A METHODOLOGICAL STUDY OF SELF-DISCLOSURE IN CHRONICALLY ILL PATIENTS

by

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ABSTRACT

The purpose of this methodological study was to develop and test the psychometric properties of the DeDonder Self-Disclosure Questionnaire. DeDonder's conceptual framework of patient self-disclosure was the organizing framework. A convenience sample (N=300) of chronically ill outpatients from a private internal medicine clinic and chronically ill inpatients hospitalized at a 178 bed rural hospital in the Midwest were studied. Data were collected using a demographic questionnaire and the DeDonder Self-Disclosure Questionnaire (DSDQ). Content validity, both expert and face, was obtained for the DSDQ prior to data collection. Construct validity for the DSDQ was analyzed by principal components factor analysis with varimax rotation and factor loading criteria set at $\geq .40$. The initial unrestricted factor analysis yielded 13 factors which accounted for 72% of the variance. Since the DSDQ was developed from three theorized subscales, the data from the 80 items were forced into a three factor solution. Factor 1 accounted for 44.7% of the variance with 79 of the 80 items loading on this single factor. Factor analysis, as a method to establish construct validity of the DSDQ, supported a unidimensional scale. The three factor solution showed

insufficient support for the three theorized subscales on the DSDQ. Cronbach's alpha for the total DSDQ was .9836 and indicated a high internal consistency reliability. It was concluded from this study that the DeDonder Self-Disclosure Questionnaire had reliability as well as content and construct validity with chronically ill patients. Overall, it was substantiated that chronically ill patients self-disclose in a limited manner to nurses. The establishment of reliability and validity is an ongoing process and additional psychometric testing of the DSDQ, using a variety of subjects and settings, would be essential. A major nursing implication from the study was the need for continued nursing research regarding communication between the nurse and patient and the consequences of this communication for the patient.

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TABLE OF CONTENTS

LIST OF FIGURES

Figure

LIST OF TABLES

CHAPTER I

INTRODUCTION

One of the important goals of nursing is the improvement of patient care. Critical aspects of this endeavor are to ascertain, understand, and improve the interpersonal relationship between nurses and patients. When an individual enters a health care facility, an interpersonal relationship with a nurse is likely to take place and is commonly referred to as the nurse-patient relationship. Upon initiation, this nurse-patient relationship is either nurtured and maintained or terminated depending on the quality and amount of communication between the nurse and patient. Jourard (1971) suggested that a healthy interpersonal relationship exists when individuals are able to interact and communicate openly and candidly with each other. Jourard described this phenomenon of open communication as self-disclosure.

Problem Statement

Self-disclosure has been widely studied in psychology using Jourard's theory (Chelune, 1975; Chelune, 1979; Hansen & Schuldt, 1984; Hurley & Hurley, 1969; Johnson & Noonan, 1972; Jourard & Lasakow, 1958; Skoe & Ksionsky, 1985; Vondracek, 1969). The most widely used instrument to measure self-disclosure is

the Jourard Self-Disclosure Questionnaire (JSDQ). Reliability and validity of the JSDQ were reported to be adequate; however, it was developed and validated predominately with subjects who were college age students in psychology classes; Jourard considered them to be superior, performing individuals. This subject description is not always adequate in nursing since patients often do not meet this criterion due to their own health care needs.

A methodological study conducted by DeDonder (1989) tested the reliability and validity of the Jourard Self-Disclosure Questionnaire with subjects who have chronic illnesses. Cronbach's alphas were computed for the total JSDQ and for the six subscales and ranged from .82 to .95. Results of the study provided support for the internal consistency reliability of the JSDQ. However, factor analysis indicated insufficient support for the construct validity of the six subscales on the JSDQ and documented the lack of conceptual congruency of self-disclosure. These findings, in addition to the initial student subjects used in the sample for instrument development, led the investigator to question whether the instrument was acceptable in its present form for utilization in measuring self-disclosure between chronically ill patients and

nurses.

The primary purpose of this methodological study was to develop and test the psychometric properties of an instrument to measure self-disclosure within the nurse-patient relationship. Development and evaluation of a valid and reliable instrument which would measure self-disclosure within the nurse-patient relationship would be paramount to facilitate additional research which could impact both nursing practice and nursing education.

Research Questions

1. What is the content validity for the DeDonder Self-Disclosure Questionnaire (DSDQ) when administered to chronically ill patients?

