

HEALTH STATUS AND PROBLEMS MANAGING PHYSICAL HEALTH AMONG  
CHRONICALLY MENTALLY ILL OUTPATIENTS: A DESCRIPTIVE  
AND CORRELATIONAL STUDY

by

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## ABSTRACT

A comprehensive evaluation of 25 chronically mentally ill Day Treatment Center patients revealed 140 functional health problems. Fifty-six (40%) of these health problems were considered to have a potentially major impact upon life and functioning of the individual. Twenty-one patients (84%) were found to have at least one major functional health problem, and 72% ( $n = 18$ ) to have more than one major problem. Minor functional health problems were identified in 100% of the patients.

A majority of the health problems identified in this study (69%,  $n = 96$ ) were either undiagnosed or untreated at the time of the study. This finding highlights a need for comprehensive health assessments to be regularly provided to this population.

Each of the potential barriers to obtaining and managing physical health care was endorsed by some of the patients. The significant correlations relating to health and health care management are discussed. Potential ways of helping chronically mentally ill patients access, obtain, and follow through with physical health care are discussed.

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## CHAPTER I

### INTRODUCTION AND RATIONALE

Epidemiological researchers over the past several decades have reported that psychiatric patients suffer higher incidence of morbidity and mortality than the population at large (Craig & Lin, 1981b; Eastwood & Trevelyan, 1972; Hoffman & Koran, 1984; Karasu, Waltzman, Lindenmayer & Buckley, 1980; Tsuang, Woolson & Fleming, 1980). Interestingly, many of the health problems identified in these studies had not been diagnosed by the patient's referring physician. Although some researchers reported physical findings in relation to psychiatric diagnoses, none clearly delineated subjects by the length of time they had required psychiatric care.

Individuals requiring extended psychiatric care in inpatient or outpatient settings could be more susceptible to health problems than those requiring a shorter duration of treatment. This increased susceptibility might be attributable to the nature of the disorder and problems with self-management. Studies among the chronically mentally ill (CMI) provide supporting evidence of increased morbidity among CMI populations. Many illnesses identified in these studies were believed to be suffi-

ciently severe that they would interfere with the daily activities and functioning of the individual (Farmer, 1987; McCarrick, Manderscheid, Bertolucci, Goldman & Tessler, 1986; Roca, Breakey & Fischer, 1987).

Chronically mentally ill persons, as well as persons in general, are heterogeneous with respect to their needs for support and structure. These needs vary over time (Bachrack, 1980). CMI patients need effective social interaction, basic necessities of life, and hope for the future. Because of difficulties with psychiatric symptoms, dependency needs, and social disability, CMI patients are poorly prepared to fulfill these basic needs without extended psychiatric treatment and a supportive rehabilitation program.

The terms **acute** or **chronic** do not refer to specific diagnoses; rather, they refer to the length of time the signs and symptoms of an illness interfere with a person's functional ability to obtain the basic necessities of life. Although the effects of an acute disorder may be short-lived, those that require more than 2 years of palliative, supportive, or reconstructive care are said to be chronic.

Any category of mental illness may become chronic. Although CMI is often understood to mean chronic schizophrenia, many other types of mental illness may also become chronic by nature of the length and severity of the

disorder. These other types of mental illness must be considered, along with chronic schizophrenia, in the planning of services for the CMI. Service planning for CMI patients should take into account both psychosocial and physical needs of individuals (Krauss & Slavinsky, 1982).

The definition of CMI persons encompasses those with moderate to severe disability in meeting their health care needs, as well as all the challenges that arise from maintaining adequate self-care. A significant portion of the CMI possess the capacity to live in relative independence if adequate community-based services, social support, and life opportunities are provided (Goldman, Gattozzi & Taube, 1981).

An important aspect of chronic illness is the burden that it represents not only to the patient, but to significant others, as well. CMI persons, especially those with diagnoses of schizophrenia, may suffer from varying degrees of primary symptoms including disorders in: (a) organized thought processes, (b) sense of self, (c) volition, (d) relationships with the external world, and (e) psychomotor processes. These disorders often result in the expression of secondary symptoms of apathy, withdrawal, poor impulse control, impaired self-care, bizarre behavior, impoverishment, difficulty with concrete thinking, and deficient coping skills (Crosby, 1987).

Additionally, many psychiatric researchers have raised questions regarding the ability of CMI persons to conscientiously react to and communicate about potentially life-threatening experiences such as exposure to sudden changes in environmental temperature and perception of pain, fatigue, or hunger.

Many CMI persons have demonstrated mild to severe handicaps in terms of their capacity to maintain a healthy lifestyle, and to accurately perceive, appraise, and manage symptoms associated with illness. In addition to these problems, social and economic factors affect the ability of the CMI to manage their own health needs. Many cannot afford adequate care and treatment, even when insurance covers a major portion of the cost. Lack of treatment and undertreatment may result in the development of more serious and costly conditions. These potential difficulties are compounded by other variables such as culture, age, social isolation, long-term medication maintenance, and self-destructive/suicidal tendencies, all of which may adversely affect health status.

Further, the CMI population is often comprised of varying proportions of volatile, itinerant, or transient populations of nomads, many of whom are "street drug" users or alcoholics. The effects of lifestyle upon the CMI have yet to be adequately explored.

The high mortality documented among psychiatric

populations is related to high morbidity among the CMI. The reasons for the persistence of these high rates are not well understood.

What remains enigmatic is the high mortality from natural causes, as well as the increased frequency of physical illness among the mentally ill when compared with the population at large. (Koranyi, 1977, p. 1137)

Early in the twentieth century, German researcher Bonhoeffer (1912) documented higher rates of morbidity and mortality among psychiatric patients. In this country, Malzberg (1934) and Comroe (1936) supported the findings of Bonhoeffer and were followed by Engel (1972), McIntyre and Romano (1977), Koranyi (1980), and Farmer (1987), among others who continued to identify the somatic element in psychiatric illness.

Despite the preponderance of evidence supporting higher morbidity and mortality rates among psychiatric patients, no significant reduction in these rates has been evidenced. Since the problem areas that may impact a psychiatric patient's health status have not been systematically explored, each of these areas should be investigated to determine how they affect the health status of chronic psychiatric patients.

If an individual has been previously identified as having a chronic mental illness, treatment may focus on the psychological symptoms or behavior of the CMI client, without further evaluation for physical problems. Many



conditions believed to be primarily psychiatric in nature have been found to conceal physical illnesses. For example, any life-threatening physical disorder may be accompanied by feelings of anxiety or depression.

The interaction between physical and psychosocial variables often leads to a confusing presentation of symptoms. Most researchers and clinicians would concur with the statement of Strickland and Kendall (1983) that physical disorders may be accompanied by psychological symptoms and vice versa. Indeed, physical and psychological symptoms may present as dynamic and intricately intertwined phenomena, making it difficult for health care providers to identify the specific etiology and course of many complaints.

### Conceptual Framework

Nurses have traditionally promoted a holistic concept of health care. Within this holistic view, humans are envisioned as biopsychosocial beings constantly interacting with their changing environment. In order to cope with this changing world, individuals employ both innate and acquired mechanisms that are biologic, psychologic, and social in origin (Roy, 1970).

Riehl (1980) proposed an "interactional model" of nursing care that builds on these concepts, but also acknowledges the tendency of human beings to think and act according to systems of meaning. Riehl's model utilizes

many insights derived from symbolic interactionist research. Individuals are understood as constantly striving to make sense of the environment in which they find themselves. Therefore, they differ from one another in the ways in which they perceive and cope with the same situation.

Riehl (1980) identified the need to assess the psychological and sociological parameters of individual functioning as critical systems affecting human behavior. She underplayed the importance of physiological systems as primary determinants of nursing problems and encouraged nurses to enter into the subjective world of the patient in order to more accurately assess patient care needs and develop meaningful plans for effective nursing care.

Chronically mentally ill persons are likely to have difficulty meeting their health care needs because of both primary and secondary deficits associated with their psychiatric disorder. Not all CMI persons manifest these deficits in the same degree. Considerable diversity exists, with only small subgroups of persons evidencing any particular deficit.

These potential cognitive and attentional deficits were summarized by Liberman, Neuchterlain, and Wallace (1982): (a) associative intrusions in speech, (b) difficulty sustaining focused attention, (c) susceptibility to misinterpreting irrelevant cues and being

easily distracted, (d) responding poorly under pressure or when tasks are complex, (e) tending to respond to the most immediate stimuli in the environment, and (f) exacerbation of psychotic symptoms in overstimulating environments.

These deficits, coupled with social withdrawal and poor motivation, may create health problems for the CMI client in the following ways. The CMI client's inability to modulate fear, interpersonal anxiety, distrustfulness, and paranoid ideas in meeting new people or visiting strange environments results in tendencies toward: (a) social isolation, (b) inability to accurately perceive and interpret body sensations, (c) inability to communicate needs to others, (d) poor problem-solving and self-directedness based on his or her inability to learn from past experiences, (e) forgetfulness, (f) motivational deficiencies, and (g) stress resulting from confusing or complex environmental demands such as those existing in most health care settings, or from the need to follow a health care regimen over time.

Many illnesses such as diabetes mellitus, cancer, hypertension, heart problems, seizure disorders, infective diseases, and others require long-term management with medication and professional care. While it is well-documented that these diseases exist among the CMI population, it is not clear how these patients evaluate their own health and functioning, nor how they explain

their use of health services. Personal appraisal of somatic functioning may influence whether the individual is motivated to maintain a healthy lifestyle, make contact with health care providers, the symptoms presented to the provider, and how those symptoms are presented. The CMI person's self-appraisal of health may have a direct effect upon the health care that is received and to what extent the person is motivated to comply with the prescribed regimen.

#### Significance of the Study

The estimated numbers of persons suffering from chronic mental illness in the United States range from 1.7 to 2.4 million (Goldman et al., 1981). These estimates encompass a wide variety of clinical conditions, predominantly schizophrenia disorders, recurrent depressive and manic-depressive disorders, paranoia and other psychoses, and personality disorders (including those recently designated as "borderline").

Minkoff (1978) reported that the number of individuals receiving care for schizophrenia in the United States was estimated at 974,972 in 1970 and was projected to be approximately 1,247,806 persons by the year 1985. Other researchers have estimated that 1.5 million persons in the United States are presently undergoing treatment for schizophrenia (Turner & Tenhoor, 1978). The Utah State Mental Health Planning Committee (1988) reported

approximately 6,333 or 22% of the total population of CMI persons living in Utah were considered "seriously chronically mentally ill" (p. 7). This large CMI population is not only a fertile area for research, but investigations regarding CMI clients may have impact on the health of the population at large, as well.

#### Purpose of the Study

The major objective of this study was to systematically and comprehensively investigate the issues that may influence the functional health and care of chronically mentally ill persons. This investigation incorporated a survey of: (a) how CMI persons appraise their own health needs and ability to effectively meet those needs, (b) demographic variables that may influence their health, (c) how they explain their use of health services, and (d) any difficulties they may have experienced in obtaining health care services.

The relationship between the identified variables that may have influenced the functional health of the participants in this study were investigated. This correlational research was conducted in an effort to further health care providers' understanding of the functional health care needs of the CMI population. It was anticipated that this information would point toward further research in this area. Further, it was hoped that through systematic and comprehensive investigation into all areas

of functional health of the CMI population, and implementation of that knowledge, that the health of this population might be improved.

### Functional Health

Functional health status implies both emotional and physical health in reference to a person's ability for self-care, mobility, and motivation to accomplish whatever goals or activities he or she wishes. In this study, physical and functional health problems were viewed synonymously because physical problems have the potential to impact the total functioning of the individual. Although functional health status includes subjective evaluations (perceptions) of adequacy and experiences of life, it also includes objective assessment of resources and life conditions (George & Beuron, 1980).

Functional status may influence the quality of life of an individual, regardless of any diagnosis of physical or mental illness. Although an elusive condition at best, quality of life has been conceptualized on a macrosocietal level to include health, meaningful activity, freedom to choose among options, security and freedom from threat, stimulation, novelty and richness of life experiences, influence, affluence, affection, and friendship (Katzner, 1979).

Quality of life for society may be influenced by the meaning and purpose that individual members ascribe to

life. Dimond and Jones (1983) claimed

... the meaning and purpose of life are bound up in basic needs for material and spiritual sustenance, for health, for achievement of personal goals, and for a whole gamut of cherished hopes and expectations. (p. 222)

Since the quality of life experience may be changed by the onset and duration of long-term illnesses such as chronic mental illness, the subjective or perceived evaluation of personal life experiences (including physical health) are also affected. The nursing goal of comprehensive, holistic care involves helping patients obtain physical, as well as mental, health care. The goal in the present investigation was to gain increased understanding of CMI patients' personal perceptions of physical health and functioning, as well as any barriers that might influence the health of this population. It was hoped that this understanding would lead to provision of more effective health care for the CMI population, which could potentially affect the health of the population at large, as well.

#### Research Questions

The following descriptive and correlational research questions were posited in this investigation.

#### Descriptive

1. What are the characteristics of the major and minor functional health problems experienced by

Salt Lake Veteran's Administration Medical Center  
(SLVAMC) CMI clients?

2. What are the major barriers perceived by SLVAMC CMI clients in obtaining and managing functional health care and how stressful are these barriers perceived to be?

### Correlational

3. To what extent are there significant relationships among the following variables:
  - 3.1 Self-rating of functional health
  - 3.2 Self-rating of emotional health
  - 3.3 Self-rating of psychiatric symptoms
  - 3.4 Self-rating of ability to perform activities of daily living
  - 3.5 Barriers in managing physical symptoms
  - 3.6 Barriers experienced in obtaining treatment for physical health problems
  - 3.7 Utilization of physical health care services
  - 3.8 Self-rating of physical health problems/illnesses
  - 3.9 Self-rating of physical health symptoms
  - 3.10 Functional health status determined by a nurse practitioner
  - 3.11 Number of major functional health problems, and
  - 3.12 Number of minor functional health problems.



## CHAPTER II

### REVIEW OF THE LITERATURE

Among health care issues debated in the United States and other countries are the difficulties faced by consumers in accessing services, as well as the appropriate means of providing services in relationship to the health needs of the population (Tessler, Mechanic & Dimond, 1976). The health status of populations may result from deprivation and/or excesses of critical health-sustaining resources, including those of a seminal nature (i.e., food) or those of a synergistic nature (i.e., health services). In any population, those subgroups that are deprived of sufficient safe food, shelter, and environment have an increased vulnerability to acute, infectious disease processes (Milo, 1976).

Chronically mentally ill outpatients are a subgroup living within the community. Demographically, they fall somewhere between the very poor and the affluent. Often, they have a low income, but live in a relatively affluent society. It has been well documented that low income Americans are not only more vulnerable to acute diseases relative to their affluent counterparts, but also have more chronic, degenerative illnesses and accidents.

Cigarettes, alcohol, illegal drugs, sucrose, cars, environmental pollutants, and tensions are readily available to the poor, while at the same time they are deprived of the level of protection afforded by the quality of food, shelter, and environment that sustain the affluent. The poor not only succumb more readily to virtually all disease processes; they also possess fewer options for getting the damage repaired or contained through the medical care system (Milo, 1976).

### Chronicity

Persons with long-term and severe problems in interpersonal relationships, mood control, thought processing, reality orientation, and coping with stress can be considered to have a chronic mental illness. Chronic mental illness is not a specific diagnosis. Diagnosis of affective disorders, problems in anxiety management, personality disorders, and organic conditions, as well as schizophrenia with its various subgroups, can all be considered chronic mental illnesses.

The properties of CMI experiences have been found to cross lines of age, diagnosis, sex, and social class. Summers and Hersh (1983) examined the relationship between psychiatric chronicity and schizophrenia by comparing a group of posthospitalized chronic schizophrenic patients with a group of chronic nonschizophrenic patients regarding symptoms, social functioning, and recidivism.

No differences were found between the groups on any of these variables. Summers and Hersh (1983) claimed their study supported the view that the diagnosis of chronicity is more crucial in gaining an understanding of the dynamics involved in severe emotional disorders than the traditional symptom-based classification system found in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1987).

The CMI population poses many challenges to the health care system for the provision of adequate care. The needs of the CMI are complex and resources for managing their health and medical problems are generally poor. Many are unemployed, lack vocational skills, and are unable to tolerate nonsheltered working situations. They often do not have adequate income to meet the basic necessities of life, even with disability payments from governmental sources. Isolation from family and friends, as well as deficiencies in social support, are generally attributable to difficulty managing the symptoms of extended mental illness. It is not uncommon for CMI persons to become transients travelling across the country without home or resources. Comfort is often sought through ingestion of alcohol, drugs of various kinds, and tobacco.

Evensen (1986) reported as many as 2,400 people roaming the streets of Utah cities are looking for work.

According to this reporter, as well as the Task Force for Appropriate Treatment of the Homeless Mentally Ill (Maurin & Russel, 1988), 25% or more of the homeless are mentally ill. The prevailing social attitude toward this population was summarized by the President's Commission on Mental Health (1978),

The chronically mentally disabled are a majority within minorities. They are the most stigmatized of the mentally ill. They are politically and economically powerless and rarely speak for themselves. Their stigma is multiplied, since disproportionate numbers among them are people who are also elderly, poor, or members of racial or ethnic minority groups. They are the totally disenfranchised among us. (p. 362)

The literature review revealed that psychiatric patients are more likely to have poor physical health and shorter life spans than the population at large. Research studies over a span of 15 years, involving psychiatric outpatients ( $N = 3,341$ ), documented that 43% to 58% of those patients studied had at least one significant physical illness, and many had more than one. Up to 83% of these illnesses were previously undiagnosed by the patient's referring physician or caregiver (Table 1). Studies involving psychiatric inpatients showed a higher incidence of patients with physical illness (33.5% - 80%), with up to 80% of the illnesses being previously undiagnosed (Table 2). Researchers of the physical health and functioning of the CMI as a specific population have also reported high rates of morbidity (Farmer, 1987; McCarrick

Table 1

## Percentage of CMI Inpatients with Physical Illnesses

Researchers	Number in Study	% of Patients		% Affecting Psychiatric Symptoms
		With Physical Illness	Previously Undiagnosed	
Phillips, 1937	164	45%	-- <sup>a</sup>	--
Marshall, 1949	174	44%	--	22%
Herridge & Cantab, 1960	209	50%	--	--
Maguire & Granville- Grossman, 1968	200	34%	49%	--
Johnson, 1968	250	60%	80%	12%
Burke, 1972	202	43%	--	--
Hall et al., 1980 <sup>b</sup>	100	80%	80%	46%
Ghadirian & Englesmann, 1985	156 <sup>c</sup>	43%	--	--
	100 <sup>d</sup>	50%	--	--

Note. <sup>a</sup> indicates no data reported; <sup>b</sup> Hall, Beresford, Gardner & Popkin; <sup>c</sup> schizophrenic; <sup>d</sup> bipolar affective disorder.

Table 2

## Percentage of CMI Outpatients with Physical Illnesses

Researchers	Number in Study	% of Patients		% Affecting Psychiatric Symptoms
		With Physical Illness	Previously Undiagnosed	
Davies, 1965	36	58%	83%	-- <sup>a</sup>
Pokorny & Frazier, 1966	1530	45%	--	30%
Koranyi, 1979	100	49%	87% <sup>b</sup>	20%
Eastwood & Trevelyan, 1972	124	"High"	--	--
Hall et al. <sup>c</sup> , 1978	658	--	46%	9%
Burke, 1978	133	50%	--	--
Koranyi, 1979	2090	43%	46%	69%
Karasu et al., 1980	200	52%	83%	--

Note. <sup>a</sup> indicates no data reported; <sup>b</sup> patients referred from social service agencies; <sup>c</sup> Hall, Popkin, Depaul, Faillace & Stickney.

et al., 1986; Roca et al., 1987).

### Mortality

Virtually all kinds of death, including suicidal, homicidal, accidental, and natural have been found to have a higher incidence among psychiatric patients than in the general population (Haugland, Craig, Goodman & Siegel, 1983; Koranyi, 1977; Malzberg, 1934; Odegard, 1952; Tsuang, Woolson & Fleming, 1980a,b). Mortality rates among psychiatric populations range from the same to four times that of the general population (Babigian & Odoroff, 1969; Blaghorn & Kenross-Wright, 1967; Haugland et al., 1983; Kolb, 1976; Rorsman, 1973). Despite the introduction of modern medical and psychotropic drugs, and improved patient care in recent decades, mortality, as well as morbidity, rates remain high in this population.

In an effort to calculate the mortality risk of the psychiatric population, Tsuang et al. (1980a,b) analyzed the causes of death in a cohort of 200 patients diagnosed with schizophrenia, 100 patients with a diagnosis of manic-depressive disorder, 225 patients with depressive disorders, and a control group of 165 surgery patients. The patients were followed for 30 to 40 years following their University of Iowa Psychiatric Hospital admission between 1934 and 1944. The surgical control group was a stratified random sample of cases proportionally matched to the psychiatric cases for age of admission, sex, and

admission pay status.

The data demonstrated a significant increase in mortality risk for all three psychiatric groups (Tsuang et al., 1980a,b). The most pronounced increase was in the first decade, with the schizophrenic patients manifesting a significant excess in deaths throughout the four decades. No excess of deaths was reported during any decade for the surgical control group.

Length of survival from admission by sex for the three psychiatric groups and the control group was analyzed in comparison with the general population (from State of Iowa survival curves). Results indicated that survival curves for all three psychiatric groups (with the exception of manic-depressive males) differed significantly from the expected curves generated from state of Iowa census data. No significant differences were demonstrated in observed and expected curves for control group subjects. Males with schizophrenia showed survival time to be shortened by 10 years, while survival time for schizophrenic females was shortened by 9 years. Although survival time was not shortened for males with manic-depressive disorders, manic-depressive females evidenced a shortened survival time of 14 years. Males with depressive disorders manifested a shortened survival time of 18-11 years, and females with depressive disorder evidenced a shortened survival of 22-15 years (Tsuang et al.,



1980a,b).

Tsuang et al. (1980a,b) also reported a significant excess of deaths due to circulatory system failure in female patients with manic-depressive psychiatric diagnoses. In the group of patients diagnosed with schizophrenia, both males and females evidenced a substantial rate of excess deaths due to infectious disease.

Koranyi (1977) reported the mortality rates of 2,070 psychiatric outpatients over a 36-month period between the years of 1972 and 1975. Data revealed that the mortality rate of the psychiatric outpatients was twice that of the general population in Ontario, Canada during 1973. Koranyi asserted that despite the small sample size, the data indicated that psychiatric patients were approximately 30 times (men 23 times, women 52 times) more prone to commit suicide than members of the general population. Similar findings were reported by Rorsman (1974), whose sample of 3,623 psychiatric patients included 49 deaths by suicide over a 6-year period.

It should be noted, however, that the data reported above were gathered from specific facilities and were unrelated to the total population from whence they came. Furthermore, these studies (Koranyi, 1977; Rorsman, 1974; Tsuang et al., 1980) were carried out before deinstitutionalization was widely practiced in the United States.

