms, stress, diagnosis and prognosis. Agreement has not always been present as to the impact of these factors, but nonetheless, they have consistently emerged as influences. If social and environmental factors influence entry into the sick role then they should influence exit from it as well; this is the scope of this study. Given this stance, the literature pertaining to entry into the sick role will now be briefly reviewed and the impact of each factor upon exit from the sick role predicted. Where mention is made of return to normal levels of functioning, it shall refer to functioning for each set of roles previously mentioned, that is, work, leisure and household roles.

Social Factors

In the earlier literature, most researchers have discussed the concept of socioeconomic status. This variable has had many different definitions, but most are a combination of occupation, income and education (such as the Hollingshead (1957) two factor index of social position). These variables have been conceived to be highly interrelated, but Twaddle (1972) has stated that they are becoming increasingly dissociated in the general population. In the present paper they will be considered as independent influences.

Occupation - Britten (1940), using an occupation based measure of socioeconomic status, has found that when occupational injuries are excluded and unemployment controlled, there is practically no difference between types of occupation and the proportion of those ill at the time of the survey. Graham (1957) has found no discernible difference between social classes and the total percentage of persons ill of any cause in the month preceding the survey. Kadushin (1964) has arrived at similar conclusions.

Lerner (1969) has found that absenteeism due to reported illness bears an inverse relationship to social position. Gerson and Skipper (1973), in a survey of workers in a pre-morbid state, have found that low status workers expect greater exemptions from work than high status workers during the acute stages of a variety of illnesses. To a certain extent this trend also held true in the convalescent

stages of illness. These studies lend support to Kadushin's contention that lower social classes react more violently to illness experiences.

Gerson and Skipper have explained their findings in terms of anticipatory coping with an unfavorable job situation. Lower status workers tend to perceive their work situation as being less satisfying, and use illness to demand greater exemptions. Further, if Kadushin's contention holds true, then it would be expected that lower status workers view life in general as being less favorable.

Hypothesis: At three weeks post-discharge, patients of lower status occupations will be less likely to have returned to normal role functioning.

Education - This variable has also been found to be a source of variation in the tendency to adopt the sick role. Lawrence (1962) has indicated that persons of limited education report they fear certain diseases more so than those with higher education. This has been related to perceived expense of the treatment, which raises the question of whether a similar relationship may exist in a health care system where services are insured. Kassebaum and Baumann (1965), in a factor analysis of the dimension of the sick role in chronic illness, have projected four factors associated with the sick role: dependency, reciprocity, role-performance and denial. Patients with low education are most concerned with dependence. This has been attributed to the acquisition of generalizable skills associated with higher education, which

provides increased alternatives with which to adapt to the physical limitations imposed by illness. Suchman (1965a, 1965b) has also found education to be a factor of importance in perceptions of health. Persons of low education tend not to be as knowledgeable about disease or to utilize medical services.

Based on the finding, that persons of low education are most concerned with dependence, it will be predicted that a similar pattern exists in the recovery stage. Persons of higher education will tend toward normal work activity, leisure activity and pre-morbid household activity.

Hypothesis: At three weeks post-discharge, patients of low educational background will be less likely to have returned to normal role functioning than will persons of higher educational background.

Age

Another variable which has consistently emerged is that of age. Lerner (1969), has found that, considering all acute conditions combined, an inverse relationship to family income exists in the middle age (45-64) group, but is much more pronounced in the old (65 and over) group. In the young age (15-44) group, family income is unrelated to the incidence of acute conditions. Kassebaum and Baumann have found older patients to be more concerned with role-performance and denial. The denial factor may indicate that older patients may not feel impaired in their capacity to perform usual

roles or, their rejection of the sick role may be defensive. Suchman (1965a, 1965b) has found that younger people are more likely to turn to others when experiencing symptoms. Furthermore, the symptoms are more likely to be interpreted as indicative of a serious illness among the old as compared to the young. The impact of this relationship upon recovery is to retard the return to pre-morbid levels of functioning. Specifically, it can be expected that older patients will be more concerned with symptom experience, and younger patients will return to normal activity sooner.

Hypothesis: At three weeks post-discharge, older patients will be less likely to have returned to normal role functioning than will younger patients.

Sex

Kassebaum and Baumann have also found sex difference along the four dimensions previously mentioned. The greatest difference occurs along the dependence dimension, with men being more concerned with this factor. This is also true, although to a lesser extent, for role-performance and denial. Women are more concerned with reciprocity. Suchman has found that women show a lower committment to a "popular" health orientation. Women are more likely to be better informed about disease than men and less skeptical of medical care, but equally high in illness dependency. Women are also more likely than men to have discussed their symptoms with other individuals, but less likely to have interpreted these

symptoms as indicative of a serious illness. If men are more dependent and more likely to interpret symptoms as indicative of a serious illness, then it could be expected that they will take longer to return to normal activities.

Hypothesis: At three weeks post-discharge, men will be less likely to have returned to normal role functioning than will women.

Nature of the Ailment

One of the assumptions of Parsons' formulation is that exemption from normal role responsibilities is relative to the nature and severity of the illness. Many researchers have concurred. Kassebaum and Baumann state that demographic and socioeconomic differences by themselves are insufficient to account for differences in sick role expectations. Within the context of chronic illness, the effect of the particular diagnosis on the patient's capacity for role-performance is extremely important. Mechanic (1968) has stated: "The perceived seriousness of a symptom will affect how likely it is that a person will respond to it. If the symptom is familiar, and the person understands why he has the symptom and what its probable course will be, he is less likely to seek care than if the symptom is unusual, strange, threatening and unpredictable". This is supported by Banks (1971) who found that those persons with previous symptom experiences expressed less health concern than those without previous experience. Twaddle (1969) has found that the nature of

the condition, especially the degree of incapacity, is important for exemption from normal roles and cooperation with a treatment agent. Expanding upon this Twaddle (1974) stated that the extent to which symptoms are noticed and the degree of importance assigned to them is likely to be related to their perceived present or future impact on normal activities.

Hypothesis: At three weeks post-discharge, patients who have experienced more severe ailments will be less likely to have returned to normal role functioning than will patients who have experienced less severe ailments.

Convalescent Care

A further variable affecting the exit roles could be the type of care received during the convalescent stage of an episode of illness. In this study, this variable takes the form of home care versus hospital care for convalescing patients. Over the past four decades, care has been given in a hospital setting. This has been based on the assumption that the expert care and technical support needed for recovery to occur has been most readily available in hospital. Of late, however, certain questions have arisen concerning the effect of the hospital upon the psychological and social readjustment of the patient. A number of alternatives for dealing with convalescing patients have been developed. One such approach is the establishment of home care programs, which also have an economic component, it

being reported to be cheaper to treat a convalescing patient outside the hospital. Griffith (1966), in a review of the advantages of home care, has concluded that it facilitates the reintegration of the patient with his family, aids the rate of recovery, frees the patient from the collective routine of the hospital and focuses attention on the special needs of the chronically ill. Stone (1968), in evaluating home treatment, has found home treatment to be just as effective and the quality of care equivalent to that of hospital care. In fact, in the areas of psychological, social and familial adjustment, home care has been shown to be more effective than hospital care. Katz et al. (1973) arrive at similar conclusions. Home care, then, would seem to facilitate the move through the exit roles.

Hypothesis: At three weeks post-discharge, patients who receive hospital care will be less likely to have returned to normal role functioning than will patients who received home care.

Summary

This chapter has dealt with the reality that people recover from acute illness at varying rates. A health action process has been outlined, and the statement made that the aspect of the process dealing with this reality has been largely ignored by researchers. The literature dealing with entry into the health process has been reviewed and the hypothesis advanced that the factors affecting entry

into the health action process also affect exit from the process. The role of these factors in relation to exit from the sick role has been discussed and the following hypotheses advanced:

1. At three weeks post-discharge, patients of lower status occupations will be less likely to have returned to normal role functioning.
2. At three weeks post-discharge, patients of low educational background will be less likely to have returned to normal role functioning than will persons of higher educational background.
3. At three weeks post-discharge, older patients will be less likely to have returned to normal role functioning than will younger patients.
4. At three weeks post-discharge, men will be less likely to have returned to normal role functioning than will women.
5. At three weeks post-discharge, patients who have experienced more severe ailments will be less likely to have returned to normal role functioning than will patients who have experienced less severe ailments.
6. At three weeks post-discharge, patients who received hospital care will be less

likely to have returned to normal role functioning than will patients who received home care.

CHAPTER II

METHODS

Introduction

This study was part of a larger project which was designed to evaluate the efficacy of home treatment as compared to hospital treatment for patients recuperating from a number of diseases and surgical procedures. An experimental Home Care Program was established in three active treatment general hospitals, located in a metropolitan area of approximately 140,000 people.

The diagnostic categories and/or surgical procedures included in the research program were determined from the results of a study conducted to assess the levels of care received by patients in the three hospitals. Those types of patients who usually had a period of low intensity nursing care at the end of their hospital stay were considered to be eligible for inclusion in the study. The types of patients are outlined in Table I.

Sample Selection

Upon admission to hospital, it was determined if the patient met the criteria of the Home Care Program, these being: a diagnosis falling within the selected categories; no complicating secondary diagnosis; primary residence in the catchment area. If these criteria were met, the patient

Table I - Surgical and/or Diagnostic Categories Utilized in the Home Care Program - ICD Codes

Surgical Procedures	Procedure #	Diagnostic #
Varicose Veins (excision & ligation)	24.4	454.9
Hernia Repair (inguinal & femoral)	38.2 - 38.8	550 - 551.0
Appendectomy	39.1 - 41.9	540.9 - 541
Cholecystectomy	43.5	540.9, 575, 576, 576.9
Operations on Stomach and Intestine	46.0 - 47.9	151.9, 153.3, 153.8, 153.9, 154.1, 211.3, 211.4, 214.4, 215.1
Ulcer Repair	46.0 - 47.9	530.1 - 533.9
Anal & Rectal Surgery	50.1 - 52.1	565 - 565.1, 566, 569.1, 569.2, 569.9, 685
Abdominal Hysterectomy	69.1, 69.2	623 - 623.9, 626.2, 626.4, 626.5, 626.6, 626.7, 629.5
Other Gynecological Surgery	69.4 - 78.6	623 - 623.9, 626.2, 626.4, 626.5, 626.6, 626.7, 629.5
Orthopedic Surgery (lower limb)	80.2 - 88.5 except 86.4	820 - 829, 835, 836, 837, 838, 844, 845
Prolapsed Disc	86.4	725 - 725.9
<u>Medical</u>		
Diabetes		250.9
Displacement of Disc		725.0 - 756.2

was contacted by a liaison nurse, informed of the program and asked if he/she were willing to participate. The patient, if willing, was then assigned randomly to either the experimental group, to receive home care, or control group, the ratio being one control patient to every two experimental patients.

Throughout the course of the study, a period of approximately 13 months, 1240 patients were screened as potential candidates, of which 420 were men and the reamining 820, women. Of this number, 583 cases (48%) were interviewed and considered part of the major study. Those remaining were excluded for a variety of reasons. The major reason for patients not being included was that their actual diagnosis differed from that presented upon admission (196, 16%). Administrative difficulties, forms or interviews not completed accounted for another 178 patients (14%). Forty-one patients (3%) were excluded because they planned to recuperate outside the catchment area. In 54 cases (4%) the physician felt that the patient was too sick or uncomfortable to be interviewed at the scheduled time. A further 28 patients (2%) were excluded because their housing situation was deemed to be below the minimum standard of safety established by the program. Only 159 of the 1240 patients (13%) refused to participate in the study.

The 583 patients used in the major study fell into 15 diagnostic/surgical categories. For purposes of this study, patients in two of these categories were omitted: other surgical; other medical.

Instruments

The measurement instruments used in the study consisted of two social interviews, a preliminary form (attachment A) and a follow-up questionnaire (attachment B).

The preliminary schedule was administered as soon as possible after admission. It consisted of a series of questions regarding social and demographic information: age, sex, occupation, education, family size, work status, marital status. A second set of questions on the first interview was concerned with levels of functioning in a so-called "state of health" - what did the individual do when "healthy"? The focus of these questions was spare time activities, the patient's role around the house, the home environment, work activities and problems in the family, with the aim being to establish base levels of functioning.

The follow-up form was administered at approximately three weeks after normal hospital discharge. It was more concerned with the patient's recovery, his reactions to hospital stay and the current levels of functioning in areas which were discussed in the first interview. One set of questions was concerned with the development of symptoms and the patient's reaction to any symptoms. A second section of the form probed the individual's perceptions of the hospital and home care staff and the hospital and home environment. The final section of the questionnaire measured

the return to the levels of functioning established in the initial form.

Two pilot studies were conducted in which the interviews and protocol were pretested. The initial study involved 20 individuals and the second, two phase study involved 40 and 70 patients respectively. The individuals interviewed were invited to comment on the questions and, as a result, it was felt that the documents were valid measures of the items under consideration. In the final study, in addition to the author, the interviews were conducted by individuals with degrees in social work.

Operationalization of Variables

The variables for the study fell into two categories - dependent and independent.

The dependent variables for the study were:

1. return to work
2. return to spare time activities
3. return to household activities

The independent variables for the study were:

1. occupational status
2. education
3. age
4. sex
5. diagnostic/surgical category
6. type of convalescent care

A detailed description of the items used to define these variables will follow.

Dependent Variables

Return to Work - If the patient worked, he was questioned during the follow-up interview regarding his current work status. Was he working normally, working with minor restrictions, working with major restrictions or had he not returned at the time of the interview.

Return to Spare Time Activities - During the follow-up interview, the patient was asked whether he had resumed his leisure activities. He/she was reminded of his activities and the interviewer coded the response in one of five categories: not applicable, no change, normal activity, returned with minor restrictions, returned with major restrictions. The not applicable category meant that the patient denied having any leisure activity. A response of no change would indicate that the patient had resumed his spare time activities immediately upon discharge. The normal activity category dealt with a gradual return until, at the time of the follow-up interview, routine leisure activities were resumed.

Return to Household Activities - During the first interview the patient was asked what role he/she performed around the house. The household activities concerned were: care of children, cooking, cleaning, washing, shopping, minor repairs and any other. The interviewer then rated the respondent's answer on a 0 to 5 scale, with zero indicating

the activity was not applicable in the respondent's case, one indicating total involvement in the activity, and five, no involvement whatsoever. During the follow-up interview, the patient was asked his/her current status with regard to the same list of household chores.

The phenomenon of interest in the study was net change in functioning for each household activity. A score was calculated for each activity by subtracting the patient's pre-morbid activity score from his/her post-morbid activity score. The two possible outcomes were: returned/not returned.