2. What is the construct validity of the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients?

3. What is the internal consistency reliability for the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients?

Theoretical Framework

DeDonder's conceptual framework of patient self-disclosure was the primary organizing framework for this study. This framework was derived from Jourard's theory using the process presented by Walker

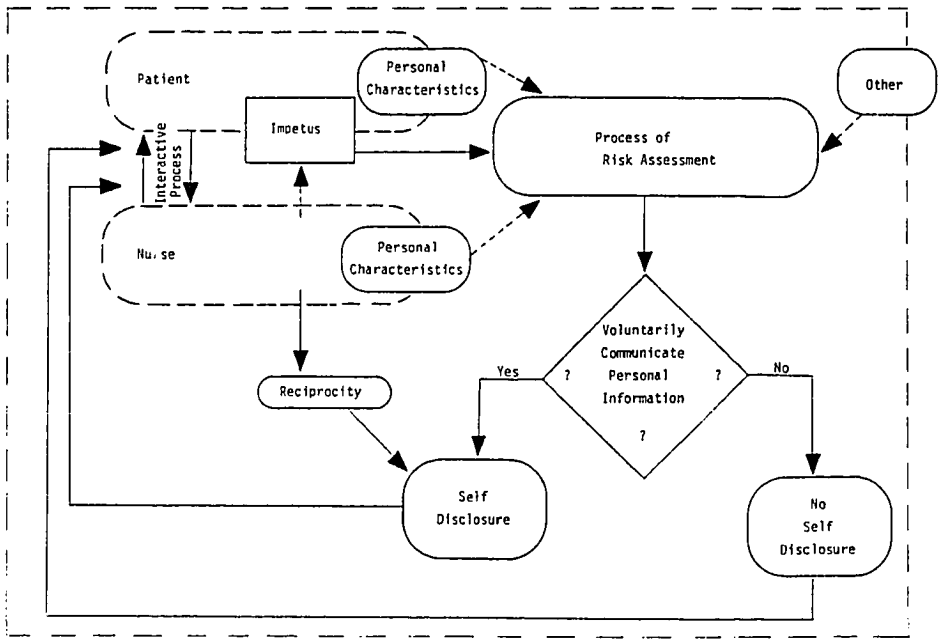
and Avant (1988) and was refined during studies by the investigator (DeDonder, 1986a; DeDonder, 1986b; DeDonder, 1989; DeDonder, 1990). An overview of the conceptual framework is presented with definitions of concepts and assumptions to follow.

Overview of Framework

A basic assumption for DeDonder's conceptual framework of patient self-disclosure is that in the discipline of nursing the nurse-patient relationship is an interactive process. This interactive process exists as an open system and receives input from the external environment (refer to Figure 1). Within the nurse-patient interactive process an impetus exists that will facilitate the process of patient self-disclosure. The impetus is an attribute of the interactive process from the patient perspective. The impetus can be known or unknown and may be related to the patient's perception, whether or not that need or desire to share personal information is perceived. The impetus may be linked to the nurse who calls forth within the patient an awareness of the need to share personal information.

As the process continues, the patient conducts a risk assessment as to the benefits versus the risks of sharing the personal information. There are various

Figure 1
Conceptual Framework -- Patient Self-Disclosure



factors that impact the patient's process of risk assessment including patient characteristics, nurse characteristics, and other unknown elements. Regardless of the exact factors that impact the process of risk assessment, if the patient believes that the risk is high and the benefits are low from sharing the personal information, then the decision regarding voluntary communication of personal information will be negative and result in no self-disclosure. If the patient believes that the risk is low and the benefits high from sharing the personal information, then the decision regarding voluntarily communicating personal information will be positive and result in self-disclosure.

Reciprocity has an effect on self-disclosure and on the possible outcome of self-disclosure. Reciprocity involves the reaction of the nurse, as the receiver of the information, to the self-disclosure of the patient. It involves the acknowledgment or awareness that the patient has disclosed.

Self-disclosure, regardless of the outcome, has an effect on the nurse-patient interactive process and consequently the impetus for the patient to further self-disclose. The effect may facilitate additional self-disclosure or restrict self-disclosure. The

patient's decision to not self-disclose also has an effect on the nurse-patient interactive process and on the impetus for the patient to self-disclose.

Concepts

The concepts used in this conceptual framework are identified and defined to facilitate clarity. The following concepts are not listed in any specific order.

1. Self-disclosure. This concept is defined as the voluntary communication of ordinarily private personal information to one or more individuals. This information could not be learned from any other source.

2. Impetus. This concept refers to any motivating force.

3. Reciprocity. This concept refers to the reaction of the receiver of self-disclosure. It involves the acknowledgment or awareness of what has been disclosed.