Craig and Lin (1981) reported that the process of deinstitutionalization of the CMI population has been associated with a marked decline in mortality rates among hospitalized psychiatric patients. This decline was most evident among elderly mentally ill patients and was closely linked to a decline in deaths from pneumonia.

In a more reliable study, Haugland et al. (1983) examined the 3.5 year mortality rates of 1,033 psychiatric patients admitted to two public psychiatric hospitals in a single catchment area of approximately 250,000 people in Rockland County, New York. The overall standardized mortality ratio was reported to be 2.29 ( $p < .05$ ), suggesting that persons treated for psychiatric illness at inpatient facilities in this county during the years 1975-76 were more than twice as likely to die before the end of 1978 than persons with the same age and sex distribution in the general population.

The five major causes of death (Haugland et al., 1983) listed in order of frequency of occurrence were: heart disease, accident or suicide, pneumonia, cancer, and cerebrovascular disease. Overall standardized mortality ratios associated with cancer were not significantly different from the general population; however, a greater portion of the cancer-related deaths were associated with alcohol addiction among psychiatric patients, compared to the general population (2.58,  $p < .05$ ). Psychiatric

patients between the ages of 15 and 44 with primarily short inpatient hospitalizations experienced more than four times greater risk of death than their contemporaries in the general population of New York state (Haugland et al., 1983).

Seven of the nine pneumonia deaths reported by Haugland et al. (1983) occurred in the elderly while hospitalized. Eleven of the 12 accident or suicide deaths and all of the cancer deaths occurred in patients under the age of 65 years. From the data generated in their study, Haugland et al. suggested that timely medical evaluation for psychiatric patients might be helpful in improving the quality of life for patients, as well as potentially preventing premature mortality.

#### Morbidity

Concern regarding the physical health of the psychiatric population was evidenced 94 years ago when Mitchell (1895) lamented "the amazing lack of a complete physical study of the insane" (p. 413). Mitchell claimed that he was unable to find a stethoscope or ophthalmoscope with which to assess a patient in a certain psychiatric institution. Although the complexity of somatic-psychic interrelationships was masterfully portrayed by Bonhoeffer (1912) in his work with diabetic psychosis, it was not until 1936 that Comroe investigated physical morbidity among a sample of the psychiatric population. Comroe

reported that out of 100 patients admitted to a psychiatric hospital and diagnosed with "neurosis," 24 developed a physical illness requiring medical attention within 8 months of their initial psychiatric evaluation.

Other researchers reported similar findings among the psychiatric population (Tables 1 and 2). In 1937, Phillips was one of the first to apply a systematic research process to this area of study. He reported that 45% of 164 consecutive psychiatric patients admitted to a hospital had at least one physical illness. Other researchers found the morbidity rate to vary between 43% and 80% (Burke, 1972; Hall, Gardner, Stickney, LeCann & Popkin, 1980; Herridge & Cantab, 1960; Johnson, 1968; Marshall, 1949).

The increased incidence of physical illness (80%) reported by Hall et al. (1980) may be attributable to several factors. The sample in this study consisted of severely ill psychiatric inpatients (76% were frankly psychotic at the time of admission). All subjects were of reportedly low socioeconomic status. Whether these factors significantly affected the results of the study was not thoroughly investigated.

Hall et al. (1980) also used more sophisticated and liberally applied psychological and physical screening procedures than previous researchers. Screening procedures included standard medical and psychiatric histories,

as well as a thorough physical examination with special attention to psychiatric and neurologic observation. Also employed were a 34-panel automated blood analysis, a complete blood cell count, urinalysis, electrocardiogram, and a sleep-deprived electroencephalogram.

Hall et al. (1978) and Koranyi (1977, 1979), among others, reported a lower rate of physical morbidity among psychiatric outpatients. These authors maintained, however, that 20% to 69% of the medical illnesses identified could have been either caused, or exacerbated, by the mental illness diagnosed in these patients.

The first documented research study seeking information from the psychiatric patient on his or her perception of physical functioning was conducted by Hall et al. (1978) with 658 psychiatric outpatients. Included in the analysis was a physical symptom checklist filled out by the patient or nurse. Sixty percent of the patients reporting four or more positive responses showed significant laboratory evidence of a medical illness. A thorough listing of each of the psychiatric diagnostic groups with the assessed physical illness was included. Correlational analysis of rate and type of physical illness with specific psychiatric diagnoses was not conducted.

A survey of the prevalence of physical illness among a specific population of psychiatric patients previously

diagnosed with either manic-depressive disorder or schizophrenia was conducted by Ghadirian and Englesmann (1985). They reported a greater rate of occurrence of physical illness in patients with manic-depressive disorder than in patients with schizophrenia in respect to all of the surveyed systemic disorders, with the exception of gastrointestinal diseases. Fifty-seven percent of the schizophrenic patients had no known physical illness as compared with 50% of the manic-depressive patients. A relatively high prevalence of cardiovascular disease found in the manic-depressive patients was consistent with the findings of Rabkin, Charles, and Kass (1983), who reported a high incidence of depression among patients diagnosed with hypertension.

The low prevalence of musculoskeletal disorders, particularly rheumatoid arthritis, in schizophrenic patients was evidenced in studies by Ramsey et al. (1982) and Mohamed, Merskey, Kazarian, and Disney (1982). Assessments of past and present physical illnesses were made from patient reports, medical files, and laboratory data. In discussing the type of illnesses identified in these samples, the researchers advised that differences in psychopathology, psychopharmacology, genetic disposition, and environmental conditions (including nutrition), might have affected the expression of physical illness. They recommended comparison of their findings with epidemio-

logical data of physical disorders in other groups of psychiatric patients.

Although the studies discussed above addressed the incidence of physical illness among the psychiatric population as a whole, these researchers failed to identify differences in the length of time the subjects in each study had experienced psychiatric symptomatology, or whether the management regime had included assistance in meeting the basic necessities of life. Other areas not addressed included: (a) perception of physical functioning, (b) personal concerns related to perceived functioning, and (c) access barriers to health care services.

Investigations of medical problems among the chronic psychiatric population have provided evidence of high morbidity rates. Roca et al. (1987) reported that 93% of 42 outpatients in a psychosocial rehabilitation program had at least one health problem warranting assessment and follow-up. In only 37% of the cases were the patients currently receiving appropriate care. Only 54% of the physical health problems identified as deserving medical attention were known to patients or staff prior to the study evaluations. Seventy-seven percent of the previously unrecognized health problems were found via routine physical examination and hematocrit assessments.

McCarrick et al. (1986) investigated the relationship between physical illness and chronicity of psychiatric

illness. They found greater than 42% of their sample ( $N = 1,471$ ) had chronic medical problems that interfered with activities of daily living. Age was not found to be a contributing factor. Based on the data obtained, McCarrick et al. asserted that different psychiatric groups have different needs that must be considered when planning health care interventions.

Farmer (1987) and McCarrick et al. (1986) suggested that community support programs linking medical and mental health care must be established in order to assure that CMI patients receive adequate care. Farmer (1987) reported 53% of CMI subjects assessed had previously undiagnosed medical problems and 36% had known medical problems requiring initiation of, or a change in, treatment. These studies involved the CMI population as a specific group and included assessments of clinical therapists or case managers regarding awareness of the physical functioning of the patient. Although therapists were found to be cognizant of some physical health problems among their clientele, the clients were nonetheless receiving inadequate health care for these problems.

Although most clinicians currently question the psychiatric patient regarding: (a) physical state, (b) recent illnesses and/or hospitalizations, and (c) results of any previous physical examinations, these assessments are hardly sufficient to identify the vast array of



physical illnesses that are diagnosed (Ghadirian & Englesmann, 1985; Hall et al., 1982; Strickland & Kendall, 1983). Routine physical examinations by family physicians, psychiatrists, or nurse clinicians do not assure complete accuracy in the diagnosis of health problems occurring in this population.

Koranyi (1979) found that half of the physical illnesses found among his psychiatric population were undetected by referring psychiatrists. In another study, psychiatric patients referred from social service agencies carried a correct physical diagnosis in only 12.5% of the cases (Hall, Gardner, Popkin, LeCann & Stickney, 1981). Johnson (1968) reported 80% of the psychiatric patients in his study to have physical illnesses. In similar studies, Maguire and Granville-Grossman (1968) reported 49% with physical illnesses, and Koranyi (1977) found 71% of his psychiatric population to have previously undetected health problems. Eighty percent of the 100 psychiatric patients in the study by Hall et al. (1981) were found to have a previously undetected physical disorder requiring medical intervention.

Mechanic (1978) claimed that frames of reference utilized by professional caregivers and patients to define illness are "highly discrepant" (p. 26). Individuals are most inclined to take some action toward health care when they experience significant departure from their usual

sense of well-being or when their ability to function is altered. Such experiences are influenced by role demands and intrapsychic processes that result in health care system access via complaints that have been shaped by social and psychological factors (Mechanic, 1978).

The potential failure to diagnose and misdiagnosis of physical symptoms as indicators of psychopathology may be due to three types of factors: (a) clinician-related, (b) illness-related, or (c) patient-related (Hoffman & Koran, 1984).

#### Clinician-Related

When a CMI patient presents for health care, his or her appearance, bizarre behavior, and inability to communicate may discourage health care providers from thoroughly investigating physical complaints or symptoms. Clinicians may miss cues or fail to clarify confusing information by not contacting therapists or relatives. In a study by Hoffman (1982), 34% of the patients admitted to a psychiatric unit were discovered to have an organic mental disorder. Presumably such a high incidence of misdiagnosis, due to the long-term nature of their emotional problems, would not be true for CMI patients. However, clinicians may be biased by their assumptions that an exacerbation of symptoms is simply a recurrence of the individual's psychiatric disorder when, in fact, the stress of the physical illness actually underlies the

exacerbation.

### Illness-Related

A potential explanation for failure to detect physical disorders among the psychiatric population is the nonspecific nature of psychiatric symptoms. Many researchers (Hall et al., 1981, 1982; Koranyi, 1980; Linden, Paulhus, & Dobson, 1986; Linn & Linn, 1975; McDiarmid & Zivin, 1986; Rosenstock & Kirscht, 1979) have alluded to this phenomenon. Strickland and Kendall (1983) claimed that "physical disorders may be accompanied by psychological symptoms and vice versa" (p. 180). Indeed, there are relatively few moments in any person's life when he or she can claim freedom from physiological stimuli capable of interpretation as symptoms of altered health. Many symptoms are nonspecific, such as indistinct pain, fever, nausea, and fatigue. By themselves, these symptoms could represent the widest conceivable assortment of physical or psychological disorders.

Physical and psychological symptoms can be intricately linked to one another and can change over time, making it difficult for physicians or clinicians to ascertain the etiology and course of many complaints that present a mixed picture of physical and psychological response (Strickland & Kendall, 1983). For example, almost all major life-threatening physical disorders can be accompanied by feelings of anxiety or depression. A general

feeling of unexplained fatigue is a symptom often presented by patients with cardiovascular disease. When this disease is present, oxygen-carrying blood is not delivered efficiently through the body and the person often feels "tired."

Malignant tumors associated with cancerous conditions may also compete with other organs for oxygen and nutrients, thus producing a feeling of fatigue and general malaise. Cardiovascular disease and cancer are the two major causes of death for the adult population and the symptom of fatigue associated with these diseases may easily be translated into depression, which is characterized by loss of energy, apathy, and social withdrawal. Likewise, a person experiencing symptoms involving disorders of the central nervous system or endocrine system may seek psychiatric treatment for general depression, mood swings, or irritability (Strickland & Kendall, 1983).

#### Patient-Related

While the nature of the relationship between physical illness and psychological symptoms remains unclear, it is speculated that some types of clients, particularly those suffering from major psychoses with concomitant disruptions in cognitive and social functioning, may present more confusing and mixed psychobiological symptomatology. Further, clients who are considered mentally ill usually

have cognitive, social, and functional deficits that lead to difficulties in identifying, seeking, and following through with appropriate health care. A consistent finding in the illness behavior literature is that persons are more likely to take action for symptoms that disrupt their usual functioning. The ability to function in order to meet one's needs may affect a patient's concept of health as much as the nature of the symptoms he or she may be experiencing.

Health is understood to be individually perceived as a dynamic and interactive response of mind, body, and spirit to multiple internal and external variables at any time and in any setting (Pelletier, 1979). Perception is defined as the reception into awareness of sensory stimuli. It is a mental act involving memory and interpretation of sensory data in terms of previously encountered information. How this information is received, transmitted, and interpreted depends upon how intact the related systems of the individual are, as well as the status of the environment (Pelletier, 1979). For example, preliminary evidence suggests that psychiatric patients are more susceptible to heatstroke than the general population, as documented by Bark (1982). All psychiatric patients succumbing to heatstroke were on a regular regimen of psychotropic medication.

### Conceptual Framework

Adler, Drake, and Stern (1984) suggested that equating symptoms with illness may lead to a failure to appreciate other perspectives such as the significance of the symptoms, the individual's ability to control and use symptoms for their own purposes, and the extent to which symptoms symbolize and reflect interpersonal relationships and system issues. Brown and Zinburg (1982) agreed and further asserted that the patient knows more about his or her own unique inner emotional life than the caregiver does, be they medically or psychologically oriented (p. 1517).

In earlier writings, Wolf (1968) recognized that the objective magnitude of an event was not as important as the individual's perception and evaluation of it. He suggested that changes in bodily functioning would eventually result if the frustration of the ineffective coping was prolonged or the environmental burden was far greater than the personal appraisal of resources.

Lazarus and Folkman (1984) expanded upon this premise and suggested that stress may be perceived to the extent that the symptoms of altered health are appraised by the individual as being potentially disruptive to a sense of well-being and to the extent that they task or exceed available resources and options for coping. Stress, emotion, and coping have been theorized to be causally

linked to illness. Although no clear evidence exists to substantiate this premise, it is accepted by many who work within the field of psychosomatic medicine, behavioral medicine, health psychology, and related fields (Lazarus & Folkman, 1984).

Illness, according to this model, may not be so much a product of the environment as is the person's appraisal of the relationship between the environment and its demands, and "the person's agendas" (e.g., beliefs, commitments, and goals) and capabilities to meet, mitigate, or alter these demands in the interest of well-being" (Lazarus, DeLongis, Folkman & Gruen, 1985, p. 770). Personal appraisal of somatic functioning may influence whether the person is motivated to maintain a healthful lifestyle and make contact with health care providers, as well as the choice of symptoms to present and how they are presented. These factors may directly affect the quality of health care received and the extent to which the person is satisfied with that care.

In reference to health care, psychiatric patients have typically been viewed as passive, regressed, and helpless, rather than active, coping individuals with important attitudes and skills (Adler et al., 1984). Individuals make continual adaptations to changes occurring inside and outside of their bodies. Through the accumulation of life experiences, most adapt successfully.

They become practiced in making psychological adaptations to new transitions based on learned experiences (Neugar-ten, 1984; Riehl, 1980). Researchers have demonstrated that stressful life events and social supports profoundly impact the adjustment process (Adler et al., 1984).

Structural and functional changes resulting from disease or injury may be adventitious, result of the person's own negligence, or even design. The cause is not as important to the present problems as the specific effects. (McDaniel, 1969, p. 208).

In an effort to define the concept of stress in the adjustment process, Selye (1956) and Pelletier (1979) suggested that stress is an integral element in the biological scheme of any living organism. Change and rapid adaptation are common elements in both positive (pleasurable) and negative stressors (Pelletier, 1979). According to stress theorists, normal adaptive stress reactions occur when the source of stress is identifiable, clear, and singular. An individual returns to a level of relatively normal functioning within a short space of time and without loss of capacity. Conversely, when the source of stress is ambiguous, undefined, prolonged, or when several sources of stress exist simultaneously, the individual does not return to a prestress mental or physiological baseline as quickly (Selye, 1956).

When an individual experiencing the stress of a psychological illness also experiences physiological stressors, a dangerously cumulative phenomenon may result.



Seligman (1975) suggested that approximately 70% of all physical illnesses develop at times when the individual feels helpless or hopeless in dealing with multiple stressors.

Mechanic (1977) claimed that individuals with significant changes in physical function and/or perceptions attempt to arrive at some prognostic information concerning those changes and some indication of how they compare with others. According to Lazarus and Folkman (1984), cognitive appraisal is largely evaluative, focused on the meaning or significance of the event, and takes place continuously during the person's "awake life." Health status represents the response of individuals to their environment based upon the type, number, and kind of causal antecedents (stimuli), as well as individuals' cognitive appraisal of the pattern and meaning of the stimuli. Individual response to internal or external stimuli may involve not only outward signs and symptoms (objective measures) of physical functioning, but internal perceptive processes (subjective measures), as well (Lazarus & Folkman, 1984).

Romano (1950) suggested that health and disease are not static entities, but rather phases of life. He maintained that these phases are dependent at any particular time on the balance maintained by genetically and experientially determined devices. These devices act

to fulfill the needs of the individual in adapting to internal and/or external stresses. In a positive sense, health (Romano, 1980) is the capacity of the individual to maintain a balance in which he or she may be reasonably free of undue pain, discomfort, or functional disability.

According to Lazarus and Folkman (1984), coping is not equated with mastery of the environment. Rather, coping allows the individual to tolerate, minimize, accept, and/or ignore what cannot be mastered. The coping model of Lazarus and Folkman (1984) addresses the total functioning of the individual in biological (physiological), cognitive (psychological), and learned (sociological) domains.

### Conclusion

Individuals make choices regarding potential health-promoting or health-damaging behaviors based on efforts to maximize valued resources (Milo, 1976). These choices are related to the type and amount of personal and societal resources.

The review of the literature demonstrated that relatively high numbers of CMI patients have concurrent medical and physical illnesses. Many studies have documented that such patients do not receive adequate care in the general health care system.

When many are responsible for a patient's management, very often no one is truly responsible. In the absence of

a comprehensive screening and service program, CMI patients are expected to initiate their own contacts with specialized health care providers and extract a consistent theme from multiple sources of care (Leopold & Schein, 1975).

It is becoming increasingly evident that mental health care providers must consider the general health care needs of their CMI clients. They may also need to assume health assessment and referral functions that have been traditionally considered the domain of the primary physician (Roca et al., 1987; Bunce, Jones, Badger & Jones, 1982).

## CHAPTER III

### METHOD

#### Design

This investigation was a descriptive and correlational analysis of the functional health status of a small group ( $N = 26$ ) of CMI outpatients in the Salt Lake Veteran's Administration Medical Center (SLVAMC) Day Treatment Center (DTC). The study involved obtaining data on how CMI patients rated their functional and emotional health. The personal appraisal of stress/distress associated with the management of functional health of CMI patients was included. The study was also designed to determine the extent of relationships among objective and subjective ratings of physical health, and other variables that might influence health and care of CMI patients.

This investigation was part of a larger, more extensive, study focusing on the functional health, lifestyle, and needs of the CMI population. Subjects in this study were assessed via the full complement of research questionnaires included within the larger study.

More than 80% of the subjects in this study were able to complete all of the requirements for the larger study

with less than moderate interference from psychiatric symptoms. Most subjects tolerated the research process. Some even expressed appreciation for the interview. This provided an incentive for the study to be extended to other veterans in the DTC program.

### Data Analysis

The University of Utah Computer Center's MicroVax II was used for data analysis. The Statistical Package for the Social Sciences (SPSS-X) frequency program and the SPSS-X Pearson product-moment correlation program were also utilized for data analysis. Correlation coefficients were reported using a two-tailed test of significance.

Because of the small sample size and the characteristics of the subjects, generalizations with respect to both objective and subjective data obtained must be considered limited to the SLVAMC CMI population.

### Setting

The SLVAMC DTC includes a supportive psychiatric outpatient program. The program is designed to assist CMI veterans in maintaining a relatively independent existence within the community.

The DTC aims to serve those CMI veterans who have a major psychiatric disability and are in need of long-term supportive treatment. The DTC offers a comprehensive spectrum of mental treatment modalities, such as medica-

tion management, group, family and individual therapy, vocational and social rehabilitation, educational opportunities, and general milieu therapy. The needs of each DTC patient determine the extent of his or her involvement within the program. The CMI patient is encouraged to actively participate in his or her treatment plan.

The patient population of the DTC consists of approximately 120 CMI veterans. Most of these veterans reside within a 100-mile radius of Salt Lake City. Some patients have been referred from the Utah Homeless Shelter.

The DTC consists of a multidisciplinary staff including a psychologist, a social worker, a nurse administrator, two rehabilitation technicians, and a secretary. A full-time psychiatrist provides consultation and medication management. DTC patients are eligible for short-term medical care unless they are seeking treatment for a service-connected medical problem. Most SLVAMC DTC patients are ineligible for unlimited medical outpatient follow-up.

The DTC facility and staff are available daily from 7:30 am to 4:00 p.m. Monday through Friday except holidays. If CMI veterans have a psychiatric and/or medical emergency when the DTC is closed, they can obtain help through the SLVAMC psychiatric and referral service,

which is available 24 hours per day, 7 days per week.

### Sample

A convenience sample of 26 male adult CMI patients enrolled in the SLVAMC day treatment center participated in the study. Most participants were active participants in the DTC.

### Diagnostic and Demographic Information

Patient charts were reviewed to extract and validate (when appropriate) patient reports of past psychiatric history, diagnosis, medications, and treatment (Appendix A). Demographic data were collected on all subjects, which included sex, marital status, income, employment status, residence, household composition, ability to manage finances, and religious preference (Appendix J).

### Questionnaires

In this section, the questionnaires utilized in this investigation are presented in the order in which they were administered.

### Experiences in Managing Health Needs

A structured interview schedule entitled Experiences in Managing Health Needs (EMHN) (Hutton, Bjork & Rolando, 1987) was developed to assess any stressors a CMI patient might have experienced in obtaining and managing physical

health care. A copy of the EMHN is presented in Appendix K. The EMHN went through various revisions in an attempt to develop a concise and effective means of obtaining accurate data without causing undue stress to the patient. The authors looked at the content of the Rand Study (Stewart, 1983; Stewart, Ware & Brook, 1987) and evaluated a literature review of the frequently mentioned problems that CMI patients reported in attempting to manage their health and obtain adequate care. Also included were questions based upon the authors' experiences in working with CMI patients in various settings over many years.

The EMHN is designed for administration by a mental health professional in an interview process with a CMI patient. The schedule is divided into two general areas of concern: (a) experiences in managing physical symptoms or illness, and (b) experiences related to health care/treatment.

For each of the 40 questions included within the EMHN, the respondent was asked to answer either "yes" or "no" regarding whether he or she had experienced any of the designated problem areas. If the response was "yes" to a designated problem/experience, the respondent was then asked to rate how upsetting or distressing the experience was. Each endorsed problem/experience was rated by the CMI respondent on a Likert scale of 0-7 (0 =



not at all distressing, to 7 = extremely distressing). Any recommendations and/or comments that the respondent had about physical health and care were addressed at the end of the interview schedule.