Independent Variables

Most of the demographic information was collected by direct question. Discussion in this section will be limited to those variables which were not tapped in this manner. In many measures, a not applicable response category existed. For purposes of analysis, such responses were omitted.

Occupational Status - Patients were classified according to a scheme developed for research in Newfoundland: professional; managerial, technical; sales, clerical; skilled trades; semi-skilled trades, services; fishing, mining, labour; housewife (Kedward & Sylph). This scheme was developed because of the idiosyncratic occupational structure which operates in Newfoundland. Until quite recently, Newfoundland was almost exclusively a rural, fishing/agrarian society. Because of this, there was no complex occupational structure with many gradients.

In this study, the concern is with occupational status of the individual, not the chief wage earner. Housewife, though a valid response, was omitted from analysis of work activity, as this activity was meant to apply to gainful employment outside the home.

Diagnostic/Surgical Category - The categories in the study covered a range of acute illnesses and acute phases of chronic conditions. As such, they fell into the transitory or impaired sick roles (as outlined by Gerson and Skipper, 1972). The severity dimension was tapped by using an independent measure of the number of days of stay as an indicator of severity of the illness. This measure was obtained from the annual report of the Saskatchewan Hospital Services Plan (1971). The distribution of days of stay by diagnostic/surgical category is given in Table II. From these figures, a three tiered ranking of severity was established: high, moderate, and low. The high severity group included ulcer repairs, stomach and intestine surgery, prolapsed discs, and orthopedic surgery (lower limb). The moderate group consisted of cholecystectomy, diabetes and abdominal hysterectomy. The low severity group included those remaining: other gynecological surgery; anal and rectal surgery; hernia repair, varicose veins; disc displacement; appendectomy.

Type of Convalescent Care - Upon discharge a range of possibilities existed: the patient may receive organized home care services, i.e. physiotherapy, visiting nurse,

Table II - Days of Stay for Selected Diagnostic/Surgical Categories, as Obtained from the Saskatchewan Hospital Service Plan Annual Report

Surgical Procedures	Days of Stay
Varicose Veins (excision & ligation)	8.5
Hernia Repair (inguinal & femoral)	8.8
Appendectomy	7.7
Cholecystectomy	14.2
Operations on Stomach and Intestine	18.4
Ulcer Repair	22.4
Anal and Rectal Surgery	9.5
Abdominal Hysterectomy	12.1
Other Gynecological Surgery	10.0
Orthopedic Surgery (lower limb)	15.9
Prolapsed Disc	16.0
<u>Medical</u>	
Diabetes	14.1
Displacement of Disc	8.5

homemaker, etc.; he/she may be discharged as an experimental patient but receive no services; he/she may be discharged in the usual manner. The three outcomes, then, were: experimental, discharged on services; self-administered; control.

Data Collection

Once the patient's agreement to participate in the study had been obtained by the liaison nurse, the patient was approached by an interviewer and the initial interview conducted. This session usually lasted between thirty and forty-five minutes. An attempt was made initially to see the patient before surgery, but latterly, patients were seen when it was most convenient.

Patients in the home care group were then discharged home either on services or without services. Control patients remained in hospital the standard period of time for the particular ailment. The follow-up interview was conducted three weeks following discharge. This form took approximately one hour to complete.

Data Analysis

As most of the variables are either nominal or ordinal in nature, analysis of the data was confined to non-parametric methods. The procedure used was the cross-tabulation subprogram of the Statistical Package for the

Social Sciences (Nie, et al., 1970). This subprogram organizes data in contingency table form and provides such statistics as chi square, Cramer's V, contingency coefficient, Kendall's Tau B and Tau C, Gamma, Somer's D.

Use of tests of significance with large samples, however, is often misleading. The nature of sampling theory is such that the closer a sample approximates the population it is drawn from in size, the lower are the confidence limits for that sample. Thus, virtually any relationship between two or more variables can be pushed toward significance by increasing the size of the sample.

The purpose of scientific research is to be able to predict future outcomes of combinations of events. Tests of significance, by themselves, do not permit such predictions. To this end, the statistic chosen was lambda assymmetric (Hays and Winkler, 1970), for categorical data. Briefly, lambda assymmetric is the reduction in the probability of error afforded by knowledge of the dependent variable in predicting the independent variable.

Criterion for Acceptance of Hypotheses

The main criterion for acceptance of a hypothesis in this study was the null hypothesis that, at three weeks post-discharge, there would be no significant difference between groups in their tendency to return to normal role functioning. A level of significance of less than .05 was necessary to reject this null hypothesis. Further, it was necessary that

this hypothesis be rejected for all three role sets.

A secondary criterion was given by lambda assymmetric. This was used because of the aforementioned need for measures of predictive ability. The use of such a measure, however, leads to interpretive problems of a qualitative nature. There is no statistical basis for determining a 'significant' finding using lambda. No attempt was made to overcome this potential problem, but rather, lambda is presented as a further refinement on the relationship in question.

Summary

In this chapter, the study method was outlined. The diagnostic/surgical categories considered, and the method of sample selection within these categories was described. The operationalization of the dependent and independent variables was discussed. The severity of the diagnosis was determined by the days of stay for that diagnostic category. The reasons for using the patient's occupational status, rather than that of the chief wage earner were discussed. Finally, the methods of data collection and data analysis were outlined.

CHAPTER III

RESULTS

Introduction

Of the 583 cases included in the final sample, 196 (34%) were men and 387 (66%), women. The average age of the sample was 44.07 years ± 15.8 S.D., and the average education was grade 10 ± 3.06 S.D. The low educational attainment was due to the paucity of schools pre 1949 (the year Newfoundland became part of Canada). Persons who had received their formal schooling before this date in Newfoundland were severely limited in opportunity for advancement. When occupational status was considered, 137 (56%) fell into the following groups: professional, managerial, technical, sales, clerical, or skilled trades. The remaining 326 (44%) of persons with an occupation were: semi-skilled trades, services, fishing, mining, labour, housewife. This is not meant to indicate that occupations were grouped for analytic purposes, but that these groupings are representative of high and low occupational status.

Effect of Occupation

Hypothesis: At three weeks post-discharge, patients of lower status occupations will be less likely to have returned to normal role functioning.

Decision: Reject the hypothesis for all role conditions.

Work Activity

Analysis showed that, as was predicted, there was a definite tendency for the lower status occupations not to have returned to work. Of the semi-skilled group, 33 (58.9%) had not returned, as was the case with 14 (58.3%) of the fishing/mining/labour group. Of those higher status groups, 22 (45.8%) of the professional/managerial group had not returned to work as compared with 18 (45.8%) of the sales/clerical group and 11 (55%) of the skilled trades group.

There was also a tendency for more of the higher status groups to be working with minor restrictions: 7 (14.6%) of professional/managerial; 4 (10%) of sales/clerical; 3 (15%) of skilled trades; 6 (10.7%) of semi-skilled trades; 1 (4.2%) of fishing/mining/labour. There was, however, no decrease in predictive error afforded by knowledge of occupation in predicting return to work activity. These findings are summarized in Table III.

These findings may be explained in terms of an unsatisfactory life experience. Gerson and Skipper (1973) have reported that lower status workers expected greater exemptions than higher status workers, when questioned in a pre-morbid state. The explanation advanced was that the lower status workers may be unhappy with their life situation and therefore use the sick role to escape this condition. An alternate explanation lies in the nature of the work task itself. A dichotomy of physical-nonphysical activities could

TABLE III - Distribution of Return to Work by Occupational Status

Return to Work	OCCUPATION									
	Professional Managerial		Sales Clerical		Skilled Trades		Semi-Skilled		Fishing Mining Labour	
	N	%	N	%	N	%	N	%	N	%
Working Normally	15	31.3	16	40	5	25	13	23.2	8	33.3
Minor Restriction	7	14.6	4	10	3	15	6	10.7	1	4.2
Major Restriction	4	8.3	2	5	1	5	4	7.1	1	4.2
Not Returned	22	45.8	18	45	11	55	33	58.9	14	58.3

$x^2 = 8.71195$, df = 12, $p < .8921$, $\tau c = .08878$, $p < .0322$, τ(work) = .00

be established, with the lower status occupations tending to be physical in nature. If this were accepted, then the lower status workers could be seen to be prevented from returning to work by the nature of their job. For example, it would be much harder for a labourer to return to his job following a hernia repair than it would be for an executive.

Leisure Activity

There was also a significant difference between occupations on the dimension of leisure activity. The direction, however, was opposite to that predicted. The lower status occupations had returned to normal activity or had experienced no change in leisure activity more frequently.

Within the lower status occupations, 34 (52.3%) of the semi-skilled group had not returned to normal functioning, nor had 12 (35.3%) of the fishing/mining/labour group and 149 (65%) of the housewives. Of the higher status occupations, 40 (72.8%) of the professional/managerial group had not returned, and 34 (65.3%) of the sales/clercial group not had, nor had 22 (73.3%) of the skilled trades group.

Analysis of predictive ability showed that knowledge of occupational status yielded a reduction in predictive error of 10.3%. These findings are summarized in Table IV.

Surprisingly, when the specific leisure activities were considered, the lower education/occupation groups tended to engage in sedentary, non-physical activities. The men tended to consider going down to the local club for

Table IV - Distribution of Return to Leisure Activity by Occupation

Return to Leisure	OCCUPATION											
	Professional Managerial		Sales Clerical		Skilled Trades		Semi-Skilled		Fishing Mining Labour		Housewife	
	N	%	N	%	N	%	N	%	N	%	N	%
No Change	3	5.5	3	5.8	2	6.7	7	10.8	4	11.8	21	9.4
Normal Activity	12	21.8	15	28.8	6	20.0	24	36.9	18	52.9	57	25.6
Minor Restriction	14	25.5	19	36.5	9	30.0	21	32.3	5	14.7	80	35.9
Major Restriction	26	47.3	15	28.8	13	43.3	13	20.0	7	20.6	69	29.1

$x^2 = 28.7424$, df = 15, $p < .0174$, $\tau c = -.04815$, $p < .0611$, σ(leisure) = .103

a beer and a game of darts as a popular leisure activity. The women enjoyed knitting or crocheting, or watching their favourite soap opera(s). Thus, the physical effort required to resume these activities was much less than that required for the higher education/occupation groups to resume their activities, more commonly physical in nature.

Another explanation stems from the discussion of work roles. It was found that the lower status education/occupation groups had not returned to normal work activities. If this were the case, then they would have more time to engage in leisure activities. Conversely, the higher status groups, having returned to work, would have fewer opportunities to resume normal leisure activities.

Household Activity

When the individual activities were considered, interesting differences emerged. The care of children activity showed no significant difference between occupation and return to pre-morbid activity. Cooking yielded a significant correlation with occupation, the lower occupational groups being less likely to have returned. A similar relationship existed for the activities of cleaning, washing and shopping. With regard to minor repairs, the direction of the relationship was reversed, with the higher status occupations less likely to be back at normal. These findings are summarized in Table V.

Care of Children - In the professional/managerial group,

Table V - Distribution of Return to Household Activity by Occupation

Activity		OCCUPATION												Statistical Test
		Professional Managerial		Sales Clerical		Skilled Trades		Semi-Skilled		Fishing Mining Labour		Housewife		
		N	%	N	%	N	%	N	%	N	%	N	%	
Care of Children	Returned	21	72.4	25	89.3	16	76.2	28	80.0	13	92.9	121	73.8	x^2=32.15196, df=30 p<.3605
	Not Returned	8	27.6	3	10.7	5	23.8	4	11.4	1	7.1	41	25.0	τc=.03991, p<.1541
Cooking	Returned	43	81.1	38	73.1	25	83.3	49	74.2	31	83.8	151	67.1	x^2= 35.43454, df=35 p<.4477
	Not Returned	9	17.0	12	27.3	4	13.3	13	19.7	6	16.2	69	30.6	τc=.07659, p<.0068
Cleaning	Returned	36	67.9	24	46.2	20	66.7	40	61.5	29	80.6	73	32.4	x^2=85.18571, df=35 p<.0000
	Not Returned	7	32.1	27	51.9	10	33.3	23	35.5	6	16.6	149	66.2	τc=.18667, p<.0000
Washing	Returned	41	77.4	38	73.1	25	83.3	52	78.8	34	91.9	125	55.5	x^2=53.97676, df=30 p<.0046
	Not Returned	12	22.6	14	26.9	5	16.7	12	18.2	3	8.1	98	43.4	τc=.1262, p<.0000
Shopping	Returned	33	62.3	31	59.6	24	80.0	44	68.8	31	86.1	107	47.6	x^2=61.00435, df=35 p<.0042
	Not Returned	19	35.8	20	38.5	6	20.0	16	25.0	5	13.9	115	51.1	τc=.13265, p<.0000
Repairs	Returned	34	64.2	37	74.0	19	65.5	51	79.7	27	75.0	192	90.6	x^2=57.85291, df=30 p<.0017
	Not Returned	19	35.8	13	26.0	10	34.5	11	17.2	9	25.0	20	9.4	τc= -.12324, p<.0001

8 (27.6%) had not resumed normal functioning, as compared with 3 (10.7%) of the sales/clerical group, 5 (23.8%) of the skilled trades group, 4 (11.4%) of the semi-skilled group, 1 (7.1%) of the fishing/mining/labour group, and 41 (25%) of the housewife group. As can be seen, no systematic difference existed between groups. There was a slight tendency for the lower status occupations to have resumed normal functioning, but it was not significant. Knowledge of the person's occupation afforded no decrease in predictive error.

Cooking - There was a significant tendency for the lower status occupation to have not resumed normal functioning. In the housewife group, 69 (30.6%) had not resumed normal functioning as compared with 6 (16.2%) of the fishing/mining/labour group who had not returned and 31 (19.7%) of the semi-skilled group. Of the higher status occupations, 9 (17%) of the professional/managerial group had not resumed normal functioning; 12 (27.3%) of the sales/clerical group had not resumed normal functioning; 12 (27.3%) of the sales/clerical group had not returned to normal; and 4 (13.3%) of the skilled trades had not. There was no increase in predictive confidence afforded by knowledge of occupation.

Cleaning - There was a significant difference between groups on cleaning activity and the trend was for housewives to have not resumed normal functioning. Of the housewives, 149 (66.2%) had not resumed normal functioning. Of the fishing/mining/labour group, 6 (16.6%) had not, as compared with 23

(35.5%) of the semi-skilled group who had not. In the higher status groups, 7 (32.1%) of the professional/ managerial group had not returned to normal functioning; 27 (51.9%) of the sales/clerical group had not resumed normal functioning; and 10 (33.3%) of the skilled trades group had not returned to normal. Occupation yielded no increase in predictive confidence.

