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THE RELATIONSHIPS OF NURSES' CRITICAL THINKING ABILITY AND PATIENTS' SELF-DISCLOSURE TO ACCURACY IN NURSING ASSESSMENT OF DEPRESSION IN ELDERLY MEDICAL PATIENTS

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CHAPTER I

THE PROBLEM

Introduction

Research on nursing assessment of patient needs and experiences is sparse. Yet it is such assessments upon which nursing care is planned and provided. Because nursing assessment provides the basis for planning care, it is important that assessments of patient needs and experiences be accurate. Although the process by which a nurse accurately assesses needs and experiences of patients is not yet fully understood, it appears that specific interpersonal and intellectual skills are needed (Gordon, 1982; Little & Carnevali, 1976; Young, 1980).

An assessment is a process by which an opinion of the patient's status is formed on the basis of clinical data and the experience and education of the nurse (Aspinall & Tanner, 1981; Del Bueno, 1983; Donna, 1976). In addition, the intellectual skill of critical thinking appears to be essential in the process of formulating a nursing assessment because critical thinking is an aspect of the problem-solving process necessary for the interpretation of

information, formation of a judgment, and decision making (Bandman & Bandman, 1988; Brill & Kilts, 1980; Gordon, 1982).

Assessment involves observation of patient behavior. Some degree of patient self-disclosure is required to assess the patient's behavior and feelings. Self-disclosure is a process by which one reveals aspects of one's experience to another person (Jourard, 1971). Self-disclosure is an interpersonal behavior in which the patient is regarded as the expert (Chelune, 1979). For example, evaluation of depression in the elderly requires disclosure by the patient of relevant feelings and behaviors.

Depression is a common affective disorder in later life which is often overlooked in geriatric medical patients (Cavanaugh, Clark, & Gibbons, 1983; Kukull, et al., 1986; Magni, De Leo, & Schifano, 1985; Okimoto, et al., 1982; Schatzberg, Liptzin, Satlin, & Cole, 1984). A number of studies have identified the problems of diagnosing depression among the elderly and point out that many cases of severe depression go unrecognized (Blazer & Williams, 1980; Kitchell, Barnes, Veith, Okimoto, & Raskind, 1982; Lesse, 1983; Nielsen & Williams, 1980).

The intent of the researcher was to investigate whether nurses' critical thinking ability and patient self-disclosure are related to nurses'

accuracy in assessment of depression among the young elderly.

The Problem

How are nurses' critical thinking ability and patient self-disclosure related to the accuracy in nursing assessment of depression among the young elderly?

Subproblems

1. Is nurses' critical thinking ability related to accuracy in nursing assessment of depression among the young elderly?
2. Is patient self-disclosure related to accuracy in nursing assessment of depression among the young elderly?
3. Is there an interaction between nurses' critical thinking ability and patient self-disclosure that affects accuracy in nursing assessment of depression among the young elderly?

Definitions

Accuracy in Nursing Assessment of Depression is the degree to which nurses' evaluation of patients' depression approximates the patients' self-report of depression. This was measured by the magnitude of the prediction error (absolute value), using the nurse's

scores on the severity of depression on the Modified Depression Status Inventory (DSI) (Zung, 1972) to predict the patient's scores on the Self-Rating Depression Scale (SDS) (Zung, 1973). Residual scores were used because the DSI and the SDS are two different scales.

Critical Thinking Ability is the ability to define a problem, select pertinent information for the solution, recognize stated and unstated assumptions, draw valid conclusions, and judge the validity of inferences (Dressel & Mayhew, 1954; Watson & Glaser, 1964). It is the result of an inquiring attitude. Critical thinking ability of nurses was measured by the Watson-Glaser Critical Thinking Appraisal (WGCTA) (Watson & Glaser, 1980).

Depression is subjective feelings and overt manifestation of hurting. It has physiological, affective, and psychological components (Zung, 1965, 1972, 1973).

Patient Self-Disclosure refers to personal information verbally communicated to the nurse (Cozby, 1973). Self-disclosure was measured by the nurse's rating of the patient's willingness to disclose information on his experience of depression, as determined by his responses in an interview using the Modified Depression

Status Inventory (Zung, 1972).

Young elderly refers to persons between the ages of 65 and 75.

Delimitations

Subjects were of nurse-patient dyads and were limited to female registered nurses and volunteer female patients between 65 and 75 years old who were hospitalized for a medical problem. Female patients between 65 and 75 years old were selected because the literature indicated that depression was common in this group (Blazer & Williams, 1980; Freedman, Bucci, & Elkowitz, 1982; Griffiths, et al., 1987; Magni, Schifano, & De Leo, 1986). Because the focus of the researcher was on the accuracy of assessment of depression, the homogeneity of medical illness of the sample was not required.

The hospitalized elderly were selected because depression is an increasing problem often overlooked among elderly medical patients (Cavanaugh, Clark, & Gibbons, 1983; Fogel & Fretwell, 1985; Magni, Schifano, & De Leo, 1986; Shamoian, 1985). Registered nurses were limited to those with at least one year of clinical nursing experience because the literature indicates that there is a trend to greater accuracy in diagnosis with experience (Tanner, Padrick, Westfall, &

Putzier, 1987). New graduates were excluded from this study because it takes at least six to eight months for them to adjust to their work tasks (Field, Gallman, Nicholson, & Dreher, 1985; Kramer, 1974). Education was reported to influence the ways in which nurses process information (Broderick & Ammentorp, 1979; Davis, 1972; Del Bueno, 1983; Neufeld, Norman, Feightner, & Barrows, 1982; Tanner, Padrick, Westfall, & Putzier, 1987; Verhonick, Nichols, Blor, & McCarthy, 1968). Therefore, this variable was statistically controlled. All patients were able to speak, read, and write the English language so they were able to communicate with the investigator and complete the instruments used in data collection. Patients were ambulatory, mentally alert, and able to perform self-care.

Theoretical Rationale

Assessment in nursing is the systematic collection and analysis of data about a patient for the purpose of making a nursing diagnosis or judgment (Gordon, 1980). Thus, assessment is the procedure by which information is gathered and analyzed for the purpose of planning nursing care and carrying out the complete nursing process. Assessment requires the intellectual skill of critical thinking in order to make nursing judgments (Bandman & Bandman, 1988; Brill & Kilts, 1980; Gordon,

1982; Yura & Walsh, 1973).

Clinical judgment involves data transformation (Levy, 1963) and is the product of an inferential process (Sarbin, Taft, & Bailey, 1960). The inferential process has been described as having four elements: a) the direction, aim, purpose, or objective of the cognitive work; b) the data or information out of which inferences are fashioned; c) the observer (nurse) who is engaged in the transformation of knowledge; and d) the product of the inferential process, clinical judgment. Clinical judgment requires certain cognitive operations, such as critical thinking, which, in turn, may influence the accuracy of nursing assessment. As the patient discloses information to the nurse, she critically analyzes the information in order to make a clinical judgment or assessment.

One cannot attend to all information simultaneously. Consequently, one learns to discriminate between patterns of stimuli to identify relevant information and assign meanings to situations (Eisenberg & Smith, 1971; Gordon, 1982; Little & Carnevali, 1976). To define a problem, collect data on the problem, recognize underlying premises, formulate hypotheses on the basis of the data, and draw conclusions are all components of this critical thinking process (Dressel & Mayhew, 1954). As a

precursor to identifying and interpreting information that is relevant to a patient's condition, and making judgments or decisions, critical thinking is related to accurate assessment (Brill & Kilts, 1980). It follows, therefore, that the greater the nurse's ability to think critically, the more accurate the assessment should be.

Self-disclosure is a process by which an individual reveals his feelings, thoughts, and experiences to another person (Jourard, 1971). As interpersonal behavior, it is a verbal communication that reveals information about oneself to another (Chelune, 1979; Cozby, 1973). In the health care situation, patients participate in their own health care by disclosing information about themselves to their health care provider. Unless the patients are willing to disclose their own thoughts and behavior to the health care provider, the identification of relevant information and correct interpretation of feelings and thoughts are less likely to be achieved. Self-disclosure provides the subjective data needed for a comprehensive assessment of the patients' experience of depression. Patient self-disclosure, elicited with care and interpreted with full understanding of the circumstances under which it was obtained, is a valuable and necessary source of information that can enhance the accuracy of nursing assessment. The

theorem of this researcher is that nurses' ability to think critically and patients' self-disclosure are related to the accuracy of nursing assessment of depression experienced by the patients.

Hypotheses

1. There is a positive relationship between nurses' critical thinking ability and accuracy in nursing assessment of depression experienced by elderly patients, independent of nurses' education.

2. There is a positive relationship between patient self-disclosure and accuracy in nursing assessment of depression experienced by elderly patients, independent of nurses' education.

3. Nurses' critical thinking ability and patient self-disclosure interact in relation to accuracy in nursing assessment of depression, independent of nurses' education. Specifically, the relationship of nurses' critical thinking ability to accuracy of assessment of depression experienced by elderly patients will be stronger when there is high patient self-disclosure than when there is low patient self-disclosure.

The Need for the Study

The need to collect and process information about patients' conditions has been noted throughout the

nursing literature (Durand & Prince, 1966; Gordon, 1982; Hammond, 1966; Henderson, 1987; Pardue, 1987). Kelly (1966) states that the inferential or diagnostic task is central to all nursing practice. However, few nursing studies have explored the accuracy of nursing assessment. Aspinall (1976) examined the diagnostic skills of graduate nurses from associate, diploma, and baccalaureate programs. She found that the diagnostic skills of baccalaureate nurses led to greater accuracy than those of either diploma or associate degree nurses. Mallick (1983) argued that accuracy in assessment leading to accurate diagnosis may prove to be a truly distinguishing characteristic between technical and professional nursing practice. The present study provides basic information about both patient and nurse behaviors that contribute to accuracy in nursing judgment.

The application of critical thinking to the diagnostic process has been cited in the literature as a major factor in the quality of care that the client receives (Bandman & Bandman, 1988; Carnevali, 1984; Gordon, 1987; Little & Carnevali, 1976). The basis of an accurate nursing diagnosis is identification of relevant information and the assignment of valid meanings to the situation (Bircher, 1982; Carnevali, 1983). Because inaccurate assessment can lead to an inaccurate nursing diagnosis, which can invalidate the

planning of care, the importance of accurate assessment cannot be overemphasized (Murray & Huelskoetter, 1983; Norris, 1987; Wolff, Weitzel, & Fuerst, 1979).

One important aspect in assessment is the information disclosed by the patient to the nurse. The disclosure of the patient's experience of depression has not been studied. The researcher sought to establish basic information about the ability to think critically, using information disclosed by the patient and its relevance to accuracy in nursing assessment of depression.

CHAPTER II

REVIEW OF RELATED LITERATURE

Assessment

Assessment is a process of gathering information for the purpose of identifying problems relating to wellness or illness (Robinson, 1983; Yura & Walsh, 1973). Assessment serves as a basis for planning, implementing, and evaluating nursing care plans.

The majority of the clinical judgment research focuses on medical judgment, using physicians and medical students as subjects. There are few studies on nurses, and most use tasks that fall within the medical domain.

Hammond (1966) studied the process of clinical inference in nursing using various types of information-seeking strategies. He suggested that the nurse needs to be competent in information-seeking and that making a clinical decision involves an analytical process.

Gordon (1980) studied the influence of inferential ability and restricted vs. unrestricted information conditions on hypothesis-scanning strategies and diagnostic accuracy of 60 graduate nursing students

(mean experience in nursing was 7 years; S.D. = 5.8). Three hypotheses testing information-gathering strategies were described: a) successive scanning testing one hypothesis at a time, discarding the hypothesis if not confirmed by the data; b) multiple hypothesis testing, using information simultaneously to test hypotheses; and c) predictive hypothesis testing as a form of multiple-hypothesis testing, using a characteristic of the person to narrow the possible hypotheses. Inferential ability was measured by the Miller Analogies Test or the Verbal Aptitude subtest of the Graduate Record Examination.

The subjects were presented with limited clinical data of a post-surgical patient and instructed to ask questions and explain how the information would help in deriving a diagnosis. Two tasks were presented with two information conditions: a) limited to a maximum of 12 questions (hemorrhagic shock), or b) unlimited (atelectasis). It was found that in the unlimited information condition (atelectasis), 48% of the 60 subjects attained the correct diagnosis. Limited information conditions (hemorrhagic shock) were associated with 88% accuracy. Difference in accuracy was significant at .001 level. The findings also showed that predictive hypothesis-testing was used primarily in the first portion of the test, with a later change to single hypothesis testing ($p = .001$).

Prolonged hypothesis testing and unlimited information conditions were associated with greater inaccuracies of diagnosis. Additionally, the finding showed that inferential ability did not influence the use of predictive hypothesis testing for accurate diagnosing. The lack of control on case materials used makes it difficult to determine whether the results were attributable to different levels of difficulty in the diagnosis of hemorrhagic shock and atelectasis or to prolonged cognitive strain. It is also possible that the Miller Analogy Test and the Verbal Aptitude subtest of the Graduate Record Examination are not accurate measures of inferential ability.

Aspinall (1979) tested the effectiveness of using the decision tree to improve nurses' diagnostic accuracy. Thirty triads of nurses, matched for educational background, length of experience, and previous performance, made up two control groups (A and B) and one experimental group (C). Each group was given a written case study about a patient with a previous history of cirrhosis who now exhibited a decrease in cognitive functioning following surgery for a ruptured appendix and an episode of gastric bleeding. All nurses were asked to list all possible conditions that could cause the change in behavior. Group A was given only the written case study; group B was given, in addition to the case study, a list of 18 disease

states that could cause the sudden decrease in cognitive functioning; Group C was given, in addition to information given the two control groups, a decision tree for each of the 18 possible diagnoses so that the nurses systematically could use the information to rule in or rule out the diagnosis. The difference in numbers of correct diagnoses among all groups was found to be significant ($p < .001$). Group C gave more correct diagnoses than did group B, which, in turn, gave more correct diagnoses than group A. The finding that group B gave more accurate diagnoses than Group A indicates that a list of 18 possible diagnoses given to the nurses in Group B served to narrow their focus to designated alternative hypotheses, leading to increase in accuracy of diagnoses. This finding is consistent with Gordon's (1980) study, where the limited information condition increased accuracy compared to the unlimited information condition. Additionally, Aspinall (1979) demonstrated that the decision tree served as a guide for nurses to screen out irrelevant information, resulting in an increase in accuracy of diagnosis.

The influence of amounts and relevance of information received by nurses about a patient's condition on accuracy of identifying health problems was studied by Cianfrani (1984). Using an experimental approach, Cianfrani constructed two conditions of

relevant cues and three levels of amounts of data. The two conditions of relevance consisted of high and low relevant cues. The three levels of amounts of data consisted of 4, 8 and 12 cues in each condition of relevance. Nurse subjects were assigned randomly to one of the six groups. They received data varying in amounts and relevance according to the group to which they were assigned. The subjects were asked to identify three separate target health problems. One set of patient information was compiled for each target health problem.

The findings were that accuracy decreased with low relevant data for all three health problems: decreased cardiac output, alterations in comfort, and alterations in peripheral circulation. Additionally, with increased amounts of data, errors increased. Because the ability to select relevant data is a component of critical thinking, it appears that critical thinking ability will enhance accuracy of nursing judgment.

Holzemer (1986) explored the cognitive structure of clinical problem solving among 75 nurse practitioners (NP) in an assessment and management of a patient with acute pneumonia superimposed over chronic bronchitis. The NP problem solving skills were examined using a patient management problem (PMP), a clinical simulation with 296 items. The score has five parts: history, physical, laboratory, management-

medical, and management-patient education. The results showed that NP problem-solving did not dwell on the medical diagnosis, but focused on the management of the client. The NP's performance on the history section was significantly associated with accurate problem statements and accurate diagnosis ($p < .05$). This finding indicates that data gathering is an aspect of problem-solving which, in turn, can influence accuracy of diagnostic judgment.