4. Risk Assessment. This is the process of identifying risk factors that cause a feeling of doubt or a feeling of vulnerability.

5. Voluntary. This refers to anything that is in accordance with one's will.

6. Communication. This concept refers to any spoken or written words that convey information.

7. Personal information. This concept is defined as any information related to the physical self, the emotional self, the spiritual self, or the social self. This information could not be learned from any other source.

8. Personal characteristics. This concept refers to the qualities that distinguish an individual from other individuals.

Conceptual Framework Assumptions

The following is a list of assumptions regarding the conceptual framework.

1. In the discipline of nursing, the nurse-patient relationship is an interactive process. The patient recognizes the role of the nurse and the nurse recognizes the role of the patient.

2. When a patient enters into the health care system there is an expectation that questions pertaining to personal information will be asked and often readily answered.

3. The environment has some effect on interactive process between the nurse and the patient.

4. All individuals possess both personal and nonpersonal information that could be available to be shared.

5. Self-disclosure can be of value in the

nurse-patient relationship and could improve patient care.

6. Self-disclosure is honest, genuine, and authentic.

7. The exact impetus elicting the response of self-disclosure is unknown.

8. Self-disclosure is an ongoing process.

Significance for Nursing

The significance of this study for nursing is the development of a reliable and valid instrument for measuring self-disclosure within the nurse-patient relationship. A valid and reliable instrument for self-disclosure could provide information which would be used to foster or nurture the nurse-patient relationship. This methodological study would increase knowledge with respect to the methods used in measuring self-disclosure rather than contributing to the substantive area regarding self-disclosure. Methodological studies are indispensable in any scientific discipline and especially so when a field is relatively new and deals with highly complex, intangible phenomena such as nursing (Polit & Hungler, 1987).

A valid and reliable instrument which would measure self-disclosure within the nurse-patient relationship

is paramount to facilitate additional research that could impact both nursing education and nursing practice. If self-disclosure could be measured accurately with patients, then nursing could examine factors which facilitate or inhibit self-disclosure between nurses and patients in the clinical setting. Other studies could be conducted to examine the therapeutic and/or social effects of reciprocal self-disclosure between nurses and patients. Findings from such studies could impact on nursing education as well as nursing practice. Such studies would contribute to the substantive area of self-disclosure in the nurse/patient relationship. However, methodological studies must be conducted initially to ensure that a valid and reliable instrument is available to measure self-disclosure within the nurse/patient relationship.

Definition of Terms

Self-Disclosure is theoretically defined as the voluntary communication of ordinarily private personal information to one or more individuals. This information could not be learned from any other source (DeDonder, 1986a). Self-disclosure, in the category of health care, is defined as information that pertains to a patient's current health situation, patient's past

health history, or patient's management of pain (DeDonder, 1990). Self-disclosure, in the category of lifestyle, is defined as information that pertains to a patient's personal habits, financial situation, work/school, or home/family (DeDonder, 1990). Self-disclosure, in the category of personal beliefs, thoughts, and feelings, is defined as information that pertains to a patients' personal beliefs, thought and feelings regarding self or others (DeDonder, 1990).

Operational Definition

Self-disclosure was operationally defined as the total score obtained on the DeDonder Self-Disclosure Questionnaire. This instrument was structured to measure chronically ill patients' self-disclosure to nurses regarding health care, lifestyle, and personal beliefs, thoughts, and feelings.

Assumptions

The assumptions for this study follow.

1. Self-disclosure ex[illegible]s within the nurse-patient relationship and can be measured.

2. Self-disclosure can be of value in the nurse-patient relationship and can improve patient care.

3. Self-disclosure is an ongoing process.

4. Participants of the study answered questions honestly.

5. When a patient enters into the health care system there is an expectation that questions pertaining to personal information will be asked and often readily answered.

Limitations

The limitations of this study involve the inability to generalize. The generalizability of this study is limited by the fact that the data were collected from a convenience sample of chronically ill outpatients from a private internal medicine clinic and chronically ill inpatients hospitalized at a 178 bed rural hospital both situated in a city of over 29,000 that provides health care services to over 60,000 people in east central Kansas. Any conclusions and generalizations that are reached may be applicable only to this particular population and sample.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature revealed that although a number of researchers have studied the general concept of self-disclosure, few researchers have studied self-disclosure as it relates to the nurse-patient relationship. The review of the literature related to this study was organized to provide an overview of self-disclosure, particularly Jourard's theory, and examine empirical studies related to the measurement of self-disclosure. In addition, studies conducted by the investigator that led to the development and refinement of DeDonder's conceptual framework of patient self-disclosure will be reviewed.