Washing - There was also a significant difference between groups on washing activity and the trend was for housewives to have not returned to normal role functioning. Of the higher status occupations, 12 (22.6%) had not returned to normal functioning; 14 (26.9%) of the sales/clerical group had not returned; nor had 5 (16.7%) of the skilled trades group. In the lower status occupations, 12 (18.2%) of the semi-skilled group had not returned; 3 (8.1%) of the fishing/ mining/labour group had not resumed normal functioning. This relationship, however, afforded no decrease in predictive error for predicting washing activity.

Shopping - In the lower status occupations, 115 (51.1%) of the housewives had not resumed normal functioning; 5 (31.9%) of the fishing/mining/labour group had not resumed normal functioning; and 16 (25%) of the semi-skilled group had not returned to normal. Of the higher status groups, 19 (35.8%) of the professional/managerial group had not resumed normal functioning. 20 (38.5%) of the sales/clerical group had not returned to normal, nor had 6 (20%) of the skilled trades group. These differences between groups were significant

and the relationship was for housewives to be less likely to have returned to normal functioning. No increase in predictive ability was gained.

Minor Repairs - A significant difference also existed here, but the direction was reversed. Lower status occupations were more likely to have resumed normal role functioning. In the high status groups, 34 (64.2%) of the professional/managerial group had returned to normal; 37 (74%) of the sales/clerical group had resumed normal functioning; and 19 (65.5%) of the skilled trades group had returned to normal. Among the low status occupations, 51 (79.7%) of the semi-skilled group had resumed normal functioning; 27 (75%) of the fishing/mining/labour group had returned to normal; 192 (90.6%) of the housewives had resumed normal functioning. Once again, no decrease in predictive error was observed.

These findings illuminate the traditional sex-based roles. Housewives, by definition, are the occupational group which is most concerned with household activities. This group consistently emerged as the most likely to be restricted across all activities, with the exception of minor repairs. For this activity, housewives were more likely to have resumed normal functioning.

This raises the question of degree of initial involvement in household activities. Housewives usually play the major role in all of the household roles but minor repairs. Thus, for those activities in which they were

heavily involved, housewives were less likely to have returned to normal activity. Conversely, for the activity in which they were not usually involved, they were more likely to have resumed normal levels of functioning.

Effect of Education

Hypothesis: At three weeks post-discharge, patients of low educational background will be less likely to have returned to normal role functioning than will persons of higher educational background.

Decision: Reject the hypothesis for all role conditions.

Work Activity

Analysis of the relationship of education to work activity yielded a significant correlation between the two, with the higher educational group tending to have returned to normal work activity or to be working with minor restrictions. Of the higher educational group (Technical or more) 25 (35.2%) were working normally, as compared with 30 (28.6%) of the middle education group (8 to 11+) and 3 (16.7%) of the low education group (None to 7).

There was little difference between groups in the tendency to have not returned to work with 10 (55.6%) of the low education group not returned, 58 (55.2%) of the middle education group, and 34 (47.9%) of the high education group. The low education group, however, did show a greater tendency to be working with major restrictions. 4 (22.2%)

of the low group were working under such constraints as compared with 7 (6.7%) of the middle and 2 (2.8%) of the high education group. These findings are summarized in Table VI. The reduction in probability of a predictive error afforded by knowledge of a person's education level was 3.3%.

Twaddle's (1972) contention that education and occupation are dissociated was not supported in the Newfoundland context. It may well be true that such is the situation in a more diversified social system, but the flat occupational structure and lower educational attainment might be similar to the conditions prevalent at the time of the initial formulation. A significant correlation ($\tau = -.529$, $p < .001$) was found between the two, with low education associated with low occupational status. When occupation was controlled, a significant relationship was found between return to work roles and education. For the sales/clerical group, a significant correlation was found in the predicted direction ($\tau c = -.2174$, $p < .0225$). A similar relationship existed for the semi-skilled occupations ($\tau c = -.20578$, $p < .0112$). There was also a significant difference for the fishing/mining/labour groups ($x^2 = 29.08563$, $df = 15$, $p < .0157$) but the cell frequencies were quite small ($N = 24$), throwing doubt on data interpretation.

Thus, in terms of Gerson and Skipper's (1973) proposal that lower status workers use the sick role to escape from an unpleasant life situation, education may be seen as

Table VI - Distribution of Return to Work by Education Level

Return to Work	Highest Attained Grade															
	None		Kg.-4		5-7		8-10		11+		Technical		University		Graduate	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Working Normally	1	33.3	0	0	2	20	16	22.9	14	40.0	13	29.5	8	53.3	4	33.3
Minor Restriction	0	0	1	20	0	0	8	11.4	2	5.7	5	11.4	2	13.3	3	25.0
Major Restriction	0	0	2	40	2	20	5	7.1	2	5.7	1	2.3	0	0	1	8.3
Not Returned	2	66.7	2	40	6	60	41	58.6	17	48.6	25	56.8	5	33.3	4	33.3

$x^2 = 28.51666$, df = 21, $p < .1261$, $\tau c = -.11514$, $p < .0082$, σ(work) = .033

a further determining factor. The low education, low occupation workers had not returned to work, but the low occupation, high education group had. This latter group may be seen to be upwardly mobile and attempting to move out of the unpleasant life situation, rather than seek relief from it.

Leisure Activities

Analysis of this factor yielded a significant difference, but the direction was opposite to that predicted, with the lower educational groups tending to have experienced no change or have returned to normal activity more often.

In the low educational group (None to 7), 10 (14.3%) had experienced no change, and 24 (34.3%) had resumed normal activity. Of the middle educational group (8 to 11+), 25 (9.8%) had experienced no change, and 77 (30.1%) had resumed normal activity. In the high educational group (Technical or more) only 5 (3.7%) had experienced no change and 31 (23%) had resumed normal functioning. Overall, an increase of 6.4% in predictive ability was gained by knowing the education of the person. These findings are summarized in Table VII.

The relationship between leisure status and education was found only within one occupational group - housewives. For this group, there was a significant correlation between leisure status and education, with the lower educational groups returning to normal activity or experiencing no change more often ($\tau c = .10205$, $p < .0113$).

TABLE VII - Distribution of Return to Leisure Activity by Education

Return to Leisure	Highest Attained Grade													
	None		Kg.-4		5-7		8-10		11+		Technical		University		Graduate	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No Change	0	0	3	13.6	7	15.9	18	10.7	7	8.0	2	2.2	0	0	3	16.7
Normal Activity	4	100	5	22.7	15	34.1	51	30.2	26	29.9	17	18.7	9	34.6	5	27,8
Minor Restriction	0	0	7	31.8	13	29.5	45	26.6	28	32.2	44	48.4	9	34.6	3	16.7
Major Restriction	0	0	7	31.8	9	20.5	55	32.5	26	29.4	28	30.8	8	30.8	7	38.9

$x^2 = 39.00912$, $df = 21$, $p < .0098$, $\tau c = .09579$, $p < .001$, σ (leisure) = .064

If the lower education/low occupation groups are perceived as existing within an unpleasant life situation, leisure roles could be cast in the role of providing an escape from this situation. Thus, the lower status persons would return to such activities more quickly. Further the findings with respect to the effect of occupation upon leisure activities could be applied. The higher status groups would have less time to resume normal leisure activities, having returned to work more often.

Household Activity

When the individual household activities were considered, the hypothesis was supported only for washing activity. There was a significant correlation between education and return to washing activity. For all other household activities, there was no significant relationship. These findings are summarized in Table VIII.

Care of Children - On this activity, the low education group (None to grade 7) had 11 (25%) of its members restricted, the middle education group (grade 8 to grade 11 plus) had 37 (23.6%) of its members restricted and the high education group (Technical plus) had 14 (16.5%) restricted. Occupation was not a contributing factor, except in the case of housewives, where the lower educated persons were less likely to have resumed normal functioning. (c = -.10788, p .0195). No gains in predictive ability accrued by knowing the education of the patient.

Table VIII - Distribution of Return to Household Activity by Education

Return to Household Activities		EDUCATION														Statistical Test
		None		Kg.-4		5-7		8-10		11+		Tech.		Univ.		Grad.		
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Care of Children	Returned	3	100	11	73.3	19	73.1	82	75.9	38	71.7	51	81.0	10	90.9	10	83.3	x =27.85562, df=42 p<.9541
	Not Returned	0	0	4	26.7	7	26.9	23	21.3	14	26.5	12	19.1	1	9.1	1	8.3	τc= -.04351, p<.1333
Cooking	Returned	4	100	16	69.6	29	64.4	135	77.6	58	67.4	62	68.1	19	79.2	14	87.5	x =47.89726, df=49 p<.5178
	Not Returned	0	0	7	30.4	12	26.6	36	20.6	25	30.1	26	28.6	5	20.9	2	12.6	τc=.00995, p<.3742
Cleaning	Returned	3	75	10	43.5	22	48.9	78	45.1	39	45.9	42	46.2	18	75.0	10	62.5	x =46.14186, df=49 p<.5897
	Not Returned	1	25	12	52.2	22	48.9	92	53.1	46	54.1	47	51.7	6	25.0	6	37.5	τc=.02735, p<.1895
Washing	Returned	3	75	11	47.8	29	63.0	114	65.5	60	69.8	67	73.6	19	79.2	12	75.0	x =41.68155, df=42 p<.4848
	Not Returned	1	25	12	52.2	16	34.8	58	33.3	24	27.9	24	26.4	5	20.8	4	25.0	τc= -.06396, p<.0195
Shopping	Returned	3	75	16	69.6	29	64.4	100	58.1	48	56.5	49	53.8	16	66.7	9	56.3	x =36.37602, df=49 p<.9092
	Not Returned	1	25	7	30.4	14	31.2	68	39.5	35	41.1	41	45.1	8	33.3	7	43.7	τc=.03809, p<.1105
Repairs	Returned	3	75	18	81.8	36	80.0	135	80.4	65	82.3	71	82.6	19	79.2	13	81.3	x =38.50899, df=42 p<.625
	Not Returned	1	25	4	18.2	8	17.8	33	19.6	13	16.5	15	17.4	5	20.8	3	18.7	τc=.00131, p<.4835

Cooking - Within the low education group, 19 (27.9%) persons were restricted, as compared with 61 (24%) of the middle education group and 33 (26.6%) of the high education group. Occupation was a contributing factor only in the fishing/mining/labour group, for which the lower education group was less likely to have resumed normal role functioning ($\tau c = -.19674$, $p < .0388$). Knowledge of a person's education level did not result in a decrease in predictive error.

Cleaning - In the low education group, 35 (50%) had not resumed normal functioning, as compared with 138 (54%) of the middle education group and 59 (45.7%) of the high education group. The skilled trades occupational group showed a significant correlation between education and return to cleaning activities, with the higher the education, the more likely that the person had resumed normal functioning ($\tau b = -.20822$; $p < .047$). No increase in predictive confidence for cleaning was gained by knowledge of a person's education level.

Washing - Only for this activity was there a significant difference between educational groups. For the low education group, 43 (59.7%) had resumed normal functioning and 29 (40.3%) had not. In the middle education group, 174 (68%) had returned to normal and 82 (32%) had not. Of the high education group, 98 (74.8%) had resumed normal functioning and 33 (25.2%) had not. Thus, the higher the education level, the greater the likelihood of return to normal washing activity. Within occupation groups, no difference existed except for the housewife group in which there was a significant correlation,

with the lower educational groups less likely to have resumed normal functioning. No decrease in predictive error was afforded by knowledge of educational levels.

Shopping - In the low education group, 22 (31.4%) had not resumed normal functioning. Neither had 103 (46%) of the middle education group nor 56 (43.1%) of the high education group. There was a tendency for low education to be associated with increased likelihood of normal functioning, but it was not significant. Occupation was a factor for this activity, with the sales/clerical, fishing/mining/labour, and housewife groups significantly correlated with resumption of shopping activity. Within the sales/clerical group, higher education was associated with increased likelihood of normal role functioning ($\tau b = -.1616$, $p < .0421$). The direction of the relationship was the same in the fishing/mining/labour group ($\tau c = -.18981$, $p < .0466$). In the housewife group, however, the direction was reversed, with lower education associated with increased likelihood of normal role functioning ($\tau b = .07621$, $p < .0436$). Knowledge of the education level of a person did not lead to any decrease in predictive error.

Minor Repairs - In the low education group, 13 (18.6%) of the persons had not resumed normal functioning, as compared with 61 (23.4%) of the middle education group, and 23 (18.3%) of the high education group. Occupation did play a role for this activity. There was a significant correlation between education and minor repair activity within the

professional/managerial/technical group, with an increased likelihood of normal role functioning associated with higher education ($\tau c = -.20648$, $p < .0129$). There was also a significant difference ($x^2 = 32.96487$, $df = 20$, $p < .034$) in the sales/clerical group in a similar direction. In the skilled trades group, there was also a significant difference ($x^2 = 39.12964$, $df = 16$, $p < .001$) but in the opposite direction. Finally, there was a significant correlation in the fishing/mining/labour group in the predicted direction ($\tau c = -.19483$, $p < .0424$). No decrease in predictive error was afforded by knowing education levels.

Education was a factor of significance only within certain occupational groups for specific household roles. The trend was in the predicted direction regardless of occupational status, with few exceptions. One of the more notable was for shopping activities, for which housewives with higher education were less likely to have resumed normal functioning. This can be explained by returning to the effect of education upon leisure activity. For that role, housewives of lower education had resumed normal role functioning more often. Shopping is the one household activity which is performed outside the home. In a number of cases, shopping was reported as being a leisure activity, a chance to get out of the house, thus the lower educated housewives could be expected to resume shopping activity more frequently. Another exception was that lower educated skilled tradesmen had resumed normal minor repairs activity

more frequently. The reasons for this were unclear, but the sample size (n = 29, df = 16) was too small to allow any confidence in predicting the relationship.

Effect of Age

Hypothesis: At three weeks post-discharge, older patients will be less likely to have returned to normal role functioning than will younger patients.

Decision: Reject the hypothesis for all role conditions.

Work Activity

There was a significant correlation between age and return to work activity, with the older age groups tending not to have yet returned to normal work activity.

Within the older age groups (51-73) only 9 (20.5%) were working normally, as compared with 16 (23.5%) of the middle age groups (33-50) and 36 (40.9%) of the younger age groups (15-33). Further, a greater proportion of the older age groups had not returned to work activity at all - 29 (59.1%) of the older age groups; 40 (58.5%) of the middle age group; and 36 (40.9%) of the younger age group.

Knowledge of a person's age yielded a reduction in the probability of predictive error of 9.5%. These findings are summarized in Table IX.