Assessment of Depression in the Elderly

Murphy (1982) reported that physical illness is a life event that is strongly linked with depression. Various studies have indicated that depression is common among the elderly who are medically ill (Borson, et al., 1986; Katon, 1984; Magni, Schifano, & De Leo, 1986; Sweer, Martin, Ladd, Miller, & Karpf, 1988). Epstein (1976) describes depression in the elderly as a manifestation of an atypical pattern, with apathy, listlessness, and an attitude of self-depreciation. Somatic complaints such as insomnia, loss of appetite, weight loss, other gastrointestinal problems, and headaches, also tend to be emphasized (Addington & Fry, 1986; Goldstein, 1979; Gurland, 1976). Worry, feelings of uselessness, sadness, pessimism, and fatigue are common symptoms of depression in the elderly (Blazer, 1982). Researchers have indicated that the elderly are

likely to mask their depression with physical symptoms, making accurate diagnosis of depression very difficult (Blumenthal, 1975; Freedman, Bucci, & Elkowitz, 1982; Zung & King 1983).

Drugs, alcohol, and medical illness must be considered in assessing depression in the elderly. For example, specific illnesses, such as idiopathic Parkinson's disease, hypo- or hyperthyroidism, pernicious anemia, pancreatic cancer, and altered electrolyte balance secondary to impaired renal function, are associated with depression (Ban, 1984; Blumenthal, 1980; Kukull, et al., 1986:, Salzman & Shader, 1978a, 1978b). Certain medications, such as digitalis, antihypertensives, antianxiety, anti-Parkinson drugs, corticosteroids, and anticancer drugs, can induce depression (Blazer, 1982).

Elderly patients often suffer from multiple medical illnesses. A depressed mood may be a side effect of prescribed drugs (Gallagher, 1987). It is, therefore, important that medication be considered in assessing depression in the elderly.

Assessment of depression in the elderly is difficult because the signs and symptoms of depression are often obscured by coexisting medical illness or somatic preoccupation (Blumenthal, 1980; Chaisson-Stewart, 1985; Kitchell, Barnes, Veith, Okimoto, & Raskind, 1982). Medical illnesses can mimic depressive

symptoms, which, in turn, can present as medical problems. Both illnesses can coexist and affect each other's course and outcome (Cavanaugh, 1987; Morris & Raphael, 1987; Shamoian, 1985).

Various studies have indicated that most elderly are reluctant to admit depressive feelings because they view such manifestations to represent weakness and inability to cope, so most elderly use denial as a defense (Liptzin, 1987; Raskin, 1979; Salzman & Shader, 1978a; Zung, Magill, Moore, & George, 1983). It is important to note that a depressive mood may not be the presenting complaint. Somatic preoccupations tend to dominate the clinical picture (Blumenthal, 1980; Katon, 1984; Nielsen & Williams, 1980; Salzman & Shader, 1978a). Because of this, assessment of depression is often overlooked.

While some investigators have reported that depression in the elderly medical patients frequently resolves spontaneously without treatment (Walker, Novack, Kaiser, Knight, & Oblinger, 1987), others have demonstrated that depression can last 12 to 18 months or longer (Maguire, Hopewood, Tarrier, & Howell, 1985). The oppressive quality of depression and its indefinite duration can handicap the individual (Robinson, 1983). Therefore, accurate assessment is necessary.

Critical Thinking

Dressel and Mayhew (1954) and Watson and Glaser (1964) describe critical thinking as the ability to define a problem, select pertinent information for the solution, recognize stated and unstated assumptions, formulate and select relevant and promising hypotheses, and draw conclusions validly and judge the validity of inferences.

Recently, Watson and Glaser (1980) defined critical thinking as a composite of abilities which includes attitudes of inquiry involving an ability to recognize the existence of problems and acceptance of the general need for evidence in support of what is asserted to be true, knowledge of the nature of valid inferences, abstraction and generalization in which the weight or accuracy of different kinds of evidence are logically determined, and skills in employing and applying the above attitudes and knowledge. Similarly, Bandman and Bandman (1988) defined critical thinking as a rational examination of ideas, inferences, assumptions, arguments, conclusions, and actions. Critical thinking involves logical reasoning.

Ennis (1962) defined critical thinking as an accurate assessment and evaluation of a statement. He presented three basic analytically distinguishable dimensions of critical thinking: a logical dimension,

a criterial dimension, and a pragmatic dimension. The logical dimension covers judging relationships between meanings of words and statements; the criterial dimension covers knowledge of the criteria for judging statements; and the pragmatic dimension covers the background purpose in making decisions about the acceptability of a statement. The theory assumes that complete criteria cannot be established for critical thinking. Instead, an element of intelligent judgment is usually required in addition to applying the criteria and knowing the meaning of words and statements. In other words, critical thinking involves making judgment.

Accurate assessment of depression requires critical thinking so that relevant data can be elicited to make inferences, deductions, and interpretations. Sarbin, Taft, and Bailey (1960) describe the inferential process as having four elements: a) the direction, aim, purpose, or objective of the cognitive work; b) the input of raw data or information out of which inferences are fashioned; c) the observer (nurse) who is engaged in the transformation of knowledge; and d) the product of the inferential process (clinical judgment). They argue that solution to a problem is not given in the data, but it must be discovered through the cognitive efforts of those who are making the clinical inference. The elements of the

inferential process are strikingly similar to those identified by Tripodi and Miller (1966) and Levy (1963) in the clinical judgment process.

Clinical judgment, which is the product of inferential process, requires cognitive operations. Critical thinking abilities are cognitive functions that are thought to influence the accuracy of nursing judgment of depression. The Watson-Glaser Critical Thinking Appraisal tests purport to measure an individual's ability to utilize selected aspects of the problem-solving process, including making inferences, recognizing assumptions, making deductions, interpreting, and evaluating arguments (Watson & Glaser, 1964). Therefore, the Watson-Glaser Critical Thinking Appraisal tests were used to measure critical thinking abilities.

Mathews and Gaul (1979) studied critical thinking in nursing diagnosis. A case study of a patient with an impairment in the ability to process thoughts (mental confusion) was presented to 48 student nurses (22 undergraduates, 26 graduates). The subjects were asked to indicate all possible nursing diagnoses for the patient's behavior. The Watson-Glaser Critical Thinking Appraisal (Form Ym) was used. The analysis of the case study revealed the graduate students identified significantly more diagnoses than the undergraduate students ($p < = .008$). However, there

was no overall relationship between the ability to derive nursing diagnoses and to think critically. An explanation may be the use of a case study wherein the cues on a patient's condition were ambiguous or nondiscriminating, leading to the inability of the nurses to identify the patient's problem.

Maciorowski (1989) studied nurses' empathy and critical thinking ability to accuracy in perception of acute pain experience of patients recovering from surgery. The sample consisted of 122 nurse-patient dyads. The Watson-Glaser Critical Thinking Appraisal was used to measure the nurses' critical thinking ability. Accurate perception of patients' acute pain experience was measured as the difference between the patients' and nurses' score on the Visual Analogue Scale (Huskisson, 1974). The results showed no significant correlation (r = -.11, p = .12) between nurses' critical thinking ability and perception of patients' acute pain experience. The researcher attributed the lack of significant findings to the intercorrelations between the Watson-Glaser Critical Thinking Appraisal and Perspective-Taking, a subscale of the Interpersonal Reactivity Index (Davis, 1980) used to measure empathy. The other reason for the lack of significance in the results could be attributed to the use of the Visual Analogue Scale to measure pain perception. Although studies had reported the

reliability and validity of the Visual Analogue Scale, Zealley and Aiken (1969) had indicated that, in measuring a variable phenomenon, the Visual Analogue Scale is most reliable when used on several observations. In this particular study, the Visual Analogue Scale was only used one time to measure accuracy in the perception of pain.

Beck and Bergman (1986) assessed the use of efficient organization of knowledge and of problem-solving strategies to enhance medical students' clinical problem-solving skills. Thirty-five preclinical medical students were randomly assigned to an experimental or control group. Each was to learn a given knowledge base containing information on eight congenital heart diseases. The diseases chosen allowed an assessment of the precision of the students' knowledge and their use of the clinical cues critical for discriminating among diseases with similar clinical findings. The experimental group was given a 30-minute lecture on the characteristics of good clinical reasoning. The lecture was a general overview of clinical problem-solving strategies. The control group received the same information in the textbook format that emphasized the pathophysiology of the diseases, but they did not receive a lecture on clinical reasoning; instead, the 30-minute period was spent discussing congenital heart diseases. The students

then diagnosed three computerized diagnostic problems of varying difficulty while verbalizing their problem-solving strategies. For all three cases, the experimental group generated the correct hypothesis, using less information. Hypothesis activation as a component of clinical reasoning is further supported in studies of Elstein, Shulman, and Sprafka (1978); Tanner (1977); and Westfall, Tanner, Putzier, and Padrick (1986).

Research on clinical reasoning has suggested that experienced clinicians tend to acquire less information than less experienced clinicians in a diagnostic workup, but that the information they acquire is highly diagnostic (Benner, 1983; Kassirer & Gorry, 1978; McGuire, 1985). This indicates that providing information alone is not sufficient, and too much information may be deleterious.

Selecting pertinent information, defining a problem, and formulating relevant hypotheses are aspects of critical thinking. Because gathering of relevant information is crucial and is dependent on the clinician's critical thinking ability, critical thinking will influence the accuracy of assessment of depression.

Patient Self-Disclosure

The accuracy of assessment depends not only on the clinician's ability to gather relevant data and translate the information into an accurate diagnosis, but also on the patient's willingness to disclose to the clinician the very information on which an accurate diagnosis is based (Young, 1980). Although there is an extensive body of literature on self-disclosure as it relates to mental health (Cozby, 1973; Doster & Nesbitt, 1979; Taylor, 1979), studies of patient self-disclosure in the nursing interview situation are sparse (Byers, Onge, Atkins, Prokop, & Grano, 1988; Dawson, 1986; Johnson, 1979; Young, 1980).

Jourard (1971) has argued that self-disclosure is the process by which an individual reveals his feelings, thoughts, and experiences to another person. Self-disclosure is defined as information about the self that one person reveals to another (Chelune, 1979; Cozby, 1973).

Despite the clinician's effort to facilitate patient self-disclosure, it is frequently observed that clients do not readily reveal information about themselves (Jourard, 1964; Lundstedt, 1966). Young (1980) examined the willingness to disclose symptoms of personal, general, and mental and emotional illness in a simulated physician-patient interaction among

college students (N = 192). Personal symptoms included fear of venereal disease, bleeding during urination, general sores, and rectal bleeding. General symptoms included fear of having cancer, going blind, becoming paralyzed, having ulcers or headaches. Mental and emotional symptoms included fear of going crazy, thinking of suicide, and feeling very depressed. The results showed that the willingness to disclose general symptoms was greater than the willingness to disclose both personal (mean = .98 vs. .30, t = 10.85, df = 191, $p < 0.001$) and emotional (means = 98 vs. - .22, t = 15.93, df = 191, $p < .001$) symptoms. However, the willingness to disclose emotional problems was higher when the subjects perceived their physicians as socially and technically competent ($p < 0.001$) than when the subjects perceived their physicians as not socially and technically competent. Overall, the findings indicate that patients are less willing to disclose emotional symptoms, but disclosure of emotional symptoms can be enhanced when the patient perceives the clinician to be socially and technically competent.

Recently, Byers, Onge, Atkins, Prokop, and Grano (1988) examined the appropriateness of self-disclosure on health and nonhealth topics among 84 outpatient males with somatic complaints (mean age = 55; S.D. = 1.5). Self-disclosure on health was measured

using the Patient Self-Disclosure Questionnaire (Dawson, Schirmer, & Beck, 1984), which includes three subscales, a) personal problems and feelings, b) responses to health care, and c) lifestyle. The nonhealth disclosure was measured using the Self-Disclosure Questionnaire (Jourard, 1961), which includes topics such as money, opinions, tastes, attitudes, interests, and work.

The analysis of variance of the mean item score on the Health Self-Disclosure subscales and the Nonhealth Self-Disclosure was significant ($F = 129.33$, $p < .001$). The post hoc comparisons showed that nonhealth scale scores were significantly lower than that of the health scale scores. The patient disclosure on personal problems and feelings had a mean score of 4.5 (S.D. = 1.64), which was significantly lower than the mean score of responses to health care (mean = 6.09; S.D. = 1.06), lifestyle (mean = 5.59; S.D. = 1.18), or the mean score of the Nonhealth Self-Disclosure (3.40; S.D. = 1.37). This finding indicates that patients will disclose health-related problems to the clinician because it is appropriate to do so in the health care setting; however, personal problems and feelings are not readily disclosed. The low disclosure on personal problems and feelings may be attributed to the patient's perception that disclosure of this topic to the clinician is not appropriate, or disclosure on this

subject is difficult.

Other studies indicated that people are differentially self-disclosing, depending upon their relationship with the recipient of the self-disclosure. For instance, Prophit (1974) studied the relationship between self-disclosure and cardiac adjustment of patients with myocardial infarction. The sample consisted of 24 white males between the ages of 38 and 60, with a mean age of 50.6 years. The 60-item Self-Disclosure Inventory (Jourard, 1961) and the Cardiac Adjustment Scale (Rumbaugh, 1964), a 160-item self-rating instrument, were used. The recipients of the patient self-disclosure were the physician, nurse, closest friend, and wife. The subjects were asked to mail back their responses on the Self-Disclosure Inventory. The findings showed that there were significant differences ($F = 4.69$, $p = .01$) in disclosure levels to the closest friend (range = 160-290; mean = 237; S.D. = 35.4), the wife (range = 170-290; mean = 238; S.D. = 33.6), the physician (range 124-230; mean = 181; S.D. = 32), and the nurse (range = 120-227; mean = 163; S.D. = 30.6). The mean scores on self-disclosure to the wife and closest friend were significantly higher than those to the physician and nurse. This study showed that self-disclosure behavior varied according to one's relationship with the recipient of disclosure. This is

consistent with the findings of Jourard and Landman (1960) and Jourard and Richman (1963), indicating that the relationship of the discloser to the recipient of self-disclosure influences the level of disclosure.

Dawson (1985) examined the patient's perception of clinician empathy and self-disclosure among outpatient hypertensive (N = 54), diabetic patients (N = 47), and those with no known chronic illnesses (N = 115). The average age for the hypertensives was 41.76; diabetics, 48; and non-chronically-ill, 31.78 years. Each subject completed the empathy scale of Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1978) and Patient Self-Disclosure Questionnaire (Dawson, Schirmer, & Beck, 1984). The findings showed that patients perceiving higher levels of clinician empathy reported less difficulty in discussing their responses to health care professionals than did those perceiving low levels ($p = .003$). The results also showed that patients reporting negatively poor health status attributed greater importance to discussing personal problems and feelings with their clinicians than did those who perceived themselves as relatively healthy ($F = 181$, $p < .04$).

Blotcky, Carscaddon, and Grandmaison (1983) examined the relationship between self-disclosure and physical health. The sample consisted of 62 undergraduate students. Of these 62 students, 39 (63%)

were female and 23 (37%) were male. The age ranged from 17 to 26, with a mean of 19.8 years. The 60-item Jourard Self-Disclosure Scale (1964) was used to assess the individual's willingness to disclose personal information. The subjects responded to each of the 60 items by indicating the extent to which the information had been disclosed to others as follows: 0 = no disclosure, 1 = disclosure only in general terms, and 2 = full and complete disclosure. The Physical Health Log was used as a self-report questionnaire which provides data regarding frequency and duration of acute and chronic physical illnesses which were experienced during the past 12 months. The correlation coefficient (r = - .39) between subjects' self-disclosure scores (M = 74.2; S.D. = 20.91) and the number of acute illnesses during the past year (M = 9.37; S.D. = 6.02) was statistically significant (p = .01). The correlation coefficient between the self-disclosure scores and the duration of illness episodes (M = 3.27; S.D. = 1.87) was not significant (p = .06). These results suggest that an individual's willingness to disclose personal information is related to the number of his physical illnesses. Specifically, self-disclosure was high when there were fewer physical illnesses experienced.