Scoring of the EMHN includes the total number of endorsed experiences/problems and the mean rating of distress associated with them. A priority listing by the CMI person of the three most distressing experiences/problems is also included. Because this tool has not been used in previous studies, reliability and validity data are not available. Standardized instruments for measuring pertinent areas of concern for this study were included with the EMHN in order to obtain comprehensive information regarding the functional health needs and concerns of the respondents.

The researchers (Hutton, Bjork & Rolando, 1987) recognized that the preexistence of mental illness in the study subjects might influence the collection of reliable and valid data. Therefore, interviewers were asked to evaluate each subject regarding their seeming ability to reply to the questions without undue influence of psychiatric symptomatology (Appendix P).

#### The Short Portable Mental Status Questionnaire

The Short Portable Mental Status Questionnaire (Pfeiffer, 1975) is a 10-question structured assessment of

cognitive function and overall organic impairment. The SPMSQ was used in this study to assess gross mental functioning and memory of the subjects. Pfeiffer (1975) and Kane and Kane (1981) showed the SPMSQ to be reliable and valid in testing for orientation and memory with a test-retest correlation of 0.82 and 0.83 ( $p \leq .05$ ).

According to Pfeiffer (1975) persons with two or fewer errors are, from an intellectual point of view, assumed to be entirely capable of self-care. Those persons with three or four errors are assumed to have mild intellectual impairment, and are able to handle routine self-care matters; however, they may require assistance of others in intellectually complex matters. Persons with five or more errors are assumed to be moderately to severely intellectually impaired and in all probability would be unable to adequately handle the intellectual tasks of the present study.

Therefore, individuals with five or more errors on the SPMSQ were considered inappropriate candidates for this study. However, no study subject had more than three errors, and the majority (76.9%) answered all questions correctly.

#### The Brief Symptom Inventory

The Brief Symptom Inventory (BSI) is essentially a shortened version of the SCL-90-R (Derogatis, 1977), a self-report inventory designed to reflect psychological

symptom patterns of psychiatric and medical outpatients, as well as nonpatient individuals (Derogatis & Spencer, 1982). The BSI consists of 53 of the 90 items included in the SCL-90-R. Each item refers to a current problem or complaint experienced by the person during the previous 7 days. It is believed that by assessing the most recent 7 days of a person's life, the most relevant information regarding his or her current clinical status will be communicated (Derogatis & Spencer, 1982).

On the BSI, the person is asked to rate the amount of distress or discomfort experienced with the problem on a 5-point scale ranging from "not at all" (0) to "extremely" (4). Items are scored in groups to yield nine primary psychiatric symptom dimensions including:

1. Somatization: Reflects distress arising from perceptions of bodily dysfunction;
2. Obsessive/Compulsive: Focuses on thought, impulses, and actions that are experienced as unremitting and irresistible by the individual, but of an unwanted nature;
3. Interpersonal Sensitivity: Centers on feelings of personal inadequacy and inferiority, particularly in comparison with others;
4. Depression: Reflects feelings of hopelessness, helplessness, and worthlessness, including suicidal ideation;

5. Anxiety: Is composed of a set of symptoms that are associated clinically with high levels of manifest anxiety;
6. Hostility: Indicates thought, feelings or actions that are characteristic of the negative affect state of anger;
7. Phobic Anxiety: Is defined as a persistent fear response to a specific person, place, object, or situation that is characterized as being irrational and disproportionate to the stimulus, and which leads to avoidance or escape behavior;
8. Paranoid Ideation: Shows characteristics of projective thought, hostility, suspiciousness, grandiosity, centrality, fear of loss of autonomy, and delusions;
9. Psychoticism: Includes items indicative of a withdrawn, isolated, schizoid lifestyle, as well as first-rank symptoms of schizophrenia, such as thought control.

Four additional items are included because the authors believed they were clinically important; however, due to their general nature, they are not placed in the primary symptom dimensions (Derogatis & Spencer, 1982).

The BSI and the SCL90-R represent two tests measuring identical symptom constructs and, as such, may possibly be used to test alternate form reliability. Data gathered

and reported by Derogatis (1977) from a sample of 565 psychiatric outpatients showed correlations of .92-.99 between the BSI and the SCL90-R for all nine symptom scales.

The "here and now" report of personal perception of psychiatric distress leads this researcher to consider the BSI as an instrument to gain information regarding the relationship between psychiatric symptomatology and health-related variables. The relatively short length of time required for administration of this inventory, an estimated 7-10 minutes, presented an added advantage for use in this study.

Although the instrument was designed as a self-report inventory, Derogatis and Spencer (1982) claimed the BSI may be administered in a narrative mode. Since the other tools included within this study were administered in a narrative fashion, it was considered prudent to remain consistent in administering the BSI. Derogatis and Spencer (1982) reported that although narrative administration does increase the amount of time required to complete this inventory, several comparisons of "self-report" versus "narrative report" did not reveal any consistent biases associated with the technique.

Scoring the BSI. Scoring of the BSI involves simple addition of the items comprising each of the nine symptom dimensions and the four additional items. These dimen-

sional totals and the additional item totals are divided by the respective number of items in each dimension. If an item is not answered in a dimensional series, then the total scores of the respective dimension are divided only by the number of answered items.

Derogatis and Spencer (1982) claimed that the subscale, General Severity Index (GSI), provides the most sensitive single indicator of the respondent's distress level, combining information on numbers of symptoms and intensity of distress. For the purposes of this study, the GSI was selected as a general indicator of psychiatric symptom distress.

The GSI is calculated by adding all the nine dimensional sums, plus the sums of the additional items together and dividing the total by 53. Although respondents may have declined to answer one or more questions on this inventory, the test will remain valid if the scoring procedure is followed carefully. The administration of this test in an interview may have influenced the relatively low number (2 or .15%) of items the subjects declined to answer. If patients had any trouble understanding a question, the interviewer was able to explain it. One subject refused to answer whether he ever had thoughts of ending his own life. Another refused to answer whether he had trouble remembering. The remaining subjects answered all 53 questions on the BSI.

### The Self-Care Assessment Schedule

The Self-Care Assessment Schedule (SCAS) was constructed by Barnes and Benjamin (1983) as a standardized assessment for self-care among chronic psychiatric clients. This measure was developed in an effort to provide a "relatively pure measure of a small number of overt behaviors of particular significance to most adults, in any environment" (Benjamin & Barnes, 1987, p. 193).

Giel, DeJong, Sloff, and Wiersman (1984) suggested that disability develops according to a hierarchical model. An assessment of self-care behaviors may be of particular importance since they are thought to be essential "survival" behaviors for independent existence within the community setting. Weisman and Bothwell (1976), among others, claimed that there is a need for a measure of social adjustment of psychiatric patients separate from abnormal symptoms and thoughts. "This may assist in early case finding, outpatient care, and prevention by focusing attention on the community adjustment of the patient" (Weisman & Bothwell, 1976, p. 1111).

Barnes and Benjamin (1987) defined self-care broadly in discussing development of the SCAS. They included items concerning domestic duties requiring mobility that are integral to self-care. These authors excluded items related to occupation due to their belief that occupation

is usually dependent upon many other demographic, social, and economic variables.

The content of the SCAS is strictly behavioral and focuses on activities essential for self-care for any person with a relatively low level of dependence. Each of the 10 items measures the frequency of one behavior during the period of 14 days prior to the assessment. Eight items are measured on ordinal 5-point (0-4) Likert (1932) scales measuring activities believed to be performed by many people either daily or every few days. The remainder (items 3 and 9) are measured on 2-point scales (0 = yes, 4 = no) that address bathing and shopping, both of which tend to be performed less frequently.

Scoring the SCAS. The scores for individual items are summed to provide the total score. The possible range of scores is 0-40. Higher total scores indicate less ability to care for self. Interpretation of the scores has been suggested as:

0-4: no self-care deficit

5-9: mild deficit

10-14: moderate deficit

15-40: severe deficit.

The SCAS was tested on individuals with acute psychiatric disorders and those believed to be in the early stages of chronic psychiatric illness. An increase in severity of



disorders (Barnes & Benjamin, 1983).

In prior studies utilizing this measure, virtually no difficulty was encountered in administering and scoring the SCAS. The distribution of total scores presented for five samples of psychiatric patients and a small group of individuals not currently receiving psychiatric care (nonconsulters) revealed between group differences ( $p < .005$ ;  $p < .001$ ) that were consistent with their known status (lowest scores for nonconsulters and highest for psychiatric inpatients).

Although the authors recognized that there could be reservations in using this measure with all groups of psychiatric patients, they assert that the SCAS may have "considerable potential as a measure of self-care and, by implication, an assessment of disability, both in clinical practice and in research" (Benjamin & Barnes, 1987, p. 201).

#### Self-Rating of Use of Health Care Services

A survey of the utilization of health care services by CMI patients was employed in this study (Appendix R). Each CMI subject was asked how many times he or she had visited various physical health care services within the past year. These services included a physician's office, a health care clinic, or an emergency medical center, as well as nurses, dentists, optometrists, chiropractors, or

physical therapists (Appendix N).

### Self-Rating of Physical and Emotional Health

Subjects were asked to make two general self-ratings, one for physical health and one for emotional health. The ratings required judgment on the part of the subject to assess personal functioning and provide a rough estimate of that functioning on the Likert (1932) scale of 0 to 7 (0 = don't know, 1 = poor, 2 = fair, 4 = average, 6 = good, and 7 = excellent). Thus, the higher number represented personal perception of better physical and emotional health.

The self-rating of physical health was requested both in the interview with the psychiatric nurse interviewer and with the NP (Appendices M and Q). The self-rating of emotional health was requested only in the interview with the psychiatric nurse (Appendix L).

### Functional Health Assessment

A functional health assessment was developed by a licensed nurse practitioner (Rolando, 1988, Appendix S) employed at the SLVAMC. This assessment included: (a) a review of past medical problems, (b) a physical symptom checklist, (c) a review of current medication usage; (d) a physical exam, and (e) a review of the subject's past medical records. Routine laboratory analyses, a Chem 20, complete blood count, urinalysis, and other tests deemed

necessary by the NP were also obtained.

Based on the results of the above assessment and data, the NP categorized current health care problems into major and minor health care problems. Major problems were considered to be illnesses or conditions that if left untreated could potentially be life threatening or significantly interfere with functioning and needed treatment (or follow-up of current treatment). Minor problems included all other non-life-threatening symptoms such as skin disorders and dental problems.

Symptoms of illness, whether physical or psychological, occur for a number of reasons and serve various functions. Appearance of symptoms must, therefore, be evaluated in relationship to total body functioning (Strickland & Kendall, 1983). Functional health cannot be measured solely by assessing physical fitness or lack of illness. It must involve a subtle philosophical attitude toward life itself (Pelletier, 1979).

Functional limitations indicate decreases in the individual's ability to carry out daily activities or expected role behaviors, as well as losses and restrictions in individual capacities for activity due to tissue damage (Haber & Smith, 1967). An important nursing relationship exists when a person cannot consistently maintain a therapeutic amount and quality of self-care. Therapeutic interventions can be understood as supportive

Therapeutic interventions can be understood as supportive of: (a) life processes, (b) the ability to cure any malfunction resulting from symptoms of illness, or (c) contributing to personal development and maturation. The special domain of nursing, then, is to provide therapeutic self-care for persons with functional discrepancies between demands for care and self-care abilities. Fundamental to holistic health care and functional health status is the premise that a person's lifestyle, willingness, and ability to participate in the healing process can significantly affect the course of his or her illness (Pelletier, 1979).

#### Procedure

Approval to conduct the study was obtained from both the University of Utah Institutional Review Board and the Salt Lake Veterans Administration Research and Development Committee. Staff were oriented to the research procedures and were supportive of the study aims. Copies of all interview schedules and functional assessment guides were made available for examination by the SLVAMC DTC administrators, physicians, therapists, and other responsible staff.

Case managers of DTC patients, primarily the nurse clinical specialist, were asked whether each patient was capable of understanding and signing an informed consent form and participating in the study. After the patient

nurse researchers and provided information regarding the study. He was then asked to participate in the study.

Patients were also informed that participation in the research study would not affect their treatment in any way. Appendix I contains a copy of the consent form. The staff were encouraged to maintain routine treatment regimes.

Day Treatment Center patients who agreed to participate in the study were requested to sign a written consent form (Appendix I). The form included a voluntary release of any important physical health findings to the necessary health care providers. The nurse practitioner (NP) made initial referrals for those subjects needing follow-up or evaluation of a health problem identified during the physical exam or from abnormal laboratory results.

All interviews were conducted at the SLVAMC DTC. The psychiatric nurse specialist arranged the interview times. Complete verbal and written instructions were given to each participant when they were interviewed according to the structure of the interview schedules. Verbal instructions by the NP conducting the functional health assessment were given to each participant before, during, and after the assessment as seemed appropriate. An effort was made by the researchers both during the interview(s) and the functional health assessment to

answer all questions asked by the subjects.

Total time required to complete the interview procedures averaged 2 hours, 20 minutes, with a range from 1 hour, 50 minutes to 7 hours. Total time for both the interview schedules and the functional assessment averaged 3 hours. These procedures were accomplished in more than one interview session. The variable time taken to complete each interview was dependent on individual patient characteristics. The time variance between interviews also depended upon whether or not the patient had experienced health problems or issues that he sought to report.

All interview schedules were administered to the subjects in one-to-one interview sessions by two nurses experienced in psychiatric care. The process of a private interview within an atmosphere of acceptance assisted the nurse interviewer in establishing a relationship of trust with the participant. The structure of the interview schedules kept the interview focused as much as possible on the areas of concern and also contributed to standardization of the process.

Initially, it was planned that the order of presentation of the interview schedules would begin with the Short Portable Mental Status Questionnaire (SPMSQ). This tool was used to assess memory and the participants' orientation with the "here and now." It soon became evident,

however, that the participants had experienced these questions many times during the course of their psychiatric care. To avoid any implication of passing or failing a test, each participant was asked identifying information at the beginning of the interview which included questions from the SPMSQ (i.e., social security number, date of birth, address, and telephone number). Other questions from the SPMSQ were included when psychiatric symptoms were reviewed. All subjects interviewed were found to have adequate orientation and memory to continue participation in the study.

## CHAPTER IV

### RESULTS AND DISCUSSION

#### Sample Description

Twenty-six adult males served as subjects in this study. The exclusion of females eliminated the opportunity to make gender comparisons. Women have been identified as having more functional health problems than men. They have also been reported to use health care services more frequently than men (Eastwood & Trevelyan, 1972; Roca et al., 1987).

The age of the subjects ranged from 30 to 78 years. Twelve (46%) were 60 years of age or older. Over half (54%,  $n = 14$ ) had been either separated, divorced, or widowed, compared with 27% ( $n = 7$ ) who had never married (Table 3).

While 8 subjects (31%) reported having children, only 1 had children living at home. Almost half of the subjects ( $n = 12$ , 46%) lived alone. Living alone may have an impact upon the subjects' lifestyles. They may feel reluctant to prepare regular, nutritional meals for just themselves. Furthermore, living alone could influence a person's activity level and amount of social interaction. These factors could adversely affect the health of these



Table 3  
Demographic Characteristics of the Sample

Characteristic	<u>n</u>	%	Mean	<u>SD</u>
<u>Age</u>			53	13
30-50	14	54%		
60-78	12	46%		
<u>Marital Status</u>				
Married	5	19%		
Divorced	11	42%		
Never Married	7	27%		
Separated	1	4%		
Widowed	2	8%		
<u>Children</u>				
None	13	5%		
1-4	7	27%		
8	1	4%		
<u>Household Includes</u>				
Spouse/mate	5	19%		
Relatives	1	4%		
Friends	5	19%		
Other patients	3	12%		
<u>Ever Employed</u>				
Yes	12	46%		
<u>Years of School Credit</u>			11.9	1.7
8-11	10	38%		
12	9	35%		
13-15	6	23%		
16	1	4%		
<u>Highest Degree or Diploma</u>				
High school	16	62%		
Associate	3	12%		
Bachelor's (BA/BS)	1	4%		
<u>Total Yearly Income</u>			\$13,156	
\$3,240-\$7,860	7	27%		
\$10,000-\$17,000	7	27%		
\$21,000-\$25,000	8	31%		
\$27,000-\$33,000	3	12%		
\$50,000	1	4%		

individuals.

It is interesting to note that the majority of the sample (62%,  $n = 16$ ) reported completing high school with 25% ( $n=4$ ) attaining higher education. This may be due to increased educational opportunities afforded to members of the armed services, age of induction, encouragement of peers, or other factors.

Twenty-two subjects (85%) received either social security or Veteran's Administration (VA) pensions. Some received a combination of both. Military service-connected benefits were available for 17 (65%) of the subjects. Service-connected disability is contingent upon the amount and type of disability incurred during active service. All service-connected disabilities are in some way related to active duty. Some of these disabilities are the result of active service experiences such as posttraumatic stress disorder. The amount of military service-connected financial and health benefits are influenced by increased disability of the veteran. One subject had multiple physical and psychiatric trauma incurred during active military service during the Vietnam War. He received disability payments totalling \$50,000 annually with complete VA health care benefits.

The average annual income of the subjects was \$13,156.77; however, 31% ( $n = 8$ ) earned \$10,000 or less per year. The average income was positively skewed by the

1 subject with an annual income of \$50,000. This subject reported himself as his only dependent. No subjects reported more than three dependents, with the majority (62%,  $n = 16$ ) reporting only themselves as dependents.

Most subjects (81%,  $n = 21$ ) asserted that emotional problems precluded their working at a paid job or going to school. Only 2 (8%) were employed at the time of the study.

The majority of subjects (58%,  $n = 15$ ) were Caucasian and affiliated with either the Latter-Day Saint (LDS) or protestant religions. This distribution was fairly representative of the community from which the subjects were drawn.

#### Psychiatric Diagnosis

The majority of the subjects had a diagnosis of schizophrenia (69%,  $n = 18$ ), which is consistent with the estimated number of schizophrenic individuals among the CMI population of the United States (Goldman et al., 1981). Eight subjects (44%) with a primary diagnosis of schizophrenia also had additional psychiatric diagnoses that could further complicate the course of their care. Other diagnostic categories included affective, personality, cognitive, and posttraumatic stress disorders. Five subjects (19%) were diagnosed with chronic substance abuse (Appendix A).

### Emotional Assessment

In an effort to investigate the reliability and validity of the BSI, Derogatis and Spencer (1982) administered the tool to several sample groups of various populations. The populations included individuals who were nonpsychiatric, as well as psychiatric, patients. Figure 1 presents both the individual dimensional scores and the GSI scores for two of these groups compared with the psychiatric outpatients in this study ( $n = 26$ ).

Individual dimensions of emotional distress assessed in the BSI showed this study's subjects to be less depressed, have less anxiety, less hostility, and more interpersonal sensitivity than the psychiatric outpatients in the standardized population. Dimensions of psychoticism and phobic anxiety showed this study's subjects to rate themselves a little higher than the normative psychiatric outpatient group. All other subscale dimensions were fairly closely aligned between these two groups.

The present sample of psychiatric outpatients rated themselves as having average or lower emotional health (Figure 2). The mean self-rating of emotional health was 3.77, with a standard deviation of 1.75. This self-rating of emotional health was significantly negatively correlated ( $r = -.7440$ ,  $p = .001$ ) with the BSI global rating of

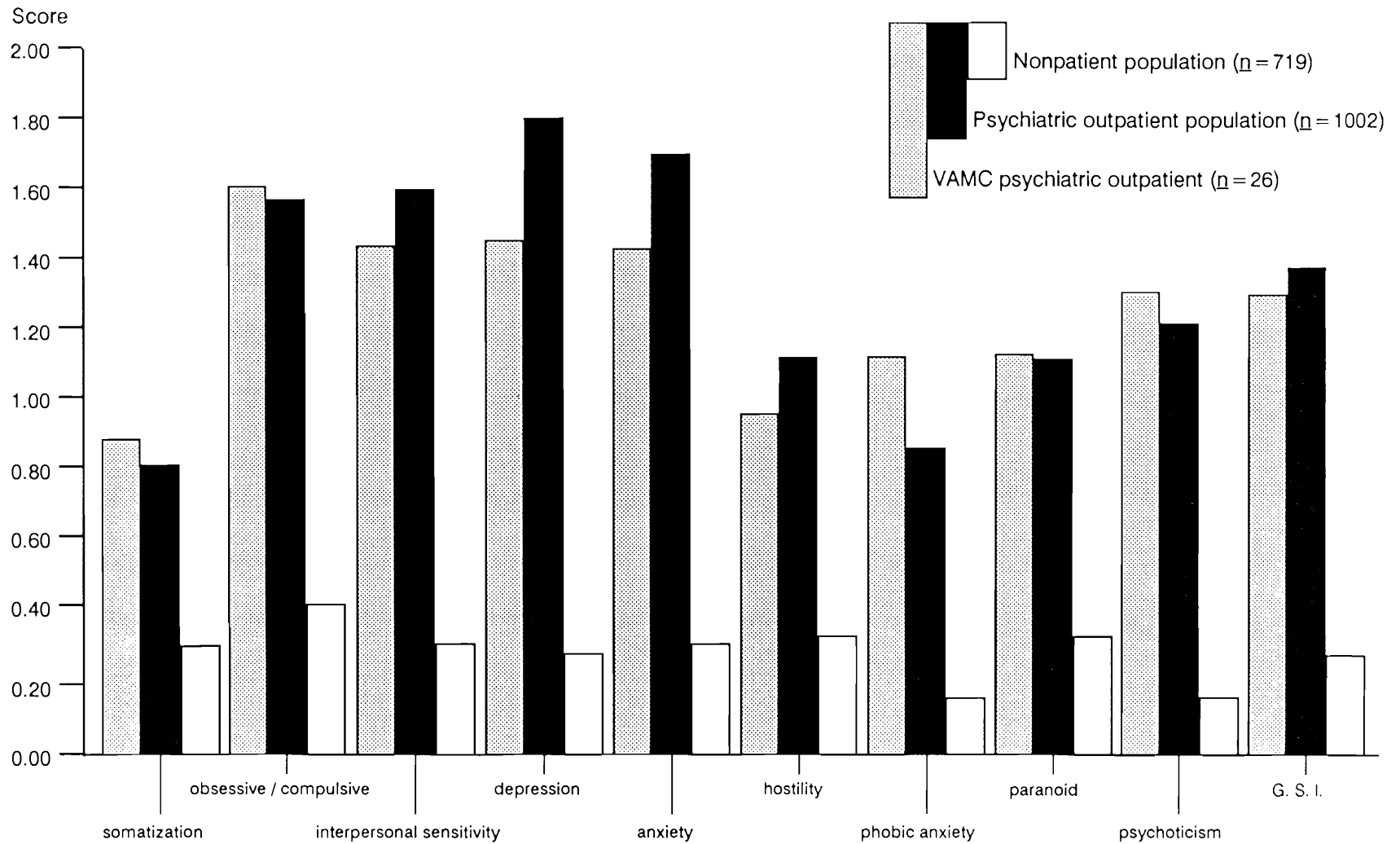


Figure 1. BSI raw score means for the nine primary symptom dimensions and one global dimension from this study and two normative samples. 55