These findings lend support to Suchman's (1965a, 1965b) contention that the older patient would be more likely to perceive symptoms to be indicative of a serious

Table IX - Distribution of Return to Work by Age Groups

Return to Work	AGE															
	15-20		21-26		27-32		33-38		39-44		45-50		51-56		57-62		63-73	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Working Normally	7	46.7	19	48.7	8	25	8	27.6	5	26.3	3	15.8	8	36.4	1	6.3	0	0
Minor Restrictions	0	0	7	17.9	4	12.5	2	6.9	1	5.3	3	15.8	1	4.5	2	12.5	1	20
Major Restrictions	1	6.7	.1	2.6	3	9.4	2	6.9	2	10.5	2	10.5	1	4.5	1	6.3	0	0
Not Returned	7	46.7	12	30.8	17	53.1	17	58.6	11	57.9	11	57.9	12	54.5	12	75	4	80

$x^2 = 27.59779$, df = 24, $p < .2774$, $\tau c = .19193$, $p < .0000$, σ(work) = .075

illness and thus be more restricted. An alternate explanation lies in the medical evidence that it takes longer for older people to recover from the effects of illness.

Leisure Activity

There was no significant relationship between age and return to leisure activity, but there was a decrease in the probability of predictive error of 7.3%. There was a slight trend in the predicted direction, with middle and older age groups tending to have restrictions on their leisure activity.

Of the older age group, 12 (9.1%) had experienced no change and 36 (27.3%) had resumed normal activities, as compared with 15 (7.9%) of the middle-age group who had experienced no change and 45 (23.7%) who had resumed normal activity. In the younger age group, 13 (9.2%) had experienced no change and 51 (36.2%) had returned to normal activity. These findings are summarized in Table X.

The failure of the younger patients to return to leisure activities more often than the older patients may be explained by a combination of type of leisure activity and illness. It was found that the younger age groups tended to be engaged more often in physical activities and the older groups, non-physical activities. Further, as mentioned earlier, illness had a more debilitating effect upon the older groups. The physical leisure activity of the younger age group was restricted by illness while the older age group was restricted by illness. Thus, the interaction of type of leisure activity

Table X - Distribution of Return to Leisure Activity by Age of Patient

Return to Leisure	AGE																			
	15-20		21-26		27-32		33-38		39-44		45-50		51-56		57-62		63-73		74-93	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No Change	6	21.4	5	9.3	2	3.4	6	8.1	5	6.8	4	9.3	3	6	5	10.6	4	13.8	0	0
Normal Activity	8	28.6	20	37.0	23	39.0	15	20.3	18	24.7	12	27.9	12	24	12	25.5	10	34.5	2	33.3
Minor Restriction	6	21.4	15	27.8	15	25.4	27	36.5	29	39.7	16	37.2	20	40	12	25.5	8	27.6	2	33.3
Major Restriction	8	28.6	14	25.9	19	32.2	26	35.1	21	28.8	11	25.6	15	30	18	38.3	7	24.1	2	33.3

$\chi^2 = 24.96971$, df = 27, $p < .5762$, $\tau c = .03285$, $p < .1448$, σ(leisure) = .073

and the impact of illness yielded a situation where young and old tended to return to normal activity at similar rates.

Household Activity

Analysis of the specific activities showed that age had no effect upon the care of children. There was no tendency for older patients to be restricted along this activity. There was a decided trend for the other activities to be related to age. Older patients tended not to be back cooking, cleaning, washing, shopping or doing minor repairs. These findings are summarized in Table XI.

Care of Children - In the younger age group (15-32), 73 (80.2%) of the patients had resumed normal functioning. 123 (77.4%) of the middle age group (33-50) has returned to normal and of the older age group (51+), 28 (77.7%) had resumed normal functioning.

As can be seen, virtually no difference existed between age groups in their tendency to resume care for children. Knowledge of a person's age yielded no decrease in predictive error whatsoever.

Cooking - Of the younger age group (15-32), 115 (85.2%) had resumed normal functioning, while in the middle age group (33-50), 124 (68.1%) had returned to normal levels. In the older age group (51+), 98 (73.7%) had resumed normal functioning. There was a significant correlation between age and return to cooking activities, with the older patients tending not to

Table XI - Distribution of Return to Household Activity by Age

Activity		AGE										Statistical Test
		15-20	21-26	27-32	33-38	39-44	45-50	51-56	57-62	63-73	74-93	
		N %	N %	N %	N %	N %	N %	N %	N %	N %	N %	
Care of Children	Returned	12 92.3	20 80.0	41 74.5	51 72.9	47 78.3	25 80.6	12 80.0	8 66.7	5 71.4	3 100.0	χ =49.63464, df=54, p<.6433,
	Not Returned	1 7.7	5 20.0	12 21.8	18 25.7	12 20.0	6 19.3	2 13.3	4 33.3	2 28.6	0 0	τ_c=.00989, p<.4003
Cooking	Returned	22 84.6	44 84.5	49 80.3	55 75.3	45 64.3	24 52.2	37 74.0	31 68.9	24 72.7	6 85.7	χ =62.88205, df=63, p<.4864,
	Not Returned	4 15.4	6 11.5	10 16.4	16 21.8	22 31.4	20 43.4	13 26.0	12 26.6	9 27.3	1 14.3	τ_c=.0759, p<.0072
Cleaning	Returned	19 76.0	38 73.1	30 49.2	25 34.2	26 37.1	14 30.4	28 56.0	20 44.4	16 50.0	6 85.7	χ =88.81796, df=63, p<.0159,
	Not Returned	6 24.0	13 27.0	31 50.8	47 64.4	43 61.5	30 65.3	22 44.0	23 51.2	16 50.0	1 14.3	τ_c=.05881, p<.0293
Washing	Returned	23 88.5	41 78.8	45 73.8	54 73.0	42 60.0	21 45.7	33 66.0	29 64.4	21 63.6	6 85.7	χ =70.09302, df=54, p<.0695
	Not Returned	3 11.5	9 17.3	16 26.3	20 27.0	27 38.6	23 49.9	17 34.0	16 35.6	12 36.4	1 14.3	τ_c=.0965, p<.001
Shopping	Returned	21 84.0	43 82.7	36 59.0	46 63.0	32 45.7	20 44.4	24 49.0	22 48.9	20 60.0	6 85.7	χ =75.82916, df=63, p<.1283
	Not Returned	4 16.0	8 15.4	24 39.4	27 37.0	36 51.5	24 53.4	24 49.0	22 48.9	11 32.4	1 14.3	τ_c=.12005, p<.0001
Repairs	Returned	23 95.8	47 92.2	50 84.7	59 80.8	53 84.1	34 77.3	31 64.6	30 69.8	26 81.3	7 100.0	χ =62.74596, df=54, p<.1940
	Not Returned	1 4.2	4 7.8	11 15.3	14 19.2	10 15.9	10 22.7	17 35.4	12 28.0	5 15.6	0 0	τ_c=.06800, p<.0159

have returned to normal levels of functioning. No increase in predictive ability is afforded by knowing the person's age.

Cleaning - This activity imposed the greatest degree of restrictions on all age groups. In the younger age group, 87 (63.5%) had returned to normal, and in the middle age group, only 65 (35.1%) had resumed normal functioning. In the older age group, 70 (53%) had resumed normal activity levels. A clear difference existed, with the middle age group being the most adversely impaired. The direction was the same as for cooking activity, with the older persons tending to be impaired. However, age did not permit any increase in predictive confidence.

Washing - In the younger age group, 109 (79.6%) of the patients had resumed normal functioning. For the middle age group, 117 (62.6%) had returned to normal activity and in the older age group, 89 (65.9%) had returned to normal. The trend here was for the older patients to be restricted in washing activity more often. No decrease in predictive error was afforded by knowledge of the person's age.

Shopping - This activity was the second most restrictive with 100 (73.5%) of the younger age group at normal levels while for the middle age group, 98 (53%) had resumed normal activity. In the older age group, 72 (55.4%) had returned to normal functioning. Once again, the trend was for the older patient to be impaired. Knowing the patient's age

yielded no increase in confidence of predicting level of role functioning for shopping activity.

Minor Repairs - In the younger age group, 120 (88.2%) had resumed normal functioning and for the middle age group, 146 (81.1%) had returned to normal. Of those in the older age group, 94 (73.4%) had returned to normal activity. The trend here is also for the older person to be restricted more often, but unlike the other activities where the middle age group was the most impaired, the older age group was the most restricted. No decrease in predictive error is gained by knowledge of the person's age.

These findings lend further support to the importance of the degree of initial involvement in the activity. The younger age group tended to have returned to normal functioning more often than either of the other groups. Of the two older groups, however, the middle age group was impaired more often. This group would tend to be more heavily involved in household activity than the older age group, and thus, would have further to go to resume pre-morbid levels.

Effect of Sex

Hypothesis: At three weeks post-discharge, men will be less likely to have returned to normal role functioning than will women.

Decision: Reject the hypothesis for all role conditions.

Work Activity

Analysis along this dimension yielded no significant difference between men and women in their tendency to return to normal work activity. Further, there was no decrease in the probability of predictive error afforded by knowledge of the person's sex.

More men had returned to normal work activity (38, 33.3%) than women (21, 25.6%), and fewer men had not yet returned to work: 53 (46.5%) as compared with 50 (61%) women. These differences, however, were not significant and are summarized in Table XII.

These findings may be explained by the male role as chief wage earner in the household. Men tended to be the chief wage earner more often than women. This would lead to more pressure being placed upon the male to return to work in order to maintain the family unit.

Leisure Activity

The results of this analysis showed a near significant difference, but the trend was in the direction opposite to that predicted. Men tended to have returned to normal leisure activities more often.

15 (10.6%) of the men had experienced no change and 42 (29.6%) had resumed normal activity. Of the women, 25 (7.8%) had experienced no change and 90 (28%) had resumed normal activity with regard to major restrictions, men were more likely to be functioning under such constraints: 51 (35.9%) of the men and 90 (28%) of the women. These findings

Table XII - Distribution of Return to Work by Sex

Status re Work	SEX			
	Male		Female	
	N	%	N	%
Minor Restriction	13	11.4	8	9.8
Major Restriction	10	8.8	3	3.7
Not Returned	53	46.5	50	61

$x^2 = 4.85019$, df = 3, $p < .1831$, $C = .00$

are summarized in Table XIII.

The locus of leisure activity offers a partial explanation of these findings. Men tended to engage in leisure activity outside the home and women, inside the home. Those leisure activities engaged in at home were normally done when the household tasks were completed. If the household tasks were not completed, as was often the case, then women would not resume leisure activities.

Household Activity

As with the effect of age, there was no relationship between sex and care of children. Women did not tend to be back at pre-morbid activity levels more often than men. Such was also the case with cooking. There was no significant relationship.

A significant difference did exist for the other activities, but not in the predicted direction. Only for minor repairs was the hypothesis supported. Women were more likely to be back at pre-morbid activity levels. On cleaning, washing and shopping activities, the direction was reversed. Men tended to be back to normal more often. These findings are summarized in Table XIV.

Care of Children - On this activity, 13 (16.5%) of the men had not resumed normal levels of functioning. For the women, 48 (23.1%) had not returned to normal. There was a slight tendency for women not to have returned to normal functioning as often as men, but this difference was not

Table XIII - Distribution of Return to Leisure Activity by Sex

Status re Leisure	SEX			
	Male		Female	
	N	%	N	%
Working Normally	15	10.6	25	7.8
Minor Restriction	42	29.6	90	28.0
Major Restriction	34	23.9	116	36.1
Not Returned	51	35.9	90	28.0

$x^2 = 7.48404$, df = 3, $p < .0580$, $\phi = .054$

Table XIV - Distribution of Return to Household Activity by Sex

Activity		SEX				Statistical Test
		Male		Female		
		N	%	N	%	
Care of Children	Returned	64	81.0	160	75.5	$x^2 = 3.36044$, df = 6, p < .7624
	Not Returned	13	16.5	48	23.1	
Cooking	Returned	114	81.4	223	69.0	$x^2 = 12.20428$, df = 7, p < .094
	Not Returned	23	16.5	90	28.9	
Cleaning	Returned	105	76.1	117	36.2	$x^2 = 69.51981$, df = 7, p < .0000
	Not Returned	32	23.2	200	61.9	
Washing	Returned	127	90.7	188	58.0	$x^2 = 49.95409$, df = 6, p < .0000
	Not Returned	12	8.6	132	40.8	
Shopping	Returned	105	76.1	165	51.2	$x^2 = 39.28593$, df = 7, p < .0000
	Not Returned	28	20.3	153	47.5	
Repairs	Returned	80	58.8	280	90.9	$x^2 = 67.27177$, df = 6, p < .0000
	Not Returned	54	39.8	28	9.0	

significant. No decrease in predictive error is achieved by knowing the person's sex.

Cooking - Of the men, 23 (16.5%) had not returned to normal and 90 (28.9%) of the women had not resumed normal functioning. Again, the tendency was for women to have returned to normal less often, but not significantly. No gain in predictive ability was accrued to knowing the person's sex.

Cleaning - For this activity, 32 (23.2%) of the men had not resumed normal functioning while 200 (61.9%) of the women had not returned to normal. This difference was significant. Women tended to resume normal cleaning activity less often than men. This relationship, however, did not yield an increase in predictive ability.

Washing - Men were also more likely to have resumed normal functioning for this activity, with 127 (90.7%) back at normal. For the women, 188 (58.0%) had resumed normal functioning. No decrease in predictive error was gained by knowledge of the patient's sex.

Shopping - The difference between groups was significant for this activity as well, with men more likely to have resumed normal functioning. For the men, 105 (76.1%) had returned to normal activities. Only 165 (51.2%) of the women had resumed normal functioning. No increase in predictive confidence was afforded by the relationship.

Minor Repairs - For this activity women were significantly more likely to have resumed normal functioning, with 280

(90.9%) at normal levels as compared to 80 (58.8%) men who had resumed normal functioning. This relationship did not afford any increase in predictive ability.

The impact of traditional sex-based roles was evident here as well. As was the case for occupation, people were less likely to have returned to normal activity for roles in which they, traditionally, were heavily involved in.

Effect of Ailment

Hypothesis: At three weeks post-discharge, patients who have experienced more severe ailments will be less likely to have returned to normal role functioning than will patients who have experienced less severe ailments.

Decision: Reject the hypothesis for all role conditions.