Jourard's Theory of Self-Disclosure

The use of the term self-disclosure had its roots in the existential and phenomenological philosophy of Husserl, Heidegger, Sartre, Buber, and Merleau-Ponty. Interest in the empirical study of self-disclosure was inspired by a series of books published by Jourard in the 1960s and by Jourard's own attempt to develop a valid instrument for measuring self-disclosure as an enduring personality trait.

Jourard became fascinated with the concept of self-disclosure after determining the fact that

patients told more about themselves in therapy than they had ever told another living person. In 1958, Jourard and Lasakow defined self-disclosure as "the process of making the self known to other persons; 'target persons' are persons to whom information about the self is communicated" (p. 91). They explained that accurate portrayal of one's self to others was an identifying criterion of healthy personality, while neurosis was related to inability to know one's "real self" and to make it known to others.

Jourard and Lasakow (1958) developed a sixty-item questionnaire (Jourard Self-Disclosure Questionnaire) to measure self-disclosure. They proposed that the kind of personal data one writes down on a job application form would be the type of information necessary for a self-disclosure questionnaire. The questionnaire they developed had six categories to define personal information or aspects of self-disclosure. The six categories were: (a) attitudes and opinions, (b) tastes and interests, (c) work, (d) money, (e) personality, and (f) body. They discovered that individuals self-disclosed more information regarding attitudes and opinions, tastes and interests, and work and less information regarding money, personality, and body.

Jourard stated, "Self-disclosure, my communication of my private world to you, in language which you clearly understand, is truly an important bit of behavior for us to learn something about" (Jourard, 1964, p. 5). Jourard believed that self-disclosure had to be honest, direct, and uncontrived. Jourard coined the term "public self" to refer to the concept of oneself which one wants others to believe. Jourard discovered that individuals tend to disclose more about themselves to people who resembled them in various ways than to people who differed from them. He had evidence that the relationship between self-disclosure and mental health was curvilinear with too much or too little self-disclosure resulting in disturbance in self and in interpersonal relationships (Jourard, 1959).

In 1971, Jourard adjusted the definition of self-disclosure to state, "Self-disclosure is the act of making yourself manifest, showing yourself so others can perceive you" (p. 19). Jourard stated that self-disclosure was a symptom of personality health and a means of achieving a healthy personality and believed that self-disclosure required the courage to be known and had to occur willingly.

Reciprocity occurs with self-disclosure (Jourard, 1971). The person's self-disclosure must be responded

to by the other person involved in the relationship. Jourard believed that many beneficial consequences occurred from self-disclosure including increased understanding and intimacy. Jourard did not address potential harmful consequences of self-disclosure.

Methodological Issues Regarding Self-Disclosure

Chelune (1979) stated there are methodological problems and issues inherent in attempting to translate a phenomenological behavior such as self-disclosure into operational terms suitable for scientific research. Inconsistencies in the conceptual definitions used in self-disclosure research was identified as one of the problems regarding self-disclosure research. The choice of an assessment technique (self-report, observational, or objective measurement) was an additional issue identified regarding the empirical endeavor of measuring self-disclosure. An additional issue identified was whether to study self-disclosure as a unidimensional or multidimensional construct. As an interpersonal behavior, self-disclosure is thought to include, at a minimum, five basic parameters: amount or breadth of personal information disclosed, intimacy of the information revealed, duration or rate of disclosure, affective manner of presentation, and self-disclosure

flexibility (Chelune, 1975). The majority of studies regarding self-disclosure have not examined all five dimensions in a given study. Chelune (1979) stated that little argument could be raised if, in assessing only one or two dimensions, investigators correspondingly limited their generalizations to the parameters considered.

Measuring Self-Disclosure of College Students

Interest in the empirical study of self-disclosure was inspired by a series of books published by Jourard in the 1960s and by Jourard's own attempt to develop a valid instrument for measuring self-disclosure as an enduring personality trait. The studies of self-disclosure usually involved the 60-item self-disclosure questionnaire developed by Jourard and Lasakow (1958). They proposed that the kind of personal data one wrote down on a job application form would be the type of information necessary for the self-disclosure questionnaire. The questionnaire was divided into six topic areas: attitudes and opinions, tastes and interests, work (or studies), money, personality, and body.