Johnson (1979) examined the effects of anxiety on levels of self-disclosure among nurses (N = 70) and patients (N = 68) aged 21 to 65 from medical, surgical,

psychiatric, and critical care units. Both patient and nurse subjects were asked to indicate to what extent they had disclosed information about themselves to each other, using the short version of the Self-Disclosure Questionnaire (Jourard, 1971). Anxiety was measured by the State-Trait Anxiety Inventory (Spielberger, Gorsch, & Lushene, 1970). The findings indicated that very low levels of self-disclosure occur between nurses and patients across all units. Whether or not these findings reflect the true nature of the communication between nurses and patients in this particular setting cannot be determined from this one study. The topics contained in the Jourard Self-Disclosure Questionnaire, which include money, body, personality, tastes, interests, attitudes and opinions, may not be perceived by nurses and patients as important to be discussed in a health care setting.

Additionally, the findings showed that patients in the surgical units reported a significant ($p = .05$) but negative correlation ($r = -.50$) between their state anxiety and self-disclosure. This finding implies that, as anxiety levels increase, levels of self-disclosure tend to decrease. This was further supported in other studies (McCroskey & Richmond, 1977; Post, Wittmaier, & Radin, 1978), suggesting that communicatively apprehensive persons will disclose at low levels to most individuals. Since hospitalization

is an event which increases anxiety in nearly all individuals who are hospitalized (Volicer, 1974), these findings indicate that the clinician needs to facilitate self-disclosure among hospitalized patients to assess accurately.

Various studies have indicated that women are more disclosing than men. For instance, Hatch and Leighton (1986), using an interval-type scale, assessed the differences in self-disclosure between male (N = 42) and female (N = 42) students with a mean age of 22.9 years. The subjects were given 20 brief situations, 20 of which depicted the subject in a position of strength; the other 10 situations depicted the subject in a position of weakness. The subjects were asked to rate each item, on a scale from 1 (least likely) to 7 (most likely), on how likely he would be to disclose the details of the situation to a best male friend, best female friend, an acquaintance, and a person whom he would never see again.

The findings showed that women were significantly ($F = 15.9$, $p = .05$) more open than men. Both men and women were less open to a person whom they would never see again ($F = 363.31$, $p = .001$). No significant interaction was found between sex of subject and strength versus weakness. Both men and women were significantly (men, $t = 4.03$, $p = .001$; women, $t = 2.99$, $p = .005$) more open to a best friend of the same

sex than of the opposite sex. Additionally, the tendency to discriminate between best-friend target person on the basis of sex was significantly (t = 1.70, p = .05) greater among male subjects than female subjects.

The result is consistent with the findings of Himelstein and Lubin (1965), Jourard (1964), Jourard and Lasakow (1958), and Jourard and Richman (1963) indicating that women are more self-disclosing than men. However, no studies were found on the self-disclosing behavior of the older adult women to the health care providers.

Vondracek (1969), using an experimental design with undergraduate students (N = 60), studied the differential effectiveness of three interviewing techniques in eliciting self-disclosure. The interviewers were five male and five female graduate students. Each interviewer interviewed two subjects each, using a probing, a reflecting, and a revealing interview technique. The interviewing techniques were defined by the interviewer's verbalizations, and interviewers were trained in the use of these techniques prior to their actual interviews. The interviewer using the revealing technique attempts to elicit self-disclosure by revealing something about himself to the subject. The interviewer using the probing technique asks direct questions to elicit

self-disclosure from the subject. The interviewer using the reflecting technique elicits self-disclosure by rephrasing questions or statements to the subject. The amount and intimacy of self-disclosure were measured. The amount was determined by timing the subject's verbalization during the interview, excluding periods of silence and interviewer statements. Intimacy was rated on a Likert-type scale, ranging from a score of 1 (least disclosing) to a score of 7 (most disclosing).

The analysis of covariance of the intimacy ratings indicated no difference in the intimacy ratings made by any of the experimental groups. However, the interviewing techniques significantly affects the amount of self-disclosure produced by the subjects. The result showed that a probing interview (mean = 625; S.D. = 182) elicited significantly greater amount of self-disclosure than a reflecting (mean = 458; S.D. = 228) or a revealing interview (mean = 424; S.D. = 274) at .05 level.

In the health care setting, patients participate in their own health care by disclosing information about themselves to their health care provider. Depression is an individual's subjective feeling and objective manifestation of hurting involving physiological, affective, and psychological components (Zung, 1972, 1973). Accurate assessment of depression

requires that patients disclose relevant information to the health care provider. Patient self-disclosure provides the subjective data needed for a comprehensive assessment of the patient's experience of depression. Unless the patient is willing to disclose his thoughts and behaviors, the identification of relevant information and the correct interpretation of the patient's feelings and thoughts are unlikely to be achieved.

CHAPTER III

THE METHOD

Design of the Study

This descriptive study was designed to determine the relationships of critical thinking ability of nurses and self-disclosure by patients to accuracy in nursing assessment of depression while controlling for nurses' education. One predictor variable, critical thinking ability, was measured by the overall score obtained on the Watson-Glaser Critical Thinking Appraisal (Watson & Glaser, 1980). The other predictor variable, patient self-disclosure, was measured by the total score obtained on the measure of patient self-disclosure on the Modified Depression Status Inventory (Zung, 1972). The criterion variable, accuracy in nursing assessment of depression, was measured by the magnitude of the prediction error (absolute value), using the nurse's score on the severity of depression on the Modified Depression Status Inventory (Zung, 1972) to predict the patient's score on the Self-Rating Depression Scale (Zung, 1973). The hypotheses were tested by multiple regression analysis.

Sample

A nonprobability, convenience sample of 120 female patients (65 to 75 years old) with a medical illness and their assigned nurses who met the criteria specified in the delimitations were recruited from the medical units of hospitals in Philadelphia and New Jersey. All new admissions meeting the criteria specified in the delimitations were contacted for participation. To maintain independence of the dyads, each nurse was paired with only one patient. Each registered nurse was paid a minimum fee for participation in the study. A sample size of 120 nurse-patient dyads was determined to provide power of > .80 to detect a medium effect in multiple regression analysis at the .05 level of significance (Cohen, 1977).

Data Collection

Prior to the collection of data, the investigator obtained permission from the Institutional Review Boards of hospitals in Philadelphia and New Jersey, where subjects were recruited (see Appendix A). Once permissions were received, the investigator made individual arrangements to meet with the nursing clinical directors and unit managers of the medical units in order to discuss the purpose and

method of the researcher.

Confidentiality was assured by identifying the data collection instruments for patients and nurses with code numbers. Nurses were assigned a code number when selected for inclusion in the study. Patients were identified by a medical record number with a matching code number of the assigned registered nurse. Upon completion of data collection for each nurse-patient dyad, the record with identifying information was destroyed by the investigator.

The following procedure was employed for data collection.

1. The investigator consulted with the nurses responsible for patient care for the purposes of selecting potential RN subjects within the delimitations of the study.

2. An explanation of the research and the nature of participation was offered to potential RN subjects by the investigator; then willingness to participate was determined.

3. When the nurses agreed to participate in the study, consent forms (see Appendix B) were distributed and signed.

4. The nurses were trained to rate the patient self-disclosure, using a lecture and a videotaped simulation of a nurse-patient interview, and they were also taught the strategies for productive interviews

(see Appendix C). The nurses completed the Critical Thinking Appraisal tests (see Appendix D) which took approximately 40 minutes.

5. The investigator reviewed patient admissions to determine potential patient subjects within the delimitations of the study.

6. A written explanation of the research was offered to each potential patient (see Appendix E). When the patients agreed to participate in the study, consent forms (see Appendix F) were distributed and signed.

7. On the first 72 hours of patient hospitalization, patients were asked by the investigator to complete the Self-Rating Depression Scale (see Appendix G). The word "Depression" was deleted from the title of the form to avoid possible response effect on patients by denial or social desirability. An instruction was added, and a time frame of seven days was included to maintain consistency for the SDS and DSI.

8. Immediately after the patients completed the Self-Rating Depression Scale, the nurses were asked to interview the patients to assess depression and patient self-disclosure, using the Modified Depression Status Inventory (see Appendix H).

9. The nurses completed the Nurses Demographic Data Form (see Appendix I).

10. The Patient Demographic Data Sheet (see

Appendix J) was completed by the researcher, using the patient chart. Since the nurse had access to the patient's record, knowledge of the patient's medical illness and medications, and their possible association with depression could bias the nurse's assessment of depression on patient; therefore, these factors were collected and examined by the investigator.

The data collection was completed over a nine-month period. One hundred forty-six registered nurses were asked to participate. Seven nurses refused to participate. Of the 139 nurses, 16 nurses withdrew after training, 3 nurses did not complete the critical thinking test, and 120 were matched with patient subjects. Of the patient group, 133 patients were asked to participate. Six patients refused to participate, 3 were transferred to other services, and 4 were not able to complete the self-rating instrument.

Instruments

Watson-Glaser Critical Thinking Appraisal

The Watson-Glaser Critical Thinking Appraisal (WGCTA) (Watson & Glaser, 1980) purports to measure inference, recognition of assumptions, deductions, interpretation, and evaluation of arguments. As in the earlier forms (Ym and Zm), the new forms, A and B, tap a composite of attitudes, knowledge, and skills. The

WGCTA seeks to provide an estimate of an individual's standing in this composite of abilities by means of five subsets, each designed to tap the above aspects of critical thinking. A high level of competency in critical thinking, as measured by the WGCTA, represents the ability to perform correctly the tasks represented by the five subsets (Watson & Glaser, 1980).

Forms A and B differ from Forms Ym and Zm in several aspects. Whereas Forms Ym and Zm are each 100 items long, Forms A and B are equivalent to Forms Ym and Zm and consist of 80 items each. They usually can be completed within 40 minutes. Some of the 160 items in new Forms A and B have been derived from Forms Ym and Zm, while others have been modified in the interest of clarity, current usage, and the elimination of racial or sexual stereotypes. Twenty-six items are entirely new. These new items, along with the revised older items, formed the pool of items that were piloted in pre-standardization testing (Watson & Glaser, 1980, p. 1). Form A was utilized in this study.

Reliability

Reliability of the Critical Thinking Appraisal instrument has been assessed in several ways. Reliability data consist of split-half reliability coefficients for upper division students (N = 212), baccalaureate nursing students (N = 129), and third-

year medical students (N = 127) which range from .72 to .85 for Form A. The split-half reliability coefficients for Form B for the upper division students and baccalaureate nursing students ranged from .70 to .75. Test-retest reliability for Form A was assessed by administering the test twice to a group of college students (N = 96) with an interval of three months between testing periods, which produced a correlation of .73, reflecting reasonable stability of the measure over time. Alternate-form reliability was calculated by correlating responses to Forms A and B utilizing a sample of 12th-grade students (N = 228) which yielded a correlation of .75 (Watson & Glaser, 1980).

Validity

Construct validity is based on relationships to related constructs as measured by other tools. Significant correlations with other intelligence and comprehension tests have been documented with students in Grade 12 (N = 31), Otis-Lennon Mental Ability (r = .70, p < .01), Scholastic Aptitude Test (verbal) (r = .69, p < .01), American College Testing Program and California Achievement Tests, Reading (N = 61) (r = .64, p < .01).

Scoring

The Critical Thinking Appraisal instrument is

scored by summing the number of correct responses to the 80 items in Form A. The maximum raw score is 80. Higher scores demonstrate greater levels of critical thinking abilities.

Self-Rating Depression Scale

The Self-Rating Depression Scale (SDS) (Zung, 1973) is a 20-item, self-assessment tool measuring severity of symptoms of depression. Ten of the items were worded positively, and 10 others were worded negatively, indicating the presence of symptomatology. Each items was scored on a 4-point scale as follows:

1 = a little of the time

2 = some of the time

3 = good part of the time

4 = most of the time.

The final score is an index derived by dividing the total raw score by the maximum possible score of 80, then multiplied by 100 (Zung, 1973).

The SDS was normed on 31 patients who were diagnosed as suffering from a depressive disorder and a control group of 100 individuals hospitalized in the medical and surgical units with no observable symptoms of depression. The result showed that the depressed patient indices ranged from 63 to 90, with a mean of 74, which was significantly different ($p < .01$) from the control indices, which ranged from 25 to 43, with a

mean of 33 (Zung, 1965).

Reliability

One approach to evaluating the reliability of an instrument is to determine its internal consistency, this being the degree to which items of a scale correlate with each other (Nunnally, 1967, pp. 197-198). Internal consistency, as measured by coefficient alpha, was found to be acceptably high (.89) for a group of 48 "well-functioning senior citizens" (12 males and 36 females) with a mean age of 70.8 (Murkofsky, Conte, Plutchik, & Karasu, 1978). In a study of 100 geriatric subjects (healthy patients, N = 40; patients treated for depression, N = 60) an alpha coefficient of .87 and a split-half reliability coefficient of .81 was reported (Yesavage, et al., 1983).

Validity

The validity of the SDS was demonstrated by Okimoto, et al. (1982) in their study of 55 medical outpatients, age 60 and older. The SDS was compared with the diagnosis made by a psychiatrist who interviewed these patients, using the criteria for depressive illness in the Diagnostic and Statistical Manual III classification (APA, 1980). The Zung scale correctly classified 85% and demonstrated significant

agreement with the psychiatric interview results (kappa = .65, $p < .01$).

Convergent validity was demonstrated between the SDS and the Geriatric Depression Scale to be .84 ($p < .001$) among healthy geriatric subjects (N = 40) and psychiatric geriatric patients (N = 60) (Yesavage, et al., 1983) and .86 among nursing home residents (depressed, N = 20; nondepressed, N = 19), age ranging from 65 to 89 (Hickie & Snowdon, 1987).

Scoring

The total raw score can range from 20 to 80. The final score was an index derived by dividing the total raw score by the maximum possible score of 80, then multiplied by 100. The SDS was constructed so that the higher the resulting index, the more severe is the depressive symptomatology. For the elderly, the index scores of less than 60 suggest no clinical depression; 60 to 69 suggest mild depression; 70 to 79 suggest moderate depression; and 80 and above suggest severe depression.

Depression Status Inventory

This is a 20-item, semi-structured, interviewer-rated instrument with content corresponding directly with the Self-Rating Depression Scale. Each item has a guide question based on the clinical signs and symptoms

ot depression. The guide question assures coverage of all areas on which judgments are required. However, the interviewer has the flexibility of modifying the questions or probing for details, which makes possible a smooth interview and a more accurate assessment.

Reliability

In a study of 225 psychiatric patients, Zung (1972) reported a split-half correlation of .82 ($p < .01$) for the 10 even-numbered and 10 odd-numbered items and a interrater reliability of .91 ($p = .01$) using two raters as calculated by Pearson product moment correlation.

Validity

Zung (1972) found a correlation of .87 ($p = .01$) between the Self-Rating Depression Scale and the Depression Status Inventory on 225 patients (152 inpatients and 73 outpatients), age ranging from 22 to 75. Using the same sample, the discriminant power of the Depression Status Inventory was demonstrated when it differentiated significantly ($p = <.01$) depressed from nondepressed patients.

Scoring

For the severity of depression, the ratings of the individual items are added and the total raw score is

converted to an index score by dividing the total score with the maximum score of 80 and multiplied by 100. The Depression Status Inventory is constructed so that the higher the resulting index, the more severe is the depressive symptomatology. For the elderly, the index scores of less than 60 suggest no clinical depression; 60 to 69 suggest mild depression; 70 to 79 suggest moderate depression; and 80 and above suggest severe depression. The Depression Status Inventory can be completed in 30 minutes.

Modified Depression Status Inventory

The original Depression Status Inventory (Zung, 1972) was modified (with permission from Dr. Zung, see Appendix K) for the present study to incorporate the instruction and rating on patient self-disclosure. The 20 items were rated for both the severity of depression and willingness of the patient to disclose information. For the severity of depression, the items are judged on a 4-point system of severity of observed or reported responses. These are defined as follows:

1 = none or insignificant in intensity or duration, present none or little of the time in frequency

2 = mild in intensity, present some of the time

3 = of moderate severity, present a good part

of the time

4 = severe in intensity or duration, present most or all of the time in frequency.

For patient self-disclosure, the same 20 items were judged on a 3-point system:

0 = no disclosure. The patient states that the answer to the question is unknown or she is not willing to discuss the subject matter.