Work Activity

Analysis of this factor only partially rejected the hypothesis. The illness categories with the longer periods of stay were not those which most often restricted return to normal functioning, but rather, those ailments which most affected body mobility and gynecological work were the most restrictive. Of those affecting body mobility, 16 (57.1%) of the hernia repair group had not returned to work activities, as compared with 24 (75%) of the orthopedic surgery group and 17 (63%) of the disc displacement group. Of the gynecological groups, 21 (84%) of the abdominal

hysterectomy group had not yet returned, nor had 3 (75%) of the other gynecological surgery group. Other groups which were severely restricted included: cholecystectomy - 8 (53.4%); stomach and intestine - 1 (50%); ulcer repair - 4 (59%). Thus, the middle severity group (in terms of days of stay) was more often restricted in return to work.

Those categories which tended to have returned to normal work activity were those with shorter lengths of stay. Of the varicose veins group, 7 (70%) had resumed normal work activity as had 7 (50%) of the appendectomy group, and 20 (90.9%) of the anal and rectal group.

Of those groups working with minor restrictions, the ones with a higher proportion of people in this category were of middle severity. 3 (20%) of the cholecystectomy group and 1 (20%) of the diabetes group fell under this heading.

In general then, those diagnostic groups which were most severely restricted were those affecting body mobility and gynecological work. This relationship between diagnosis and work roles allowed a reduction in predictive error of 30%. These findings are summarized in Table XV.

Leisure Activities

The configuration for leisure activities was similar to that for work activity. The diagnostic categories which imposed restrictions more frequently were those affecting body mobility, and gynecological work. Of the orthopedic surgery group, 14 (23.3%) were experiencing minor restrictions,

Table XV - Distribution of Return to Work by Diagnostic Category

Return to Work	DIAGNOSIS											
	Varicose Veins	Hernia Repair	Appendectomy	Cholecystectomy	Stomach & Intestine	Ulcer Repair	Anal & Rectal	Abd. Hysterectomy	Other Gynecological surgery	Orthopedic Surgery	Diabetes	Displacement
	N %	N %	N %	N %	N %	N %	N %	N %	N %	N %	N %	N %
Working Normally	7 70	4 14.3	7 50	3 20	1 50	2 25	20 90.9	2 8	1 25	5 15.6	2 40	3 11.1
Minor Restriction	0 0	6 21.4	2 14.3	3 20	0 0	2 25	1 4.5	1 4	0 0	2 6.3	1 20	3 11.1
Major Restriction	0 0	2 7.1	1 7.1	1 6.6	0 0	0 0	1 4.5	1 4	0 0	1 3.1	1 20	4 14.8
Not Returned	3 30	16 57.1	4 28.6	8 53.4	1 50	4 50	0 0	21 84	3 75	24 75	1 20	17 63.0

$x^2 = 88.59154$, df = 33, $p < .0000$, C (work) = .3

and 33 (55%), major restrictions; 15 (25%) of the disc displacement group were experiencing minor restrictions and 30 (50%), major restrictions; 22 (45.8%) of the hernia repair group were experiencing minor restrictions and 13 (27.1%), major restrictions. Of the abdominal hysterectomy group, 42 (47.2%) were experiencing minor restrictions and 31 (34.8%), major restrictions, as compared with 12 (42.9%) of the other gynecological surgery group who were experiencing minor restrictions and 4 (14.3%) with major restrictions.

Those groups which exhibited the majority of their members returned to normal role functioning were: appendectomy - 14 (58.3%); anal and rectal - 25 (73.5%); diabetes - 9 (75%); prolapsed disc - 1 (100%). These findings allowed a reduction of 20% in predictive error, and are summarized in Table XVI.

The severity of the ailment (expressed in days of stay) does not seem to be the factor of concern. Rather, it would seem that those ailments which impose restrictions upon the person during the convalescent period and those which bear directly on role performance (both work and leisure roles) are the salient categories. These ailments need not necessarily be the most 'severe', or impose the longest period of hospitalization.

Household Activities

Care of Children - The categories most severely restricted were: appendectomy - 2 (22.2%); stomach and intestine - 5

Table XVI - Distribution of Return to Leisure Activity by Diagnostic Category

Return to Leisure	DIAGNOSIS											
	Varicose Veins	Hernia Repair	Append-ectomy	Cholecy-stectomy	Stomach & Intestine	Ulcer Repair	Anal & Rectal	Abd. Hyst-erectomy	Other Gynecolo-gical Srugery	Orthopedic Surgery	Prolapsed Disc	Diabetes	Dis-placement
No Change	4 10.8	5 10.4	2 8.3	6 7.5	1 10	3 14.3	7 20.6	4 4.5	2 7.1	4 6.7	1 100	3 25	4 6.7
Normal Activity	14 37.8	8 16.7	12 50.0	32 40.0	1 10	7 33.3	18 52.9	12 13.5	10 35.7	9 15	0 0	6 50	11 18.3
Minor Restriction	13 35.1	22 45.8	7 29.2	22 27.5	6 60	7 33.3	5 14.7	42 47.2	12 42.9	14 23.3	0 0	1 8.3	15 25.0
Major Restriction	6 16.2	13 27.1	3 12.5	20 25.0	2 20	4 19.0	4 11.8	31 34.8	4 14.3	33 55.0	0 0	2 16.7	30 50.0

$\chi^2 = 113.05478$, df = 36, $p < .0000$, $\tau c = .15684$, $p < .0000$, $\sigma = .2$

(83.3%); ulcer repair - 2 (20%); abdominal hysterectomy - 24 (35.3%); orthopedic surgery - 7 (21.9%). The differences between diagnostic categories were significant, with the more serious ailments those which tended to be restricted. Knowledge of diagnostic category allowed a slight reduction in predictive error - 3%.

Cooking - This activity imposed restrictions on a wider range of diagnostic categories. Those categories most severely restricted (i.e. more than 20% not yet back at normal functioning) were: varicose veins - 8 (21.6%); cholecystectomy - 22 (26.5%); stomach and intestine - 5 (50%); ulcer repair - 5 (22.6%); abdominal hysterectomy - 31 (34.4%); orthopedic surgery - 17 (27.8%); disc displacement - 7 (24.1%). These differences were significant, but no reduction of predictive error was gained.

Cleaning - Within this group, only one diagnostic category did not have more than 20% of its members under restrictions: anal and rectal - 3 (8.1%). Of the other categories, those with more than 50% of their members restricted were: cholecystectomy - 42 (50.6%); stomach and intestine - 5 (50%); abdominal hysterectomy - 76 (84.4%); other gynecological surgery - 17 (58.6%); disc displacement - 29 (50%). These differences were significant and an increase of 4% in predictive ability was observed.

Washing - Those groups with more than 25% of their members restricted were: cholecystectomy - 29 (34.6%); stomach and intestine - 3 (30%); abdominal hysterectomy - 46 (51.1%);

other gynecological surgery - 13 (44.7%); disc displacement - 17 (29.3%). These differences were significant, but no gains in predictive ability were experienced.

Shopping - Those groups with more than 25% of their members restricted were: varicost veins - 11 (30.6%); cholecystectomy - 30 (36.1%); stomach and intestine - 5 (50%); abdominal hysterectomy - 57 (63.3%); other gynecological surgery - 17 (44.8%); orthopedic surgery - 21 (35.6%); disc displacement - 26 (44.9%). These differences were significant, but there were no gains in predictive ability.

Minor Repairs - There was no significant difference between diagnostic groups in this activity. Those groups which were most restricted were: hernia repair - 20 (40.8%); ulcer repair - 5 (22.7%); orthopedic surgery - 16 (28.1%); and disc displacement - 17 (30.4%). Further there was no reduction in the probability of predictive error. These findings are found in Table XVII.

Effect of Service Category

Hypothesis: At three weeks post-discharge, patients who received hospital care will be less likely to have returned to normal role functioning than will those patients who received home care.

Decision: Reject the hypothesis for all role conditions.

Work Activity

There was no significant tendency for the hospital care group to have returned to normal work activity less

Table XVII - Distribution of Return to Household Activity by Diagnostic Category

Activity		DIAGNOSIS																							
		Varicose Veins		Hernia Repair		Append-ectomy		Cholecy-stectomy		Stomach & Intestine		Ulcer Repair		Anal & Rectal		Abd. Hyst-erectomy		Other Gyn-ecological Surgery		Ortho-pedic Surgery		Pro-lapsed Disc		Diabetes		Disc Dis-placement		Statistical Test
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Care of Children	Returned	24	80.0	19	86.4	7	77.8	41	78.8	1	16.7	8	80.0	18	94.7	44	64.7	17	89.5	22	68.8	1	100	7	100.0	36	83.7	x^2=114.49684, df=72, p<.0008 =.03
	Not Returned	5	16.6	3	13.6	2	22.2	10	19.2	5	83.3	2	20.0	1	5.3	24	35.3	2	10.5	7	21.9	0	0	0	0	7	16.3	
Cooking	Returned	26	70.3	40	81.6	22	88.0	57	68.7	5	50.0	17	77.3	32	86.5	58	64.4	23	79.3	43	70.5	1	100	10	83.3	42	72.4	x^2=81.52351, df=96, p<.1466
	Not Returned	8	21.6	7	14.2	3	12.0	22	26.5	5	50.0	5	22.6	3	8.1	31	34.4	5	17.2	17	27.8	0	0	1	8.3	7	24.1	
Cleaning	Returned	21	56.8	34	70.8	14	56.0	39	47.0	4	40.0	17	77.3	33	89.2	14	15.6	9	31.0	39	65.0	1	100	8	66.7	28	48.3	x^2=185.94684, df=96, p<.0000 =.04
	Not Returned	14	37.8	14	29.2	11	44.0	42	50.6	5	50.0	5	22.6	3	8.1	76	84.4	17	68.6	21	35.0	0	0	4	33.3	29	50.0	
Washing	Returned	27	73.0	40	81.6	20	80.0	53	63.1	7	70.0	18	81.8	33	89.2	44	48.9	15	51.7	47	77.0	1	100	11	91.7	40	69.0	x^2=119.43416, df=84, p<.0057
	Not Returned	9	24.3	9	18.4	5	20.0	29	34.6	3	30.0	4	18.2	2	5.4	46	51.1	13	44.7	14	23.0	0	0	1	8.3	17	29.3	
Shopping	Returned	25	69.4	35	71.4	21	84.0	49	59.0	5	50.0	20	90.9	31	83.8	33	36.7	10	34.5	38	64.4	1	100	9	75.0	30	51.7	x^2=133.43358, df=96, p<.0059
	Not Returned	11	30.6	11	22.5	4	16.0	30	36.1	5	50.0	2	9.1	4	10.8	57	63.3	17	44.8	21	35.6	0	0	2	16.7	26	44.9	
Repairs	Returned	29	82.9	28	57.1	24	96.0	68	86.1	8	80.0	17	77.3	32	91.4	73	88.0	25	86.2	40	70.2	1	100	10	90.9	39	69.6	x^2=96.21257, df=84, p<.1713
	Not Returned	6	17.1	20	40.8	1	4.0	10	12.7	2	20.0	5	22.7	3	8.6	10	12.0	4	13.8	16	28.1	0	0	1	9.1	17	30.4	

often than the home care group.

Of the hospital care group, 32 (60.4%) had not returned to work as compared with 37 (48.7%) of the self-administered group and 33 (52.4%) of the home care group. More of the home care group were working with restrictions - 13 (20.6%) while 9 (17%) of the hospital care group were operating under similar conditions, and 11 (14.5%) of the self-administered.

The tendency, then, was for the self-administered group to have returned to normal work activity more often, followed by the home care group, and then the hospital group. These differences, however, were not significant and there was no reduction in the probability of a predictive error afforded by this relationship. A summary of these findings is found in Table XVIII.

Leisure Activity

As with work activity, there was no significant difference between mode of treatment and the tendency to resume normal functioning. Patients on home care did not return to leisure activities more often. Indeed, if anything, they tended to return less often.

Of the hospital care group, 109 (62.2%) were experiencing restrictions, as compared to 101 (76.9%) of the home care group and 108 (60.8%) of the self-administered group.

The lack of relationship was further illuminated by the near non-existent reduction in the probability of

Table XVIII - Distribution of Return to Work by Service Category

Return to Work	SERVICE CATEGORY					
	Experimental		Self-administered		Control	
	N	%	N	%	N	%
Working Normally	17	27.0	28	36.8	12	22.6
Minor Restriction	8	12.7	7	9.2	6	11.3
Major Restriction	5	7.9	4	5.3	3	5.7
Not Returned	33	52.4	37	48.7	32	60.4

$x^2 = 3.99280$, df = 6, $p < .6777$, ϕ (work) = .00

predictive error, only 9%. These findings are summarized in Table XIX.

Household Activity

There was also no support for this hypothesis when specific activities were analyzed. There was a slight trend in the direction for all but minor repairs, but its effect was negligible. These findings are summarized in Table XX.

Care of Children - Of the experimental group, 12 (13.3%) had not resumed normal functioning. In the self-administered group, 34 (28.8%) had not returned to normal, as compared with 16 (19.3%) of the control group who had not returned to normal. The experimental group tended to have returned more often, but this difference was not significant. No increase in predictive ability was afforded by knowing the service category.

Cooking - In the experimental group, 27 (18.9%) had not returned to normal, as compared with 56 (30.6%) of the self-administered group who had not resumed normal functioning, and 30 (21.6%) of the control group. Once again, the experimental group tended to have resumed normal functioning more often, but the difference was not significant. Knowing the service category did not yield any decrease in predictive error.

Cleaning - This activity had the most impact on persons with respect to restricting resumption of normal functioning. Of the experimental group, 67 (46.9%) had not returned to

Table XIX - Distribution of Return to Leisure Activity by Service Category

Return to Leisure	SERVICE CATEGORY					
	Experimental		Self-administered		Control	
	N	%	N	%	N	%
No Change	13	8.6	19	9.8	14	8.8
Normal Activity	37	24.5	57	29.4	46	28.9
Minor Restriction	49	32.5	64	33.0	53	33.3
Major Restriction	52	34.4	54	27.8	46	28.9

$x^2 = 2.35738$, df = 6, $p < .8841$, $C = .009$

Table XX - Distribution of Return to Household Activity by Service Category

Activity		SERVICE CATEGORY						
		Experimental		Self-administered		Control		Statistical Test
		N	%	N	%	N	%	
Care of Children	Returned	77	85.6	81	68.6	66	79.5	x^2=14.66198, df=12, p<.2604
	Not Returned	12	13.3	34	28.8	16	19.3	
Cooking	Returned	113	79.0	122	67.0	102	73.9	x^2=19.65477, df=14, p<.1414
	Not Returned	27	18.9	56	30.6	30	21.6	
Cleaning	Returned	75	52.4	85	47.0	62	45.3	x^2=12.29716, df=14, p<.5825
	Not Returned							
Washing	Returned	107	74.8	122	67.0	86	61.9	x^2=20.39046, df=12, p<.0601
	Not Returned	34	23.8	59	32.5	51	36.7	
Shopping	Returned	90	62.9,	96	53.6	84	60.9	x^2=13.67910, df=14, p<.4739
	Not Returned	49	34.3	80	44.7	52	37.7	
Repairs	Returned	111	81.0	138	79.8	111	82.8	x^2=9.24446, df=12, p<.6819
	Not Returned	25	18.3	35	20.3	22	16.4	

normal, as compared with 93 (51.3%) of the self-administered group who had not resumed normal functioning, and 72 (52.5%) of the control group. No decrease in predictive error was gained by knowing the service category.