The subjects in the initial methodological study (Jourard & Lasakow, 1958) were asked to indicate to what extent they had discussed each of the 60

statements with each of four target persons--mother, father, best male friend, and best female friend. The subjects were taken from larger samples drawn from three Alabama college populations: two white liberal arts colleges, a black liberal arts college, and a school of nursing located in a medical school. For the combined sample, 300 white and black liberal arts college sophomores and juniors and 55 white nursing students were obtained. For the purpose of analysis, subjects were randomly selected subsamples drawn from the combined sample. Data were analyzed using analysis of variance to examine the influence of race, sex, target-differences, and aspects of self; the influence of marriage; and parent-cathexis with self-disclosure to parents.

Subjects tended to vary the amount of self-disclosure with respect to the category of information to which an item about the self belonged. Two clusters of aspects emerged, a high disclosure cluster including attitudes and opinions, tastes and interests, and work, and a low disclosure cluster comprised of money, personality, and body. The authors concluded that the study demonstrated that self-disclosure was measurable and that the present questionnaire measuring was valid. There was limited

documentation regarding the validity of the instrument and there was no attempt to control for sampling bias.

In 1964 Jourard reported some empirical support of the theory. Jourard reported that the reliability was satisfactory for the Jourard Self-Disclosure Questionnaire with odd-even coefficients for larger subtotals running in the .80s and .90s (Jourard, 1964).

The research conducted by Jourard inspired others to examine the importance of self-disclosure. Pedersen and Higbee (1968) conducted a study investigating the equivalence and construct validity of two self-disclosure measures, the sixty item Jourard Self-Disclosure Questionnaire (JSDQ) and a shortened version, a twenty-five item self-disclosure questionnaire (SD-25). The questionnaires were administered during two one-hour class periods to 107 college students enrolled in two introductory psychology classes at a university on the West Coast. The researchers state there was evidence of validity with all the correlations high, the lowest correlation in the validity diagonal being .60. This was significant beyond the .01 level of significance (two-tailed). The researchers concluded that analysis of the JSDQ and SD-25, by use of the multitrait-multimethod approach, suggested these two

measures had construct validity, since the matrices provided evidence for both convergent validity and discriminating validity. Although the researchers stated construct validity was determined by multitrait-multimethod, as suggested by Campbell and Fiske (1959), they did not use two different methods to measure self-disclosure and only used one method to measure the second concept, social accessibility. Therefore, the findings and conclusions must be reviewed with caution.

A study conducted by Pedersen and Breglio (1968) represented an effort to further establish the validity between the Jourard Self-Disclosure Questionnaire and a shortened version, a twenty-five item self-disclosure questionnaire. The questionnaires were administered to 52 students enrolled in two introductory psychology courses at a major university on the West coast. Pedersen and Breglio also developed and administered an additional questionnaire, which they titled the Self-Disclosure Questionnaire (SDQ), to the students at the same time. The SDQ yielded separate scores of actual depth of self-disclosure in five topic areas, a total depth of disclosure score, and a total amount of disclosure score. The results indicated that both total depth and total amount of disclosure as measured

by the SDQ were significantly correlated (.84) with total self-disclosures as measured by the Jourard Self-Disclosure Questionnaire. This finding provided additional construct validity for the Jourard Self-Disclosure Questionnaire. Similar evidence for the construct validity of the shortened 25 item self-disclosure questionnaire was absent.

Hurley & Hurley (1969) conducted a study to explore the construct validity of the Jourard Self-Disclosure Questionnaire. They compared the questionnaire with several independent measures of self-disclosure based upon information supplied by well-informed peers concerning how self-disclosing individuals were over a series of group-counseling sessions. Subjects (N=50) were enrolled in a graduate counseling course for a ten week term with the majority being candidates for advanced degrees. The researchers stated that these individuals were unusually well qualified to make valid self-disclosure ratings of their fellow group members in an appropriate setting and provided an authentic context for the measurement of self-disclosure.

The Jourard Self-Disclosure Questionnaire was summed over all the items. One independent measure of self-disclosure was obtained by the Hurley Self-Disclosure Rating. The Hurley Self-Disclosure

Rating scores were determined by averaging all scores given to each participant by the other members of his group, omitting self-ratings. Other independent self-disclosure measures were obtained by a questionnaire given only at the final group meeting. Participants rated all group members along a 5-point scale called the Direct Disclosure Rating.

The researchers found non-significant negative correlations between the Jourard Self-Disclosure Questionnaire and the observer Direct Disclosure Rating and non-significant negative correlations between the JSDQ and the Hurley Self-Disclosure Rating. While there was limited evidence for construct validity, this finding did not seem surprising since the Jourard Self-Disclosure Questionnaire measured self-report past self-disclosure to significant others in contrast to current disclosure determined by others. In addition, the analysis would have been strengthened by employing the multitrait-multimethod approach for determining construct validity.