1 = reluctant to disclose. The patient answers the questions with hesitation or difficulty. For example, the patient answers questions in a vague or nonspecific manner; patient's answers are fragmented, accompanied by pauses; or patient acknowledges the presence of the symptom but does not elaborate on the subject, or the patient changes the focus of discussion away from self;

2 = willing to disclose. The patient answers the question readily, freely offering information. For example, the patient gives specific response(s) to questions; patient answers questions spontaneously; or patient acknowledges the presence of a symptom and elaborates on the subject, offering personal information on the subject.

Scoring

For patient self-disclosure, the total raw score ranges from 0 to 40. The higher scores indicate that

the patient is more willing to disclose information related to signs and symptoms of depression.

Pilot Study

A pilot study was conducted using the Modified Depression Status Inventory among hospitalized medical patients (N = 14). The purposes of the pilot study were to determine if the instruction on the Modified Depression Status Inventory was understandable and to determine the agreement between raters on the patient self-disclosure measure.

All new admissions to three medical units of a New Jersey hospital who met the delimitations for the study were reviewed. The first 14 patients who volunteered to participate were included in the sample for the pilot study. The ages of the patients ranged from 65 to 75 years, with an mean age of 69.4 years (S.D. = 3.4). The sample was white, with an average educational attainment of 12 years; 93% were widowed and 7% married (Appendix L). Following a standard introduction, the purposes of the pilot study were explained to the patient. The patients were informed that their participation would involve an interview for 30 minutes regarding their feelings and physical health in the last week and that the interview would be conducted by a nurse with another nurse as an observer. When the patient signed a consent form, the interview

was scheduled for the next day at a time that was convenient for the patient and the two registered nurses.

All interviews were conducted in a private room. The patients were informed that some questions might be difficult to answer, and, if so, that it was permissible to indicate they were not willing to discuss the subject matter or that the answer was unknown. After the first two interviews, the sequence of the items was rearranged to focus on less threatening topics, initially to provide a "warm-up" period for the patient and to facilitate a smooth flow in the interview. The sequence of the items was modified as follows: sleep disturbance, decreased appetite, weight loss, constipation, fatigue, diurnal variations, depressed mood, crying spells, psychomotor retardation, confusion, irritability, psychomotor agitation, indecisiveness, hopelessness, personal devaluation, emptiness, dissatisfaction, and suicidal ruminations.

The results showed that the mean scores for the patient self-disclosure and severity of depression were 34.3 (S.D. = 4.37) and 45.3 (S.D. = 6.94), respectively. Most of the patients in this sample had a self-disclosure score that fell near the maximum score of 40 (range 0 to 40), indicating willingness to disclose information on symptoms of depression during

the interview. Although 86% of the patients (N = 12) scored below 60, indicating no clinical depression, 14% (N = 2) scored 60 and 64, indicating mild depression.

The interrater reliabilities on severity of depression and self-disclosure were also assessed. By comparing the ratings of the nurse and observer, the interrater reliabilities of severity of depression and patient self-disclosure, as calculated by the Pearson product moment correlation, were .92 and .89 respectively.

CHAPTER IV

ANALYSIS OF DATA

Descriptive Statistics

Nurses

The demographic characteristics of the sample of nurses are summarized in Tables 1 and 2. The nurses' age ranged from 23 to 60 years, with a mean of 35 years (S.D. = 8.78). The years of experience ranged from 1 to 30 years, a mean of 8.5 years (S.D. = 6.3). The educational background of the nurses was predominantly (43.3%) associate degree, and 8% had a master's degree. Most nurses (96.7%) were employed full time, and 75% were assigned on day shift. About 30% had practiced in geriatric nursing, and only 6% had practiced in psychiatric nursing.

A majority of the nurses (51%) had practiced in the cardiac unit. About 48.3% were primary nurses of the patients. The average length of time spent by nurses on physical care of patients ranged from 30 minutes to 4 hours, with a mean of 1½ hours (S.D. = 22 minutes). The length of time spent talking to patients ranged from 30 minutes to 2 hours, with a mean of 55

minutes (S.D. = 15 minutes).

Table 1

Frequencies and Percentages of Demographic Characteristics of Nurses

(N = 120)

Characteristics	N	%
Basic Education		
Diploma	38	31.7
Associate	52	43.3
Baccalaureate	30	25.0
Highest Degree		
Master	8	6.7
Employment Status		
Full Time	116	96.7
Part Time	4	3.2
Shift Assigned		
Day	90	75.0
Evening	23	21.7
Night	4	3.3
Geriatric Experience		
With	37	30.0
Without	83	70.0
Psychiatric Experience		
With	7	5.8
Without	113	94.2
Area of Practice		
Medicine	34	28.3
Cardiac	62	51.7
Oncology	2	1.7
Renal	18	15.0
Pulmonary	3	3.3
Administration	1	.8
Patient Contact		
Admitted Patient	15	12.5
Primary Nurse	58	48.3

Table 2

Range, Mean, and Standard Deviation for Demographic Characteristics of Nurses

($\underline{N}$ = 120)

Characteristics	Range	Mean	S.D.
Age	23-60	35	8.8
Years of Experience	1-30	8.5	6.3
Patient Contact			
Minutes Spent on Physical Care	20-240	90	22
Minutes Spent Talking	30-210	55	15

Patients

The demographic characteristics for the sample of patients are summarized in Table 3. The patients' age ranged from 65 to 75 years, with a mean age of 69.5 (S.D. = 3.6). Most of the patients (80%) were Caucasian. A majority of the patients (60.8%) had completed high school education. Most of the patients (49.2%) were married. Approximately 38% lived with their spouses.

The primary health problem of most of the patients (57%) was cardiovascular related. Diabetes was the most prevalent secondary health problem (36%). Approximately 47% of the patients were taking digitalis.

Table 3

Frequencies and Percentages of Demographic Characteristics of Patients

(N = 120)

Characteristics	N	%
Ethnic Origin		
Caucasian	96	80.0
Black	23	19.2
Hispanic	1	.8
Marital Status		
Single	3	2.5
Married	59	49.2
Divorced	8	6.7
Widowed	48	40.0
Separated	2	1.7
Education		
Less Than High School	11	9.2
High School Diploma	73	60.8
Some College	20	16.7
College Degree	16	13.1
Living Arrangement		
Alone	39	32.5
With Spouse	45	37.5
With Children	19	15.8
With Spouse & Children	9	7.5
With Relatives	4	3.3
With Friends	4	3.3
Psychiatric History		
With	5	4.2
Without	115	95.8
Primary Health Problem		
Coronary Disease	27	22.5
Vascular Disease	39	32.5
Pulmonary Disease	11	9.2
Arthritis	8	6.7
Renal Disease	27	22.5
Cancer (skin)	2	1.6
Secondary Health Problem		
Diabetes	43	35.8

continued

Table 3 continued

Hypertension	30	25.0
Pulmonary Disease	13	10.8
Anemia	8	6.7
Arthritis	16	13.3
Gall Bladder Disease	3	2.5
Cancer of Throat	1	.8
None	4	3.3
Medications		
Antianxiety	21	17.5
Antihypertensive	19	15.8
Antidepressant	3	2.5
Digitalis	57	47.5

Study Variables

A compilation of the descriptive characteristics of the three variables employed in the study are presented in Table 4.

Table 4

Descriptive Statistics for Study Variables

(N = 120)

Variable	Range	Mean	S.D.
Accuracy in Nursing Assessment of Depression (Absolute value)	.08-22.26	7.58	4.94
RNs, DSI score	33-75	48.70	9.19
Patients' SDS	31-83	49.50	10.50
Critical Thinking Appraisal	32-74	54.90	9.40
Patient Self-Disclosure	20-40	36.70	4.40

The range of scores for accuracy in nursing assessment of depression was from .08 to 22.26, with a mean of 7.58 (S.D. = 4.74), indicating a wide margin of error. The index scores on the nurses' assessment of severity of depression on the DSI ranged from 33 to 75, with a mean of 48.7 (S.D. = 9.19) and patients' self-rating on depression on the SDS ranged from 31 to 83, with a mean of 49.5 (S.D. = 10.5). The mean scores on the SDS and DSI revealed that most of the patients had index scores below 60, indicating no clinical depression. The range of scores for the nurses' Critical Thinking Appraisal was from 32 to 74, with a mean of 54.8 (S.D. = 9.4). The nurses' scores on the Critical Thinking appraisal indicated that most of the nurses in this sample had low critical thinking abilities. The range of scores for the patient self-disclosure was from 20 to 40, with a mean of 36.7 (S.D. = 4.4). The results revealed that most of the patients had a self-disclosure score that falls near the maximum score of 40, indicating willingness to disclose information on symptoms of depression during the interview.

The Instruments

Correlations among predictor variables were computed to determine their independence. The

correlation coefficient (r = .03) between critical thinking ability and patient self-disclosure indicated no significant (p = .79) shared variance between the two variables.

Coefficient alphas for the scales of the Watson-Glaser Critical Thinking Appraisal, the Depression Status Inventory, and the Self-Rating Depression Scale were computed to determine the reliability of the scales. They are presented in Table 5.

Table 5

Alpha Reliability Coefficients for Instruments (N = 120)

Instruments	Alpha
Critical Thinking Appraisal	.84
Depression Status Inventory (DSI)	.66
Self-Rating Depression Scale (SDS)	.75

The coefficient alpha for the Watson-Glaser Critical Thinking Appraisal demonstrated a high degree of internal consistency; that is, performance on one item correlated highly with other items on the same scale. The coefficient alpha for the Depression Status Inventory demonstrated a moderate degree of internal

consistency, while the Self-Rating Depression Scale demonstrated a high degree of internal consistency (Nunnally, 1967).

Hypotheses

Hypothesis 1 and hypothesis 2 were tested by multiple regression analyses. The tests of hypotheses 1 and 2 are reflected in the significance of the main effects of critical thinking ability of the nurse and patient self-disclosure, after statistically controlling for nurses' education. Hypothesis 3 was tested by the significance and the nature of the interaction (product term = self-disclosure x high/low critical thinking) between critical thinking ability of the nurse and patient self-disclosure independent of nurses' education. All significance tests were conducted at .05 level.

Hypothesis 1

There is a positive relationship between nurses' critical thinking ability and accuracy (magnitude of error) in nursing assessment of depression, independent of nurses' education.

A multiple regression analysis (see Table 6) was conducted on nurses' education and critical thinking ability with the dependent variable, accuracy in

Table 6

Multiple Regression Analysis of Nurses' Education, Critical Thinking, and Accuracy in Nursing Assessment

(N = 120)

Variable	Beta	T
Education		
Associate	.76	.53
Baccalaureate	.73	.57
Masters	3.06	.13
CTA	- .15	.004*

Constant = 15.06

R^2 = .08

*p < .05

nursing assessment of depression. The regression coefficient (r = - .15) for critical thinking ability was statistically significant (p = .004). The regression coefficient indicated that nurses with high critical thinking abilities had low magnitude of error in nursing assessment of depression in the elderly medical patients. The result also revealed that nurses' education and accuracy in nursing assessment of depression were not significantly correlated. Approximately 8% of the variance in accuracy in nursing assessment of depression could be explained by nurses' education and nurses' critical thinking ability. The unique contribution of nurses' critical thinking

ability to accuracy in nursing assessment of depression after nurses' education was partialled out was 7%. Hypothesis 1 was supported.

Hypothesis 2

There is a positive relationship between patient self-disclosure and accuracy in nursing assessment of depression independent of nurses' education.

A multiple regression analysis (see Table 7) was conducted for nurses' education and patient self-disclosure with the dependent variable, accuracy in

Table 7

Multiple Regression Analysis of Nurses' Education, Patient Self-Disclosure, and Accuracy in Nursing Assessment of Depression

(N = 120)

Variable	Beta	T
Education		
Associate	- .35	.76
Baccalaureate	- .09	.95
Masters	- .87	.66
Patient Self-Disclosure	- .17	.11

Constant = 13.83

R^2 = .03

nursing assessment of depression. The regression coefficient (r = -.17) for patient self-disclosure was

not significant (p = .11). The result also showed that nurses' education and accuracy in nursing assessment were not significantly correlated. Approximately 3% of the variance in accuracy in nursing assessment of depression was due to nurses' education and patient self-disclosure. The unique contribution of patient self-disclosure to accuracy in nursing assessment of depression after nurses' education was partialled out was 2% which was not significant. Hypothesis 2 was not supported.

Hypothesis 3

There is an interaction between the nurses' critical thinking ability and patient self-disclosure in relation to accuracy in nursing assessment of depression independent of nurses' education. Specifically, the relationship of nurses' critical thinking ability to accuracy in nursing assessment of depression will be stronger when there is high patient self-disclosure than when there is low patient self-disclosure.

A multiple regression analysis was conducted (see Table 8) to determine the nature of the interaction of critical thinking ability and patient self-disclosure in relation to accuracy in nursing assessment of depression independent of nurses' education. The

regression coefficient (.00) for the interaction of critical thinking ability and patient self-disclosure was not significant (p = .90). Approximately 10% of

Table 8

Multiple Regression Analysis of Nurses' Education, Critical Thinking, Patient Self-Disclosure,and Accuracy in Nursing Assessment

(N = 120)

Variable	Beta	T
Education		
Associate	- .90	.45
Baccalaureate	- .72	.57
Masters	- 2.61	.20
CTA	- .20	.63
PSD	- .26	.69
CTA x PSD	.00	.90

Constant = 24.47

R^2 = 10.01

the variance in accuracy in nursing assessment of depression was accounted for by nurses' education, patient self-disclosure, and nurses' critical thinking ability. However, no variance in accuracy in nursing assessment of depression was accounted for by the interaction of nurses' critical thinking ability and patient self-disclosure independent of nurses' education. Hypothesis 3 was not supported.

Ancillary Findings

Pearson product moment correlation coefficients were computed between nurses' education, years of experience, and critical thinking ability. Critical thinking ability and nurses' education were significantly (p = .004) but weakly correlated (r = .26). Critical thinking ability and nurses' years of experience were not significantly correlated (r = .14, p = .13).

A Pearson product moment correlation coefficient (r = .06, p = .48) between nurses' years of experience and accuracy in nursing assessment of depression was not significant.

Further analyses were conducted on accuracy of nursing assessment of depression with data obtained from the nurses' demographic sheets. Analysis of variance (ANOVA) was used to examine the differences in accuracy in nursing assessment for nurses' education, shift assignment, area of practice, experience in geriatric care, and assignment as primary nurses. The results are summarized in Table 9. No statistically significant differences were found in the accuracy in nursing assessment of depression for any demographic characteristics except for primary nurses (F = 4.31, p = .04). The mean score (mean = 5.55, S.D. = 1.8) on accuracy in nursing assessment of depression for the

Table 9

Analysis of Variance Summary for Accuracy in Nursing Assessment of Depression with Demographic Characteristics of Nurses

(N = 120)

Source of Variation	df	SS	MS	F	P
Education					
Between	2	11.69	5.84	.24	.79
Within	117	2887.52	24.68		
Total	119	2899.20			
Shift Assigned					
Between	1	39.23	39.23	1.61	.87
Within	117	2857.69	24.43		
Total	118	2896.92			
Area of Practice					
Between	2	69.24	34.62	1.40	.25
Within	111	2747.36	24.75		
Total	113	2816.60			
Geriatric Experience					
Between	1	34.16	34.16	1.47	.24
Within	118	2865.04			
Total	119	2899.20			
Admitted Patient					
Between	1	54.27	54.27	2.35	.13
Within	118	2722.44	23.07		
Total	119	2776.71			
Primary RN					
Between	1	99.64	99.64	4.39	.04*
Within	118	2677.06	22.69		
Total	119	2776.71			

*p < .05

primary nurses was significantly lower than the mean score (mean = 8.39, S.D. = 2.4) for those who were not primary nurses. On the basis of this finding, it may be concluded that primary nurses had a significantly ($p = .04$) lower magnitude of error in nursing assessment of depression than those who were not primary nurses.