Washing - Of the experimental group, 34 (23.8%) had not returned to normal. In the self-administered group, 59 (32.5%) had not resumed normal functioning, as compared to the control group where 51 (36.7%) had not returned to normal. Again, the experimental group had resumed normal functioning more often, but the difference was not significant. No gains in predictive ability were experienced.

Shopping - In the experimental group, 49 (34.3%) had not returned to normal, as compared with 80 (44.7%) of the self-administered group, and 52 (37.7%) of the control group. Knowledge of the service category did not result in a reduction of predictive error.

Minor Repairs - Only for this activity did the control group resume normal functioning more often than the experimental. Of the control group, 111 (82.8%) had resumed normal functioning, as compared with the experimental group, where 111 (81%) had returned to normal. In the self-administered group, 138 (79.8%) had resumed normal functioning. Once again, however, these differences were not significant. For this activity, knowledge of the service category did not result in an increase in predictive ability.

CHAPTER IV

CONCLUSIONS

Introduction

Parsons' sick role model postulated that after a period of time, the sick person would resume his normal role and task obligations. Neither the process by which the person would recover, nor the roles and tasks to be resumed were specified. Other researchers have further discussed this exit role, but not developed it. Gerson and Skipper (1972) have implied that there may be more than one exit role, depending on the type of ailment. The present research has been aimed at specifying those factors which would affect and effect exit from the sick role.

To this end, the literature pertaining to entry into the sick role was reviewed and the general hypothesis advanced that those factors shown to affect entry into the sick role would also affect exit from that same role. The factors postulated to be of importance were: age, sex, occupation, education, diagnosis and mode of convalescent care.

Throughout most of the sick role literature, the roles and tasks affected, or rather, investigated were functional ones - work and household activities. No mention was found of non-functional activities such as social roles. The argument may be advanced that these are non-essential

activities, a luxury. Yet, disease affects these roles just as surely as it affects the so-called functional roles. Therefore, in this study, three sets of roles were investigated: work roles, leisure roles and household roles. Specific hypotheses were advanced concerning the impact of the factors outlined above on each set of roles. These three sets of roles were viewed as a total package representing a person's obligations. Return to normal levels of functioning may be a product of the relevance of each set for the individual. Variations were expected in the tendency to return to them.

The results showed that none of the hypotheses were accepted. There was, however, partial support for most hypotheses. The hypothesis dealing with occupation was accepted for work roles, rejected for leisure roles (the trend being in the direction opposite to that predicted), and accepted for all household roles except care of children and minor repairs, the latter showing a tendency in the opposite direction.

Education was also supported for work roles, there being a significant correlation between the two, with the lower educated persons tending not to have returned to normal work activity. This relationship was further illuminated when occupation was considered. The occupational groups in which this relationship existed were: sales/clerical; semi-skilled; fishing/mining/labour. For leisure roles, the hypothesis was rejected, the trend being opposite

to that predicted. Only for the housewife group was there a correlation in the direction predicted. For the third set of roles, household, the hypothesis was accepted only for washing activity.

Work roles were significantly affected by age, with the older age groups less likely to have resumed normal work activity. Leisure roles were not significantly affected by age, but the trend was in the predicted direction. All household roles, except care of children, were affected in the predicted direction.

The findings concerning the effect of sex indicated a relationship opposite to that predicted. Men were more likely to have returned to work activity, leisure activity and all household activities but care of children and minor repairs.

Those persons in the more severe diagnostic categories were not less likely to have resumed normal functioning. Rather, the distinguishing factors were the impact upon body mobility and gynecological surgery. People in these categories were less likely to have returned to normal activity across all role sets.

Finally, no difference was found for service category. There was no significant trend for home care patients to have resumed normal functioning for any role.

Role Functioning

As noted, no hypothesis was supported across all role sets. In most cases, acceptance of the hypothesis for

one role was accompanied by a rejection on the other role(s). This would seem to indicate that roles were ranked differentially by people and performance of these roles was determined by the relative weight assigned them.

Because the person had not returned to normal levels of functioning for all role sets, it may be concluded that he/she had not fully recovered from the effects of the sickness experience but still occupied an impaired role. The three sets of roles may thus be seen as competing for the individual's attention. The order in which the roles were reassumed is determined by the salience of the activity for the individual.

The findings of the study indicated that the lower status education/occupation groups reassumed leisure activities more frequently, and the higher status groups, work activities. Further, the traditional division of household activity between sexes was illuminated. Each sex group tended not to return to those activities traditionally assigned it. This may be explained in terms of the level of involvement in the activity in a pre-morbid condition.

With regard to an overall ranking of roles, it would seem that generally non-functional roles are ranked lower than functional roles. Leisure activities were restricted across a wider range of surgical procedures than either work or household activities. No relative ranking of the roles was conducted, however, and any conclusions are tenuous.

With regard to work roles, the lower status occupational groups did take longer to return to normal functioning. This may be explained in terms of an unsatisfactory life experience. Gerson and Skipper (1973) have reported that lower status workers expected greater exemptions than higher status workers, when questioned in a pre-morbid condition. The explanation advanced was the lower status workers were unhappy with their life situation and therefore used the sick role as a way to escape this situation. The present findings would seem to support this. Lower status workers were less likely to have returned to normal work roles. An alternate explanation is the nature of the work task itself. A dichotomy of physical/non-physical activities could be established, with the lower status occupations tending to be physical in nature. If this were accepted, then the lower status workers would be seen to be prevented from returning to work by the nature of their job. For example, it would be harder for a labourer to return to his job following a hernia repair than it would be for an executive.

Interrelated with this are the findings concerning education. Education and occupation were correlated (τ = -.529, $p < .001$) with low education associated with low occupational status. Education did not affect work roles independent of occupation, as predicted, but only for the sales/clerical, semi-skilled and fishing/mining/labour groups. This lends support to the two explanations advanced for the findings concerning occupation. These groups would

be those engaged in rote, unrewarding tasks. Also, these would be those groups involved in physical activity. Thus, the general finding that the low education, low occupational status persons are less likely to have returned to normal work roles may be explained by dissatisfaction with their life situation and the physical nature of their work.

With regard to age, Suchman (1965a, 1965b) stated that the older patient would be more likely to perceive symptoms to be indicative of a serious illness. In the present study, older patients were less likely to have returned to normal work activities. This would seem to support Suchman's contention. Illness may have a debilitating effect (physical and psychological) upon older persons. An alternative explanation may be that older people are better established in their jobs and can afford to take more time off. Of the two, however, the first would seem the most likely. Illness does have a heavier impact upon the older age groups.

Suchman's (1965a, 1965b) contention that men would be more dependent was not supported in the exit role. Women were not more likely to have resumed normal role functioning. This may have been due to the nature of the illness. Women tended to experience more serious surgical procedures - cholecystectomy, abdominal hysterectomy, varicose veins. Further, women tended not to be the chief wage earner in the household. This would lead to more pressure being placed upon the men to return to work in order to maintain the family unit.

Throughout much of the preceding discussion the role of illness has come up as a possible explanation. The findings of this study indicated that those surgical procedures with specific restrictions will affect work activity. If the time required to recover was more than three weeks post-discharge, then the person had not returned to work. The effect of the ailment, then, would seem fairly evident.

Finally, there was no support for the effect of service category upon work roles. It might be that the study period, three weeks, was too short a time for differences to emerge. The impact of such a program may take longer to be felt.

As mentioned earlier, leisure roles may be conceived of as non-functional roles. Indeed, the rejection of all the hypotheses concerning these roles, except that of diagnosis, would seem to support this view. One of the major problems associated with the study of this set of roles was the myriad of leisure activities. As opposed to work roles which had a limited number of configurations, leisure roles included everything from watching television and knitting to scuba diving and mountaineering. For the purposes of analysis, the nature of the activity was not considered. The question was phrased such that, regardless of the activity, what was the person's current status. It may be that a lot more effort is required to return to mountaineering than to return to watching television.

This factor becomes highlighted when the hypotheses concerning occupation and education are considered. The data showed a trend in the direction opposite to that predicted. Surprisingly, when the specific leisure activities were considered, the lower-occupation groups tended to engage in sedentary, non-physical activities. The men tended to consider going down to the local club for a beer and a game of cards as a popular leisure activity. The women enjoyed knitting or crocheting while watching television. Thus, the effort required to resume these activities was much less than that required for the higher education/occupation groups to resume their activities, more commonly physical in nature.

Another explanation stems from the discussion of work roles. It was found that the lower status education/occupation groups had not returned to normal work activities. If this were the case, then they would have more time to engage in leisure activities. Conversely, the higher status groups, having returned to work, would have fewer opportunities to resume normal leisure activities. This finding lends support to the view expressed earlier that the package of role obligation is not resumed as a whole, but rather the various components are reassumed differentially. The findings thus far would indicate that the lower status education/occupation groups reassume leisure activities more frequently and the higher status groups, work activities.

The failure of the younger patients to return to leisure activities more often than the older parients may be explained by a combination of type of leisure activity and illness. It was found that the younger age groups tended to be engaged in physical activities and the older groups, non-physical activities. Further, illness had a more debilitating effect upon the older groups. The physical leisure activity of the younger age group was restricted by illness, and the older age group was restricted by illness. The older age groups tended to return more frequently because their activities were non-physical. Further, the younger people were more likely to be working, thus with less time to relax.

The hypothesis concerning sex and leisure activity was not supported, and the trend was opposite to that predicted. As with work roles, the severity of the surgical procedure was a more restrictive factor for women than for men. Further, the locus of leisure activity differed for men and women. Men tended to engage in leisure activity outside the home and women, inside the home. Those leisure activities at home were normally done when the household tasks were completed. If the household tasks were not completed, as was often the case, then women would not resume leisure activities. Once again, it would appear that tasks are ranked according to personal relevance and priority.

With regard to the impact of surgical procedure upon leisure activities, it was found that the configuration

was similar to that for work roles. The more serious procedures, with any inherent restrictions, placed limitations upon return to normal leisure tasks. It must be noted, however, that leisure activities were restricted across a wider range of surgical procedures. This would seem to indicate that leisure tasks were ranked lower than work or household tasks. Generally speaking, therefore, non-functional tasks rank lower than functional tasks in a hierarchy of tasks.

Service category also had no significant effect upon leisure activity. As with work roles, the self-administered group had resumed normal leisure roles more often than the experimental group. The reason for this would seem to be the same as for work roles. The self-administered group had to rely upon its own resources sooner than the experimental group and therefore resumed task obligations earlier.

Household roles were considered functional, and as such, people tended to resume normal functioning more often than was the case with leisure roles. A problem arose with the use of net difference between pre- and post-morbid levels of functioning. The actual level of functioning was not considered, but only the change. The impact of this was to ignore the degree of involvement of the person in household roles. This problem became clearly evident when the findings concerning sex were examined. For all activities except minor repairs, men had resumed normal role functioning more often than women. This relationship was not in the

predicted direction. Only for minor repairs did women resume normal functioning more frequently than men. The traditional roles of men and women have been for men to perform any needed repairs and for women to cook, clean, care for the children, buy the groceries and generally, keep the house in order. Note, then, that neither men nor women had returned to their traditional roles. The explanation for this lies in their respective degree of involvement in the activities. If men had not been heavily involved in the activity initially, it would be relatively easier to return to this level. Similarly, if women had not been involved in minor repairs to a great extent, it would be easy to return to doing the little that they had been doing. This bias can be found, or suspected, throughout most of the findings on this dimension.

With regard to occupation, the trend was in the predicted direction for all activities but minor repairs. This was due in large part to housewife being considered a lower status occupation. This meant that the lower status group was weighted heavily in the direction of females. Thus, the configuration was affected heavily by sex.

Education was a factor of significance only within certain occupational groups for specific household roles. The trend was in the predicted direction regardless of occupational status, with few exceptions. For shopping activities, housewives with higher education were less likely to have resumed normal functioning. This can be explained

by returning to the effect of education upon leisure activity. For that role, housewives of lower education had resumed normal role functioning more often. Shopping is the one household activity which is performed outside the home. In a number of cases, shopping was reported as being a leisure activity, a chance to get out of the house, thus, the lower educated housewives could be expected to resume shopping activity more frequently. The lower educated skilled tradesmen had resumed normal minor repairs activity more frequently. The reasons for this were unclear, but the sample size ($n = 29$, $df = 16$) may have been too small.

The middle age groups were most severely restricted across all household activities but minor repairs, for which the older age group experienced the most difficulties. The one explanation which may be advanced is that the middle age groups were more involved in these activities to begin with, and thus had further to go to resume pre-morbid levels. A further factor might be the type of surgery a person underwent. The middle age groups experienced hysterectomy and cholecystectomy, two of the more severe procedures, more frequently.

On this point, surgical procedure affected household roles in a manner similar to work and leisure roles. The more severe procedures imposed restrictions upon all household activities. There was no significant difference between surgical groups for minor repairs. Those categories which imposed the most severe restrictions, however, were those

which had a larger proportion of men in them - hernia, ulcer, orthopedic surgery and disc displacement. This lends further support to the traditional division of roles and degree of involvement with them.

Finally, only for household roles did the home care group tend to have resumed normal functioning more frequently. The services provided to this group were household bound. This may have permitted members of this group to channel their energies into recovering from the effects of the illness itself. This period of time may have been sufficient to allow for a resumption of normal household roles. What is not known is the degree to which the three groups had recovered from the clinical manifestations of the illness at the time of questioning.

Implications for Future Research

From the analysis of the data, a two-facet set of roles emerged: instrumental and social roles. Both sets of roles were affected by disease, and the priority assigned to each varied according to a number of factors. It would appear that resumption of normal functioning for one set of roles implied that normal levels of functioning would not be attained for the other. This, however, was limited by the time chosen for evaluation of functioning. In the present study, a period of three weeks post-discharge was chosen. Future studies should follow the patients for a longer period of time, possibly with two measures of functioning. Further, a clinical assessment of recovery

should be conducted. Valuable data could thus be gathered concerning objective versus subjective perceptions of recovery.