Number of Subjects

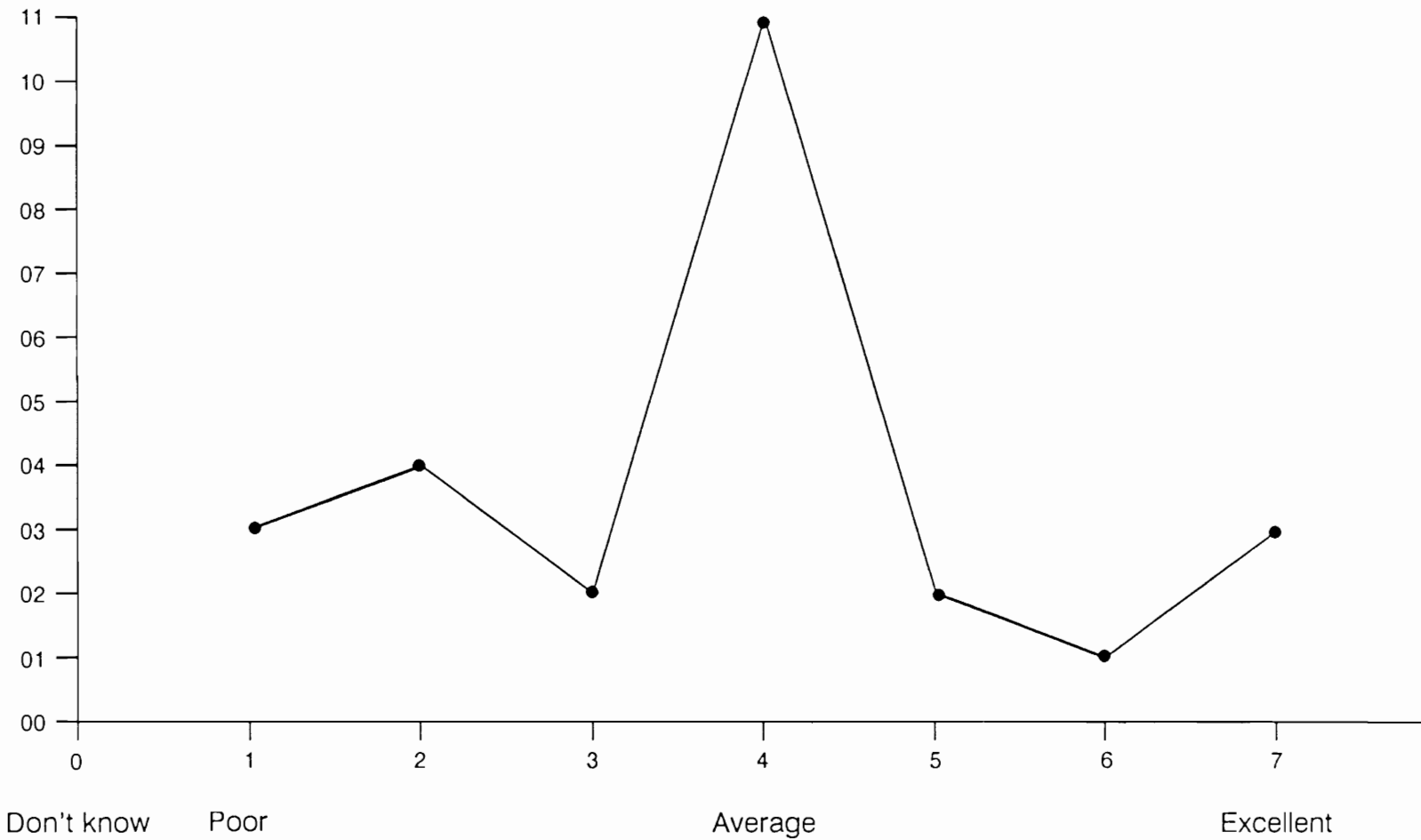


Figure 2. Subjects' self-rating of emotional health (mean = 3.77; SD = 1.75).

psychiatric distress. These results suggest that subjects who rated themselves as having better emotional health also endorsed fewer psychiatric symptoms on the BSI. This strong correlation also suggests that asking the chronic psychiatric outpatient to provide a personal rating of emotional health may have validity similar to the more standardized BSI.

#### Self-Care Assessment

A majority of the study subjects ( $n = 14$ , 54%) scored a total of 9 or less on the SCAS (Table 4). According to the scoring guidelines for this tool, the scores of these subjects indicated little functional impairment in their ability to care for self in activities of daily living. Only 4 subjects (15%) showed a severe self-care deficit.

The range of total SCAS scores of the SLVAMC DTC patients were lower than the four sample groups of different populations evaluated by Benjamin and Barnes (1987) (Table 5). The mean value for the VAMC group, however, fell between the two normative groups of new psychiatric outpatients and new psychiatric DTC patients.

Of the individual areas addressed on the SCAS, the ability to perform personal daily hygiene and grooming was the most often endorsed (Table 6). The majority of subjects ( $n = 21$ , 81%) reported an ability to maintain personal hygiene and grooming at least 6-14 days during

Table 4  
Total SCAS Scores for SLVAMC DTC Sample

	<u>n</u>	%
No self-care deficit (0-4)	7	27%
Mild deficit (5-9)	7	27%
Moderate deficit (10-14)	8	31%
Severe deficit (15-40 <sup>a</sup> )	4	15%

Note. <sup>a</sup>No subject scored higher than 20.

Table 5  
SCAS Scores of the SLVAMC DTC Sample Compared with  
Four Normative Groups

	Male CMI DTC Patients	New Psychiatric		Weekly Pain Clinic <sup>a</sup>	Psych- iatric Inpa- tients
		Out- Patients	Day Patients		
<u>N</u>	26	163	91	106	29
Range	0-20	0-31	0-30	0-40	0-28
Mean	9.42	7.53	9.96	10.8	10.9
<u>SD</u>	5.17	6.73	7.07	8.9	7.2

Note. <sup>a</sup>Consecutive new attendees at weekly pain clinic.



Table 6  
 SLVAMC DTC Subjects' Responses for SCAS

Question	Frequency	<u>n</u>	%
1. Dressed before 10:00 am	every day	15	58%
	6-10+ days	6	23%
	1-5 days	5	19%
2. Hair/appearance tidy	every day	17	65%
	6-10+ days	7	27%
	1-5 days	2	8%
3. Bath/shower without assist- ance	yes	25	96%
4. Meal preparation	every day	11	42%
	6-10+ days	2	8%
	1-5 days	1	4%
5. Lying on bed/sofa	every day	11	42%
	6-10+ days	1	4%
	1-5 days	5	19%
	never	10	38%
6. Dress without assistance	yes	26	100%
7. Outside home	every day	21	81%
	6-10+ days	4	15%
	1-5 days	1	4%
8. Meal in bed	none	25	96%
9. Shopping	yes	22	85%
10. Cleaned home/ apartment	every day	8	31%
	6-10+ days	3	12%
	1-5 days	7	27%
	never	8	31%

the 2-week period prior to the time of the study.

Although 16 subjects (62%) claimed they spent some time between 10:00 am and 9:00 pm lying on a bed or sofa in 2 weeks, 21 subjects (81%) asserted they spent time outside of their home every day.

The scores of the SCAS may have been higher in the SLVAMC group due to the sample being comprised exclusively of males. Benjamin and Barnes (1987) found males scored significantly higher than women, with a possible bias toward women in meal preparation and house cleaning. This was demonstrated in the SLVAMC group with 12 subjects (46%) reporting they did not prepare any meals in the 14 days prior to the study. Eight subjects (31%) also claimed never to have cleaned or helped clean their residence.

#### Research Question One

The first research question sought information on the major and minor functional health problems experienced by SLVAMC CMI clients. A total of 140 functional health problems were identified in the 25 subjects who received a functional health assessment by the licensed SLVAMC NP involved with the study. One subject who participated in the interview process with the psychiatric nurse voluntarily left the VAMC DTC program and the state of Utah prior to his scheduled functional health examination.

Fifty-six (40%) of the 140 functional health problems

identified among the subjects of this study were considered to have a potentially major impact upon the total functioning of the individual. If left untreated, these problems could be life-threatening (Appendix D).

The functional health problems considered by the researchers to be non-life-threatening at the time of the study were designated as minor health problem. There were 84 (60%) functional health problems identified as minor. These problems have the potential, if left untreated over time, to have a major impact upon the functional health of the individual (Appendix D).

Twenty-one subjects (84%) who received a functional health assessment were found to have at least one major functional health problem (Table 7). More than one major problem was detected in 86% ( $\underline{n} = 18$ ) of these subjects. Minor functional health problems were identified in 100% of the subjects ( $\underline{n} = 25$ ). More than one minor health problem was detected in 88%.

Major and minor functional health problems identified in this study were categorized according to a review of physiological systems. The systems that were primarily involved with the 56 major functional health problems included the endocrinological, nutritional, and metabolic systems (16 problems, 29%) and the cardiovascular system (14 problems, 25%). The systems primarily involved with the 84 identified minor functional health problems

Table 7  
 Number of Major and Minor Functional Health  
 Problems for SLVAMC DTC Patients

<u>n</u>	%	<u>Number of Functional Health Problems</u>	
		Major	Minor
3	12%	0	4
1	4%	0	6
3	12%	1	3
1	4%	2	1
3	12%	2	2
3	12%	2	3
2	8%	2	4
1	4%	2	5
1	4%	2	7
2	8%	3	2
1	4%	3	6
1	4%	4	1
1	4%	5	1
1	4%	5	3
1	4%	8	6
25	100%	56	84
		Mean = 2.24	Mean = 3.40
		<u>SD</u> = 1.81	<u>SD</u> = 1.63

included the general system area including hygiene, dentation, substance abuse, health information, and immunization (25 problems, 30%). Other identified systems included the dermatological system (16 problems, 19%), neurological system (12 problems, 14%), and the gastrointestinal system (9 problems, 11%). The number of functional health problems identified in this study was consistent with previous studies that have demonstrated high morbidity rates among various CMI populations (Farmer, 1987; McCarrick et al., 1986; Roca et al., 1987). Many of the major and minor functional health problems identified in CMI subjects involved in this study were of a chronic nature requiring extended care and treatment. Management of functional health problems such as hypertension, adult onset diabetes, organic heart disease, asthma/chronic obstructive pulmonary disease, and peptic ulcer disease, to name a few, require consistent medication, diet, exercise, and treatment to help maintain optimal health and functioning.

The increase in mental problems might influence the medical management of the physical illness. Giller (1980) suggested that for CMI persons, adaptive lifestyle refers to substantive attempts to cope with illness, as well as other stresses. Seven of eight major, and three of six minor, functional health problems identified in one CMI subject were not well-controlled. However, this patient

was receiving some medical care at the time of this study. Due to the uncontrolled nature of the health problems experienced by this patient, his overall functional health was rated by the VAMC NP as "poor." The number of health problems for which he was able to obtain medical management and follow-up treatment shows progress toward an adaptive lifestyle; however, access to management of health does not always result in adequate care and/or good health.

The majority of patients with major and minor functional health problems identified in this study needed modification in treatment or follow-up at the time of the study. Subjects were currently receiving adequate treatment for 22 (39%) of the 56 identified major functional health problems (Table 8). The remaining 34 major functional health problems (61%) were either untreated or in need of further treatment. Thirteen subjects (52%) were found to have two major functional health problems each that needed further evaluation and care. Subjects were receiving adequate treatment for only 19 (23%) of the 84 minor functional health problems identified (Table 9). Thus, 74% (62) of these problems remained untreated at the time of assessment. Three problems identified did not require treatment, for example, an easily reduced left inguinal hernia (Appendix G). These problem areas will require careful monitoring

Table 8  
Treatment of Major Functional Health Problems

	Number of		Currently	
	Subjects	Problems	Receiving Treatment	Not Receiving Treatment
	1	8	7	1
	9	2	0	2
	1	3	1	2
	2	3	2	1
	2	2	2	1
	1	4	2	2
	3	1	0	1
	2	5	3	2
Total	21	56	22	34

Table 9  
Treatment of Minor Functional Health Problems

	Number of		Currently	
	Subjects	Problems	Receiving Treatment	Not Receiving Treatment
	2	6	3	3
	5	3	0	3
	2	2	0	2
	1	7	1	6
	3	1	0	1
	2	4	1	3
	2	3	1	2
	1	5	3	2
	1	6 <sup>a</sup>	2	1
	3	4	0	4
	3	2	1	1
Total	25	84	19	62 <sup>a</sup>

Note.   <sup>a</sup>No treatment was needed for three of these problems.



over time to assess the need for treatment. The majority of the major (61%,  $n = 34$ ) and minor (74%,  $n = 62$ ) functional health problems identified, however, were not being treated at the time of the study. Virtually none of the subjects who received a functional health assessment were found to be free of functional health problems in need of treatment or follow-up.

It is speculated that the stress of a major physical illness may intensify preexisting unrelated mental disorders (Hall et al., 1982). Many functional health problems may first be manifested via symptoms of disturbed mood, thought processes, or behavior, making accurate assessments difficult. It is also difficult for the CMI client to accurately assess his or her own functioning (Krummel & Kathol, 1987). A majority of the subjects in this study ( $n = 16$ , 62%) not only endorsed the statement that emotional problems become worse when they feel physically ill, but the mean distress rating was 5.13, with 7 indicating the highest amount of distress.

Further, a wide range of functional health problems, including endocrine dysfunction, metabolic and hematologic abnormalities, and vascular diseases are known to mimic bona fide functional psychosis (Lieberman & Coburn, 1986). This confusion about sensations (i.e., whether they are of a physical or emotional origin) was identified by a majority of the subjects in the study ( $n = 14$ , 54%).

Through laboratory analyses, functional health problems related to physiological symptoms were identified in SLVAMC DTC subjects. These included increased fasting blood glucose levels, increased thyroid function test, microcyten anemia, and toxic theophylline level.

#### Major Functional Health Problems

Obesity and hypertension were the most prevalent major functional health problems identified in this study (Appendix F). Eleven patients (44%) were found to be overweight (122% to 161% of their ideal body weight) (Recommended dietary allowances, 1980). Only 1 subject (4%) was found to be significantly malnourished (81% of ideal body weight). These findings demonstrate a need for dietary, exercise, and lifestyle counseling/management for these subjects. Obesity can lead to the development of further functional health problems such as hypertension, coronary artery disease, cerebrovascular disease, and degenerative joint disease, to name only a few.

While 9 subjects (36%) were hypertensive, only 5 were receiving adequate treatment at the time of the study. This finding is similar to results of other investigations with CMI patients (Barnes & Benjamin, 1983; Roca et al., 1987). Other cardiovascular problems included organic heart disease with a history of myocardial infarction, and 1 subject with a history of aortic aneurysm (4 cm).

Neurological problems involving the senses such as chronic pain, impaired eyesight, and reduced hearing and touch were also identified among the subjects of this study. These problems can cause increased stress for a CMI patient who already has difficulty adequately relating to his environment due to signs and symptoms of mental illness. Characteristic symptoms of mental illness, specifically schizophrenia, invariably include disturbances in several of the following areas: (a) language and communication, (b) content of thought, (c) perception, (d) affect, (e) sense of self, (f) volition, and (g) relationship to the outside world (American Psychiatric Association, 1987).

Gastrointestinal problems identified in this study included 3 subjects with a history of peptic ulcer disease. A guaiac positive stool was identified in 1 of these subjects. A notable mass was identified in the lower right quadrant of the abdomen of a subject that required immediate referral. Fortunately, resolution of the problem involved surgical removal of what turned out to be a subcutaneous suture granuloma. Although this may not seem to be a life-threatening condition, the subject and caregivers could not have known the seriousness of the problem prior to resolution.

Poor dental hygiene was assessed as a major problem in 1 subject due to the extreme deterioration of his

teeth. He had only 6 lower front jaw teeth and those were in a state of severe decay.

Impotence was considered a major functional health problem for 1 subject because of the disruptive impact this problem was having on the client's life and marital relationship. Seven other additional major functional health problems were identified in this patient.

Musculoskeletal problems included decreased mobility secondary to spondylitis in 1 subject and degenerative joint disease in another. Other major problems included multiple disfiguring facial scars secondary to an explosive trauma and toxic theophylline level assessed as 22 mcg/ml (therapeutic range 10-20 mcg/ml).

Inability to follow through with medically prescribed treatment is another area of concern with CMI populations. Noncompliance with medication management for a life-threatening illness was identified in 1 subject. This finding highlights the need to closely supervise this patient, and potentially intervene to assist him in meeting his functional health needs in dealing with a critical health problem.

Psychosomatic fixation was identified in 1 subject. This problem was viewed as a major health problem due to the effects of anxiety on the patient's long-term health. With the many over-the-counter medications available to the public, as well as illegal drugs, this subject could

potentially medicate himself, depending on his own assessment of the problem. Also, if health caregivers witness his constant ruminations of psychosomatic complaints, they may overlook a real problem when it occurs.

A majority (81%,  $\underline{n} = 21$ ) of the subjects in this study were identified as having a combination of both major and minor functional health problems. Twenty-eight percent ( $\underline{n} = 7$ ) were assessed as having 55% of the 56 major functional health problems. These same subjects were also assessed as having 25% of the 84 minor functional health problems.

Lack of evidence of cancer or rheumatoid arthritis in the subjects of this study supports data collected in other investigations of physical health among the psychiatric population. Consistent evidence of a fairly strong negative relationship between schizophrenia and rheumatoid arthritis (Osterberg, 1978) has been reported. The relationship between psychiatric illness and cancer is unclear, with much conflicting data being reported. However, Craig and Lin (1981a) reported data suggesting a lowered risk for lung cancer among patients diagnosed with schizophrenia. This finding is intriguing because of the relatively large number of CMI subjects who report heavy consumption of high-tar cigarettes (Masterson & O'Shea, 1984).

### Minor Functional Health Problems

The 84 minor functional health problems identified in the subjects of this study showed many of the same areas of concern as the major functional health problems (Appendix G). The 25 problems listed (30%) in the general systems area included 4 patients with health problems related to smoking (i.e., respiratory difficulties such as increased coughing). While more subjects smoked, these subjects were identified as having a minor functional health problem due to the impact their smoking had on other areas of their health.

The 16 identified dermatologic problems included several problems that could have a significant negative impact on the self-image of the subjects (i.e., facial/chest scars with disfigurement, lid entropion, acne lesions, and hyperplasia of the oil glands). Compromised self-image may also result from urinary-reproductive problems of impotence, prostate nodule, spermatocele, testicular cyst, and hypertrophy identified among these subjects.

Cardiovascular and respiratory problems assessed as minor were adequately treated. Gastrointestinal problems that necessitated further treatment included constipation ( $\underline{n} = 2$ ) and diverticulosis ( $\underline{n} = 2$ ). Other gastrointestinal problems were either well controlled or required no current treatment.

The urinary/reproductive area of functioning showed 3 subjects with benign prostatic hypertrophy and 1 subject with a prostate nodule previously assessed as benign. However, the subject with the prostate nodule maintained that he had cancer of the prostate despite laboratory evidence to the contrary.

The 13 problems assessed as being related to the nervous/sensory system included 3 subjects with nonsurgical cataracts. Of the 4 subjects who were assessed as having decreased visual acuity, 2 were waiting for funds from Medicaid before obtaining corrective glasses.

Five subjects were found to have endocrinological/nutritional or metabolic problems. Two subjects were mildly malnourished (85% to 91% of ideal body weight) and 3 subjects were mildly obese (111% to 115% ideal body weight) (Recommended dietary allowances, 1980).

A need for a health education rehabilitation program among CMI clients has become evident in analyzing the amount and types of functional health problems identified in this population. The relative high rate of problems related to nutrition, dentation, hygiene, outdated immunizations, need for exercise, and medication/treatment compliance, to name only a few, supports this area of concern. The lifestyle of these subjects may be altered through this type of programming, which could positively impact their functional health.

The vast array of functional health problems identified in this study also reflects the need for multidisciplinary caregivers to work together with primary care providers or case managers in order to adequately treat the functional health problems that may occur among CMI clients. This coordination of care could assist in offsetting the potential for negative drug interactions between medications prescribed for treatment of psychotic symptoms and those prescribed for other health problems. Psychotropic medications are known to have significant side effects and can interact with other chemicals to produce devastating effects.

A body of empirical evidence exists indicating that CMI patients with severe illness, or painful illness, do not complain of discomfort (Karasu et al., 1980; Talbott & Linn, 1978). The data from the present study failed to support this claim. The strong relationship between the NP's overall functional health rating and the subject's self-rating of functional health ( $p \leq .01$ ) showed that these subjects were well aware of their health status. Also, the strong relationship between the number of identified major functional health problems and the subjects' reports of symptoms and past history of illness support this awareness. Identification of minor functional health problems did not seem to influence health ratings of either the subjects or the NP.



The relatively high rate of functional health problems identified in this study was surprising (since 57% of the subjects claimed they had received a physical examination in the previous year). Whether due to patient-related, disease-related, or caregiver-related factors, it is clear that many functional health problems are not receiving adequate treatment.

Self-Report of Past Health History: Illnesses

Subjects in this study reported 116 total physical illnesses (Appendix F). Cardiovascular problems included 8 subjects who claimed hypertension, and 10 who had been assessed with the problem. Three patients identified heart disease as a problem with only 1 subject assessed as having this problem at the time of the interview. Circulation was another problem endorsed by 6 patients, with only 4 having been assessed as having circulatory difficulties.

Respiratory problems reported by the patients included chronic conditions such as asthma ( $n = 1$ ). The assessment process for this study verified this report. Although 5 patients (20%) reported having emphysema, only 1 was assessed as currently experiencing this problem.

Gastrointestinal disorders showed an interesting situation with no subject endorsing peptic ulcer disease and 2 patients receiving treatment for the problem. At

the time of the study, 3 other patients were assessed as having the diagnosis of peptic ulcer disease and were referred for further evaluation. Ten subjects claimed they had "stomach problems" in the past.

Other areas of interest were the neurologic/sensory-related problems, which included 17 patients who endorsed decreased vision, with only 8 being assessed as having this problem. Although no subject in this study was assessed as having cancer or arthritis, 3 patients reported cancer as an illness and 9 patients reported having arthritis.

#### Physical Symptom Checklist

The 25 subjects who received functional health assessments reported a total of 244 specific symptoms of altered physical functioning. These ranged from 0-32 symptoms for each patient, with a mean value of 9.8 and a standard deviation of 7.7. The majority of subjects (52%,  $n = 13$ ) reported having 10 or fewer symptoms of physical illness, with 32% ( $n = 8$ ) reporting 11-18 symptoms, and 8% ( $n = 2$ ) reporting 23-32 symptoms.