Physical illness, certain medications, and substances, such as alcohol, have been reported to be associated with depression. Because nurses had access to the patients' charts, an ANOVA was conducted to test for differences in accuracy in nursing assessment of depression for the variables of patients' primary diagnosis, secondary diagnosis, and prescribed medications. Table 10 presents the findings.

No statistically significant differences were found in patients' primary diagnosis, secondary diagnosis, and medications in relation to accuracy in nursing assessment of depression. Only 4 patients reported alcohol used; therefore, no analysis was done.

The amounts of time spent by the nurses on physical care and time spent talking to patients in relation to accuracy in nursing assessment of depression were examined. Pearson product moment correlations for accuracy in nursing assessment of

depression and the length of time spent for physical care (r = .14, p = .13) and the length of time spent talking to patients (r = .08, p = .38) were not significant.

Table 10

Analyses of Variance Summary for Accuracy in Nursing Assessment of Depression with Medical Illness and Medications of Patients

(N = 20)

Source of Variation	df	SS	MS	F	P
Primary Diagnosis					
Between	3	10.75	3.58	.14	.94
Within	106	2645.23	24.95		
Total	109	2655.98			
Secondary Diagnosis					
Between	4	33.05	8.22	.32	.87
Within	99	2572.50	25.98		
Total	103	2605.56			
Medications					
Between	3	26.87	8.96	.36	.78
Within	113	2792.96	24.72		
Total	116	2819.84			

Further analyses were conducted on patient self-disclosure with data obtained from the patient demographic sheet. Analysis of variance (ANOVA) was used to examine differences in patient self-disclosure with patients' education, ethnic background, marital status, and living arrangement. The results are

summarized in Table 11. No statistically significant differences were found in patient self-disclosure for any of patients' demographic characteristics.

Table 11

Analysis of Variance Summary for Patient Self-Disclosure with Demographic Characteristics of Patients

(N = 20)

Characteristics	df	SS	MS	F	P
Education					
Between	3	15.21	15.21	.76	.39
Within	116	2280.66	19.66		
Total	119	2295.87			
Marital Status					
Between	2	.76	3.78	.21	.81
Within	113	2050.19	18.14		
Total	115	2057.75			
Ethnicity					
Between	1	14.40	14.40	.74	.39
Within	117	2281.47	19.50		
Total	118	2295.87			
Living Arrangement					
Between	2	5.90	2.95	.15	.86
Within	111	2243.53	20.21		
Total	113	2249.44			

Analysis of variance was conducted to examine the differences in the patient self-disclosure of depressed and nondepressed patients. Depressed and nondepressed patients were classified based on the rating of patients on the SDS and nurses' rating on the DSI. The

ratings of patients' SDS ($F = .07$, $p = .79$) and nurses' DSI ($F = .00$, $p = .95$) revealed no significant differences in patient self-disclosure for depressed and nondepressed patients.

CHAPTER V

DISCUSSION OF FINDINGS

The purpose of the researcher was to examine the relationships of nurses' critical thinking ability and patients' self-disclosure to accuracy in nursing assessment of depression among the elderly medical patients. Research studies have shown that education influences the ways in which nurses process information (Broderick & Ammentorp, 1979; Davis, 1972, Del Bueno, 1983; Tanner, Padrick, Westfall, & Putzier, 1987; Verhonick, Nichols, Glor, & McCarthy, 1968). Based upon the proposition that nurses' ability to think critically and patient self-disclosure are related to accuracy in nursing assessment of depression, it was hypothesized that nurses' critical thinking ability and patients' self-disclosure would be positively related to accuracy in nursing assessment of depression independent of nurses' education. Further, the relationship of nurses' critical thinking ability to accuracy in nursing assessment of depression was expected to be stronger when there was high patient self-disclosure than when there was low patient self-disclosure. In this section, the findings relative to

each hypothesis are discussed with consideration given to both theoretical formulations and methodological concerns.

Critical Thinking Ability and Accuracy in Nursing Assessment of Depression

The first hypothesis predicted that there would be a positive relationship between nurses' critical thinking ability and accuracy in nursing assessment of depression, independent of nurses' education.

Critical thinking ability was defined as attitudes of inquiry that involve an ability to define a problem, select pertinent information for the solution, recognize stated and unstated assumptions, formulate and select relevant and promising hypotheses, draw valid conclusions, and judge the validity of inferences (Dressel & Mayhew, 1954; Watson & Glaser, 1964, 1980). Critical thinking ability of nurses was measured by the Watson-Glaser Critical Thinking Appraisal (Watson & Glaser, 1980).

Accuracy in nursing assessment of depression is the degree to which nurses' evaluation of patients' depression approximates the patients' self-report of depression. This was measured by the magnitude of the prediction error (absolute value) using the nurse's score on the severity of depression on the Depression Status Inventory (DSI; Zung, 1972) to predict the

patient's score on the Self-Rating Depression Scale (SDS; Zung, 1973). The DSI and SDS had a correlation coefficient (r = .51, p = .0001) indicating that the two measures share a common variance of 25%.

The regression coefficient (r = - .15) of Critical Thinking Appraisal in relation to accuracy in nursing assessment of depression independent of nurses' education was significant (p = .004). The Critical Thinking Appraisal regression coefficient indicated that there was high magnitude of error in nursing assessment of depression when there was low nurses' critical thinking ability. Eight percent of the variance in accuracy in nursing assessment of depression was accounted for by nurses' education and nurses' critical thinking ability. The unique contribution of nurses' critical thinking ability to accuracy in nursing assessment after accounting for nurses' education was 7%, and this was significant.

This result was interesting because prior studies on critical thinking ability and nursing diagnosis reported no significant findings. For instance, Mathews and Gaul (1979) studied the relationship between both undergraduate and graduate students' ability to derive nursing diagnosis from a written case study and scores on the Watson-Glaser Critical Thinking Appraisal instrument. The results showed no relationship between critical thinking ability and the

ability to establish a nursing diagnosis. Similarly, Tanner (1977) reported no relationship between the scores on Watson-Glaser Critical Thinking Appraisal and measures related to clinical judgment using case studies among nursing students.

A possible explanation for the inconsistencies in the findings could be attributed to the use of simulations versus the actual clinical situation. Previous studies relied on simulations as a means of assessing performance on clinical judgment. This study showed that the use of simulations could not represent the clinical judgment tasks, and the responses elicited were not like those that would occur in actual practice.

Recently, Holzemer and McLaughlin (1988) tested the validity of two types of clinical simulation: clinical simulation tests (CST) and patient management problems (PMP) with the Watson-Glaser Critical Thinking Appraisal instrument to assess the relationship between a measure of critical thinking ability and performance on the clinical simulators. The results showed no correlation between the clinical simulation tests and the Watson-Glaser Critical Thinking Appraisal test. These findings indicated that the Watson-Glaser Critical Thinking Appraisal and the clinical simulation tests such as CST and PMP might be measuring different dimensions of cognitive abilities.

Cognitive abilities other than critical thinking have been reported to influence accuracy in nursing diagnosis. For instance, Lunney (1989) studied the relationships of productive thinking and accuracy of nursing diagnosis among nurses (N = 111) using nursing case studies. Productive thinking includes divergent production of semantic units (DMU) which is the ability to retrieve multiple information from memory, divergent production of semantic classes (DMC) which is flexibility in thinking, necessary in generating different hypotheses, and divergent production of semantic implication (DMI) which is the ability to consider multiple possibilities related to information given. The basic thinking abilities of divergent production of semantic units (DMU), divergent production of semantic classes (DMC), and divergent production of semantic implication (DMI) were reported to be positively correlated with accuracy in nursing diagnosis. However, when case studies were used as separate measures of accuracy, the results were varied for each case, indicating that diagnosing is case specific.

Recently, Maciorowski (1989) in a clinical study examined the relationship of empathy, critical thinking ability, and accuracy in nursing perception of acute pain in post-operative patients. No significant findings were reported. The researcher explained the

lack of significant findings to be due to the correlation between the measures of empathy and critical thinking ability. However, another possible explanation for the lack of significant findings in Maciorowski's study could be attributed to the use of the Visual Analogue Scale to rate perceived pain experience of patients. Pain as a phenomenon is variable and would possibly require more observations when using a Visual Analogue Scale. The nurses in Maciorowski's study conducted a one time observation of patient pain experience instead of making several observations using the Visual Analogue Scale.

In this study, accuracy in nursing assessment of depression was defined as the degree to which nurses' evaluation of patients' depression approximates the patient's self-report of depression. This was measured by the magnitude of the prediction error (absolute value) using the nurse's scores on the DSI (Zung, 1972) to predict the patient's scores on the SDS (Zung, 1973).

Doubts have been raised about the advisability of using only self-administered measures in assessing depression with the elderly. Research indicates that patients tend to misrepresent information on self-administered reports by denial or exaggeration (Brown & Zung, 1973). Also, certain items which are typically used in depression scales require an outside trained

observer to obtain valid information which cannot be gleaned from self-administered measures (Hamilton, 1980). However, there is evidence indicating that self-administered measures correlate well with the ratings of trained professionals (Deluty, Deluty, & Carver, 1986; Post, et al., 1985). The self-report is important because it provides access to the subjective feelings and moods of the patients in the assessment of depression.

Similarly, the observer rating is valuable because the ratings embody the judgment of the clinician. The clinician's judgment involves data transformation and is a product of an inferential process which requires certain cognitive operations. Critical thinking abilities are cognitive functions which are necessary for the interpretation of information and formation of a judgment. Critical thinking influences the accuracy in nursing assessment of depression. In this study, both the observer rating and self-rating were used.

The Watson-Glaser Critical Thinking Appraisal for the registered nurses in this study had a mean score of 54.9 (S.D. = 9.4), which was lower than the mean score (56.6, S.D. = 7.3) for baccalaureate nursing students (N = 129) as reported by Watson and Glaser (1980). A higher mean score (59.4, S.D. = 7.8) on the Watson-Glaser Critical Thinking Appraisal for the baccalaureate prepared nurses was reported by

Maciorowski (1989).

Mathews and Gaul (1979) also reported high mean scores on the Watson-Glaser Critical Thinking Appraisal (Form Ym) for the baccalaureate nursing students (mean = 75, S.D. = 8.4) and the graduate student nurses (mean = 78, S.D. = 6).

The differences on the mean scores of the Watson-Glaser Critical Thinking Appraisal could be attributed to the differences in the nurses' educational background. Nurses in this study were predominately (43%) associate degree graduates while those in Maciorowski's study were predominately baccalaureate graduates, and Mathews and Gaul's were baccalaureate and graduate nursing students.

Patient Self-Disclosure and Accuracy in Nursing Assessment of Depression

The second hypothesis, which expressed a positive relationship between patient self-disclosure and accuracy (magnitude of error) in nursing assessment of depression, independent of nurses' education, was not supported. Approximately 3% of the variance in accuracy in nursing assessment of depression was due to nurses' education and patients' self-disclosure. The unique contribution of patient self-disclosure to accuracy in nursing assessment of depression, independent of nurses' education, was 2% which was not

significant.

Although the result was not significant, the regression coefficient (r = - .17) indicated that, when patient self-disclosure was high, the magnitude of error was less in nursing assessment of depression in the elderly medical patients.

In the health care situation, patients participate in their own health care by disclosing information about themselves to their health care provider. Self-disclosure is the process by which an individual makes aspects of oneself and one's experience known to another person (Jourard, 1971). As an interpersonal behavior, it is a verbal communication to reveal information about oneself to another (Chelune, 1979; Cozby, 1973; Jourard, 1971).

The accuracy in nursing assessment of depression also depends on the patient's willingness to disclose information on which an accurate diagnosis is based (J. C. Young, 1988; J. W. Young, 1980). Unless the patient is willing to disclose his own thoughts and behavior to the health care provider, the identification of relevant information and correct interpretation of patients' feelings and thoughts are less likely to be achieved.

Patient self-disclosure was measured by the nurse's rating of the patient's willingness to disclose information on their experience of depression as

determined by her responses in an interview on the modification of Zung's instrument, Depression Status Inventory (DSI; Zung, 1972). All nurses were taught how to rate the patient's willingness to disclose information using a videotape on a simulated nurse-patient interview and strategies on productive interviews. In spite of the training program, differences in nurses' ratings could occur as a result of the environment in which the interview was conducted. The interviews were conducted in the patient's room. Although privacy was provided during the interview, it was impossible to control the setting because most patients shared a room with another patient. The interview setting could have affected the willingness of the patient to disclose information. However, the nurse's rating on the patient self-disclosure revealed that most patients were willing to disclose information on signs and symptoms of depression during the interview.

Although it would seem logical that patient self-disclosure could influence the accuracy in nursing assessment of depression, because depression is a subjective feeling of hurting with objective manifestations, it was not supported in this study. Possible reasons for the insignificant finding could be attributed to the measure of patient self-disclosure. Although the level of self-disclosure was high for the

sample as a whole, it may be that the patient self-disclosure measure was not an adequate measure of patient self-disclosure which was necessary for accurate assessment of depression.

In this study, patient self-disclosure is defined as personal information verbally communicated to the nurse. It was possible that information were communicated verbally and nonverbally by patients during the interview. The role of nonverbal communication was not delineated in this study. To what extent nurses may have used or not used nonverbal cues in their rating of patient self-disclosure is not known. The measure of patient self-disclosure needs to delineate the nonverbal communication of the patient in the assessment of depression. Similarly, the amount of relevant information disclosed needs to be considered. By incorporating the amount of relevant information and nonverbal communication of the patient in the measure of self-disclosure, the instrument might be a predictor of accuracy in nursing assessment of depression.

Critical Thinking Ability, Patient Self-Disclosure, and Accuracy in Nursing Assessment of Depression

The third hypothesis, which stated that there was an interaction between nurses' critical thinking ability and patient self-disclosure to accuracy in nursing assessment of depression, independent of

nurses' education, was not supported. Specifically, the relationship of nurses' critical thinking ability to accuracy in assessment of depression experienced by elderly patients was not shown to be stronger when there was high patient self-disclosure than when there was low patient self-disclosure.

The interaction between patient self-disclosure and nurses' critical thinking ability to accuracy in nursing assessment of depression was not significant.

Ancillary Findings

A Pearson product moment correlation analysis was conducted to examine the relationship of nurses' education to critical thinking ability. The correlation coefficient (r = .26, p = .004) between the nurses' education and critical thinking ability was found to be significant. Although the correlation between nurses' education and critical thinking was weak, one could conclude that nurses' education contributed to critical thinking abilities.

This is consistent with the findings of Scoleveno (1981) who studied the differences in the critical thinking abilities of the senior diploma, associate, and baccalaureate nursing students, using simulated nursing situations. Scoleveno's findings showed that baccalaureate nursing students obtained a significantly higher score (p = < .01) in both the Watson-Glaser

Critical Thinking Appraisal and the simulation tests when compared to associate degree and diploma students. The associate degree students obtained a significantly higher score ($p = < .01$) than the diploma students. This study showed that higher education influenced critical thinking abilities. Similarly, Pardue (1987) reported that nurses with master's and baccalaureate degrees had higher scores in critical thinking ability when compared to the diploma and associate degree nurses.

Differences in accuracy in nursing assessment of depression in the elderly medical patients were examined in relation to nurses' educational background, years in practice, shift assignment, area of practice, geriatric experience, and patient contact, such as having admitted the patient and being the primary nurse. In each case, except for patient contact as a primary nurse ($F = 4.32$, $p = .04$), the findings were not significant. That is, there were no relationships found between any of the selected demographic characteristics of nurses except for those who were primary nurses.

The significant findings on primary nursing and accuracy in nursing assessment of depression was interesting. Primary nursing is based on the belief that the patient is the central focus of care (Manthey, 1990). The primary nurse is responsible for assessing,

planning, and evaluating nursing care for her patients (Bowers, 1989; Manthey, 1990).

A possible explanation for this finding could be attributed to the individualized nursing of patients in the practice of primary nursing. Along with this was the 24-hour accountability of the primary nurse in the care of patients which promoted continuity of care. A continuity of care could encourage a trusting relationship, thereby facilitating patient self-disclosure. On the other hand, accountability involves making judgment in the care of patients. It could be possible that primary nursing provided more opportunities to carry out the aspects of critical thinking and develop the rapport for patient self-disclosure hich could explain this finding.