In 1971, Panyard conducted a study to measure the reliability of the Jourard Self-Disclosure Questionnaire. The investigator found an odd-even split-half coefficient of .70 (n=100). The investigator did not elaborate on the sample or the

procedure but stated that the researcher decided that revisions were needed in the questionnaire. Panyard extended Jourard's original rating scale to make finer discriminations of amount disclosed and found the odd-even split-half correlations for the revised questionnaire to be .91 (n=41). The replication of the extended rating scale, readministered 5 months later, provided a split-half coefficient of .93 (n=80) and a test-retest reliability coefficient of .91 (n=37). There has been no additional utilization of Panyard's extension for the Jourard Self-Disclosure Questionnaire, therefore the psychometric properties derived from this revision have limited value.

Allen and Nishikawa (1988) conducted a study to identify the relationship between nursing faculty self-disclosure and nursing student self-disclosure. Three male and 20 female graduate students enrolled in two sections of a personal mastery seminar were asked to complete the Jourard Self-Disclosure Questionnaire at the beginning of the academic semester and at the end of the semester. Both sections were facilitated by the same faculty member who differentially used teacher self-disclosure to share professional and personal anecdotal information relevant to the topic being discussed. Data analysis for this descriptive study

consisted primarily of a comparison of pre-test and post-test scores on the JSDQ for groups exposed to differential degrees of teacher self-disclosure. The results revealed no significance between or within group findings for self-disclosure. Although this study used the Jourard Self-Disclosure Questionnaire, it was unclear as to the reliability and validity of the instrument with this population. Allen & Nishikawa (1988) stated "the reliability and validity data for the questionnaire was explored to some extent in a different study which used both mean disclosure time in seconds per self-disclosure topic and forty items previously scaled as to intimacy value. However, more work needs to be done in this area" (p. 7).

Measuring Self-Disclosure of Patients and Nurses

There has been limited nursing research measuring self-disclosure within the nurse-patient relationship. Johnson (1979) conducted a study to determine if a relationship could be found between self-disclosure and anxiety in selected nurses and patients in a clinical setting. The conceptual framework for the study was based on literature and research which suggested that self-disclosing individuals tend to be healthier, mentally and physically, than individuals who do not self-disclose. Nurse and patient subjects in the study

were from four types of hospital units: medical, surgical, psychiatric and critical care. The 70 nurses who took part were registered nurses (RNs) and licensed vocational nurses (LVNs) currently engaged in full-time practice. Patients (N=68) were individuals between the ages of 21 and 60 years who had been hospitalized at least five and no more than eight days at a 775-bed public hospital in a large urban city in southwestern United States. The independent variables of the study for nurses were: their nursing specialties, age, race, education program and years of nursing experience. For patients, the independent variables were their hospital unit, age, sex, race and level of education. The dependent variables for both nurses and patients were their scores on the instruments.

The two instruments used were the Jourard Self-Disclosure Questionnaire and the State-Trait Anxiety Inventory. A pilot study was conducted using the Jourard Self-Disclosure Questionnaire which led to the shortening of the questionnaire to 30 items for the present study due to the inordinate amount of time required by subjects to complete it and the fatiguing effects on patients. The revised questionnaire was shortened to a 30 item measure by using only the odd items. There was no information regarding validity or

reliability of this shortened version.

The data were analyzed descriptively and inferentially on all respondents across all variables. Means and standard deviations were computed on all data. One-way analyses of variance were used to determine if any significant differences existed among nurses, among patients and between nurses and patients on self-disclosure and anxiety. The Spearman-Brown correlation coefficient was obtained to determine the relationship between the levels of self-disclosure and anxiety in both groups of subjects.

As a single group (LVNs and RNs combined) the disclosures made by nurses to patients were very low in number. When the subjects were grouped according to hospital unit, age, race and years of nursing experience, there were no significant differences in the nurses' reported levels of self-disclosure to patients.

In studying the correlations of state/trait anxiety and self-disclosure of nurses to patients there was a significant negative correlation between state anxiety and level of self-disclosure to patients for nurses who were 45 years of age and older ($r = -.76$, $p = .01$). In white nurses, there was a significant negative correlation between state anxiety and self-disclosure

(r= -.46, p=.01) and between trait anxiety and self-disclosure to patients (r= -.33, p=.05). When the data were analyzed according to education program, RNs reported a significant negative correlation between state anxiety and self-disclosure to patients (r= -.28, p=.05). From a total of 28 correlations computed across the 14 variables, 23 were negative and four of these showed a significant negative correlation. The researchers believed this supported one of the research propositions, that as anxiety levels tend to increase levels of self-disclosure tend to decrease.