#### Functional Health Rating by the Nurse Practitioner

The VAMC licensed NP provided an overall functional health rating for each subject based on the results of the functional health assessment (Table 10). A majority of subjects (64%,  $n = 16$ ) were assessed as having average to

Table 10  
Rating of Subject's Functional Health Status by the  
Licensed NP

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	Rating	<u>n</u>	%
Poor	1	1	4%
	3	8	32%
Average	4	6	24%
	5	3	12%
	6	7	28%
Mean Rating	4.24		
Standard Deviation	1.42		

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above average health. Although 1 subject (4%) received a functional health rating of "poor," no subjects were assessed as having "excellent" health.

#### Self-Rating of Functional Health Status

Subjects in this study were asked to make two self-ratings of functional health. The self-rating made in the context of the interview with the psychiatric nurse showed that 65% ( $n = 17$ ) of the subjects perceived themselves to have poor to average health. Five (19%) assessed themselves as having excellent health. The mean for this scale was 3.92, with a standard deviation of 2.24. The self-rating by 24 subjects in an interview with the NP showed 75% ( $n = 18$ ) rating themselves as having poor to average functional health. Two subjects (8%) rated themselves as having excellent functional health. The mean for this scale was 3.75, with a standard deviation of 1.87.

#### Comparison of the Three Ratings of Functional Health

A comparison of the three ratings of functional health including one by the NP and two self-ratings by subjects is depicted in Figure 3. This comparison of scores demonstrates that more subjects ( $n = 6$ , 23%) rated themselves as having poor health in the interview with the psychiatric nurse than in the interview with the NP. The

Number of  
Subjects

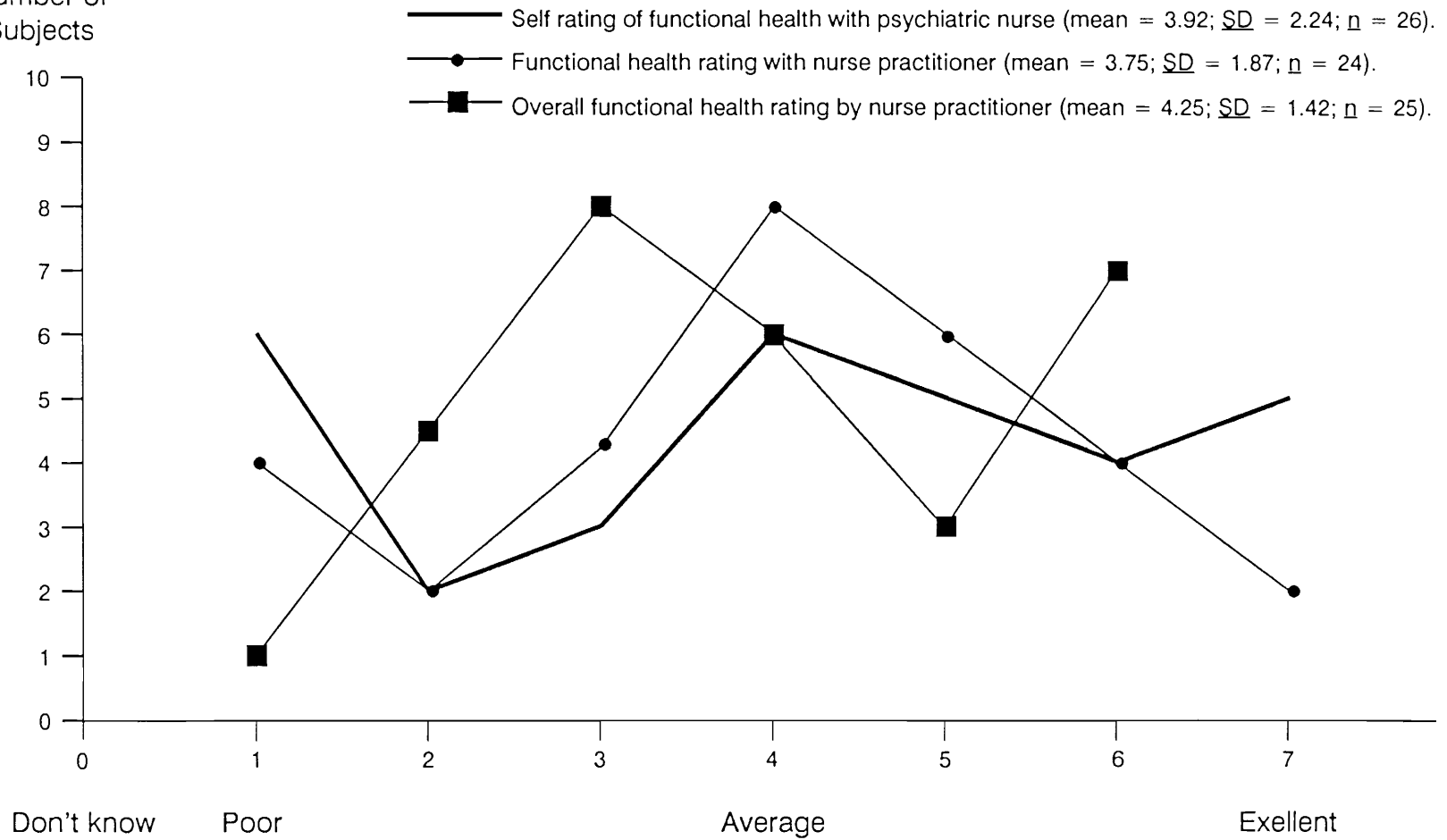


Figure 3. Comparison of three functional health ratings.

NP rated only 1 subject (4%) as having poor health.

Interestingly, the NP rated no subject as having excellent health; however, 2 subjects (8%) with the NP and 5 subjects (19%) with the psychiatric nurse endorsed this rating. The lower standard deviation of the NP's rating (1.42) reflects less variability between individual scores than the self-ratings of subjects. These findings demonstrate that more subjects perceived themselves as having either better or worse health than was assessed by the NP.

#### Research Question Two

Research question two investigated the major health experiences perceived by SLVAMC CMI patients to be barriers to obtaining and managing functional health care, and how stressful these experiences were perceived to be. Each of the 40 experiences investigated in this study were endorsed by some of the subjects (Appendix K). Of the 11 experiences in managing physical symptoms of illness investigated, the total number endorsed by each subject ranged from 0 to 11, with a mean of 5.58 and a standard deviation of 3.13. Of the 29 experiences related to health treatment, the total number endorsed by each subject ranged from 2 to 22, with a mean of 12.19 and a standard deviation of 6.57.

Self-ratings of distress, on a scale of 0-7, made in conjunction with each of the identified experiences,

showed variation in mean scores (Appendix H). Mean levels of distress reported in association with experiences in managing physical symptoms of illness ranged from 4.0 to 5.63, with a standard deviation between means of 2.02. The mean levels of distress reported in relation to experiences with health treatment ranged from 2.63 to 5.77, with a standard deviation between means of 2.10.

A priority listing of the 11 most frequently endorsed experiences in relation to health care are presented in Table 11. Two experiences most often endorsed by subjects related to the environment. These included: (a) long waits to see the doctor, and (b) noise and confusion in health care settings. Other areas most frequently identified involved internal thought processing and relationships with health care professionals.

These areas of concern, along with lack of information or skills in accessing health care, were also reported as causing the greatest amount of distress (Table 12). Other emotionally distressing experiences related to the perception of altered health, obtaining care, or relationships with health care practitioners.

Two major areas of concern for CMI patients in attempting to manage their health needs were reflected in three experiences which were most frequently endorsed, as well as receiving high distress ratings. These were: (a) emotional problems getting worse when I am ill or have a

Table 11  
Most Frequently Endorsed Barriers to Health Care

Experience	Number of Subjects Endorsing Experience
1. Long waits to see the doctor.	20
2. Noise and confusion in health care settings	18
3. Worry about body functioning (normal/defective)	16
4. Emotional problems get worse when I am physically ill	16
5. Not enough energy to take action about my health	16
6. Have to explain my problems too many times	16
7. Distrust of health care providers	15
8. Trouble describing my physical problems to others	15
9. Confusion about sensation, either physical or emotional	14
10. Frightened by bodily sensations (i.e., pain, hunger)	14
11. Waiting in crowded waiting room	14



Table 12  
 Health Care Barriers Associated with the Highest  
 Amount of Reported Distress

Experience/Barrier	Mean Distress Level	<u>SD</u>
1. Bad experiences with doctors in the past	5.77	1.36
2. Feeling trapped in health care setting	5.75	1.66
3. Hearing voices or having confused thoughts when needing a medical doctor	5.73	1.74
4. Frightened by bodily sensations (i.e., pain, hunger)	5.64	1.50
5. Not knowing how or feeling uncomfortable making medical/dental appointments	5.40	1.82
6. Not being included in treatment plans	5.30	1.77
7. Fear something dreadful is happening when ill	5.18	2.09
8. Trouble understanding source or cause of bodily sensations or symptoms	5.15	2.08
9. Emotional problems get worse when I am physically ill	5.13	1.63
10. Not knowing what to do about symptoms	5.09	1.97
11. Distrust of health care providers	5.07	2.09

physical health problem, (b) feeling of distrust toward health care providers, and (c) being frightened by the experience of bodily sensations such as pain, fatigue, or hunger.

#### Emotional Problems Getting Worse When I am Ill

There is growing evidence in the literature supporting the clinical interface of psychiatric and medical disorders (Jefferson & Marshall, 1981). Nonpsychiatric illnesses can often cause psychiatric symptoms. Consequently, symptoms of a physical disorder may be diagnosed as an exacerbation of preexisting psychiatric problems and may influence the mental health caregiver to alter the previous psychiatric diagnosis and treatment.

CMI patients may be confused by the symptoms they are experiencing and may attribute them to their psychiatric problems. Indeed, Burke (1978) claimed that inevitably CMI patients believed that all their health-related problems resulted from their psychiatric condition. When a psychiatric patient makes contact with health care providers, the stereotypical reaction is often characterized by lack of sympathy and a belief that the complaints are psychological and, therefore, unworthy of physical investigation (Burke, 1978). One patient in this study reported he went to the hospital with a complaint of severe back pain and was placed on a psychiatric unit for

3 months without his even receiving a physical examination. He claimed that the only help he received for his "back problem" was from his son-in-law who is a "masseur."

For the CMI client, symptoms of altered health, no matter what the etiology, may increase stressful sensations dependent upon his or her perceived ability to adequately meet the health care needs associated with those symptoms. Lazarus and Folkman (1984) claimed that in order to understand variations among individuals under similar conditions, health care providers must take into account the cognitive processes that intervene between the encounter and the reaction. With increased specialization of health care services, frequently the decision of what a symptom might mean to the health and functioning of a person and which health care specialist to contact is left up to the person experiencing the symptom.

#### Feelings of Distrust Toward Health Care Providers

Trust can be defined as the firm belief in the honesty, integrity, and reliability of another person without fear of outcome. Trust also refers to an individual's belief that the other person's behavior is predictable under a given set of circumstances. Trust can also be associated with reliance on something in the future (i.e., hope) (Rogers, 1951).

Krauss and Slavinski (1982) asserted that when many

CMI persons find that the symptoms of their mental illness do not remit over time, but continue or even worsen, the person is faced with despair because of lack of progress toward wellness or relief from distress. CMI patients may also find that caregivers and supportive others have a negative change in attitude toward them. A CMI person who is frightened, disorganized, or panicked may reach out for help in a clumsy way. This is often perceived by others as hostility or aggression. Consequently, the patient is often rejected by those toward whom he or she was reaching. In some instances, the patient is actually punished for his or her clumsy attempt to seek help by being secluded, restrained or given increased medication. As each interpersonal transaction fails, a lack of trust and faith in others is reinforced. This difficulty to develop trusting relationships with fellow human beings is often seen as characteristic of persons diagnosed with schizophrenia, as well as other mental disorders (Mendel, 1976).

The primary therapist or case manager (with whom the CMI patient has established a trusting relationship) may be reluctant to evaluate somatic complaints. Objections voiced by psychiatrists to performing physical examinations include: (a) lack of experience in performing functional health assessments, (b) impracticality of performing assessments in outpatient facilities, par-

ticularly if it necessitates disrobing, (c) unmanageable transference and countertransference problems via the performance of the health assessment, and (d) increased risk of malpractice (Anderson, 1980). Other issues that seem to limit the full assessment of somatic complaints among CMI patients in the mental health care setting include: (a) large caseloads with financial and temporal constraints, (b) fear of increasing somatic rumination on the part of the patient, (c) difficulty accessing health care services, and (d) financial constraints.

The CMI patient is often compelled to leave familiar environs to seek help from community resources (i.e., private practitioners, emergency clinics, or with this population, SLVAMC medical care facilities). Subjects in this study repeatedly expressed concern about having to see health care providers they had never met and did not trust to understand their problems.

#### Frightened by the Experience of Bodily Sensations

The identification of fear associated with symptoms of altered bodily functioning shows a need for these patients to be allowed to verbalize their concerns to individuals whom they perceive as understanding their needs. If professional health care providers are frequently confused by the etiology of altered health symptomatology, it is understandable that CMI persons

might likewise be confused.

Krauss and Slavinski (1982) claimed that CMI persons on psychotropic medications are particularly attuned to and disturbed by alterations in bodily functions. Patients often blame these alterations on their prescribed medications. Krauss and Slavinski urged mental health clinicians to take an efficient and nontraditional view of the management of chronic symptom patterns. Much remains to be learned about the nature and course of symptoms experienced by CMI persons who have been continuously treated and maintained on medication. The problem for the clinician, then, is to determine how to help the client find relief from and to compensate for the effects of all of his or her symptoms while still meeting the necessities of daily life.

Other investigators of mentally ill populations have studied the effects of age, culture, and geographic access to services, as well as other barriers in accessing health care services. Although these areas were investigated as potential barriers for the population in this study, they were not identified by the subjects as causing them difficulty. This may be attributable to the specific population, the majority of whom are eligible for service-connected benefits, including health care.

Within this relatively small sample, all of the investigated barriers to accessing health care were

endorsed at some time by the subjects. Each experience related in some way to trust, either in the clients themselves or in others to meet their needs without undue negative sequelae. These findings suggest a need to understand the experiences that CMI patients may have in understanding their own physiological functions and obtaining health care without undue anxiety.

Some experiences were endorsed by only a few subjects; however, the emotional ratings represented the maximum amount of distress for that subject. A case in point is the potential barrier of being embarrassed about having a physical examination. The 5 subjects (19%) who endorsed this experience also reported a distress rating of 7.

### Research Question Three

Research question three investigated the relationship between variables including: (a) self-ratings of physical and emotional health, psychiatric symptoms, and self-care ability; (b) experiences in managing physical symptoms of illness and obtaining health care; (c) history of physical health; (d) utilization of health care services, and (e) present health status of a group of SLVAMC CMI patients.

The intercorrelational data are presented in Table 13. It should be noted that none of the intercorrelations among self-care, health care service use, and number of minor health problems achieved significance ( $p = .05$ ).

Table 13  
Intercorrelational Data

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	
V1 Self-Rating (NP) Health Status	1.0000												
V2 Self-Rating (Psychiatric Nurse) Health Status	.7116**	1.0000											
V3 Emotional Health (Self-Rating)	.3547	.5147**	1.0000										
V4 GSI	-.3072	-.5050**	-.7440***	1.0000									
V5 Self-Care	.1838	.2636	-.0948	-.1917	1.0000								
V6 Managing Health	-.4640*	-.5374**	-.6176***	-.7242***	-.3171	1.0000							
V7 Experiences with Treatment	-.4794*	-.6267*	-.5075*	-.7566***	-.2440	.7247***	1.0000						
V8 Health Care Service Use	-.1761	-.1822	.0159	.0549	-.3999	-.0526	.1097	1.0000					
V9 # Physical Illnesses	.5599**	-.6656***	-.3728	.5316**	-.2723	.5906**	.7289***	.1142	1.0000				
V10 # Physical Symptoms	-.6278***	-.6268***	-.5042*	.6153***	-.2620	.7033***	.7825***	.0812***	.8179***	1.0000			
V11 NP Overall Health Rating	.6632*	.3195	.1506	.0354	.0048	-.1203	-.1839	-.1940	-.4021	-.4235*	1.0000		
V12 # Major Health Problems	.4969*	-.3281	-.1323	.1973	-.2372	.2591	.3467	.3147	.6056***	.5849**	-.5876**	1.0000	
V13 # Minor Health Problems	.1947	-.0045	-.3269	.1571	.0013	.2196	-.0217	-.3955*	.1872	.1513	.1425	-.0621	1.0000

Note. \* $p < .05.$ , \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .



### Self-Rating of Physical Health

The two self-ratings of physical health showed a significant correlation ( $p \leq .001$ ). While the self-rating with the NP showed a significant correlation with the functional health rating of each subject by the NP ( $r = .6632$ ,  $p = .001$ ), the self-rating with the psychiatric nurse did not. These two self-ratings were made at different times, and were separated by a few days to several weeks. A  $t$  test showed no significant differences between the two self-ratings of functional health. These ratings were not independent as they were done within the context of an interview conducted by different interviewers. In general, the patients tended to rate themselves as functioning a little better when interviewed by the psychiatric nurse than they did when interviewed by the NP. Additionally, ratings with the NP were made in the context of having a physical examination, which may have focused attention on physical symptoms. In general, the NP tended to rate subjects as physically healthier than they rated themselves.

The relatively strong positive relationship ( $p = .001$ ) between the subjects' ratings of functional health with the NP and the NP's rating of the subjects' health shows an awareness of the subject of his own health and functioning. It is interesting to note that the subject's rating of health with a psychiatric nurse was not

correlated with the NP's rating of the subject's health. Subjects may have been more focused on the emotional aspect of physical health with the psychiatric nurse and on actual physical functioning with the NP.

Although there was a strong relationship ( $p < .001$ ) between the subject's two separate ratings of physical health, the difference between the ratings demonstrates a need to utilize various means to evaluate the health of this population. If the subject had only been asked to rate his health in the interview with the psychiatric nurse, it might have been assumed that he was unaware of his own health status. However, by also asking him to rate his health status with the NP, a different perspective was gained.

The need for more than one type of assessment of health is further evident in the strong relationship between the subject's rating of physical and emotional health with the psychiatric nurse interviewer. Subjects may have focused more on physical problems with the NP and more on emotional problems with the psychiatric nurse. Subjects may also have wanted to please or influence the interview and the NP responded according to the context of the care being explored (i.e., one talking about health, health barriers, and emotional distress versus a physical examination).

Self-report of functional health status appears to be

influenced by the subject's awareness of symptoms of altered health. The strong relationship between the number of physical illnesses, number of physical symptoms, and physical health status, although self-reported, lends evidence that CMI subjects are aware of personal signs of altered functioning. The subjects also demonstrated an ability to accurately relate this awareness when asked specific questions about their functional health.

#### Self-Rating of Emotional Health

The relationship between self-rating of emotional health and the global rating of emotional distress demonstrated that subjects perceived increased emotional stress as negatively affecting their emotional health. It is this cognitive appraisal of personal resources to mediate the potential demands of stressors that Lazarus and Folkman (1982) claimed impacts the individual's ability to cope with life events. These authors further suggested that this appraisal process is necessary for individuals to survive and flourish. Lazarus and Folkman contend that by utilizing appraisal skills, the individual can distinguish between potentially benign and dangerous situations.

A strong relationship was evidenced between the nonindependent, self-reported symptoms of altered physical health, measures of emotional health and distress, and

barriers to obtaining health care (managing health and experiences in treatment). The subject's perception of decreased emotional health and increased emotional distress was shown to be influenced by an increase in the number of perceived symptoms of altered physical health. This finding supports the subject's report of emotional problems becoming worse with the perception of increased symptoms of illness. The emotional distress that results from the CMI person's perception of symptoms may influence not only the accessing of health care services, but all aspects of health care for the individual, as well.

The significant correlation between the subjects' self-report of emotional health functioning and experiences in obtaining and managing health care lends support to their reports of increased emotional problems resulting when increased symptoms of physical illness are experienced. The negative direction of the correlation demonstrates that subjects who rated themselves as having above average or better emotional health identified fewer problems in meeting their health care needs.

#### Experiences in Managing Health and Treatment

The relatively large number of functional health problems identified in this study (140) that needed treatment ( $n = 96, 69\%$ ) demonstrates that subjects' health needs were not being met at the time of the study. The

significant correlations between perceived barriers to health care management and treatment and all dimensions of the emotional distress scale including the GSI ( $p < .05$ ) demonstrates that as subjects perceived increased barriers to health care, they also perceived increased emotional distress.

Strong positive correlations were demonstrated between experiences in managing health care and number of physical symptoms and past and present history of physical illness. Patients who tended to have more health problems also tended to have encountered more negative experiences in managing those problems. Experiences that were rated as most distressing first pertained to negative past experiences with physicians and second, to increased symptomatology. This finding reflects difficulty in managing the anxiety associated with either visiting a health clinic or not understanding how to manage physical symptoms. Awareness of the relationship between physical symptomatology and its negative effects on emotional functioning was reflected in the strong negative correlation between self-ratings of emotional health and experiences in managing symptoms of illness ( $p = .001$ ) and experiences with health care ( $p = .008$ ). This finding demonstrates that the number of negative experiences with altered health and access to health care influenced the subject to perceive himself to be less well emotionally.

It is noteworthy that experiences with both treatment and management of physical health problems showed strong intercorrelations ( $p = .001$ ) with not only the GSI, but with all nine individual dimensions of emotional distress, as well.

### Self-Care

No significant correlational relationships were demonstrated between the subjects' report of self-care on the SCAS and their self-report of physical health status. This was true of findings both with the individual SCAS questions and the SCAS global rating.

Lazarus and Folkman (1984) asserted that the measurement of health status as an outcome has many of the same problems as measurement of social functioning. These problems include issues of self-report and judgment as to the quality of health and life experiences. It is recognized that there may be substantial influences upon these two human experiences. The chronic nature of the respondents' mental illnesses, however, may have profoundly impacted their ability to meet the basic needs of living, with a potential for coping with situational demands repeated over time.

The subjects of this study live within a community setting, maintain their own personal living space, and socially interact to meet their own personal needs. It is understood they have developed skills to adequately

interact in a social context, regardless of their involvement at the SLVAMC day treatment program.

The SCAS scores showed a limited variance demonstrating possible mild to moderate deficits in self-care. No subject had a total score over 20 (possible score 40). Many major physical illnesses or problems were found among this population. However, these problems were not assessed by the subjects as causing sufficient problems with functioning to significantly impact their ability to meet the self-care needs of daily living.