However, the result of this study revealed that nurses' education, patient self-disclosure, and critical thinking ability accounted for only 10% of the variance in accuracy in nursing assessment of depression in the elderly patients. Therefore, it could be possible that there were other factors in the practice of primary nursing that could account for accuracy in nursing assessment of depression.

The relationship of nurses' experience to accuracy in nursing assessment of depression was also examined, using a Pearson product moment correlation. The correlation (r = -.07, p = .48) between experience and

accuracy in nursing assessment of depression in the elderly medical patients was not significant. Although not significantly correlated, it appears that nurses who had more experience had low magnitude of error in nursing assessment of depression in the young elderly medical patients. This is consistent with the findings of Westfall, Tanner, Putzier, & Padrick (1986) who reported that nurses with greater experience have greater situation-specific knowledge and activate more accurate and relevant hypotheses and diagnoses than the less experienced nurses.

Several studies have cited that medical illness in general can trigger depression or vice-versa (Cadoret & Widmer, 1988; Cavanaugh, 1986; Kitchell, et al., 1982; Morris & Raphael, 1987; Murphy, 1982; Zung & King, 1983). Certain medications are also associated with depression. These include antihypertensive, antianxiety, antidepressant, anti-Parkinson agents, corticosteroids, and digitalis. Alcohol is also associated with depression.

Most of the patients (57%) in this study had medical conditions affecting the cardiovascular system. Forty-seven percent were taking digitalis, 17% were taking antianxiety medications, 16% were taking antihypertensive drugs, and 2% were taking antidepressants. Based on the medications prescribed to the patients in this study, one could say that most

of these patients were at risk for drug-induced depression.

However, the mean scores on patients' SDS and nurses' DSI revealed that most of the patients were not clinically depressed. A comparison of patients' SDS and nurses' DSI showed that 20% (N = 24) of the patients were clinically depressed based on patients' SDS, while only 10 % (N = 12) were clinically depressed based on nurses' DSI. Of the patients who were clinically depressed based on the SDS, 16.6% (N = 20) had scores ranging from 60-69, suggesting mild depression; 1.6% (N = 2) had scores ranging from 70-79, suggesting moderate depression; and 1.6% (N = 2) had scores ranging from 80-100, suggesting severe depression. On the other hand, the index score on the nurses' DSI revealed that of the patients who were clinically depressed, 7.5% (N = 9) had scores ranging from 60-69, suggesting mild depression, and 2.5% (N = 3) had scores ranging from 70-79, suggesting moderate depression.

The differences in the ratings of patients and nurses could be attributed to the differences in their knowledge and experience in assessing symptoms of depression. Patients report symptoms of depression based on their personal perspective. On the other hand, nurses have the knowledge and experience in a spectrum of depression upon which to base their

clinical judgment. Another possible reason for the difference in the ratings of the patients and nurses could be attributed to the Self-Rating Depression Scale which include somatic items. For the elderly with a physical illness, their self-ratings may reflect actual physical conditions associated with physical illness or with advanced age rather than the depressive symptomatology.

According to Kraus (1976), preinformation regarding patients' conditions influence the observations of nurses. In an experimental study using a film of a patient information on 80 nurses, Kraus reported that preinformation significantly ($p = .01$) influenced nurses to direct their observations toward certain patient characteristics which were associated with the patient state described in the information.

Because nurses had access to the patients' charts, analysis of variance were performed for the differences in accuracy in nursing assessment of depression in the young elderly patients with patients' medical conditions and medications. No significant differences were found in accuracy of nursing assessment of depression and patients' medical conditions and medication (all $p = > .05$). Based on this result, one could conclude that there were no significant differences in the accuracy of nursing assessment on

elderly patients who had medications associated with depression. The question of whether the nurses knew that certain medical conditions and medications are associated with depression was not known in this study.

The variable of time was analyzed in relation to accuracy in nursing assessment of depression in the young elderly medical patients. The amount of time the nurse had spent on physical care and time spent talking to the patient seemed to be a logical intervening variable when examining for accuracy in nursing assessment of depression. The correlation (r = .08, p = .38) on the length of time spent by nurses talking to patients to accuracy in nursing assessment of depression was not significant. Similarly, the correlation (r = .14, p = . 13) of the length of time spent by nurses on physical care to accuracy in nursing assessment of depression was not significant. A possible explanation for the lack of significant results on the length of time spent by the nurses on physical care and time spent talking to patients in relation to accuracy in nursing assessment of depression could be attributed to a lack of focused assessment on the part of nurses while in contact with patients.

Cianfrani (1984) reported that with low relevant data, error in nursing diagnosis increases. Focused assessment requires observational and intellectual

skills. Critical thinking is an intellectual skill which is essential in the selection of pertinent data and interpretation of information which, in turn, can increase accuracy in nursing judgment. On the other hand, a lack of focused assessment can lead to collection of a large amount of data which is not necessarily relevant, thereby increasing the error in nursing assessment.

CHAPTER VI

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

Research on nursing assessment of patients' needs and experiences is sparse. Yet it is such assessments upon which nursing care is planned and provided. Although the process by which a nurse accurately assesses needs and experiences of patients is not yet fully understood, it appears that specific interpersonal and intellectual skills are needed (Gordon, 1982; Little & Carnevali, 1976; Young, 1980). This study attempted to investigate the relationships of the nurse's critical thinking ability and patient self-disclosure to accuracy in nursing assessment of depression.

The ability to think critically implies competence in organizing, analyzing, and synthesizing multiple factors in the environment (Bandman & Bandman, 1988). Self-disclosure is a process by which one reveals aspects of oneself and one's experiences to another person (Jourard, 1971). As an interpersonal behavior, it is a verbal communication to reveal information

about oneself to another (Chelune, 1979; Cozby, 1973; Jourard, 1964). Patient self-disclosure provides the necessary subjective information needed to comprehensively assess the patient's experience of depression. Unless the patient is willing to disclose his own thoughts and behavior to the health care provider, the identification of relevant information and correct interpretation of patient's feelings and thoughts are unlikely to be achieved. The theorem of the researcher was that the nurse's critical thinking ability and the patient's self-disclosure are related to the accuracy in nursing assessment of depression experienced by the patient.

Participants were 120 young elderly female patients hospitalized for medical illness and their assigned female registered nurse. A nurse and patient constituted a dyad. Volunteer registered nurse subjects were trained to rate the patient self-disclosure and were taught strategies for productive interview prior to interviewing a patient. Within the first three hospital days, the patient completed the Self-Rating Depression Scale (SDS; Zung, 1973) and was interviewed by the nurse to rate the severity of depression and patient self-disclosure, using a modification of Zung's instrument (DSI, 1972).

The hypotheses tested were:

1. There is a positive relationship between

nurses' critical thinking ability and accuracy in nursing assessment of depression experienced by elderly patients, independent of nurses' education.

2. There is a positive relationship between patient self-disclosure and accuracy in nursing assessment of depression experienced by elderly patients, independent of nurses' education.

3. Nurses' critical thinking ability and patient self-disclosure interact in relation to accuracy in nursing assessment of depression, independent of nurses' education. Specifically, the relationship of nurses' critical thinking ability to accuracy in nursing assessment of depression experienced by elderly patients will be stronger when there is high patient self-disclosure than where there is low patient self-disclosure.

A multiple regression analysis was used for the analysis of data. All significance tests were conducted at the .05 level. Hypothesis 1 was supported. The regression coefficient (r = - .15) of nurses' critical thinking ability to accuracy in nursing assessment of depression, independent of nurses' education, was significant (p = .004). The unique contribution of nurses' critical thinking ability to accuracy in nursing assessment of depression, after nurses' education was accounted for, was 7% which was significant. Hypothesis 2 was not

supported. The regression coefficient (r = - .17) of patient self-disclosure to accuracy in nursing assessment of depression, after nurses' education was partialled out, was not significant (p = .11). The unique contribution of patient self-disclosure to accuracy in nursing assessment, after nurses' education was accounted for, was 2%. Hypothesis 3, which stated there was an interaction between nurses' critical thinking ability and patients' self-disclosure to accuracy in nursing assessment of depression, was not supported. The regression coefficient (.00) for the interaction of nurses' critical thinking ability and patients' self-disclosure was not significant (p = .90).

Alpha reliability coefficients were computed for the Watson-Glaser Critical Thinking Appraisal, Depression Status Inventory, and Self-Rating Depression Scale. The alpha coefficients for the Watson-Glaser Critical Thinking Appraisal was .84, Depression Status Inventory was .66, and Depression Self-Rating Scale was .75.

Analysis of data using Pearson product moment correlation was conducted between accuracy in nursing assessment of depression and selected demographic data for nurses, such as years of experience, age, length of time spent providing physical care and talking to patients. Nurses' years of experience and accuracy in

nursing assessment had a correlation coefficient (r = .07, p = .48) which was not significant. The length of time spent on physical care and accuracy in nursing assessment of depression had a correlation coefficient (r = .14, p = .13) which was not significant. The length of time spent by the nurse talking to the patient had a correlation coefficient (r = .08, p = .38) which was not significant.

An analysis of variance was conducted to examine the differences in accuracy in nursing assessment of depression and selected demographic characteristics of the nurses, such as education, shift assignment, employment status, geriatric experience, and who were primary nurses. No significant findings were found except for the primary nurses.

An analysis of variance was conducted to examine the differences in accuracy in nursing assessment of depression and patients' primary diagnosis, secondary diagnosis, and medications. No significant findings were found.

An analysis of variance was conducted to examine the differences in patient self-disclosure and patient's education, ethnicity, marital status, and living arrangement. No significant findings were found.

An analysis of variance was also conducted to examine the differences in patient self-disclosure of

depressed and nondepressed patients. No significant findings were found.

Conclusions

In interpreting any findings from this study, a note of caution is in order. The findings are based on a convenience sample. Conclusions that may be drawn from this study, based upon testing and ancillary findings, are as follows:

1. Nurses' education is significantly related to nurses' critical thinking ability.

2. Nurses' critical thinking is significantly related to accuracy in nursing assessment of depression among young elderly hospitalized patients independent of nurses' education.

3. Patient self-disclosure is not significantly related to accuracy in nursing assessment of depression in young elderly hospitalized patients.

4. There were no significant differences in patient self-disclosure and patients' education, ethnic background, marital status, and living arrangement.

5. Nurses' education, years of experience, employment status, shift assignment, geriatric experience, time spent talking to the patient, and time spent on physical care are not related to accuracy in nursing assessment of depression in young elderly hospitalized patients.

5. Primary nursing is related to accuracy in nursing assessment of depression in young elderly hospitalized patients.

6. Nurses' access to patients' charts with information on medical conditions and medications which are associated with depression had no influence on the accuracy in nursing assessment of depression among young elderly hospitalized patients.

Implications

The importance of nursing assessment is well documented in the nursing literature (Mallick, 1981; Putzier & Padrick, 1984; Yura & Walsh, 1983). Nursing assessment provides the basis for planning care. The results of this study present some directions for future research in accuracy in nursing assessment of depression in young elderly medical patients.

The findings in this study underscore the importance of nurses' critical thinking ability to accuracy in nursing assessment of depression in elderly medical patients. Critical thinking is necessary for the interpretation of information, formation of a judgment, and decision making (Bandman & Bandman, 1988; Brill & Kilts, 1980; Gordon, 1982, 1987). Research related to accuracy in nursing assessment of depression should be pursued to continue building a knowledge base for nursing practice.

The findings in this study also support previous studies indicating that education contributes to critical thinking ability. The implication is that educational efforts may best be directed toward assisting students to develop critical thinking abilities in the socialization of students to the profession. The development of teaching strategies on how to nurture the abilities to think critically among students needs to be supported.

The significantly stronger ability for primary nurses to accurately assess depression among young elderly medical patients needs to be studied further. The assumption in primary nursing is that nurses provide individualized patient care (Bowers, 1989). Along with this is the 24-hour accountability of the primary nurse which promotes continuity of care. May be primary nurses have more opportunities to carry out the aspects of critical thinking and develop the rapport for patient self-disclosure which account for accuracy in assessment of depresion.

Recommendations for Future Research

Based upon the findings of this study, the following suggestions are made for future research.

1. Continue research on the nature of patient self-disclosure in the clinical setting as it relates to nursing assessment.

2. Replicate and continue research on the relationship between nurses' critical thinking ability and accuracy in nursing assessment in other clinical settings.

3. Conduct clinical research to explore the components of primary nursing that may influence accuracy in nursing assessment.

4. Continue research on the development and evaluation of teaching strategies that will enhance critical thinking abilities in students.

5. Replicate the study, but incorporate the amount of relevant information and observed nonverbal cues into the measure of patient self-disclosure in the study of assessment of depression.

BIBLIOGRAPHY

Addington, J. & Fry, P. (1986). Directions for clinical psychosocial assessment of depression in the elderly. Clinical Gerontologist, 5(½), 97-117.

American Psychological Association (1983). Publication manual of the American Psychological Association (3rd ed.). Washington, D.C.: American Psychological Association.

Aspinall, M. (1979, May-June). Use of a decision tree to improve diagnostic accuracy. Nursing Research, 28, 182-185.

_____ (1976). Nursing diagnosis--the weak link. Nursing Outlook, 24 (7), 433-37.

_____, & Tanner, C. (1981). Decision-making for patient care: Applying the nursing process. New York: Appleton-Century-Crofts.

Ban, T. (1984). Chronic disease and depression in the geriatric population. Journal of Clinical Psychiatry, 45 (3), 18-23.

Bandman, E. & Bandman, B. (1988). Critical thinking in nursing. Norwalk, CT: Appleton & Lange.

Barrett-Lennard, G. (1978). The 64-item relationships inventory: Development and adaptation. Unpublished manuscript, University of Waterloo.

Beck, A. & Bergman, D. (1986). Using structured medical information to improve student's problem-solving performance. Journal of Medical Education, 61, 750-756.

Benner, P. (1983). From novice to Excellence and power in clinical nursing practice. Menlo Park, CA: Addison-Wesley Publishing Co.

Bircher, A. U. (1982). The concept of nursing diagnosis. In M. J. Kim & D. A. Moritz (Eds.), Classification of nursing diagnoses: Proceedings of the third and fourth national conference (pp. 30-43). New York: McGraw-Hill.

Blazer, D. (1982). The diagnosis of depression in the elderly. Journal of the American Geriatrics Society, 28 (2), 52-58.

_____ & Williams, C. (1980). Epidemiology of dysphoria and depression in an elderly population. American Journal of Psychiatry, 137 (4), 439-444.

Blotcky, A., Carscaddon, D., & Grandmaison, B. (1983). Self-disclosure and physical health. Psychological Reports, 53, 903-906.

Blumenthal, M. (1980). Depressive illness in old age: Getting behind the mask. Geriatrics, 35, 34-43.

Borson, S., Barnes, R., Kukull, W., Okimoto, J., Veith, R., Inui, T., Carter, W., & Raskind, M. (1986). Symptomatic depression in elderly medical outpatients. Journal of American Geriatrics Society, 34 (2), 342-347.

Brill, E. & Kilts, D. (1980). Foundations of nursing. New York: Appleton-Century-Crofts.

Brink, T., Yesavage, J., Lum, O., Heersema, P., Adey, M., & Rose, T. (1982). Screening tests for geriatric depression. Clinical Gerontologist, 1 (1), 37-43.

Broderick, M. & Ammentorp, W. (1979). Information structures: An analysis of nursing performance. Nursing Research, 28 (2), 106-110.

Byers, P., Onge, J., Atkins, L., Prokop, J., & Grano, J. (1988). Self-disclosure, anxiety, and health worry scheduled outpatients. Psychological Report, 62 (2), 379-386.

Cadoret R. & Widmer, R. (1988). The development of depressive symptoms in elderly following onset of severe physical illness. The Journal of Family Practice, 27 (1), 71-76.

Carnevali, D. (1984). The diagnostic reasoning process. In D. Carnevali, P. Mitchell, N. Wood, & C. Tanner (Eds.), Diagnostic reasoning in nursing (pp. 25-56). Philadelphia: J. B. Lippincott.