For patient subjects, none of the independent variables had significant influence on the differential levels of patients' self-disclosure to nurses. There was a tendency across all variables that suggested that patients disclose very little to nurses. Johnson (1979) concluded that this study identified the critical deficiencies in knowledge about nurses and patients in regard to anxiety and self-disclosure.

Results of this study may have been affected by the possibility that the instrument used to measure self-disclosure was not valid or reliable. There was no information regarding the psychometric properties of the revised instrument used in the study and the researcher stated that the revised instrument was based

on using only the odd items from the Jourard Self-Disclosure Questionnaire.

A study examining the level of reciprocal disclosure occurring between nurses and patients on selected units in the clinical setting of a large 775 bed public urban hospital was conducted by Johnson (1980). The volunteer subjects consisted of nurses (n=70) and patients (n=68). The instrument selected to determine levels of self-disclosure was the Jourard Self-Disclosure Questionnaire. The researcher shortened the questionnaire, however, to 30 items due to the fatiguing effects subjects reported during a pilot phase of the study. There was no information given regarding the reliability or validity of the revised questionnaire. Furthermore, there was no information in the literature that would validate a 30 item form of the Jourard questionnaire. The results of the study showed that there were very low levels of self-disclosure occurring between nurse and patient subjects 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" (Johnson, 1980, p. 19). The researcher suggested additional research be conducted to measure self-disclosure levels

of nurse and patients.

In 1984, Dawson, Schirmer, and Beck published research regarding a new instrument that would measure patient self-disclosure. The instrument was the 21 Item Patient Self-Disclosure Questionnaire. Three areas of patient difficulty in disclosing to a health care provider were measured: personal problems and feelings, responses to health care, and life style.

Patient difficulty in disclosure was measured by 21 items on a 7-point rating scale, 7 for each disclosure area with ratings summed to obtain scores. A correlation matrix of the ratings of 216 patients was subjected to a three-factor principal components analysis with Varimax rotation; the solution accounted for 59% of the total variance. High internal consistency and test re-test reliability for the total scale and subscales were obtained; Cronbach's alpha .82-.83, (n = 214); r = .81-.87, (n =66) respectively. There was limited information regarding construct validity being established and no information regarding a conceptual framework for the development of the instrument. A threat to the construct validity of this instrument was determined upon examining the instrument and finding that it measured difficulty in self-disclosing, not self-disclosure itself. In

addition, there was inconsistency between the directions for completing the instrument, as outlined in the published research, compared to directions on the scale itself. The published research implied that this instrument measured patient self-disclosure within the nurse-patient relationship. The directions on the scale stated, "Please read each item and decide how difficult it would be for you to discuss the item with your primary health care physician." It was inconsistent that the directions had no mention of "nurse".

Hojlo (1988) conducted a study that examined patient difficulty in self-disclosing health related information using the Patient Self-Disclosure Instrument (Dawson, Schirmer, & Beck, 1984). Thirty-nine pairs of nursing home staff and nursing home residents, purposively selected, composed the sample for the study. Data were collected using demographic data forms, The Hogan Empathy Scale and Empathic Tendency Scale for staff, and the Patient Self Disclosure Instrument and Visual Analogues were used for residents. Findings identified resident perception of staff perspective-taking and emotional empathy inversely related to resident difficulty in self-disclosure of health related information. Only

resident perception of staff perspective-taking contributed to the multiple regression after controlling nurse age and education. Hojlo concluded that nursing home resident perceptions of nursing home staff perspective-taking and nursing home staff emotional empathy are significant predictors of nursing home resident difficulty of self-disclosure of health related information.

A qualitative research study was conducted by DeDonder (1986b) to describe the phenomenon of self-disclosure of patients occurring during prenatal assessments. The setting for the study was a local county health department that served a county approximately 45,000 in population. The subjects, (N=2), were 19 and 20 years old. Both were single, Caucasian and expecting their first baby. Data were collected during the observations of three routine prenatal assessments conducted by a nurse practitioner. The researcher was strictly in the role of observer. Verbal and nonverbal communication of the subjects were recorded in a notebook through process recordings. In addition, the assessments were tape recorded to facilitate accurate documentation and retrieval of information.