#### Utilization of Health Care Services

There were no significant correlations between utilization of health care services and other variables assessed in this study (i.e., functional health status, emotional health status, experiences related to health care, and ability for self-care). There was a tendency for utilization to be associated with the number of reported health problems ( $r = -.3955$ ,  $p = .05$ ) and with less self-care ability ( $r = -.0526$ ,  $p = .053$ ). These negative correlations provide evidence that patients who utilized health care services more often had fewer minor health problems. On the other hand, subjects with less reported ability to perform self-care claimed that they used more health care services. Other areas that one might expect to influence utilization of health care

services, such as subject's family size, age, income, level of education, insurance or service-connected eligibility, and perception of emotional and physical health showed no significant associations.

#### Functional Health Rating by the Nurse Practitioner

The licensed NP's rating of each subject's functional health was influenced by the number of major health problems assessed during the functional health assessment. This was evidenced by the significant correlation ( $\underline{r} = -.5876$ ,  $\underline{p} = .003$ ) between number of assessed major health problems and the functional health rating. In other words, subjects with fewer major health problems were rated as having better health. No significant relationship between the NP's ratings of health and the number of minor health problems was revealed.

There was a significant inverse correlation between the NP's functional health rating of the subjects and the number of self-reported physical symptoms ( $\underline{r} = -.4235$ ,  $\underline{p} = .039$ ). This finding indicates that subjects who perceived an increase in physical symptoms of illness were also assessed by the NP as having poorer health. As has been discussed, even though the subjects reported that emotional problems worsened with increased symptoms of illness, they were nonetheless aware of their own functioning. The correlation between the NP's functional



health rating and the number of physical illnesses reported by subjects approached significance ( $r = -.4021$ ,  $p = .051$ ). Reports of physical illnesses included any past experience the subjects may have had with the designated illness. The fact that many illnesses reported were not experienced by the subject at the time of the study (i.e., bronchitis, urinary tract infection, kidney stone) may have skewed this correlational finding. The number of physical illnesses, however, correlated strongly with the number of current physical symptoms ( $r = .8179$ ,  $p = .001$ ). This showed a possible tendency for some patients to be more somatically oriented.

#### Demographic Variables

Some demographic variables that one would expect to impact a person's functional health status did not show significant relationships in this study (i.e., income, VA service-connected eligibility, insurance eligibility, family size, age, and cultural background). The reported number of symptoms of physical illness and experiences with health care showed a significant positive relationship ( $p = .05$ ) with income and VA service-connected eligibility, but not with subject health status. This finding suggests that those veterans with greater service-connected disability use more health care services and get more money, but may not be in better health than other members in the subject group.

Epidemiologic evidence supports the assertion that as age increases, the overall perspective of physical functioning decreases (Greenhouse, 1980). Data in this study supported this assumption. Self-ratings of physical health by subjects with a psychiatric nurse interviewer showed a negative relationship ( $r = -.4020$ ,  $p = .04$ ) with the age of the subject. This finding indicates that subjects perceived themselves as less healthy with increasing age. Age of subjects did not correlate with any other areas investigated in this study, including the NP rating of the patient's physical health. The relatively strong correlation ( $p = .01$ ) between the global self-rating of emotional distress and experiences managing symptoms of illnesses, experiences with treatment, number of physical symptoms of illness, and number of physical illnesses, although all self-ratings, indicate that psychiatric condition is a better predictor of functional capacity than age.

Marital status has also been linked to rates of morbidity with lower rates being associated with individuals who are in "attached" marital relationships. In some studies, this relationship has been shown to be more strong for men than for women (Moss, 1978). However, it was not possible to assess this variable in this study due to the all-male population.

It might appear that the population from which this

sample was drawn is unique from other groups of CMI persons, particularly those outside the VA system. However, it should be noted that the high rate of functional health problems needing treatment or follow-up ( $\underline{n} = 96, 69\%$ ) identified among this CMI population, even with the psychiatric care available to them, offers a compelling reason to be concerned about the CMI population at large.

## CHAPTER V

### SUMMARY, IMPLICATIONS AND RECOMMENDATIONS

#### Summary

The results of this study support previous reports documenting a high rate of functional health problems among the CMI population. Evidence that the majority of these health problems go untreated implies that subjects in this study, as well as those assessed in similar studies, receive less than optimal medical care in either psychiatric or medical settings.

Subjects in this study, as well as the majority of the CMI population, reside within the community. The Utah State Mental Health Planning Committee (1988) reported that approximately 6,333 or 22% of the total population of CMI persons living in Utah are considered "seriously chronically mentally ill" (p. 4). The risk to the community for increased health problems and financial and social burdens resulting from the health of the CMI population has not been investigated. However, these factors may be significant.

The accurate assessment of physical health and functioning of CMI patients is important not only for

adequate medical management, but for effective psychiatric care, as well (Karasu et al., 1980). Subjects in this study reported increased emotional distress with indications of physical illness. They also claimed they were often confused over what symptoms of altered health might mean for them, and whether the symptoms are related to their psychiatric or physical health. Lack of trust in unfamiliar health care providers identified by subjects shows a need for mental health professionals who have worked with CMI patients and who have established a trust relationship to be trained in evaluation of their patients' functional health needs, in order for appropriate referrals to be made.

Medical care of CMI patients is complicated by multiple factors including: (a) patient variables, such as increased emotional distress with symptoms of altered health status, lack of trust in health care providers, and lack of social skills to obtain care; (b) environmental variables, such as noisy waiting rooms and long waits to see health care providers; and (c) mental health professional variables such as not understanding how CMI patients perceive their physical health and functioning, new health care providers at each visit, time and monetary constraints, and comprehensive assessment skills.

Adler et al. (1984) noted that CMI patients are individuals with identities that developmentally,

logically, conceptually, and humanistically predate their patienthood. To establish an effective plan of care for the CMI population, health care providers need to consider each CMI patient as being adjusted within his or her lifespan, rather than just a bearer of treatment outcomes. Incorporating the comprehensive assessment tools utilized within this study may assist mental health professionals, and others, in gaining an increased understanding of each CMI patient.

All of the subjects within this relatively small sample had at least one physical health problem and some had many more than one. These health problems, however, did not appear to dramatically affect the patient's ability to function in performing their activities of daily living. Therefore, it is suggested that an assessment tool evaluating specific technical skills of the CMI patient may be more useful than the basic assessment tool used in this study (SCAS). Some technical skills that may be more useful for understanding the specific needs of each patient in regards to obtaining and following through with health care could include the patient's ability to: (a) use the telephone and mass transit system, (b) budget time and/or income, and (c) plan and follow through with scheduled appointments.

Individuals are not passive responders, but rather active persons with individual strategies for coping that

determine and alter the types of stresses and supports to which they are exposed (Adler et al., 1984). A patient's bizarre behavior may not be a symptom of decompensation, but rather an attempt to meet various needs, including housing, food, safety, and health care, as well as a myriad of other needs. The data from this study show that the CMI subjects were aware of specific symptoms of altered health that related in a significant way with the NP's rating of their functional health. Subjects were also able to inform the researchers of those areas that distressed them most in obtaining health care (i.e., bad experiences with physicians in the past, feeling trapped in health care settings).

A person and the environment are closely linked through a series of complex interactions. For CMI patients, understanding of these relationships is limited. In this study, asking the CMI patient about his perspective increased understanding of distressful areas in obtaining health care. Areas of concern identified by the subjects, such as long waits to see the physician and noise/confusion in health care settings, may be areas that mental health professionals can change in order to meet the needs of this population.

It is suggested that a comprehensive health rehabilitation program be incorporated into the treatment plan for CMI patients. With the relatively large number of

untreated health problems identified in this study, it seems reasonable that a health rehabilitation program would offer benefits that match or exceed those of social rehabilitation programs among this population. The development of skills to appropriately access health care may assist in decreasing the anxiety that CMI patients experience in contacting and following through on health care. Having medically trained personnel available to CMI patients may not be sufficient. Health support group therapy, regular individual counseling, home outreach, and formal education and support for improved healthy living may be required.

Although most clinicians today question psychiatric patients about their physical state, recent illnesses, recent hospitalizations, and results of previous physical examinations, these efforts are insufficient to identify the vast array of physical illnesses manifested in this population. Health care providers need to comprehensively assess patients by not only attempting to gain objective data such as vital signs, laboratory data, and various functional tests, but by gathering subjective data, as well. These subjective assessments should include emotional, physical, and social factors. Health care providers, whether in medical or mental health care practices, require sensitivity training regarding the health and functioning of the CMI patient. The data from



this study demonstrated that patients were aware of their functioning and need for care, but had specific concerns about that care. Meeting patients' needs may increase their feelings of trust with the health care provider, have a positive impact on their future, and improve present health and functioning.

In the absence of case managers, or a health rehabilitation program, patients are generally expected to initiate their own contacts with specialized health care resources and to extract a consistent theme of multiple sources of care. It seems reasonable that psychiatric nurses, with their understanding of holistic functioning and psychiatric processes, may be able to play a vital role in health assessment, as well as in the management of the CMI patient's total functional health care.

#### Implications for Nursing

As health care professionals, nurses have a unique opportunity to serve as holistic caregivers for the CMI population. Nurses can help integrate the physical health, social health, and mental health problems of these patients and develop rehabilitative programs that will assist in meeting their needs for optimal health.

The data obtained from this study showed a need for understanding the dynamic principles of pathological functioning, as well as those governing health, wholeness, and optimal levels of wellness. Kerr (1988) claimed that

... while nurses do not seek to treat pathology in the same sense as physicians, we do seek to undermine the pathology by enlarging the areas of wholeness and optimal health within each individual. [We, as nurses, must also] understand the interrelatedness that exists between the body, mind and spirit. (p. 49)

Lynaugh and Fagin (1988) challenged nurses to learn from each other. Nurses can also learn from their patients. Gaining an understanding of the patient's perspective of functioning and problems with meeting his or her needs may well assist nurses in considering the individual strengths and attitudes of the patient. Nurses, then, can help the patient reach and maintain optimal levels of health and functioning.

#### Limitations

This study's limitations are numerous. They include (a) a nonrandom, convenience sample of a specialized population, and (b) difficulty operationalizing the concept of "health." Many subjects became confused about mental or psychiatric problems when the interviewer attempted to gain data on "physical health problems." Variables assessed and discussed in this study were often confounded, neither specifically dependent nor independent.

Another important limitation of this study involved use of a newly created instrument. However, the strong correlation between the self-rating of emotional health developed from this study and the standardized BSI showed

that the short version employed in this study was valid. At first, another limitation of this study seemed to be volume of material involved in the assessment process. The average length of time for the interview reported by the psychiatric nurse interviewer was 2 hours, 20 minutes. Most subjects, however, appeared to enjoy the sustained focused attention and calmed over time.

#### Evaluation of the Subject's Response to the Interview

Interviewers evaluated each of the subjects immediately upon completion of the interview. Greater than 80% of this sample were evaluated as having been able to respond during the interview with less than moderate expression of psychiatric symptoms.

Two patients diagnosed with decreased cognitive functioning, although able to respond appropriately, did require extra explanations at times during the interview process. Only 3 patients appeared excessively defensive, angry, or paranoid. The majority (88%) were felt to be reliable participants. One of the 3 patients that may have been unreliable in accurate responses to the interview reported to the researcher, "I'm just doing this to prove to those Docs I don't needs meds!"

The mean time for the length of the interview process was 2 hours, 20 minutes. The length of time ranged from 1 hour and 50 minutes to 7 hours. The majority of subjects

(96%) were able to complete the interview within 1-3 hours. The 1 patient who took 7 hours was severely depressed, lonely, and had multiple functional health problems including a tracheostomy for sleep apnea. Extra time was spent with this subject in order to process his feelings in relation to his experiences.

The subjects' responses to the interviews indicated only 7 (27%) experienced some psychiatric discomfort. Twenty-five (95%) reported the questions were easy to follow. The 1 subject who reported some difficulty in ability to follow the interview context had experienced head trauma in the past with resulting brain damage and required extra explanation during the interview.

#### Recommendations for Further Research

The findings from this study provided preliminary data that demonstrate a need to consider ways of understanding CMI patients' views of their health and functioning. Identification of ways to transfer that information into meaningful and practical interventions that will affect the health of this population is needed. It is recommended that this study be repeated with other populations of CMI patients in other psychiatric settings. With a larger sample size, correlation of the interview evaluations with other areas investigated in this study may provide increased information about the influence that

subjects' emotional and behavioral conditions at the time of interview had on their responses. This study did not include a large enough sample to analyze these data in a meaningful way; therefore, they are presented in Appendix C.

Although this study was comprehensive in scope, other researchers may find it profitable to identify specific variables that can be studied with larger samples of both male and female CMI patients. Although some patients reported difficulty accessing health care, increased access does not necessarily mean better health. The subjects in this study that demonstrated increased use of services did not appear to be in significantly better health than other members of the subject group. However, access may not be the key variable -- rather, it is suggested that the entire health delivery process may require assessment. Analysis of this delivery process should include issues related not only to the environment, but to the health care provider and patient, as well. It might be interesting to investigate whether CMI patients report reduced stress or fewer emotional problems in response to a quieter and calmer health care environment that includes personnel with whom the patient has developed a trusting relationship.

In this study, the total number of symptoms of altered health reported by subjects was analyzed and

related to other areas of health assessment. A study investigating whether specific symptoms reported by patients correlated with symptoms reported by the NP might facilitate further understanding of the health processing ability of this population.

Subjects in this study reported feeling confused and frightened about bodily sensations. However, they were able to provide an overall health rating that correlated with the NP's rating of their health. The self-rating of physical health was nonindependent and may, therefore, have been influenced by the interviewer in some way. However, it should be noted that t test analysis between interviewers showed no significant rating differences, although no significant correlations between ratings were identified. These findings are further complicated by the fact that a majority (n=15, 58%) of the subjects reported feelings of distrust toward health care providers and difficulty describing their physical problems to others. Did the self-ratings reflect the subject's true personal assessment of physical health or was he merely reporting what he thought the interviewer wanted to hear? Further study of the health of CMI patients is clearly needed, with attention being directed to all areas that may influence health and functioning.

While data were available regarding the lifestyle of subjects in this study, analysis was not conducted with

this information. With the high incidence of nutritional disorders (i.e., obesity and malnourishment), hygiene problems, gastrointestinal problems, and hypertension, it became evident that analysis of lifestyle variables would have been helpful. During interview sessions, several subjects asked to leave the room to smoke or drink coffee. Assessment of the smoking habits and daily caffeine ingestion of these subjects would have facilitated understanding of their health problems. Other fruitful areas of research might include exercise patterns, dietary habits, seatbelt usage, alcohol use, or use of other harmful substances, to name only a few. In the larger investigation of which this study comprised a portion, these data were collected. It is recommended that correlational analysis be conducted to identify the influence that these lifestyle variables may have on the health problems of this CMI population.

APPENDIX A

DIAGNOSTIC INFORMATION



Table 14

## DSMIII-R Diagnostic Information for Subjects

Diagnosis	<u>n</u>	<u>%</u>
<u>Single-Axis, Single Diagnosis</u>		
Axis I Major Depression (296.33)	1	3.8%
Axis I Chronic Paranoid Schizophrenia (295.32)	3	11.5%
Axis I Chronic Undifferentiated Schizophrenia (295.62)	7	26.9%
Axis I Schizoaffective (295.70)	1	3.8%
Axis III Organic Anxiety Disorder (194.80)	1	3.8%
<u>Single-Axis with Multiple Diagnoses</u>		
Axis I:		
Chronic Undifferentiated Schizophrenia (295.62)		
Schizoaffective (295.70)		
Major Depression (196.33)	1	3.8%
Axis I:		
Posttraumatic Stress Disorder (309.89)		
Major Depression (296.33)		
Generalized Anxiety Disorder	1	3.8%
<u>Dual Axes Each with Single Diagnosis</u>		
Axis I Chronic Paranoid with Axis III Polysubstance Abuse (304.90)	1	3.8%
Axis I Chronic Paranoid Schizophrenia with Axis III Dementia with Memory or Cognitive Loss	1	3.8%
Axis I Chronic Paranoid Schizophrenia with Axis II Unspecified Mental Retardation (319.00)	1	3.8%
Axis I Chronic Paranoid Schizophrenia with Axis III Chronic Substance Abuse (305.00)	1	3.8%
Axis I Chronic Undifferentiated Schizophrenia with Axis III Chronic Substance Abuse (305.00)	1	3.8%
Axis I Chronic Undifferentiated Schizophrenia with Axis II Borderline Personality Disorder (301.83)	1	3.8%

Table 14 continued

Diagnosis	<u>n</u>	%
<u>Multiple Axes/Multiple Diagnoses</u>		
Axis I Posttraumatic Stress Disorder with Axis II Borderline Personality Disorder, Antisocial Personality Disorder and Axis III Polysubstance Abuse (304.90) and Organic Anxiety Disorder (294.80)	1	3.8%
Axis I Paranoid Schizophrenia and Schizoaffective Disorder, with Axis II Polysubstance abuse	1	3.8%
Axis I Major Depression and Dys- thymia with Axis III Dementia with Memory Loss	1	3.8%

Source: American Psychiatric Association (1987).  
Diagnostic and statistical manual of mental  
disorders (3rd ed.). Washington, DC: Author.

APPENDIX B

PERCEPTIONS OF EMOTIONAL HEALTH

Table 15  
Subjects' Perceptions of Emotional Health

Rating	<u>n</u>	% <sup>a</sup>
Don't Know	0	0
1 Poor	3	11.5%
2	4	15.4%
3	2	7.7%
4 Average	11	42.3%
5	2	7.7%
6	1	3.8%
7 Excellent	3	11.5%

Mean Rating = 3.77  
Standard Deviation = 1.75

Note.   <sup>a</sup> Indicates valid percent.

APPENDIX C

SUBJECTS' AND INTERVIEWERS' COMMENTS

Subject's Comments on the Interview  
Process

1. Informative, intense, assertive and a whole lot of fun.
2. Alone a lot -- try to be pleasant, but inside I don't feel well.

Interviewer's Comments on Subjects

1. Patient calmed when able to leave the interview at his own discretion and smoke and relate to other patients for about 5 minutes. He then came back to the interview. Patient appeared to gain sense of control and decreased in anxiety. He was able to respond without overt psychiatric signs and symptoms. He vented some of his anger to friends in the smoking areas about some of the issues introduced with the questions.
2. Patient was extremely needy for someone to listen to him and took a great deal of time with the interview -- critical incident report caused confusion because he went to the hospital with a functional problem and was placed in a psychiatric unit.
3. Validity and reliability of the instrument in this study are in question with this patient since he was extremely paranoid and wanted to please more than be accurate.
4. Patient appeared extremely preoccupied with being susceptible to AIDS and the possibility of all of his signs and symptoms being related to AIDS.
5. Recent admission to day treatment -- alcoholism with 16 years. Dry X 1 month. History of impulsiveness, impatient to understand the rating system in this study -- critical.
6. Patient found the interview somewhat distressing when talking about symptoms that recall experiences from the past, especially in relation to POW experience.

APPENDIX D

FUNCTIONAL HEALTH PROBLEMS

Table 16  
 Enumeration of Major Functional Health Problems  
 Identified by Affected System

System/Problem	<u>n</u>	Treated	Untreated
<u>Cardiovascular</u>			
Hypertension	9	5	4
High cholesterol level	3		3
Organic heart disease (previous MI, history of heart failure)	1	1	
History of aortic aneurysm	1	1	
<u>Respiratory</u>			
Sleep apnea with tracheostomy	1	1	
Acute bronchitis	1		1
Asthma/COPD	1		1
<u>Gastrointestinal</u>			
Peptic ulcer disease	1	1	
History of gastrointestinal bleeding	2		2
Abdominal mass right lower quadrant	1		1
<u>Urinary/Reproductive</u>			
Impotence	1	1	
<u>Nervous System/Sensory</u>			
Chronic pain from gunshot wound	1	1	
Lobotomy-dementia with decreased cognitive function	1	1	
Cerebral vascular insufficiency; carotid endorectomy; history of transient ischemic attacks	1	1	
Peripheral neuropathy	1		1



Table 16 continued

System/Problem	<u>n</u>	Treated	Untreated
<u>Musculoskeletal</u>			
Decreased mobility; secondary spondylitis, decreased strength in fingers, right hand, and right leg	1	1	
Degenerative joint disease	2	1	1
<u>Endocrinological, Nutritional, and Metabolic</u>			
Obesity (122% - 161% ideal body weight)	11		11
Undernourished (81% of ideal body weight)	1		1
Diabetes (adult onset) (Fasting blood sugar > 140 and > 200)	2	2	
Increased thyroid function test	1		1
Mild microcyten anemia	1		1
<u>Dermatologic</u>			
Multiple disfiguring facial scars secondary to explosive trauma	1		1
<u>General</u>			
Polysubstance abuse	3	2	1
Medication noncompliance with life-threatening illness	1		1
Toxic theophylline (level 22 mcg/ml with therapeutic range 10-20 mcg/ml)	1		1
Psychosomatic -- seen 3-4 times in rheumatology and neurology clinic without findings	1		1
Poor dentation with only lower front teeth remaining which show severe decay	1		1
<b>Totals</b>	<b>56</b>	<b>22</b>	<b>34</b>

APPENDIX E

MINOR FUNCTIONAL HEALTH PROBLEMS

Table 17  
 Enumeration of Minor Functional Health Problems  
 Identified by Affected System

System/Problem	<u>n</u>	Treated	Untreated
<u>Cardiovascular</u>			
Hypertension well-controlled	1	1	
Mild peripheral vascular insufficiency	1	1	
Orthostasis	1	1	
History of right bundle branch block	1		1
<u>Respiratory</u>			
Cough syncope	1	1	
History of positive tuber- culosis test	1	1	
<u>Gastrointestinal</u>			
History of peptic ulcer disease	2	2	
Constipation	2		2
Diverticulosis	2		2
Internal minor hemorrhoid	1	1 <sup>a</sup>	
External hemorrhoid	1	1 <sup>a</sup>	
Left inguinal hernia -- easily reduced	1	1 <sup>a</sup>	
<u>Urinary/Reproductive</u>			
Benign prostate hypertrophy	3	1	2
Prostate nodule -- benign history	1	1	
Spermatocele	1		1
Cyst on testicle	1		1
Impotence secondary to drug use	1		1

Table 17 continued

System/Problem	<u>n</u>	Treated	Untreated
<u>Nervous System -- Sensory</u>			
Nonsurgical cataracts	3		3
Decreased visual acuity	4	2	2
Fine intentional tremor (pin roll -- secondary to chronic drugs)			
Resting tremor, secondary to medications	2	2	
Tension headache	1		1
Myopia 20/30 vision	1	1	
<u>Musculoskeletal</u>			
Decreased mobility-fracture right foot with deformity	1	1	
Degenerative joint disease	1	1	
Muscle wasting left lower extremity	1		1
<u>Endocrinologic/Nutritional/ Metabolic</u>			
Undernourished (81%-91% ideal body weight)	2		2
Obesity (111% - 115% ideal body weight)	3		3
Elevated glucose	1		1
<u>Dermatologic</u>			
Fungal infection -- toenails	4		4
Callouses -- feet	1	1	
Facial/chest scars with disfigurement	1	1	
Dermatitis -- skin left arm	1	1	
Skin rash on buttocks	1		1
Poor foot hygiene	3		3
Lid entropion	1		1
Acne lesions	2		2
Fungal infection -- ears	1		1
Hyperplasia of oil glands	1		1

Table 17 continued

System/Problem	<u>n</u>	Treated	Untreated
<u>General</u>			
Tobacco abuse	4		4
Poor oral hygiene with caries, rule out abscess	1		1
Poor dentation	5		5
Impacted ears -- ear wax	4		4 <sup>b</sup>
History of alcohol abuse -- remission	1	1	
Immunizations not current	2		2
Dentures need relining	1		1
Lack of health information	1		1
<b>Totals</b>	<b>84</b>	<b>19</b>	<b>62<sup>c</sup></b>

Note.   <sup>a</sup> treatment not required at this time; <sup>b</sup> treated by NP; <sup>c</sup> 3 did not require treatment at this time.