_____ (1983). Nursing case planning: Diagnosis and management. Philadelphia: J. B. Lippincott.

Cavanaugh, S. (1987). Depression in the hospitalized inpatient with various medical illnesses. Psychotherapeutics and Psychosomatics, 45 (2), 97-104.

_____, Clark, D., & Gibbons, R. (1983). Diagnosing depression in the hospitalized medically ill. Psychosomatics, 24 (9), 809-815.

Chaisson-Stewart, M. (1985). The diagnostic dilemma. In M. Chaisson-Stewart (Ed.), Depression in the elderly an interdisciplinary approach (pp. 18-37). New York: John Wiley & Sons.

Chelune, R. J. (1979). Measuring openness in interpersonal communication. In G. J. Chelune, R. L. Archer, J. M. Civikly, V. J. Derlega, J. A. Doster, J. Grzelak, J. R. Herron, C. L. Kleinke, J. G. Nesbitt, L. R. Rosenfeld, D. A. Taylor, & J. Waterman, Self-disclosure. San Francisco: Jossey-Bass.

Cianfrani, K. L. (1984). The influence of amounts and relevance of data on identifying health problems. In M. J. Kim, G. K. McFarland, & A. M. McLane (Eds.), Classification of Nursing Diagnosis: Proceedings of the Fifth National Conference (pp. 150-161). St. Louis: C. V. Mosby Co.

Cohen, J. (1977). Statistical power analysis for the behavioral sciences (Rev. ed.). New York: Academic Press.

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

Davis, B. (1972). Clinical expertise as a function of educational preparation. Nursing Research, 21 (5), 530-534.

Davis, M. (1980). A multidimensional approach to individual differences in empathy. Psychological Documents, Washington, DC: American Psychological Association.

Dawson, C. (1985). Hypertension, perceived clinician empathy, and patient self-disclosure. Research in Nursing and Health, 8, 191-198.

Dawson, C., Schimer, M., & Beck, L. (1984). A patient self-disclosure instrument. Research in Nursing and Health, 7, 135-147.

Del Bueno, D. (1983). Doing the right thing: Nurses' ability to make clinical decisions. Nurse Educator, 8 (3), 7-11.

Deluty, B., Deluty, R., & Carver, C. (1986). Concordance between clinicians' and patients' ratings of anxiety and depression as indicated by private self-consciousness. Journal of Personality Assessment, 50 (1), 93-106.

Diagnostic and Statistical Manual of Mental Disorders (3rd ed.) (1980). Washington, DC: American Psychiatric Association.

Donna, M. E. (1976). The judgment process in nursing. Image, 8, 27-29.

Doster, J. & Nesbitt, J. (1979). Psychotherapy and self-disclosure. In G. Chelune, R. Archer, J. Civikly, V. Derlega, J. Doster, J. Grzelak, J. Herron, C. Kleinke, J. Nesbitt, J. Rosenfeld, A. Taylor, & J. Waterman (Eds.), Self-disclosure (pp. 177-224). San Francisco: Jossey-Bass.

Dressel, P. & Mayhew, L. B. (1954). General education: Explorations in evaluation. (Final report of the Cooperative Study of Evaluation in General Education). Washington, DC: American Council on Education.

Durand, M. & Prince, R. (1966). Nursing diagnosis. Nursing Forum, 5 (4), 51-65.

Eisenberg, A. M. & Smith, R. (1971). Nonverbal communication. New York: Bobbs-Merrill.

Elstein, A., Shulman, I., & Sprafka, S. (1978). Medical problem-solving: An analysis of clinical reasoning. Cambridge, MA: Harvard University Press.

Ennis, R. H. (1962). A concept of critical thinking: A proposed basis for research in the teaching and evaluation of critical thinking ability. Harvard Educational Review, 32, 81-111.

Epstein, L. (1976). Depression in the elderly. Journal of Gerontology, 31, 81-111.

Field, W., Gallman, L., Nicholson, R., & Dreher, M. (1984). Clinical competenence of baccalaureate students. Journal of Nursing Education, 23 (7), 284-293.

Fogel, B. & Fretwell, M. (1985). Reclassification of depression in the medically ill elderly. Journal of American Geriatric Society, 33 (6), 446-448.

Freedman, N., Bucci, W., & Elkowitz, E. (1982). Depression in a family practice elderly population. Journal of American Geriatrics Society, 30 (6), 372-377.

Gallagher, D. (1987). Assessing affect in the elderly. Journal of the American Geriatric Society, 27 (6), 38-41.

Goldstein, S. (1979). Depression in the elderly. Journal of the American Geriatric Society, 27(6), 38-41.

Gordon, M. (1987). The nurse as a thinking practitioner. In K. Hannah, M. Reimer, W. Mills, & S. Letourneau (Eds.), Clinical judgment and decision making: The future with nursing diagnosis. Proceedings of the International Nursing Conference. New York: John Wiley & Sons.

_____ (1982). The nursing diagnosis. New York: McGraw-Hill.

_____ (1980). Predicting strategies in diagnostic tasks. Nursing Research, 29 (1), 39-45.

Griffiths, R., Good, W., Watson, N., O'Donnell, Fell, J., Shakespeare, J. (1987). Depression, dementia, and disability in the elderly. British Journal of Psychiatry, 150, 482-493.

Gurland, B. (1976). Symposium on age differentiation in depressive illness. Journal of Gerontology, 31, 279-282.

Hamilton, M. (1980). Rating depressive patients. Journal of Clinical Psychiatry, 41 (2), 21-24.

Hammond, K. (1966). Clinical inference in nursing part II: A psychologist's viewpoint. Nursing Research, 15, 27-38.

Hatch, D. & Leighton, L. (1986). Comparison of men and women self-disclosure. Psychological Reports, 58 (1), 175-178.

Henderson V. (1987). Nursing process--a critique. Holistic Nursing Practice, 1 (3), 7-17.

Hickie, C. & Snowdon, J. (1987). Depression scales for the elderly: GDS, Gilleard, Zung. Clinical Gerontologist, 6 (3), 51-54.

Himelstein, P. & Lubin, B. (1965). Attempted validation of the self-disclosure inventory by the peer-nomination technique. Journal of Psychology, 61, 13-16.

Holzemer, W. & McLaughlin, F. (1988). Concurrent validity of clinical simulations. Western Journal of Nursing Research, 10 (1), 73-83.

_____ (1986). The structure of problem-solving in simulations. Nursing Research, 36 (4), 231-235.

Huskisson, E. (1974). Measure of pain. Lancet, 9, 1127-1131.

Johnson, M. (1979). Anxiety/stress and the effects on disclosure between nurses and patients. Advances in Nursing Science, 4, 1-20.

Jourard, S. (1971). Self-disclosure in British and American college females. Journal of Social Psychology, 56, 325-330.

_____ (1964). The transparent self: Self-disclosure and well-being. New York: Van Nostrand Company.

_____ (1961). Self-disclosure in British and American college females. Journal of Social Psychology, 56, 325-320.

_____ & Landman, M. (1960). Cognitive cathexis and the dyadic effect in men's self-disclosing behavior. Merrill-Palmer Quarterly, 6, 178-186.

_____ & Lasakow, P. (1958). Some factors in self-disclosure. Journal of Abnormal and Social Psychology, 56, 91-98.

_____ & Richman, P. (1963). Factors in self-disclosure inputs of college students. Merrill-Palmer Quarterly, 9, 141-148.

Kassirer, J. & Gorry G. (1978). Clinical problem-solving: A behavioral analysis. Annals of Internal Medicine, 89 (2), 245-255.

Katon, W. (1984). Depression: Relationship to somatization and chronic medical illness. Journal of Clinical Psychiatry, 45 (3), 4-11.

Kelly, K. (1966). Clinical inference in nursing I: A nurse's viewpoint. Nursing Research, 159 (1), 23-26.

Kitchell, M., Barnes, R., Veith, R., Okimoto, J., & Raskind, M. (1982). Screening for depression in hospitalized geriatric medical patients. Journal of American Geriatric Society, 30, 174-177.

Kramer, M. (1974). Reality shock: Why nurses leave nursing. St. Louis: C. V. Mosby.

Kraus, V. (1976). Pre-information--its effects on nurses' description of patients. Journal of Nursing Education, 15 (15), 18-26.

Kukull, W. A., Koepsell, T., Inui, T., Borson, S., Okimoto, J., Raskind, M., & Gale, J. (1986). Depression and physical illness among elderly general medical clinic patients. Journal of Affective Disorders, 10, 153-162.

Lesse, S. (1983). The masked depression syndrome--results of a seventeen year clinical study. American Journal of Psychotherapy, 37 (4), 456-475.

Levy, L. H. (1963). Psychological interpretation. New York: Holt, Rinehart, & Winston.

Liptzin, B. (1987). The geriatric patient and general hospital psychiatry. General Hospital Psychiatry, 9 (3), 198-202.

Little, D. E. & Carnevali, L. (1976). Nursing care planning. New York: J. B. Lippincott.

Lundstedt, S. (1966). Interpersonal risk theory. Journal of Psychology, 62, 3-10.

Lunney, M. (1989). An investigation of the relationship of selected factors of productive thinking and accuracy of nursing diagnosis. Unpublished doctoral dissertation, New York University.

Maciorowski, L. (1989). The relationships of nurses'empathy and critical thinking ability to accuracy of perception of patients' acute pain experiences. Unpublished doctoral dissertation, New York University.

Magni, G., Schifano, F., & De Leo, D. (1986). Assessment of depression in an elderly medical population. Journal of Affective Disorder, 11, 121-124.

Mallick, J. (1983). Nursing diagnosis and the novice student. Nursing and Health Care, 4 (8), 455-459.

_____, De Leo, D., & Schifano, F. (1985). Depression in geriatric and adult medical inpatients. Journal of Clinical Psychology, 41 (3), 337-343.

Maquire, G., Hopwood, H., Tarrier, N., & Howell, T. (1985). Treatment of depression in cancer patients. Acta Psychiatrica Scandinavia, 72, 85-92.

Manthey, M. (1990). Definition and basic elements of a patient care delivery system with an emphasis on primary nursing. In G. Mayer, M. Madden, & E. Lawrencz (Eds.), Patient care delivery models (pp. 201-210). Rockville, MD: Aspen Publishers, Inc.

Mathews, C. A. & Gaul, A. L. (1979). Nursing diagnosis from the perspective of concept attainment and critical thinking. Advances in Nursing Science, 2 (1), 17-26.

McCroskey, J., & Richmond V. (1977). Communication apprehension as a predictor of self-disclosure. Communication Quarterly, 25, 40-43.

McGuire, C. (1985). Medical problem-solving: A critique of the literature. Journal of Medical Education, 60, 587-593.

Morris, P. & Raphael, B. (1987). Depressive disorder associated with physical illness. General Hospital Psychiatry, 9 (5), 324-330.

Morrison, E. (1989). Nursing assessment: What do nurses want to know? Western Journal of Nursing Research, 11 (4), 469-476.

Murkofsky, C., Conte, H., Plutchik, R., & Karasu, T. (1978). Clinical utility of a rapid diagnostic test series for elderly psychiatric outpatients. Journal of American Geriatrics Society, 26 (1), 22-26.

Murphy, E. (1982). Social origins of depression in old age. British Journal of Psychiatry, 141, 135-142.

Murray, R. & Huelskoetter, M. (1983). Psychiatric mental health nursing, giving emotional care. Englewood Cliffs: NJ: Prentice-Hall, Inc.

Neufeld, V., Norman, G., Feightner, J., & Barrow, H. (1981). Clinical problems-solving by medical students: A cross-sectional longitudinal analysis. Medical Education, 5, 315-322.

Nielsen, A. & Williams, T. (1980). Depression in ambulatory medical patients. Archives of General Psychiatry, 37, 999-1004.

Norris, J. (1987). The nursing process. In J. Norris, M. Kunes-Cornell, S. Stockard, P. Erhart, & G. Newton (Eds.), Medical health psychiatric nursing a continuum of care. New York: John Wiley & Sons.

Nunnally, J. (1967). Psychometric theory. New York: McGraw-Hill, Inc.

Okimoto, J., Barnes, R., Veith, R., Raskind, M., Inui, T., & Carter, W. (1982). Screening for depression in geriatric medical patients. American Journal of Psychiatry, 139 (6), 799-802.

Pardue, S. (1987). Decision-making skills and critical thinking ability among associate degree, diploma, bacclaureate, and master's prepared nurses. Journal of Nursing Education, 26 (9), 354-361.

Post, A., Wittmaier, B., & Rodin, M. (1978). Self-disclosure as a function of state and trait anxiety. Journal of Consulting and Clinical Psychology, 46, (1), 12-19.

Post, S., Alford, C., Baker, N., Franks, R., House, R., Jackson, A., & Petersen, J. (1985). Comparison of self-reports and clinicians' ratings of unipolar depression. Psychological Reports, 57 (4), 479-483.

Prophit, P. (1974). The relationship of psychological construct of self-disclosure to post-coronary adjustment. Unpublished dissertation, The Catholic University of America.

Putzier, D. & Padrick, K. (1984). Nursing diagnosis: A component of nursing process and decision making. Topics in Clinical Nursing, 5 (4), 21-29.

Raskin A. (1979). Signs and symptoms of psychopathology in the elderly. In A. Raskin & L. Jarvik (Eds.), Psychiatric symptoms and cognitive loss in the elderly, 3-18. Washington, DC: Hemisphere Publishing Co.

Robinson, L. (1983). Psychiatric nursing as a human experience (3rd ed.). Philadelphia: W. B. Saunders Company.

Rumbaugh, D. (1964). EITS Manual for the cardiac adjustment scale. San Diego, CA: Educational and Industrial Testing Service.

Salzman, C. & Shader, R. (1978a). Depression in the elderly. I. Relationship between depression, psychological defense mechanisms, and physical illnesses. Journal of American Geriatric Society, 26 (6), 263-260.

_____ (1978b). Depression in the elderly. II. Possible drug etiologies; differential diagnostic criteria. Journal of American Geriatric Society, 26 (7), 303-308.

Sarbin, T., Taft, R., & Bailey, D. (1960). Clinical inference and cognitive theory. New York: Holt, Rinehart and Winston, Inc.

Scoloveno, M. (1981). Problem-solving ability of senior nursing students in three program types. Unpublished doctoral dissertation, Rutgers University the State University of New Jersey.

Schatzberg, A., Liptzin, B., Satlin, A., & Cole, J. (1984). Diagnosis of affective disorders in the elderly. Psychosomatics, 25 (2), 126-131.

Shamoian, C. (1985). Assessing depression in elderly patients. Hospital Community Psychiatry, 36, 338-339.

Speilberg, C., Gorsch, R., & Lushene, R. (1970). Manual for the state-trait anxiety inventory. Palo Alto, CA: Consulting Psychologists Press.

Sweer, L., Martin D., Ladd, R., Miller, J., & Karpf, M. (1988). The medical evaluation of elderly patients with major depression. Journal of Gerontology: Medical Sciences, 43 (3), 53-58.

Tanner, C. (1977). The effect of hypothesis generation as an in instructional method on the diagnostic process of senior baccalaureate nursing students. Unpublished doctoral dissertation, University of Colorado.

_____, Padrick, K., Westfall, U., & Putzier, D. (1987). Diagnostic reasoning strategies of nurses and nursing students. Nursing Research, 36 (6), 358-363.

Taylor, D. (1979). Motivational bases. In G. Chelune, J. Archer, M. Civikly, V. Derlega, J. Doster, J. Grzelak, J. Herron, C. Kleinke, J. Nesbitt, L. Rosenfeld, D. Taylor, & J. Waterman (Eds.), Self-disclosure (pp. 110-150). San Francisco: Jossey-Bass.

Tripodi, T. & Miller H. (1966). The clinical judgment process: A review of the literature. Social Work, 11 (3), 63-69.

Verhonick, P., Nichols, G., Glor, B., & McCarthy, R. (1968). I came, I saw, I responded: Nursing observation and action survey. Nursing Research, 17 (1), 38-44.

Volicer, B. (1974). Patients' perception of stressful events associated with hospitalization. Nursing Research, 23 (3), 235-238.