Two problem areas emerged which cast interpretive doubt on the results of this study. The first dealt with the measurement of return to leisure activity. The non-consideration of the specific leisure activity meant that differential degrees of difficulty for role resumption existed, inherent in the role itself, and not to characteristics of the person. Of course, the choice of leisure activity may be such a characteristic, but this is unknown. What is needed is the actual leisure activity and the degree of difficulty associated with it. One possible dichotomy would be physical-non-physical leisure. All activities must be ranked and any comparisons of return to functioning done for activities with the same ranking.

A similar problem existed for the household roles. The degree of involvement, rather than the degree of difficulty, was ignored in this case. Consequently, this meant that, depending on the level of participation in the activity, it was either easier or more difficult for a person to resume normal functioning. It is essential that any future research specify the level of role involvement and consider resumption in the light of specific levels of pre-morbid participation.

The final recommendation for future research items from the nature of the data itself. Firstly, most of the data was non-parametric in nature. This imposes restrictions

upon the type of analysis to be used and interpretation of the same. Secondly, most of the variables were inter-correlated and, as such, effects were confounded by other effects. It was hoped to use the multivariate nominal scale analysis, developed by Andrews and Messenger (1973) which allows for a weighting of the independent variables and their differential influence determined by case. Unfortunately, this package was not available locally, and time did not permit the writing of a program to carry out this analysis. Any future work should attempt to utilize such an analytic system. The partitioning of an individual into age, sex, occupation and whatever, creates artificial and at times, misleading conclusions.

ATTACHMENT A

HOME CARE PROJECT

Social Interview I

Director: L.W. Gerson, Ph.D.
M.U.N. Medical School

Reference #: _____

Date: _____ 1-12

Patient's Name: _____ M.C.P. #: _____

Address & Phone Number(s)

_____

_____

M.R.P.'s Name: _____

Address & Phone Number(s)
(if different from above)

_____

_____

Pt's Age: ___ Marital Status: ____

Present Occupation: _____

Education: _____

Admission Date: _____

Hospital Ward: _____

Illness/Operation: Date: _____

_____

Family Physician: _____

Attending Physician/Surgeon: ____

_____

Pt's Marital Status

Married	= 1
Single	= 2
Divorced	= 3
Widowed	= 4
Separated	= 5

13

Education

None	= 0
Kg. - 4	= 1
5 - 7	= 2
8 - 10	= 3
11+	= 4
Technical/ Clerical	= 5
University	= 6
Graduate	= 7

14

Hospital

General	= 1
Grace	= 2
St. Clare's	= 3

15

Patient's Work Status

N.A.	= 0
Employed, permanent	= 1
Employed, temporary	= 2
Employed, seasonal	= 3
Unempl., temporary	= 4
Unempl., permanent	= 5
Unempl., illness	= 6
Retired	= 7

16

PATIENT'S WORK AND OCCUPATIONAL STATUS

May I ask what work you/ he/she does?

Patient's Occup. Status
- N.A. = 0
- Profess, manag. techn. = 1
- Sales, clerical = 2
- Skilled trades = 3
- Semi-skilled, services = 4
- Fishing, Mining, Labour = 5
- Housewife = 6

17

When patient is not chief wage-earner

May I ask what work you/ he/she does?

Chief Wage-Earner's Wk. Status
- N.A. = 0
- Employed, permanent = 1
- Employed, temporary = 2
- Employed, seasonal = 3
- Unempl., temporary = 4
- Unempl., permanent = 5
- Unempl., illness = 6
- Retired = 7

18

Chief Wage-Earner's Occup. St.
- N.A. = 0
- Profess, manag. techn. = 1
- Sales, clerical = 2
- Skilled trades = 3
- Semi-skilled, services = 4
- Fishing, Mining, Labour = 5
- Housewife = 6

19

PATIENT'S ILLNESS AND HOSPITALIZATION

How long has ... been ill?

Duration Patient's Illness
- Emergency Admission = 0
- Up to 1 week = 1
- Up to 1 month = 2
- Up to 3 months = 3
- Up to 6 months = 4
- Up to 1 year = 5
- Up to 5 years = 6
- 5+ years = 7

20

And how long has (s)he known (s)he was going into hospital?

Hospitalization Expected
- Quite unexpected = 1
- Expected up to 1 wk. = 2
- 1 mo. = 3
- 3 mos. = 4
- 6 mos. = 5
- 1 yr. = 6
- More than 1 year = 7

21

How did (s)he feel about that?
(Probe: Was (s)he worried?)

Patient's Anxiety Re:Hospital

N.A.	= 0
No anxiety	= 1
Slight	= 2
Moderate	= 3
Severe	= 4
Did not discuss	= 5
Relief	= 6
Acceptance	= 7

22

Has ... been in hospital in the past 15 years?

 # Pt. Prev. Hospitalizations 23

COMPOSITION OF HOUSEHOLD

Patient's Household

How many people live in this house?
Who are they?

 # Males in house 24

 # Females 25

 # Persons: 26

0 - 2 yrs. 27

3 - 5 28

6 - 15 29

16 - 20 30

21 - 64 31

65 - 74 32

over 75

Indicate chief wage-earner.

Name	Sex	Age	SS	Rel. pt.	Home/Work/School		

Patient's Status

Husband	= 1
Wife	= 2
Parent of husb.	= 3
Parent of wife	= 4
Son/Daughter	= 5
Other relative	= 6
Friend/boarder	= 7
Other	= 8

33

If appropriate

Are the children able to look after themselves?

Children's Self-Sufficiency
N.A. = 0
Not at all = 1
With min. excep. = 2
Most of time = 3
All the time = 4

34

Can there be somebody home, if necessary?

Possibility Someone Home
Yes, in = 1
Yes, out = 2
Yes, both = 3
No = 4

35

Name:

Address:

Telephone:

Outside Resource Persons
N.A. = 0
Relative(s) = 1
Neighbour(s) = 2
Other friend(s) = 3
Present employee(s) = 4
Planned temp. help = 5
Other = 6
More than one = 7

36

HOUSING CONDITIONS

How many rooms are there in the house?

No. of Habitable Rooms (Exclude kitchen/WC and unusable rooms)

37

Check rooms below:

Number of bedrooms

38

ROOMS	# ROOMS
Living/Sitting rooms:	
Bedrooms:	
Kitchen:	
Bathroom/ Toilets:	
Other:	

Number of bathrooms

39

Determine adequacy of plumbing and heating.
If inadequate give reasons

Heating and Plumbing:
Adequate = 1
Inadequate* = 2

40

Stairs in Use
None = 0
1/2 flight = 1
1 flight = 2
1 1/2 flights = 3
2 flights = 4
3 flights = 5
4 or more flights = 6

How many flights of stairs are normally used?

41

Are there any things that cause problems in the running of the house?

Other Problems
None = 0
Minor = 1
Major = 2
Severe* = 3

42

GENERAL CONDITION OF HOUSE: (inside) (Rate from interviewer's impression only)

Condition of House
N.A. (not seen) = 0
Clean, Good condition = 1
Clean, deteriorated = 2
Neglected, structurally sound = 3
Neglected, deteriorated* = 4

43

HOUSEHOLD ACTIVITIES

Of the following household chores, how much did ... do before (s)he got sick?

N.A. = 0
Total = 1
Major = 2
Minor = 3
Occasional = 4
None = 5

If appropriate

Care of children

Cooking

Cleaning

Washing

Shopping

Repairs (minor)

Other: Are there any other important things in the home that need doing regularly: (e.g. care of aged parent, special diets, driving children to school, walking dog).

Patient's Role re Housework

Care of children 44

Cooking 45

Cleaning 46

Washing 47

Shopping 48

Repairs (minor) 49

Other 50

Did his/her sickness cause any change in this?

Change in Patient Role
N.A. = 0
Much less = 1
A little less = 2
About the same = 3
A little more = 4
Much more = 5

51

Has (s)he had any difficulty doing what he is doing now?

Problems with Housework
N.A. = 0
None = 1
Some = 2
Marked = 3
52

Let's come back to the children again: Could you tell me something about them?
Are they a bit of a hindrance to you at this stage or are they helpful and cooperative on the whole or not?

Probe: How much they do for themselves and others.

Helpfulness of Children
N.A. = 0
Major help = 1
Some help = 2
No bother = 3
Minor hindrance = 4
Major hindrance = 5
53

Pt. Role Discipline Children
N.A. = 0
Total = 1
Major = 2
Minor = 3
Occasional = 4
None = 5
54

What do you do when they are difficult?
(Probe: Do you and your husband/wife see eye to eye about this)?

Relationships of Children
N.A. = 0
Very good = 1
Fairly good = 2
Not too good = 3
Very bad = 4
55

Who takes the greatest responsibility for controlling the children?
(Probe success)

Manageability of Children
N.A. = 0
Fairly easy = 1
Fairly hard = 2
Extremely hard = 3
56

HEALTH OF FAMILY MEMBERS
Apart from ... is there/ anyone else in the household sick at the moment?
(Check infectious or serious diseases)

Illness in Household
None = 0
Minor = 1
Major = 2
57

Ask Major Resource Person (where possible)
And how would you describe your own health?

Health Major Resource Person
Good = 1
Fair = 2
Poor = 3
58

LEISURE & SOCIAL ACTIVITIES
Illness often interferes with spare time activities.
What did ... do in his/her spare time?

Use of Leisure
Very active = 1
Fairly active = 2
Fairly inactive = 3
Very inactive = 4
59

(Apart from work) how much did (s)he usually see of people? (If pt. housewife, probe neighbour contacts). Does (s)he have any special or close friends?

Phys. Activity, Sports
Yes = 1
No = 2

60

Usual Contacts/Friends
Many contacts = 1
Some contacts = 2
Few/no contacts = 3

61

Have there been any changes in spare-time activities because of the illness? Probe: activities and contacts with people.

Change in Use of Leisure
N.A. = 0
None = 1
Some change = 2
Marked change = 3

62

Change Extent of Contacts
N.A. = 0
None = 1
Some change = 2
Marked change = 3

63

How many hours a week was ... working as a ... (see p. 1) about the time (s)he went into hospital?

Hours of Wk. Pre. Hosp.
N.A. = 0
None = 1
1 - 10 hrs. = 2
11 - 20 hrs. = 3
21 - 30 hrs. = 4
31 - 40 hrs. = 5
40+ hrs. = 6

64

Is this the amount (s)he usually works?

Usual Hours of Work
N.A. = 0
Greater than normal = 1
Less than normal = 2
Same as normal = 3

65

Has the illness made any (other) changes in his/her work?

Changes in Work
N.A. = 0
None = 1
Minor = 2
Major = 3
Job loss = 4

66

DOMESTIC RELATIONS
We know from many studies that among the most common problems in families are: (finances, children, sex, in-laws, communication, physical abuse, alcoholism). What would you say are your problems?

Problems in Family
None = 0
Finances = 1
Children = 2
Sex = 3
In-laws = 4
Communication = 5
Physical abuse = 6
Alcoholism = 7
Other = 8

67

68

69

FINANCIAL SITUATION

Do you have any kind of insurance which may pay part of the costs? (Workmen's Comp., welfare, pensions, other allowances, Blue X, or private insurance)

Sources of Health Coverage
Workmen's Comp. = 1
Welfare = 2
Pensions & Allowances = 3
Blue X or other private insurance = 4
Other = 5

70

And finally, do you have a car or truck? If no, is there one you could borrow in an emergency?

Car Ownership
Car owned = 1
Car available = 2
Neither owned nor available = 3

71

Interviewer_____

Date of Interview_____

Place of Interview_____

Interviewee(s)_____

Relnshp to Pt._____

Relnship Interviewee Pt.
Patient = 1
Spouse = 2
Parent = 3
Child = 4
Other rel. = 5
Other = 6

72

INTERVIEWER'S COMMENTS:

Interviewer's Comments
Yes = 1
No = 2

73

Group Assignment
Exp. Disc. on Serv. = 1
Self-administered = 2
Control = 3
Exp. Disc. to Inst. = 4
Self Adm. Disc to Inst. = 5
Control Disc. to Inst. = 6

74

Interview Time
Medical = 1
Pre-Surgery = 2
Post-Surgery = 3

75

ATTACHMENT B

HOME CARE PROJECT

Follow-up Social Interview

Director: L.W. Gerson, Ph.D.
M.U.N. Medical School

Date of Interview _____

Interviewer _____

Interviewee(s) _____

_____

Relnshp. to Patient _____

Patient's Name:

_____

Address & Phone Number:

_____

Admission Date:

_____

Date of Operation:

_____

For Interviewer Reference Only

Illness/Operation:

Patient's Age: _____

Marital Status: _____

Occupation: _____

in House: _____

Patient #: _____ ☐

Hospital:
General ☐
Grace ☐
St. Clare's ☐

Attending Physician(s) ☐

_____ ☐ 1-12

_____ ☐

Transfer Date: ☐

_____ ☐

Date of Discharge: ☐

_____ ☐

Days in Hosp: _____ ☐ 13

☐ 14

"Early Days": _____ ☐ 15

☐ 16

HEALTH POST-HOSPITAL

How are you feeling? How did you feel when you first came out of the hospital? Since you came out of hospital, have you had any .., (refer to the list of symptoms).

Probe: frequency, severity, whether experienced in last week.

Group: _____

Discharge from Wound (1)

1. Freq./severity ☐ 17
2. In last week ☐ 18

Pain (2)

1. Freq./severity ☐ 19
2. In last week ☐ 20

Fever (3)

1. Freq./severity ☐ 21
2. In last week ☐ 22

Bleeding (4)

1. Freq./severity ☐ 23
2. In last week ☐ 24

Nausea/Vomiting (5)

1. Freq./severity ☐ 25
2. In last week ☐ 26

Trouble Urinating (6)

1. Freq./severity ☐ 27
2. In last week ☐ 28

Constipation/Diarrhoea (7)

1. Freq./severity ☐ 29
2. In last week ☐ 30

Sleeplessness (8)

1. Freq./severity ☐ 31
2. In last week ☐ 32

1. Frequency/Severity

Never	= 0
Constant/maj.	= 1
Constant/min.	= 2
Intermittent/maj.	= 3
Intermittent/min.	= 4
Brief period maj.	= 5
Brief period min.	= 6
Single episode maj.	= 7
Single episode min.	= 8

2. In last week

Yes = 1
No = 2

1. Frequency/Severity

Never	= 0
Constant/maj.	= 1
Constant/min.	= 2
Intermittent/maj.	= 3
Intermittent/min.	= 4
Brief period maj.	= 5
Brief period min.	= 6
Single episode maj.	= 7
Single episode min.	= 8

2. In last week

Yes = 1
No = 2

What frame of mind/spirits were you in when you first came out of hospital?
Probe: happiness, depression, relief, dependency, guilt, anxiety.