APPENDIX F

SELF-REPORTED HEALTH HISTORY

Table 18  
 Subjects' Self-Reported Health History Reported  
 by Affected System

System/Problem	<u>n</u>
<u>Cardiovascular</u>	
Hypertension	8
Heart disease	3
Circulation	6
<u>Respiratory</u>	
Bronchitis	3
Asthma	1
Emphysema	5
Pneumonia	2
Sinus	1
Tuberculosis	2
<u>Gastrointestinal</u>	
Peptic ulcer disease	0
Stomach	10
Diverticulitis	1
<u>Urinary-Reproductive</u>	
Urinary tract infection	2
Kidney stones	2
Impotence	2
<u>Nervous-Sensory</u>	
Brain damage	
(brain coming out ears)	1
(due to aspirin -- unvalidated)	1
Craniotomy for skull injury	1
Headache	1
Hearing decreased	4
Vision decreased	17
<u>Musculoskeletal</u>	
Arthritis	9

Table 18 continued

System/Problem	<u>n</u>
<u>Endocrinologic-Nutritional-Metabolic</u>	
Anemia	1
Diabetes (adult onset)	2
Thyroid	1
Dehydration	1
<u>Dermatologic</u>	
Boils	1
Frostbite (? areas)	1
Skin	9
Warts	1
"Swimmer's Ear" (fungus in ear)	1
"Jungle Rot" (feet)	1
<u>General</u>	
Alcohol abuse	8
Cancer	3
Venereal disease	4



APPENDIX G

HEALTH STATUS RATINGS

Table 19  
 Self-Ratings of Overall Health with Psychiatric Nurse  
 and Nurse Practitioner

Rating	Rating	n	%
<u>Self-Rating of Overall Health with Psychiatric Nurse Interviewer</u>			
Poor	1	6	23.1%
Fair	2	2	7.7%
	3	3	11.5%
Average	4	6	23.1%
Good	6	4	15.4%
Excellent	7	5	19.2%
<b>Mean</b>	<b>3.92</b>		
<b>Standard Deviation</b>	<b>2.24</b>		
<u>Self-Rating of Overall Health with Nurse Practitioner</u>			
Poor	1	4	16.7%
Fair	2	2	8.3%
	3	4	16.7%
Average	4	8	33.3%
Good	6	4	16.7%
Excellent	7	2	8.3%
<b>Mean</b>	<b>3.75</b>		
<b>Standard Deviation</b>	<b>1.87</b>		

APPENDIX H

HEALTH CONCERNS AND STRESSES

Table 20  
Responses and Distress Rating Means and Standard  
Deviations for Health Concerns and Stresses

Experiences	Distress Rating		n	%
	Mean	SD		
<u>Managing</u>				
1. Trouble understanding source or cause	5.15	2.08	13	50.0%
2. Confusion about sensation, physical or emotional	4.64	2.17	14	53.8%
3. Worry about body function -- normal or defective	4.75	2.15	16	61.5%
4. Frightened by bodily sensations (i.e., pain)	5.63	1.50	14	53.8%
5. Not knowing what to do about symptoms of illness	5.09	1.97	11	42.3%
6. Trouble describing my physical symptoms to others	4.73	2.43	15	57.7%
7. Feel like I am falling apart when ill	4.00	1.88	14	53.8%
8. Feel my body not part of me when ill	4.75	1.98	16	61.5%
9. Emotional problems get worse when physically ill	5.13	1.63	16	61.5%
10. Fear something dreadful is happening when ill	5.18	2.09	11	42.3%
11. Worry physical illness interferes with relationships	4.50	2.36	12	46.2%

Table 20 continued

Experiences	Distress Rating		n	%
	Mean	SD		
<u>Treatment</u>				
1. Embarrassed with physical examination	4.56	2.07	9	34.6%
2. Not knowing how/uncomfortable making medical dental appointments	5.40	1.82	5	19.2%
3. Difficulty understanding doctor/nurse recommendations	5.00	2.52	7	26.9%
4. Trouble remembering to make medications for physical health	3.83	2.55	12	46.2%
5. Trouble remembering to do a treatment	3.57	2.15	7	26.9%
6. Difficult going alone to doctor or dentist	4.83	1.94	6	23.1%
7. Not enough energy to take action about health	4.31	1.85	16	61.5%
8. A different doctor every time go to a medical facility	4.25	2.34	13	50.0%
9. Long waits to see doctor	4.56	2.11	20	76.9%
10. Crowded waiting room	3.93	2.76	14	56.0%
11. Noise and confusion in health care settings	3.50	2.36	18	69.2%
12. Getting lost or need to ask questions	2.63	2.45	8	30.8%
13. Have to explain too many times	4.50	2.13	16	61.5%

Table 20 continued

Experiences	Distress Rating		n	%
	Mean	SD		
14. Lack of respect for personal privacy	4.71	2.50	7	26.9%
15. Delay in treatment due to lost/incomplete medical records	5.00	2.65	7	26.9%
16. Side-effects of medications for physical health problems	4.62	1.98	13	50.0%
17. Too ill to follow prescribed treatment	4.50	1.52	6	23.1%
18. Not included in treatment plans	5.30	1.77	10	38.5%
19. Prescribed treatment did not help/made worse	5.00	1.87	9	34.6%
20. Hard to get appointment	4.73	1.27	11	42.3%
21. Unable to get treatment due to cost or ineligibility	3.50	1.93	8	30.8%
22. Unsure if condition needed attention	4.21	2.33	14	53.8%
23. Distrust of health care providers	5.07	2.09	15	57.7%
24. No one believes me	5.00	1.78	13	50.0%
25. Care providers unaware of past medical problems	3.67	2.45	9	34.6%
26. Not able to choose doctor I would like	4.38	2.93	8	30.8%
27. Bad experiences with doctors in the past	5.77	1.36	13	50.0%

Table 20 continued

Experiences	Distress Rating		n	%
	Mean	SD		
28. Feeling trapped in a health care setting	5.75	1.66	12	46.2%
29. Hearing voices or having confused thoughts when needing a medical doctor	5.73	1.74	11	42.3%

APPENDIX I

CONSENT DOCUMENTS



Subject Information Sheet

Information About: Assessment of Functional Health,  
Health Perceptions, Needs and Use of  
Services Among Chronically Mentally  
Ill Outpatients.

Previous research studies have shown that persons receiving mental health care may also experience physical health problems. As nurses, we are interested in the physical health of patients in the Salt Lake City Veteran's Administration Medical Center Day Treatment Program. We would like to learn more about your physical health and any problems you may have in taking care of your health.

Benefits from this study include the gaining of information that may help to improve your physical health care. The information you provide may also help to improve the physical health care of other psychiatric patients. No payments of money or special recognition will be provided to the subjects of this study.

This study involves minimal risk except in relationship to the possible loss of time and stress involved in completing the physical examination and the questionnaires.

Your name will be strictly confidential and will not be used in reporting the findings of this study. You may or may not elect to have any positive findings reported to your therapists at the VA. Participation in this study will not affect your continuing treatment at SLVAMC. You may withdraw from participating in this study at any time without any consequences whatsoever to your participation in the Day Treatment Program.

\_\_\_\_\_

Date

\_\_\_\_\_

Signature of Subject

\_\_\_\_\_

Date

\_\_\_\_\_

Witness

As a subject of this study, you will be asked to do the following two things:

1. Complete several questionnaires about your physical health, health needs and habits, and any problems you have had in taking care of your health. A nurse will help you complete the questionnaires and answer any questions. It should take you about 1 hour to complete the questionnaires.
2. Complete a health history and physical examination done by a nurse practitioner, which will take approximately 1 1/2 hours to complete.

If you have not had your annual blood work and urinalysis required by the Day Treatment Program, you will be asked to give a urine specimen and to have blood drawn (15 cc or approximately 3 teaspoons) from your vein. Occasionally bruising, inflammation, or in vary rare cases, infection may occur at the site where blood was drawn.

You are also being asked to give permission for the VAMC to allow us to use information contained in your records that pertains to your physical health status (recent lab tests, x-rays, EKGs, and past psychiatric history).

After the physical examination the nurse practitioner will share with you any findings and recommendations. If you believe the recommendations would be helpful to you, it will be your responsibility to seek further health care. The staff at the Day Treatment Center may be of assistance in answering questions, but they are not responsible for making arrangements for health care that does not fall within your VA eligibility. For any health problems that require immediate attention, you will be referred to the VA admitting office for further evaluation.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

For VA patients, see VA form 10-1086 for a statement of liability.

for non-VA patients, in the event you sustain injury resulting from the research project in which you are participating, the University of Utah will provide you, without charge, emergency and temporary medical treatment not otherwise covered by insurance. Furthermore, if your injuries are caused by negligent acts or omissions of University employees acting in the course and scope of their employment, the University may be liable, subject to limitations prescribed by law, for additional medical costs and other damages you sustain. If you believe that you have suffered an injury as a result of participation in this research program, please contact the Office of the Vice President for Research, telephone number 581-7236.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

I give my permission for any positive results obtained in the physical assessment and laboratory tests to be released to my mental health therapist or advocate within the Veteran's Administration Medical Center.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

If you have any questions, they will be answered by the following nurse researchers who can be contacted through the SLVAMC Nursing Services (582-1565, X 1218): JoAnn Rolando, R.N., M.S.; Ann Hutton, R.N., M.S.; and Marilynne Bjork, R.N. If you have any questions that you would rather not discuss with the nurse researcher, you may contact the Institutional Review Board Office at 581-3655.

I have read this consent form, my questions have been answered, and I have received a copy of the consent form. I desire to participate in this study. I understand that my participation is voluntary and that I can end my participation at any time by withdrawing consent without consequence to my future care. I give my permission to information gathered in this study to be released to the aforementioned nurse researchers: Ann Hutton, faculty member from the University of Utah College of Nursing, JoAnne Rolando, Geriatric Nurse Specialist, SLVAMC, and Marilynne Bjork, graduate student, University of Utah College of Nursing.

---

Date

---

Signature of Subject

---

Date

---

Witness

APPENDIX J

DEMOGRAPHIC QUESTIONNAIRE<sup>1</sup>

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<sup>1</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

Interviewer: \_\_\_\_\_

## SECTION 1: DEMOGRAPHIC VARIABLES

Some aspects of people's backgrounds are important in understanding the kind of help they need when faced with illness.

Var. #

\_\_\_ 1. What is your sex? (Circle the number next to the correct or most accurate response.)

Male.....1

Female.....2

\_\_\_ 2. How old were you on your last birthday?

\_\_\_ years

\_\_\_ 3. At this time are you:

Married.....1

If married, for how long? \_\_\_\_\_

Separated.....2

Divorced.....3

If divorced, for how long? \_\_\_\_\_

Widowed.....4

If widowed, for how long? \_\_\_\_\_

Never married.....5

Number of marriages \_\_\_\_\_

\_\_\_ 4. Do you have any children?

Yes.....1

List children and ages:

How many \_\_\_\_\_

No.....2

(If no, skip to #5)

\_\_\_ 5. How many children do you have living at home?

\_\_\_ Children

OR

None at home.....00

(If none, skip to #5)

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

\_\_\_ 6. List any children living at home:

Name	Sex	Age
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

\_\_\_ 7. Not counting children, do you: Yes No  
 Live alone?.....1 2  
 (If yes, skip to #10)

\_\_\_ 8. Does your household include:

	<u>Yes</u>	<u>No</u>
Your spouse or other mate.....	1	2
Relatives.....	1	2
Friends.....	1	2
Other patients.....	1	2

\_\_\_ 9. How many people, counting children and any others who usually live with you, are in your household (be sure to count yourself)?

\_\_\_\_\_ people

\_\_\_ 10. Are you currently working at a paid job?

a. If yes, how many hours per week do you work?

\_\_\_\_\_ average hours per week  
 (Skip to #11)

b. If no, are you (pick the best one):

- Vocational education.....1
- Sheltered workshop.....2
- Unemployed.....3
- Retired.....4
- Physically disabled.....5
- In school.....6
- Emotionally disabled.....7

c. Have you ever been employed?...1 Yes No  
 2

Describe \_\_\_\_\_

(Last employment for wages - date, etc.)

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

\_\_\_ 11. Do your emotional problems keep you from working at a job or going to school?

Yes.....1

No.....2

\_\_\_ 12. How many years of regular school (including college) did you finish and get credit for?

\_\_\_\_\_ years of schooling

\_\_\_ 13. What is the highest degree or diploma you have?

No degree or diploma.....1

High school diploma.....2

Associate (AA).....3

Bachelors (BA or BS).....4

Masters (MA, MS, MBA, etc.).....5

Professional (MD, PhD, Law, etc.).....6

\_\_\_ 14. Source of income (circle all that apply):

Welfare.....1

Social Security  
(including VA, pension)...2

Disability .....3

Family.....4

Earned income.....5

Savings.....6

Other (please specify) \_\_\_\_\_

<u>Yes</u>	<u>No</u>
------------	-----------

Do you manage your own money? .....	1	2
-------------------------------------	---	---

If no, describe situation. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Date: \_\_\_\_\_

ID #: \_\_\_\_\_

- \_\_\_ 15. Counting all income from all sources, what was your total family income (before taxes) for 1986? (Include wages, tips or commissions, social security, dividends, pensions, alimony, welfare, etc.)

\_\_\_\_\_ Total monthly income

\_\_\_\_\_ Estimate of total yearly income

- \_\_\_ 16. Including yourself, how many people were dependent on that income in 1987?

\_\_\_\_\_ People

- \_\_\_ 17. What would you say is your own main racial or ethnic group?

American Indian or Alaskan Native...1

Asian or Pacific Islander.....2

Black (not of Hispanic origin)...3

Hispanic.....4

White (not of Hispanic origin)...5

Other \_\_\_\_\_.....6

- \_\_\_ 18. Do you have a religious preference?

Protestant.....1

Catholic.....2

L.D.S. (Mormon).....3

Jewish.....4

Other.....5

(specify): \_\_\_\_\_

No preference.....6

APPENDIX K

PERCEIVED HEALTH CONCERNS AND  
STRESSES QUESTIONNAIRE<sup>2</sup>

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<sup>2</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

**SECTION II: PERCEIVED HEALTH CONCERNS AND STRESSES**

The following items refer to experiences in trying to get your health needs met. The items cover staying healthy, following medical advice, and obtaining health care services when you need them. For each item you will be asked if you have ever experienced the situation as described. Next, if you have experienced the situation, you will be asked to rate how upsetting or distressing the experience was on a 0 to 7 point scale (0 = not at all distressing 7 = extremely distressing).

**A. Experiences in Managing Physical Symptoms or Illness**

-----0-----1-----2-----3-----4-----5-----6-----7-----					
Not at all	Slightly	Somewhat	Moderately	Extremely	
Distressing	Distressing	Distressing	Distressing	Distressing	
<u>Rating</u>					<u>Yes</u> <u>No</u>
_____	1.	Trouble understanding the source or cause of bodily sensations or symptoms.		1	2
_____	2.	Confusion about whether a sensation is a physical health problem or a part of an emotional condition.		1	2
_____	3.	Worry whether or not my body is functioning normally or is defective in some way.		1	2
_____	4.	Frightened by the experience of bodily sensations, such as pain, fatigue, hunger, etc.		1	2
_____	5.	Not knowing what to do when I have symptoms that might be a physical illness.		1	2
_____	6.	Trouble describing my physical symptoms to others.		1	2
_____	7.	Feel like I am falling apart when I feel ill.		1	2
_____	8.	Feel as if my body were not a part of me when I am not feeling well physically.		1	2
_____	9.	Emotional problems getting worse when I am ill or have a physical health problem.		1	2
_____	10.	Fear that something dreadful or awful is happening when I'm physically ill.		1	2
_____	11.	Worry that physical illness interferes with important relationships.		1	2

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

B. Experiences in Relation to Treatment

-----0-----	-----1-----	-----2-----	-----3-----	-----4-----	-----5-----	-----6-----	-----7-----
Not at all	Slightly		Somewhat		Moderately		Extremely
Distressing	Distressing		Distressing		Distressing		Distressing
Rating							
						Yes	No
_____	1.	Feel embarrassed about a physical health examination.				1	2
_____	2.	Not knowing how or feeling uncomfortable in making medical or dental appointments.				1	2
_____	3.	Difficulty understanding what the doctor or nurse recommended should be done about my health problem.				1	2
_____	4.	Trouble remembering to take medications prescribed for my <u>physical health</u> problems.				1	2
_____	5.	Trouble remembering to do a treatment prescribed by a doctor or nurse.				1	2
_____	6.	Difficulty going alone to a doctor's or dentist's office.				1	2
_____	7.	Not having enough energy or motivation to take action about my health even when I know I need treatment.				1	2
_____	8.	Seeing a different doctor every time I go to a medical facility.				1	2
_____	9.	Long waits to see the doctor.				1	2
_____	10.	Having to wait in a crowded waiting room.				1	2
_____	11.	Noise and confusion in health care settings.				1	2
_____	12.	Getting lost, or needing to ask questions in a large health clinic or office building.				1	2
_____	13.	Having to explain my problems too many times.				1	2
_____	14.	Lack of respect for my personal privacy.				1	2
_____	15.	Delay in treatment because of lost or incomplete medical records.				1	2
_____	16.	Experiencing side effects of medication prescribed for a <u>physical health problem</u> .				1	2
_____	17.	Too ill to follow prescribed treatments.				1	2

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

-----0-----1-----2-----3-----4-----5-----6-----7-----						
Not at all	Slightly	Somewhat	Moderately	Extremely		
Distressing	Distressing	Distressing	Distressing	Distressing	Yes	No
Rating						
_____	18.	Not being included in plans or given explanations regarding my treatment.			1	2
_____	19.	Prescribed treatment did not help or made my health problem worse.			1	2
_____	20.	Hard to get an appointment for medical care when I need it.			1	2
_____	21.	Unable to obtain treatment or medication because of cost or ineligibility.			1	2
_____	22.	Unsure if my condition really needed medical attention.			1	2
_____	23.	Feeling of distrust toward health providers.			1	2
_____	24.	No one believing my problems are real or taking me seriously.			1	2
_____	25.	Care provider (doctor/nurses) unaware of past medical problems when I'm seeking care for a new problem.			1	2
_____	26.	Not being able to chose the doctor I would like.			1	2
_____	27.	Bad experiences with doctors in the past.			1	2
_____	28.	Feeling trapped, wanting to run away when in a health care setting.			1	2
_____	29.	Hearing voices or having confused thoughts when needing to see a medical doctor.			1	2

C. Comments

Are there any other experiences or health concerns that have not been mentioned that have been troublesome to you? Please describe.

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Date: \_\_\_\_\_

ID #: \_\_\_\_\_

D. Priority List

Of all the experiences which you have rated as being distressing, select the three (3) that have been the most upsetting. Rank order (1-3) these experiences according to which was the most upsetting as 1, the next most upsetting as 2, and the least upsetting as 3.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

APPENDIX L

PERCEIVED EMOTIONAL HEALTH ASSESSMENT TOOL<sup>3</sup>

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<sup>3</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.





APPENDIX M

PHYSICAL HEALTH STATUS QUESTIONNAIRE<sup>4</sup>

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<sup>4</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.

ID # \_\_\_\_\_

Interviewer: \_\_\_\_\_

Date: \_\_\_\_\_

SECTION VII. PERCEPTION OF PHYSICAL HEALTH STATUS:Var. #

\_\_\_ 1. How would you rate your overall physical health right now?

0-----1-----2-----3-----4-----5-----6-----7  
 Don't know poor fair average good excellent

\_\_\_ 2. Compared to 3 months ago, would you say that your overall health is:

0-----1-----2-----3-----4-----5-----6-----7  
 Don't know much about much  
 worse the same better

\_\_\_ 3. How much of the time do you think about your physical health?

0-----1-----2-----3-----4-----5-----6-----7  
 Don't know not at seldom occasionally frequently all the  
 all time time

\_\_\_ 4. How much does it bother you to think about your physical health?

0-----1-----2-----3-----4-----5-----6-----7  
 Don't know not at a little somewhat moderately extremely  
 all a little bothersome bothersome

\_\_\_ 5. Compared with family members and/or friends, is your physical health status:

0-----1-----2-----3-----4-----5-----6-----7  
 Don't know worse about the much  
 same better

\_\_\_ 6. How many times during the last year have you been confined to bed or home for more than 3 days because of a physical health problem? \_\_\_\_\_

\_\_\_ 7. Describe problems:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_ 8. Do any health care workers visit you in your home on a regular basis?

\_\_\_ Yes (if yes, answer questions 9 and 10)

\_\_\_ No

\_\_\_ Refused

\_\_\_ Don't know

Client # \_\_\_\_\_

Var. #

\_\_\_ 9. If yes to Question 8, is this person a (check all that apply):

\_\_\_ Home health aide

\_\_\_ Visiting nurse

\_\_\_ Friend

\_\_\_ Relative

\_\_\_ Other (describe) \_\_\_\_\_

\_\_\_ 10. If yes to Question 8, what does this person do for you?

1st person    2nd person    3rd person

Provide nursing care  
(change dressings, give  
shots, BP, other)

Provide assistance in  
daily living

Help with homemaking,  
cooking, cleaning

Help with shopping,  
transportation

\_\_\_ 11. Have you ever been in a hospital or nursing home for physical health problems? Please describe with date and reason for hospitalizations.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_ 12. Do you have any health problems for which you are currently being treated?

Describe health problem(s): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Describe treatment(s) including prescribed or self-prescribed remedies:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Client # \_\_\_\_\_

Var. #

- \_\_\_\_ 13. Do you have any health problems for which you are not receiving treatment, or for which treatment has not been effective?

Describe health problem(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Describe any attempted treatment including self-prescribed or over-the-counter remedies: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

APPENDIX N

USE OF HEALTH CARE SERVICES QUESTIONNAIRE<sup>5</sup>

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<sup>5</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.