Vondracek, F. (1969). The study of self-disclosure in experimental interviews. Journal of Psychology, 72, 55-59.

Walker, F., Novack, N., & Kaiser, D., Knight, A., & Oblinger, P. (1987). Anxiety and depression among medical and surgical patients nearing hospital discharge. Journal of General Internal Medicine, 2 (1), 99-101.

Watson, G. & Glaser, E. M. (1980). Manual for Forms A and B: Watson-Glaser Critical Thinking Appraisal. New York: The Psychological Corporation.

Watson, G. & Glaser, E. M. (1964). Manual for Forms YM and ZM: Watson-Glaser Critical Thinking Appraisal. New York: The Psychological Corporation.

Westfall, U., Tanner, C., Putzier, D., & Padrick, K. (1986). Activating clinical inferences: A component of diagnostic reasoning in nursing. Research in Nursing and Health, 9, 269-277.

Wolff, L., Weitzel, M., & Fuerst, E. (1979). Fundamentals of nursing. New York: J. B. Lippincott Company.

Yesavage, J., Brink, T., Rose, T., Lum, O., Huang, V., Adey, V. & Leirer. (1983). Development and validation of a geriatric depression screening scale: A preliminary report. Journal of Psychiatric Research, 17 (1), 37-49.

Young, J. C. (1988). Rationale for clinical self-disclosure and research agenda. Image, 20 (4), 196-199.

Young, J. W. (1980). The effects of perceived physician competence on patients' symptom disclosure to male and female physicians. Journal of Behavioral Medicine, 3 (3), 279-290.

Yura, H. (1983). The nursing process: Assessing, planning, implementing, evaluating (4th ed.). Norwalk, CT: Appleton-Century-Croft.

_____, & Walsh, M. (1973). The nursing process: Assessing planning, implementing, evaluating. New York: Appleton-Century-Crofts.

Zealley, A. & Aiken, P. (1969). Measurement of mood. Proceedings of the Royal Scoiety of Medicine, 62, 993-996.

Zung, W. (1973). From art to science: The diagnosis and treatment of depression. Archives of General Psychiatry, 29 (3), 328-337.

_____ (1972). The depression status inventory: An adjunct to the self-rating scale. Journal of Clinical Psychology, 28, 539-543.

_____ (1965). A self-rating depression scale. Archives of General Psychiatry, 12, 63-70.

_____, & King, R. (1983). Identification and treatment of masked depression in a family medicine practice. Journal of Clinical Psychiatry, 44 (10), 365-368.

_____, Magill, M., Moore, J., & George, T. (1983). Recognition and treatment of depression in a family medicine practice. Journal of Clinical Psychiatry, 44, 3-6.

APPENDIX A
LETTER TO THE PARTICIPATING HOSPITALS

Dear _____,

I am a doctoral candidate in nursing at New York University. I am writing to request permission to conduct a research study in your older adult medical units.

The study is to investigate whether nurse's critical thinking ability and patient self-disclosure are related to accuracy in nursing assessment of depression among older adult, female medical patients. The proposed sample for this study will consist of female registered nurse and volunteer female patient dyads.

I understand that the Institutional Review Board determines the approval of studies involving human subjects. I am enclosing a copy of the research proposal and my curriculum vitae for your review. I will contact your office within 2 weeks to follow up on my request.

Thank you for your time in consideration of this proposal. I look forward to talking with you.

Sincerely,

APPENDIX B
CONSENT FORM FOR NURSES

I, the undersigned, freely consent to participate in the research study about patients' experience of depression, being conducted by Elizabeth W. Gonzalez (a doctoral candidate at New York University). I understand that I will be asked to complete an information questionnaire, Critical Thinking Appraisal, attend a 30 minute training program on how to rate patient self-disclosure, and conduct a patient interview to rate the patient's willingness to disclose information and their experience of depression. The interview will take at least 30 minutes to complete.

Furthermore, I understand that no physical or psychological harm is anticipated to participants and that the potential benefits of this study are related to increasing nurses' understanding of the accuracy of nursing assessment of depression. I know that I can withdraw from this study at any time without loss of benefits and that my individual data will remain confidential. Further, the data will be analyzed and findings will be reported on a group basis. I understand that I will be paid $10.00 for my participation in this study.

I know that if I have any questions, I can contact the investigator, Elizabeth M. Gonzalez, at this number: [redacted] and she will answer my questions.

_____ _____
Signature Date

Would you like a copy of the study results mailed to you? [ ] Yes [ ] No

If yes, please complete the following information:
Name_____
Address_____
_____

APPENDIX C
PROGRAM FOR TRAINING RNs TO RATE PATIENT SELF-DISCLOSURE

This program teaches registered nurses how to rate patient's willingness to disclose information during an interview. The 30-minute training program consists of two parts: (a) discussion of the definition and categories of self-disclosure, and (b) a simulated nurse-patient interview where RNs will rate the patient self-disclosure.

Main Objective: At the completion of the program, the RNs will be able to demonstrate the ability to differentiate between the three categories of patient self-disclosure by rating accurately the patient self-disclosure in a simulated videotape, nurse-patient interview through a paper and pencil test.

Part I (Content Overview)

A. The investigator defined self-disclosure according to Jourard (1971) and Cozby (1973).

B. The investigator described the three categories of patient self-disclosure for this particular research. Then examples were shown using a videotape to illustrate specific behavior(s) indicative of each category. The differences on each category were discussed.

   The categories are:

   1. No disclosure: Rated as 0

      Patient states that she is not willing to discuss the subject matter or that the answer to the question is unknown.

   2. Reluctant to disclose: Rated as 1

      a. Answers questions in a vague or nonspecific manner.

      b. Answers are fragmented, accompanied by pauses.

c. Acknowledges the presence of a symptom but does not elaborate on the subject, or attempts to change the focus of the discussion away from the self.

3. Willing to disclose: Rated as 2

Patient answers questions with ease, offering information freely. For example, the patient (a) gives specific responses to question;, (b) answers questions spontaneously, discussing detailed information about the subject; (c) acknowledges the presence of a symptom, offering personal information relevant to the subject being discussed.

Part II (Content Overview)

The rating of patient self-disclosure by the RNs was elicited through a simulated nurse-patient interview. Two simulations were developed. Simulation 1 was used initially, while simulation 2 was used for those who were unable to correctly identify all the items the first time.

All nurse participants were given a slide presentation on strategies to promote productive interviews according to Murray and Huelskoetter (1983). This was followed with a brief verbal explanation on each strategy. The following strategies were presented:

1. Establish rapport. Create a warm, accepting climate and a feeling of security and confidentiality so that the person feels free to talk about what is important to her.

2. Arrange comfortable positions for both yourself and the patient so that full attention can be given to the interview.

3. Control the external environment as much as possible. This is sometimes difficult or impossible to do, but try to minimize external distractions, and arrange the setting to reduce physical distance.

4. Begin by stating and validating with the patient the purpose of the interview.

5. Use a vocabulary on the level of awareness or understanding of the person. Avoid professional jargon or words too abstract for

the patient's level of understanding or health condition.

6. Be precise in what you say, so that the meaning is understood. Say as little a possible to keep the interview moving. Ask questions that are well-timed, open-ended, and pertinent to the situation.

7. Be gentle and tactful when asking questions about home life or personal matters. What you consider common information may be considered very private by some.

8. Be an attentive listener. Listen for feelings, needs, and goals. Do not answer too fast or ask a question too soon.

9. Encourage free expression of feelings.

10. Encourage spontaneity. Provide movement in the interview by picking up verbal leads, and clues from the patient. If the patient asks you a personal questions, redirect it to her.

11. Indicate when the interview is terminated, and terminate graciously. Make a transition in interviewing by saying:

    "There is one more question I'd like to ask . . ."
    "Just two more points I'd like to clarify . . ."
    "Before I leave, do you have any other questions or comments to share?"

APPENDIX E
WRITTEN EXPLANATION OF THE STUDY

Dear Patient:

You are invited to participate in a study about the assessments that nurses make regarding patient's feelings and physical health. The purpose of this study is to provide information about patient and nurse behaviors that contribute to accurate nursing assessment.

Women hospitalized for a medical problem will be asked to participate in the study. Confidentiality will be assured, by identifying patients with code numbers and only group data will be reported.

If you agree to participate in the study, you will first be asked to sign a consent form. Your participation involves completion of a questionnaire about your feelings and physical health, which takes approximately 10 minutes. After you have completed the questionnaire, you will be interviewed by your nurse about your feelings and physical health. The interview is at least 30 minutes.

I will contact you tomorrow morning to follow up on this. If you have any questions about this study, please feel free to call:

Elizabeth W. Gonzalez, R.N.
Tel: [redacted]

APPENDIX F
PATIENT CONSENT FORM

Principal Researcher: Elizabeth W. Gonzalez, RN, MSN

Research Title: The relationships of nurses' critical thinking ability and patient self-disclosure to the accuracy of nursing assessment

Statement of Patient's Rights:

You are being asked to participate in a research study. It is not part of your normal treatment. You need not participate to continue to receive your normal treatment.

You may have this research study participation consent form read to you or your legally authorized representative.

You must sign this form before you can be included in this study.

If you do elect to participate in this study, you will be given a copy of this signed form, and a copy will be placed in your hospital medical record.

You have the right to ask all the questions you wish about this study and your participation in it. You should not agree to participate until all of your questions have been answered to your satisfaction by the principal researcher identified above.

Federal regulations require that you be informed of the following and that you or your representative sign this form if you wish to participate:

1. Research. This study has been reviewed and approved by the appropriate hospital committees. It involves research and is not necessary for your medical treatment at the hospital.

2. Purpose. The purpose of this research is to provide information about both patient and nurse behaviors that contribute to accuracy in nursing assessment.

3. Duration. If you elect to participate in this study, it is expected that your involvement will include responding to a self-rating scale and an interview about your feelings and physical health, which will take at least 40 minutes.

4. Nonexperimental Procedures. The following procedure will be employed by the investigator: (a) review hospital admissions to identify potential patients; (b) consult with the nurses responsible for patient care for the purpose of selecting potential patients and their assigned nurses; (c) an explanation of the research will be offered to each potential patient and willingness to participate determined; (d) when you and your nurse agree to participate in the study, consent forms will be distributed and signed; (e) your nurse will be asked to complete an information questionnaire, a Critical Thinking Appraisal instrument, and a 30-minute training program to rate self-disclosure at times convenient for the nurse and the investigator.

Within the first 72 hours after admission, (a) you will be asked by the investigator to complete a Self-Rating Scale; (b) immediately after you complete the Self-Rating Scale, your nurse will conduct a 30-minute interview; and (c) the investigator will complete the Patient Demographic Data Sheet, utilizing your hospital record.

5. Risks. Your participation in this study has no foreseeable risks.

6. Benefits. The potential benefits of this study are related to increasing nurses' understanding of patients. There is no direct benefit to you in your participation in this study; however, other women who are medically ill may possible benefit from this study because an accurate assessment of their feelings and physical condition can lead to early interventions to relieve distress and maintain the quality of life.

7. Confidentiality. The confidentiality of your research study records will be maintained; however, the United States Food and Drug Administration will have the right to inspect those records at any time.

8. Medical Treatment. Medical treatment will be

supplied to you if you suffer an injury during your participation in this research study.

9. Contact Person. If you have any questions with regard to this study, please contact:

Elizabeth W. Gonzalez, R.N., M.S.N.
Principal Investigator
Tel: [redacted]

10. Voluntary Participation. Your participation in this research study is voluntary. If you elect not to participate, you will suffer no penalty or loss of benefits to which you would otherwise be entitled as a patient.

11. Discontinuation. If you elect to participate in this research study, you may discontinue your participation at any time without penalty or loss of benefits you would otherwise be entitled as a patient.

Statement of Patient:

I have read the above information. I have had the opportunity to ask all the questions I needed to ask, and have had my questions answered to my satisfaction.

I understand my rights, the risks, and benefits of my participation and the other aspects of the above information.

I understand I will be given a copy of this consent form. Therefore, I agree to participate in this approved research study as explained to me.

_____
(Signature of Participating Patient)

_____
(Print or Type Name of Participating Patient)

_____
(Date of Patient Signature)

_____
(Investigator)

APPENDIX I
NURSE DEMOGRAPHIC DATA SHEET

Code number _____

1. Age _____

2. Nursing Education (check each category, if applicable)

   a. BASIC
   ___ Diploma
   ___ Associate Degree
   ___ B.S.N.
   ___ Other (please indicate) _____

   b. HIGHEST DEGREE
   ___ Masters degree
   ___ Doctoral degree

3. Number of years employed in nursing

   ___ full time _____ years
   ___ part time _____ years

4. Indicate current area of practice _____

5. Have you worked in a psychiatric unit?
   ___ Yes ___ No

6. Have you worked in a geriatric facility?
   ___ Yes ___ No
   If yes, how long? _____

7. Contact with patient?
   a. Are you the primary nurse of this patient? (Circle one) Yes. No.
   b. Number of days you have been assigned to this patient. _____
   c. Total time spent with patient for physical care. _____
   d. On how many different occasions did you talk to the patient per day? _____
   e. What was the average length of your conversation with the patient? _____ minutes

8. To what shift are you assigned?
   ___ Day ___ Evening ___ Night

APPENDIX J
PATIENT DEMOGRAPHIC DATA SHEET

Nurse Patient Dyad No. _____ Hospital No. _____
To be completed by the investigator from patient's chart.

Age: _____

Marital Status: [ ] Single [ ] Divorced
[ ] Married [ ] Widow
[ ] Separated

Ethnic Background: [ ] Caucasian [ ] Black
[ ] Hispanic [ ] Asian
[ ] Other (specify)_____

Education (Check more than one where applicable):
[ ] Less than high school [ ] Associate Degree
[ ] High school only [ ] Bachelor's Degree
[ ] Vocational training [ ] Master's Degree
[ ] Some college, no degree [ ] Doctoral Degree

Living Arrangement:
[ ] Alone
[ ] With spouse and children
[ ] With spouse
[ ] With relatives other than children
[ ] Other (specify) _____

Medical Diagnosis: _____

Other Health Problems:_____

History of psychiatric hospitalization? [ ] No [ ] Yes
If yes, specify diagnosis:_____
When was the last episode?_____

Medications currently taken:
[ ] Antihypertensives [ ] Corticosteroids
[ ] Digitalis [ ] Antianxiety
[ ] anti-Parkinson [ ] Antidepressant

APPENDIX K

Medical Center

508 Fulton Street
Durham NC 27705

Veterans Administration

November 14, 1988

[redacted]

[redacted]

Dear: Elizabeth,

Per your letter of request dated November 1, 1988, you have my permission to use the following scale(s) for the limited and specific purpose of you research as outlined in your letter.

You will need to include the following information on all applicable forms and manuscripts where the requested scale(s) is used:

WZ Self-rating Depression Scale (SDS)

WZ Depression Status Inventory (DSI)

_____ Self-rating Anxiety Scale (SAS)

_____ Anxiety Status Inventory (ASI)

_____ Self-rating Psychiatric Inventory List (SPIL)

_____ Interviewer-rated Psychiatric Inventory List (IPIL)

_____ Self-rating Pain and Distress Scale (PAD)

On completion of your project, you agree to send a copy of your final result and findings, in the form of a report, preprint, or published paper.

Sincerely, [redacted]

APPENDIX L
DESCRIPTIVE STATISTICS FOR DEMOGRAPHIC CHARACTERISTICS OF PILOT STUDY PATIENTS

(N = 14)

Characteristics	N	%
Sex		
Female	14	(100)
Male	0	
Mean Age		
69.4 years (S.D. = 3.4)		
Ethnicity		
Caucasian	15	(100)
Marital Status		
Widowed	13	(93)
Married	1	(7)
Separated	0	
Single	0	
Type of Illness		
Arthritis	2	(14)
Chronic Obstructive Pulmonary Disease	1	(7)
Angina	2	(14)
Diabetes Mellitus	2	(14)
Coronary Artery Disease	3	(21)
Hypertension	2	(14)
Cancer of the Throat	1	(7)
Myocardial Infarction	1	(7)