Weakness/Tiredness (9)

1. Freq./severity ☐ 33
2. In last week ☐ 34

Dizziness/Headache (10)

1. Freq./severity ☐ 35
2. In last week ☐ 36

Itching (11)

1. Freq./severity ☐ 37
2. In last week ☐ 38

Lack of Appetite (12)

1. Freq./severity ☐ 39
2. In last week ☐ 40

Swelling/Stiffness (13)

1. Freq./severity ☐ 41
2. In last week ☐ 42

Discoloration (14)

1. Freq./severity ☐ 43
2. In last week ☐ 44

Low Spirits, Easily Upset (15)

1. Freq./severity ☐ 45
2. In last week ☐ 46

Emotional Health

No mention	= 0	
Relieved	= 1	
Contented	= 2	☐ 47
Very happy	= 3	
Dependent, pleasant	= 4	☐ 48
Dependent, unpleasant	= 5	
Guilty	= 6	
Fear/Anxiety	= 7	☐ 49

Anything Else (16)

1. Freq./severity ☐ 50

2. In last week ☐ 51

☐ 52

☐ 53

If appropriate

Which symptoms caused you the most worry?

(Review worry re: symptoms. If appropriate: Probe: Degree of Worry).

Worried by Symptoms
N.A. = 0
Slightly = 1
Very = 2
Extremely = 3

☐ 54

☐ 55

☐ 56

ACTIVITIES OF DAILY LIVING

When you came home from the hospital, was there anything you found difficult about your own personal care? (Probe: help needed).

Help needed ☐ 57

If yes, what do you still need help with?

Present Level ☐ 58

	Help Needed	Present Level
0 No help needed		
1 Bathing		
2 Dressing		
3 Toilet		
4 Transferring		
5 Continence		
6 Feeding		

Was there any extra care you needed such as a special diet, laundry, nursing care? (Note duration of extra work).

Extra Work Reported
None reported = 0
A little extra = 1
Much more = 2
Very much more = 3

☐ 59

Special Diet
Laundry
Nursing Care

Duration Extra Work
None = 0
First 3 days = 1
4 - 7 days = 2
8 - 15 days = 3
15+ days = 4

☐ 60

Where patient a wage-earner

Are you back at work?

# of Days Off Work
Exact Number

☐ 61

If yes: When did you go back?
Probe: Full/modified workload?
Any problems or concerns?

If no: How do you feel about this?

All Wage Earners

Has being off work caused any loss of income that is not covered by insurance?

Before you became ill at home, you were doing ... (name the items from Questionnaire I) which of these have you not been able to do since returning from hospital?

N.A. = 0
Total = 1
Major = 2
Minor = 3
Occas. = 4
None = 5

Care of Children

Cooking

Cleaning

Washing

Shopping

Repairs

Other

How do you feel about these changes?

Status re Work
N.A. = 0
Working normally = 1
Working min. restr. = 2
Working maj. restr. = 3
Not returned = 4
☐ 62

Concerns About Work
Very worried = 1
Worried = 2
Mixed = 3
Glad = 4
Very Glad = 5
☐ 63

Loss of Income
N.A. = 0
No loss = 1
Yes, partial = 2
Yes, major = 3
Yes, full loss = 4
☐ 64

☐ 65

Patient's Role re Housework

Care of Children	☐ 66
Cooking	☐ 67
Cleaning	☐ 68
Washing	☐ 69
Shopping	☐ 70
Repairs (minor)	☐ 71
Other	

☐ 72

Effect of Total Load
No Change = 0
Easy = 1
Hard = 2
Very hard = 3
Extremely hard = 4

Status re Housework
N.A. = 0
Working normally = 1
Working min. restr. = 2
Working maj. rests. = 3
☐ 73

What about your sparetime activities?
(For Interviewer) Note activities from Interview I

_____

_____

_____

Status re Leisure

N.A.	= 0	
No change	= 1	☐ 74
Normal activity	= 2	
Minor restrictions	= 3	
Major restrictions	= 4	☐ 75

Length of Stay

We haven't talked about your hospital experience yet. You were in hospital.... days. How do you feel about the length of your stay? Was that not long enough, about right, or too long? Probe: Medical and Attitude

Medical

About right	= 1	
Too long	= 2	☐ 76
Not long enough	= 3	

Attitude

About right	= 1	
Too long	= 2	☐ 77
Not long enough	= 3	

What type of ward did you have?

Type of Ward

Ward all time	= 1	
Priv/semi all time	= 2	
Ward to private	= 3	☐ 78
Private to ward	= 4	
Other	= 5	

What was your stay in hospital like?

Overall Response Hospital I

Food	☐ 79
Rest	☐ 80
Expressive	☐ 81
Instrumental	☐ 82
Cleanliness	☐ 83
Recreation	☐ 84
Pt. Communication	☐ 85
Other	☐ 86

N.A.	= 0
Very good	= 1
Good	= 2
Mixed recreation	= 3
Fair	= 4
Poor	= 5

Do you have any comments or/anything special to say about ... (quote items in coding column).

Was it like that for the whole time you were there?

N.A. = 0
Very good = 1
Good = 2
Mixed react. = 3
Fair = 4
Poor = 5

Overall Response Hospital II

Food	87
Rest	88
Expressive Treatment	89
Instrumental Treatment	90
Cleanliness	91
Recreation	92
Pt. Communication	93
Other	94

Overall Response At Home

Food	95
Rest	96
Expressive Treatment	97
Instrumental Treatment	98
Cleanliness	99
Recreation	100
Pt. Communication	101
Other	102

N.A. = 0
Strongly pos. = 1
Positive = 2
Mixed reac. = 3
Indifferent = 4
Negative = 5
Strongly neg. = 6

What about some of the people in the hospital?

Hospital

How did you find the:

Doctor

Nurses

Physiotherapists

Anyone else

Home

Since you came home, have you been seen by any of these?

Doctors

Nurses

Physiotherapists

Anyone else

How did you find them?

Did you have any visitors while you were in hospital?

Attitude to Staff Hospital I

Doctors ☐ 103

Nurses ☐ 104

Physiotherapists ☐ 105

Others ☐ 106

Attitude to Staff Hospital II

Doctors ☐ 107

Nurses ☐ 108

Physiotherapists ☐ 109

Others ☐ 110

Attitude to Staff/Home

Doctors ☐ 111

Nurses ☐ 112

Physiotherapists ☐ 113

Others ☐ 114

Visitors in Hospital

No = 0
Yes, few = 1
Yes, many = 2

☐ 115

How did you feel about visitors?

Satisfaction with Visits Hospital

Very dissatisfied	= 1	
Dissatisfied	= 2	
Mixed reaction	= 3	
Satisfied	= 4	☐ 116
Very satisfied	= 5	

Have you had any visitors since you came home?

Visitors at Home

No	= 0	
Yes, few	= 1	☐ 117
Yes, many	= 2	

How did you feel about them? While you were in hospital you were concerned about....

.....

Satisfaction with Visits Home

Very dissatisfied	= 1	
Dissatisfied	= 2	
Mixed reaction	= 3	
Satisfied	= 4	☐ 118
Very satisfied	= 5	

If confirmed, explore the effects of absence from home and return to the home on the degree and nature of concern.

N.A.	= 0
Much better	= 1
Better	= 2
No change	= 3
Worse	= 4
Much worse	= 5

Problems in Family

None	= 0	☐ 119
Finances	= 1	☐ 120
Children	= 2	
Sex	= 3	☐ 121
In-laws	= 4	
Communication	= 5	☐ 122
Physical abuse	= 6	
Alcoholism	= 7	☐ 123
Other	= 8	
		☐ 124

How did the children react whilst you were in hospital?

Helpfulness of Children

N.A.	= 0	
Major help	= 1	
Some help	= 2	☐ 125
No bother	= 3	
Min. hindrance	= 4	
Maj. hindrance	= 5	

Reln'ships of Children

N.A.	= 0	
Very good	= 1	
Fairly good	= 2	☐ 126
Not too good	= 3	
Very bad	= 4	

Manageability of Children

N.A.	= 0	
Very easy	= 1	
Fairly easy	= 2	☐ 127
Fairly hard	= 3	
Extremely hard	= 4	

How did they react when you came home?

Helpfulness of Children

N.A.	= 0
Major help	= 1
Some help	= 2
No bother	= 3
Min. hindrance	= 4
Maj. hindrance	= 5

128

Reln'ships of Children

N.A.	= 0
Very good	= 1
Fairly good	= 2
Not too good	= 3
Very bad	= 4

129

Manageability of Children

N.A.	= 0
Very easy	= 1
Fairly easy	= 2
Fairly hard	= 3
Extremely hard	= 4

130

Did anyone - say a relative or friend come to stay or anyone in the family go away to stay elsewhere while you were in hospital?
Has anyone come in or anyone gone away since you came home?

If yes: How did that work out?

Pers. lv/join Household

No change	=0
Yes, hosp. period	=1
Yes, Home Care Program	=2
Yes, both Hosp. & H.C.P.	=3

131

Children's Overall Response Change Hosp.

N.A.	= 0
V. satisfactory	= 1
Satisfactory	= 2
Mixed	= 3
Negative	= 4
V. negative	= 5

132

Children's Overall Response Change Home

N.A.	= 0
V. satisfactory	= 1
Satisfactory	= 2
Mixed	= 3
Negative	= 4
V. negative	= 5

133

What expenditures have you had since you first went into hospital? (Include items that were covered by Private Insurance, including Blue Cross, DVA, Workmen's Compensation, Welfare, other.

Costs during hospitalization	If costs incurred	Approx. amount	Insurance/ other cover specify items & coverage
Transport (if 10+ miles)			
Babysitter			
Other (specify)			
Total			
Costs in Home Care period			
Med. supplies (drugs, dressings, appliances, equip.)			
Other supplies (diet foods bedlinen)			
Transport (to dr. OPD errands)			

Hospitalization Costs to Family

134
135
136

Home Care Actual Costs

137
138
139

ICDA Codes

140
141
142
143

Costs in Home Care period			
Sitters (extra)			
Other domestic help (extra)			
Nursing help			
Other			
Totals HCP			
Totals Hospitals			
Grand Total			

Interviewer's Comments:

144
145
146
147
148
149
150
151

Group
Experim. Disc Serv. = 1
Self-Adm. = 2
Control = 3
Exp. Disc. to Inst. = 4
Self-Adm. Disc. to Inst = 5
Control Disc. to Inst. = 6

152

Pt. Conv. at Home
Yes = 1
No = 2

153

Interv's Comments
Yes = 1
No = 2

154

BIBLIOGRAPHY

Andrews, C.M. and R.S. Messenger. Multivariate Nominal Scale Analysis: a report on a new analysis technique and a computer program. Ann Arbor: Survey Research Center, University of Michigan, 1973.

Banks, F.R. and M.D. Keller. Symptom Experience and Health Action. Med. Care, 9, 6: 498-502, 1971.

Britten, R.H. et al. The National Health Survey: Some General Findings as to Disease, Accidents and Impairments in Urban Areas. Public Health Reports, 55: 444-470, 1940.

Freidson, E. Patient Views of Medical Practice. New York: Russell Sage Foundation, 1961.

Freidson, E. The Sociology of Medicine. Current Sociology, X/XI: 123-140, 1962.

Gerson, L. and J. Skipper. A Conceptual Model for the Study of the Health Action Process. Can. Jour. Pub. Health, 63: 477-485, 1972.

Gerson, L. and J. Skipper. Job Status and Expectations of Exemptions from Work Due to Illness. Jour. Occup. Med., 15, 8: 633-634, 1973.

Graham, S. Socio-Economic Status, Illness, and the Use of Medical Services. Millbank Mem. Fund. Quarterly 35: 58-66, 1957.

Griffith, J. Taking the Hospital to the Patient: Home Care for the Small Community. One of a series of publications relating to Progressive Patient Care, 1966.

Hays, W. and R. Winkler. Statistics: Probability, Inference and Decision. Volume II, New York: Holt, Rinehart and Winston, Inc., 1970.

Hollingshead, A. Two Factor Index of Social Position. New Haven: by the author, 1957.

Kadushin, C. Social Class and the Experience of Ill Health. Sociol. Inquiry, 34: 67-80, 1964.

Kasl, S.V. and S. Cobb. Health Behavior, Illness Behavior and Sick Role Behavior. Arch. Environ. Health, 12: 246-266, 1966.

Kassebaum, G. and B. Baumann. Dimensions of the Sick Role in Chronic Illness. Jour. Heal. Hum. Beh., 6: 16-27,, 1965.

Katz, S. et al. The Effects of Continued Care - a study of chronic illness in the home. National Center for Health Services Research and Development, 1973.

Lawrence, P. Chronic Illness and Socio-Economic Status. Public Health Reports, 63: 1507-1521, 1948.

Lerner, M. "Social Differences in Physical Health:, in J. Koda et al. (eds.), Poverty and Health. Cambridge: Harvard University Press, 1969, pp. 69-112.

Mechanic, D. and E.H. Volkart. Stress, Illness Behavior and the Sick Role. Amer. Sociol. Rev., 26: 51-58, 1961.

Mechanic, D. The Concept of Illness Behavior. J. Chron. Dis., 15: 189-194, 1962a.

Mechanic, D. Medical Sociology. New York: The Free Press, 1968.

Merton, R.K. "The Role-Set: Problems in Sociological Theory". Brit. J. Sociol., 8: 106-120, 1957.

Nie, N.H. et al. Statistical Package for the Social Sciences. New York: McGraw-Hill Book Company, 1970.

Parsons, T. The Social System. New York: The Free Press, 1951.

Polgar, S. "Health Action in Cross-Cultural Perspective", in H.E. Freeman et al. (eds.), Handbook of Medical Sociology, 1st ed. Englewood Cliffs: Prentice-Hall, Inc., 1963, pp. 397-419.

Stone, J. The Effectiveness of Home Care for General Hospital Patients. JAMA, 205,3: 145-148, 1968.

Suchman, E. Social Patterns of Illness and Medical Care. Jour. Heal. Hum. Beh., 6: 2-16, 1965a.

Suchman, E. Stages of Illness and Medical Care. Jour. Heal. Hum. Beh., 6: 114-128, 1965b.

Szasz, T.S. and M.H. Hollender. "A Contribution to the Philosophy of Medicine: The Basic Models of the Doctor - Patient Relationship". A.M.A. Arch. Intern. Med., 97: 585-592, 1956.

Twaddle, A.C. Health Decisions and Sick-Role Variations: An Exploration. Jour. Heal. Soc. Beh., 10: 105-115, 1969.

Twaddle, A.C. Illness Behavior and the Sick Role. (in preparation), 1972.

Twaddle, A.C. The Concept of Health Status. Soc. Sci. and Med., 8: 29-38, 1974.