Client # \_\_\_\_\_

SECTION VIII. USE OF HEALTH CARE SERVICES:Var. #

- \_\_\_ 1. During the past year, I have visited a doctor's office, health care clinic or emergency medical center \_\_\_\_\_ times (number of visits).  
These visits were for the following health care problems or conditions: \_\_\_\_\_  
\_\_\_\_\_
- \_\_\_ 2. During the past year, I have seen a dentist \_\_\_\_\_ times (number of visits).  
These visits were for the following dental problems or conditions: \_\_\_\_\_  
\_\_\_\_\_
- \_\_\_ 3. During the past year, I have seen other health care providers such as:  
\_\_\_ Optometrist  
\_\_\_ Chiropractor or physical therapist  
\_\_\_ Nurse  
\_\_\_ Other (specify): \_\_\_\_\_
- \_\_\_ 4. When was the last time you saw a medical doctor or other health care provider for a physical health problem or had a physical health examination?  
\_\_\_ Days ago  
\_\_\_ Weeks ago  
\_\_\_ Months ago  
\_\_\_ Years ago  
\_\_\_ Never  
\_\_\_ Cannot remember
- \_\_\_ 5. Who is the person most likely to suggest to you that you need to see a doctor or someone about a health care problem?  
\_\_\_ Myself  
\_\_\_ Parent(s)  
\_\_\_ Relative  
\_\_\_ Friend  
\_\_\_ Another client  
\_\_\_ Therapist or case manager

APPENDIX O

PATIENT'S RESPONSE TO INTERVIEW QUESTIONNAIRE<sup>6</sup>

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<sup>6</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

SECTION XI. PATIENT'S RESPONSE TO INTERVIEW

Please answer "yes" or "no" to the following questions:

- \_\_\_\_\_ 1. Have you experienced any discomfort answering these questions?
  
- \_\_\_\_\_ 2. Have you found this questionnaire/interview easy to follow and understand?
  
- \_\_\_\_\_ 3. Have you been able to focus your thoughts during this interview?

Other Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



APPENDIX P

QUESTIONNAIRE ASSESSING INTERVIEWER'S EVALUATION  
OF PATIENT BEHAVIORS DURING INTERVIEW<sup>7</sup>

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<sup>7</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

Interviewer: \_\_\_\_\_

SECTION XII. INTERVIEWER'S EVALUATION OF PATIENT RESPONSE DURING INTERVIEW

1. Based on the behavior and verbal responses of the CMI patient participant during the interview/questionnaire, rate the extent to which you believe the patient was able to respond without being unduly influenced by anxiety and/or symptoms of mental illness (please circle the appropriate number):

0-----1-----2-----3-----4-----5-----6-----7  
None of the time                      Some of the time                      All of the time

2. Please list any of the question(s) that you believe created a problem for the patient in terms of either validity, reliability, or appropriateness of response:

\_\_\_\_\_  
\_\_\_\_\_

3. Please specify any problems you experienced with the patient during the administration of this questionnaire or with the interview:

\_\_\_\_\_  
\_\_\_\_\_

4. In relation to the amount of stress the patient participant exhibited during this interview, would you say the interview was (circle the appropriate number):

0-----1-----2-----3-----4-----5-----6-----7  
Not at     A little                      Moderately stressful                      Very stressful  
all           stressful

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

Using the following 0 to 7 point scale, answer Questions 5-9:

0-----1-----2-----3-----4-----5-----6-----7  
 Not at Mild Moderate A great  
 all deal

5. Did the patient appear to experience any of the following during the interview?

Fear  
 Agitation  
 Withdrawal  
 Unable to respond  
 Needed help of extra explanations  
 Defensive, paranoid  
 Angry, hostile  
 Other \_\_\_\_\_

6. Lack of awareness of physical needs/problems:

Seemed perplexed by questions about health  
 Denied obvious problem with health  
 Lacks knowledge about basic health and hygiene needs  
 Shows lack of response to usually painful stimuli  
 Other \_\_\_\_\_

7. Interference with internal or external stimuli; inability to focus attention:

Preoccupied, unable to concentrate  
 Easily distracted or confused  
 Intrusions in speech  
 Inability to selectively attend; susceptible irrelevant cues  
 Bizarre answers or beliefs  
 Reports bizarre symptoms  
 Made unusual connections between health and other issues (e.g., religion)  
 Difficulty identifying real from unreal

Date: \_\_\_\_\_

ID #: \_\_\_\_\_

0-----1-----2-----3-----4-----5-----6-----7  
 Not at Mild Moderate A great  
 all deal

## 8. Ability to communicate feelings and ideas:

- Impoverished thought and ideas  
 Pressured speech, talkative  
 Unable to respond appropriately to some questions  
 Had to be encouraged to respond  
 Inconsistent or irrelevant responses  
 Angry, demanding  
 Unassertive, passive  
 Other \_\_\_\_\_

## 9. Ability to organize self and thoughts; set and accomplish goals:

- Unclean, unkempt appearance  
 Difficulty following directions  
 Lack of interest or motivation  
 Responses indicate difficulties in problem-solving  
 Impulsive responses  
 Poor memory, forgetful  
 Difficulty conceptualizing  
 Unrealistic expectations of own abilities  
 Needed considerable direction and assistance  
 Other \_\_\_\_\_

## 10. Length of time required to complete interview: \_\_\_\_\_

Other comments:

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APPENDIX Q

HEALTH HISTORY QUESTIONNAIRE<sup>8</sup>

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<sup>8</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.

ID # \_\_\_\_\_

SECTION XIII: PAST HEALTH HISTORY

1. Do you have any physical complaints today? (If so, list)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. How would you rate your overall physical health right now?

0-----1-----2-----3-----4-----5-----6-----7  
Don't know poor average excellent

3. Have you ever been in the hospital for a medical problem? If so , please list reasons:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Are these health problems documented in the VAMC's medical record?

\_\_\_ No \_\_\_ Yes

5. Have you ever had surgery or any broken bones? \_\_\_ No \_\_\_ Yes  
(Please list problems and when they occurred)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Do you have, or have you been told you have, any of the following illnesses (please be specific)

	<u>No (1)</u>	<u>Yes (2)</u>
a. Vision problems	_____	_____
b. Hearing problems	_____	_____
c. Skin disorder	_____	_____
d. Sinus problem	_____	_____
e. Thyroid disorder	_____	_____
f. High blood pressure	_____	_____
g. Heart disease (CHF, MI, Angina, Rheumatic fever, in pulse)	_____	_____
h. Circulation problems	_____	_____
i. Liver disease	_____	_____
j. Stomach or intestinal problems (ulcers, constipation)	_____	_____

ID # \_\_\_\_\_

	<u>No (1)</u>	<u>Yes (2)</u>
k. Alcoholism/abuse	_____	_____
l. Diabetes	_____	_____
m. Bleeding disorder	_____	_____
n. Frequent urinary tract infections	_____	_____
o. Kidney stones	_____	_____
p. Venereal disease	_____	_____
q. Cancer	_____	_____
r. Emphysema/Bronchitis	_____	_____
s. Tuberculosis	_____	_____
t. Pneumonia	_____	_____
u. Stroke	_____	_____
v. Seizures	_____	_____
w. Arthritis	_____	_____
Other (please list)	_____	_____
_____		
_____		
_____		

APPENDIX R

SYMPTOM CHECKLIST<sup>9</sup>

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<sup>9</sup> Reprinted with permission of coauthors Ann P. Hutton and JoAnn Rolando. Hutton, A.P., Bjork, M., & Rolando J. (1988). Experiences in managing health needs. Unpublished document available through the University of Utah College of Nursing, Salt Lake City, UT.



ID # \_\_\_\_\_

SECTION XIV: SYMPTOM CHECKLIST

Do you have any of these symptoms?

<u>Var. #</u>		No (1)	Yes (2)
___	Weight loss or gain of more than 10 pounds within the past year?	_____	_____
___	Feeling tired with no energy for usual activities?	_____	_____
___	Fever, chills or sweating?	_____	_____
___	Notice that you bruise easily?	_____	_____
___	Skin rash, irritation or itching?	_____	_____
___	Change in vision (blurring)?	_____	_____
___	Noticed that your hearing has decreased?	_____	_____
___	Ringing or buzzing in your ears?	_____	_____
___	Frequent headaches?	_____	_____
___	Frequent or severe nosebleed?	_____	_____
___	Sore throat?	_____	_____
___	Do you feel your sense of smell is normal?	_____	_____
___	Trouble with sinus drainage?	_____	_____
___	Sore in or around your mouth that has been present for more than 3 months?	_____	_____
___	Excessive dryness in your mouth?	_____	_____
___	Unusual or abnormal tastes in your mouth?	_____	_____
___	Pain or choking when you swallow?	_____	_____
___	Hoarseness that has lasted more than 2 months?	_____	_____
___	Pain in your teeth or gums?	_____	_____
___	Persistent or recurring cough that has lasted for more than 2 weeks?	_____	_____
___	Activity-limiting shortness of breath?	_____	_____
___	Waking at night short of breath?	_____	_____
___	Aches, pressure or pain in your chest or arm when you exercise?	_____	_____
___	Swelling in your ankles?	_____	_____
___	Leg or calf cramps when you walk?	_____	_____
___	Notice your heart beating fast when you were not exercising?	_____	_____
___	Burning or pain in your stomach?	_____	_____

		ID # _____	
<u>Var. #</u>	No (1)	Yes (2)	
___		Frequent vomiting, more than once a week?	_____
___		Certain foods bother your stomach (acid digestion, or heartburn after meals)?	_____
___		Change in normal bowel movements?	_____
___		Difficulty or pain in passing urine?	_____
___		Difficulty holding or controlling urine?	_____
___		Pass reddish or bloody urine?	_____
___		(Women only) Itching, discharge or irritation from or around your vagina?	_____
___		(Women only) Noticed a foul odor coming from your vagina?	_____
___		(Women only) Painful periods?	_____
___		(Women only) Bleeding between periods?	_____
___		(Women only) Irregular periods?	_____
___		(Women only) Menopausal difficulties?	_____
___		(Men only) Need to pass urine more frequently than every 3 hours?	_____
___		(Men only) Discharge, pain in penis?	_____
___		Painful intercourse?	_____
___		(Men only) Premature ejaculation?	_____
___		Inability to achieve orgasm/erection?	_____
___		Lumps or tenderness in breasts/testes?	_____
___		Thickened or ingrown toenails?	_____
___		Swollen lymph glands?	_____
___		Neck stiffness or pain which has interfered with your normal activities for more than 3 days?	_____
___		Back stiffness or pain which has interfered with your normal activities for more than 3 days?	_____
___		Stiffness, pain and/or swelling of one or more joints?	_____
___		General weakness or pain in your muscles that has caused a major change in your activities?	_____
___		Loss of consciousness or blackouts?	_____
___		Severe headaches?	_____
___		Dizziness or faintness when you stand up suddenly?	_____



APPENDIX S

FUNCTIONAL HEALTH ASSESSMENT<sup>10</sup>

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<sup>10</sup> Reprinted with permission of JoAnn Rolando. Rolando, J. (1988). Functional health assessment. Unpublished document available through University of Utah College of Nursing, Salt Lake City, UT.

ID # \_\_\_\_\_

SECTION XVII: FUNCTIONAL HEALTH ASSESSMENT

(To be completed by nurse practitioner)

Date \_\_\_\_\_

Nurse practitioner \_\_\_\_\_

(General Information)

Variable  
Number

\_\_\_\_\_ Ask patient to rate his/her overall physical health right.

Don't Know	Poor	Average					Excellent	
0	1	2	3	4	5	6	7	

\_\_\_\_\_ Height (inches) \_\_\_\_\_

\_\_\_\_\_ Weight (LB) \_\_\_\_\_

\_\_\_\_\_ Percentage of Ideal Body Weight \_\_\_\_\_

\_\_\_\_\_ Blood Pressure (Systolic) \_\_\_\_\_

\_\_\_\_\_ Blood Pressure (Diastolic) \_\_\_\_\_

\_\_\_\_\_ Orthostatic change in blood pressure \_\_\_\_\_

- 1 = None
- 2 = Drop of 12 mm. or less when moving from lying to standing
- 3 = Drop of 12-20 mm.
- 4 = Drop of 20 mm. or more

\_\_\_\_\_ Pulse \_\_\_\_\_

1 = Regular sinus rhythm

2 = Irregular rhythm

\_\_\_\_\_ Rate (list rate \_\_\_\_\_)

1 = normal rate (60-100)

2 = bradycardia (less than 60)

3 = tachycardia (greater than 100)

\_\_\_\_\_ Temperature (>98<sup>6</sup> orally) \_\_\_\_\_

1 = no 2 = yes

ID # \_\_\_\_\_

Variable  
Number

\_\_\_\_\_

How many medications (over the counter and prescribed) are you currently taking (include both psychiatric and non-psychiatric drugs)? \_\_\_\_\_

Please list all medications, drugs, vitamins, aspirin, antacids, or other remedies that you are currently taking.

	Medication	Dosage/Frequency	Reason for Use
(1)	_____	_____	_____
(2)	_____	_____	_____
(3)	_____	_____	_____
(4)	_____	_____	_____
(5)	_____	_____	_____
(6)	_____	_____	_____

Do you experience any reactions or side effects from any of the drugs or medication you are taking?

Yes  
Please describe

No

\_\_\_\_\_

\_\_\_\_\_

(General Appearance)

(Personal Grooming) \_\_\_\_\_

- 1 = Appropriate: Face shaven, hair groomed, clothes clean
- 2 = Unkempt
- 3 = Disheveled: Face unshaven, offensive body odor, clothes heavily soiled, skin dirty

(Skin) \_\_\_\_\_

Any lesions, lacerations, bruises, ulcers, abnormal hair distribution, rash or diminished skin turgor.

- 1 = No
- 2 = Yes

Specify skin abnormality

\_\_\_\_\_

\_\_\_\_\_

ID # \_\_\_\_\_

Variable  
Number

\_\_\_\_\_ (Head and Neck)

\_\_\_\_\_ Diminished hearing (512 tuning fork) Weber/Rinne  
1 = No      2 = Yes \_\_\_\_\_

\_\_\_\_\_ Abnormality of external ear \_\_\_\_\_  
1 = No      2 = Yes \_\_\_\_\_  
(List \_\_\_\_\_)  
(i.e., deformity, masses)

\_\_\_\_\_ Abnormality of middle ear (canals, TMS)  
1 = No      2 = Yes \_\_\_\_\_  
(List \_\_\_\_\_)

\_\_\_\_\_ (Eyes)

\_\_\_\_\_ Decreased visual acuity with correction \_\_\_\_\_  
1 = No      2 = Yes \_\_\_\_\_  
(List Snellen \_\_\_/\_\_\_)

\_\_\_\_\_ Structural Eye Abnormality \_\_\_\_\_  
1 = none  
2 = lesion  
3 = lid abnormality (List \_\_\_\_\_)  
4 = nystagmus  
5 = strabismus  
6 = EOM impaired  
7 = conjunctive/sclera (List \_\_\_\_\_)  
8 = Cornea (List \_\_\_\_\_)  
9 = Cataract  
10 = Lense/iris (List \_\_\_\_\_)  
11 = Retina (List \_\_\_\_\_)

\_\_\_\_\_ (Nose)

\_\_\_\_\_ Any structural abnormalities \_\_\_\_\_  
(shape, masses, inflammation, discharge patency)  
(List \_\_\_\_\_)  
1 = No      2 = Yes

ID # \_\_\_\_\_

Variable  
Number

\_\_\_\_\_ (Mouth)

\_\_\_\_\_ Oral hygiene (Circle findings) \_\_\_\_\_

1 = Good

2 = At least one of the following: carries bad breath,  
missing teeth, inflammation, spongy gums, alteration in  
color or thickness or adhesiveness of tongue.

3 = two of the above (specify: \_\_\_\_\_  
, \_\_\_\_\_)

4 = three of the above (specify: \_\_\_\_\_  
, \_\_\_\_\_, \_\_\_\_\_)

5 = four or more (specify \_\_\_\_\_  
, \_\_\_\_\_, \_\_\_\_\_  
, \_\_\_\_\_)

\_\_\_\_\_ Oral pharynx \_\_\_\_\_

1 = normal

2 = mild inflammation

3 = moderate inflammation and/or exudate

4 = severe inflammation and/or exudate

\_\_\_\_\_ (Throat/Neck) \_\_\_\_\_

\_\_\_\_\_ Enlarged thyroid \_\_\_\_\_

1 = No 2 = Yes

\_\_\_\_\_ (Lymphatics)

\_\_\_\_\_ Enlarged lymph nodes \_\_\_\_\_

1 = none

2 = enlarged cervical nodes

3 = enlarged axillary nodes

4 = enlarged inguinal nodes



ID # \_\_\_\_\_

Variable  
Number

_____	(Respiratory) Structural defects in thoracic wall	_____
	1 = none	
	2 = kyphosis	
	3 = lordosis	
	4 = scoliosis	
	5 = barrel chest	
	6 = funnel chest	
_____	Rhythm/rate	_____
	1 = no effortless	
	2 = short of breath	
	3 = bradypnea	
	4 = dyspnea	
_____	Cough	_____
	1 = none	
	2 = nonproductive cough	
	3 = productive cough	
_____	Chest Percussion	_____
	1 = no resonance in all lung fields	
	2 = dullness in one or more lung lobes	
	3 = hyperresonance in one or more lobes	
_____	Chest Auscultation	_____
	1 = no breath sounds, no adventitious sounds	
	2 = rales in one or more lobes	
	3 = wheezes	
	4 = absent breath sound in one or more lobes	
	5 = other adventitious sounds	
	(List _____)	

ID # \_\_\_\_\_

<u>Variable</u>		
<u>Number</u>		
_____	(Breast)	
	Breast Tissue	_____
	1 = normal	
	2 = assymetrical in appearance	
	3 = skin discoloration/edema	
	4 = venous pattern	
_____	Breast Mass/Lumps	_____
	1 = None	
	2 = Yes	
_____	Breast Tenderness	_____
	1 = No      2 = Yes	
_____	Nipples	_____
	1 = normal	
	2 = deviated	
	3 = discharge	
	4 = other	
	(Circulatory)	
_____	S <sub>1</sub> or S <sub>2</sub> split	_____
	1 = No      2 = Yes	
_____	Extra heart sounds	_____
	1 = No      2 = Yes	
_____	Heart murmur	_____
	1 = No      2 = Yes	
_____	Increased JVD	_____
	1 = No      2 = Yes	
_____	Diminished pulses	_____
	1 = none	
	2 = carotid	
	3 = radial	
	4 = femoral	
	5 = popliteal	
	6 = post-tibialis	
	7 = dorsalis pedis	

ID # \_\_\_\_\_

Variable  
Number

_____	Bursts/Thrills 1 = none 2 = carotid 3 = thyroid 4 = abdominal 5 = femoral	_____
_____	Circulation to limbs 1 = adequate, nl color, temp. 2 = abnormal skin discoloration (cyanosis, rubor) 3 = alteration in skin temp 4 = ischemic ulcers 5 = pain in extremities 6 = varicose veins 7 = other (Specify _____)	_____
_____	Pedal edema 1 = none 2 = trace 3 = 1+ edema 4 = 2+ edema 5 = pitting edema	_____
_____	(Abdomen) Observable defects 1 = none 2 = scars 3 = masses 4 = pulsation 5 = venous pattern	_____
_____	Abnormal bowel sounds 1 = none 2 = decreased peristalsis 3 = increased peristalsis	_____

ID # \_\_\_\_\_

Variable Number		_____
_____	Enlarged organs 1 = No      2 = Yes (List _____)	_____
_____	Palpable Masses 1 = No      2 = Yes (Where _____)	_____
_____	Tenderness 1 = No      2 = Yes (Where _____)	_____
_____	Ascites 1 = No      2 = Yes	_____
_____	CVA tenderness 1 = No      2 = Yes	_____
_____	Hernia 1 = No      2 = Yes	_____
	(Extremities)	
_____	Decreased ROM - <u>neck</u> 1 = No      2 = Yes	_____
_____	Decreased ROM - <u>upper extremities</u> (shoulder, elbow, hands, torso) 1 = No      2 = Yes	_____
_____	Decreased ROM - <u>lower extremities</u> (hips, knees, ankles) 1 = No      2 = Yes	_____
_____	Structural defects - extremities 1 = none 2 = missing limb 3 = swollen/inflamed joints 4 = stooped posture 5 = arthritis nodules 6 = structural deviations (List _____)	_____

ID # \_\_\_\_\_

<u>Variable</u> <u>Number</u>		_____
_____	(Neurological)	
	Abnormal cranial nerves	_____
	1 = No          2 = Yes	
	(List _____)	
_____	Motor strength	_____
	1 = normal	
	2 = decreased strength - upper extremities	
	3 = decreased strength - lower extremities	
	4 = decreased strength - upper/lower extremities	
_____	Abnormal muscle movements	_____
	1 = No          2 = Yes	
	(List _____)	
	(tremors, cogwheel, paralysis)	
_____	Muscle Mass	_____
	1 = adequate	
	2 = mild atrophy	
	3 = moderate atrophy	
	4 = gross atrophy/wasting	
_____	Coordination - Rhomberg	_____
	1 = negative	
	2 = positive	
_____	Coordination - finger-nose	_____
	1 = normal	
	2 = unsteady	
_____	Gait	_____
	1 = normal/steady	
	2 = ataxic	
	3 = shuffling	
	4 = other	
	(List _____)	

ID # \_\_\_\_\_

Variable  
Number

_____	Sensory		_____
	1 = no sensory deficits		
	2 = unable to respond to <u>light touch</u> in one or more extremities		
	3 = unable to detect <u>vibration</u> in one or more extremities		
	4 = unable to detect <u>temperature change</u> in one or more extremities		
	5 = unable to detect <u>pain</u> in one or more extremities		
_____	Reflexes (biceps, brachioradialis, triceps, knee, achilles)		_____
	1 = normal (2+)		
	2 = <u>diminished</u> but present in one or more extremities		
	3 = <u>hyperactive</u> in one or more extremities		
	4 = <u>hyperactive</u> with clonus		
	5 = <u>positive babinski</u>		
	(Labs)		
_____	Abnormal electrolytes		_____
	1 = No      2 = Yes		
	(List _____)		
_____	Abnormal nutritional indexes (alb, prot, chol)		_____
	1 = No      2 = Yes		
	(List _____)		
_____	Abnormal liver/biliary function test		_____
	1 = No      2 = Yes		
	(List _____)		
	(SGOT, GGPT, D. bil., I. bil., LDH, alk phos)		
_____	Abnormal blood count		_____
	1 = No      2 = Yes		
	(List _____)		
_____	Abnormal urine		_____
	1 = No      2 = Yes		
	(List _____)		

Summary of Health Problems

ID # \_\_\_\_\_

Major Problems

Currently under treatment:

<u>Yes</u>	<u>No</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total Number \_\_\_\_\_

Minor Problems

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total Number \_\_\_\_\_

Preventive Health Care Issues

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Need for Follow-up (referrals, monitoring, education)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Record of Follow-up

Date \_\_\_\_\_

Information \_\_\_\_\_

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