The unit of analysis for the verbal communication

was a statement made by the subject either in response to a question asked by the nurse practitioner or a statement offered spontaneously by the subject that involved some aspect of self-disclosure. The information regarding verbal communication was analyzed for self-disclosure. Initial categories of analysis were projected to be the same theoretical categories as established by Jourard (1958): body, personality, money, work, tastes and interests, and attitudes and opinions. Content analysis of the data revealed that not all the pre-established categories were appropriate to the data collected. The alternative categories identified and developed were: family, knowledge deficit, body, money/work, tastes and interests, and attitudes and opinions. The verbatim transcriptions of the prenatal assessments were then coded using six separate colors of highliter pens for each of the major categories. Then the frequency of responses was obtained for each category and summary statistics were completed.

The responses from the six categories developed were then compared to three broad categories: the physical self, the emotional self, and the social self. Summary statistics were then completed for these categories. A total of 88 verbal responses of

self-disclosure were obtained from three prenatal assessments of the two subjects. The largest number of responses pertained to attitudes and opinions (31%), followed by self-disclosure regarding body (26%). The lowest amount of self-disclosure was in the category of money/work (7%). When responses were compared to the three broad categories established, 60% of self-disclosure pertained to the physical self, 25% for the social self and only 15% of self-disclosures pertained to the emotional self.

The results of this limited study validated that self-disclosure occurred within the nurse-patient relationship. The results also suggested that further research would be beneficial in order to adequately investigate the phenomenon of self-disclosure as it relates to the nurse-patient relationship.

A study conducted by DeDonder (1989) tested whether reliability and validity of the Jourard Self-Disclosure Questionnaire existed with chronically ill subjects. The convenience sample consisted of 120 chronically ill subjects who were seen in a private, outpatient internal medicine clinic situated in a small city in the Midwest. Two instruments were used to collect data, a Demographic Questionnaire and the Jourard Self-Disclosure Questionnaire. Demographic data were

summarized. Scores were calculated for the JSDQ and analyzed for reliability using coefficient alpha as a measure of internal consistency reliability and principal components factor analysis using Varimax rotation was completed to analyze construct validity. Findings indicated that overall, chronically ill patients did not self-disclose to the nurse. Cronbach's alpha for the total Jourard Self-Disclosure Questionnaire was .97, indicating a high internal consistency reliability. In addition, Cronbach's alphas were computed for the six subscales and ranged from .82 to .95. These results provided support for the internal consistency reliability of the Jourard Self-Disclosure Questionnaire.

Factor analysis was used to establish construct validity and since the Jourard Self-Disclosure Questionnaire was developed with six subscales, the data from the sixty items were forced into a six factor solution. Analysis of the data indicated that 66% of the variance was explained by this six factor solution. All but one item loaded on the six factors with crossloading noted on a total of 18 items demonstrating conceptual ambiguity. Analysis of the six factor solution indicated insufficient support for the six subscales on the Jourard Self-Disclosure

Questionnaire and documented the conceptual incongruences on the six factors. Thus construct validity was not supported for the Jourard Self-Disclosure Questionnaire. The findings indicated that while the instrument was reliable, it was not valid. This study indicated that the Jourard Self-Disclosure Questionnaire was not acceptable in its present form for utilization in measuring self-disclosure between chronically ill patients and nurses.

A qualitative study was conducted by DeDonder (1990) to determine the content domain of self-disclosure within the nurse-patient relationship. The study used Jourard's theory of self-disclosure as the organizing framework. Since the purpose was to determine the content domain of self-disclosure within the nurse-patient relationship, both nurses and patients were included in the sample. The convenience sample consisted of 30 chronically ill patients and 26 nurses with experience in caring for the chronically ill.

Data were obtained through a demographic questionnaire and were summarized. Data were also obtained using the Object Content Test (OCT). The OCT is an unstructured, self-administered, paper and pencil

test that can be administered to respondents either individually or in a group. The respondent must be given a fairly sensible reason for filling out the test, but must not be given any indication of the kinds of responses that are possible or expected. There are 20 numbered blanks for responses on the test and respondents are informed that they can fill in fewer than the 20 blanks or turn the paper over and add more to the 20 spaces. The OCT generally takes about 30 minutes to administer (Hartley, 1970). Spitzer, Couch, and Stratton (1970) reported multiple studies reporting test-retest reliability coefficients ranging from .38 to .85 for the OCT. The data from the OCT were analyzed using content analysis.

A total of 474 responses were generated by the two groups of subjects completing the OCT. After initial analysis, 227 responses were eliminated due to replication. The remaining 247 responses (Appendix C) were analyzed with category labels and theoretical definitions established. The categories that evolved from the data are shown, with their definitions and selected examples of response items, in Table 1. The three categories that emerged from the data were health care, lifestyle, and personal beliefs, thoughts, and feelings.

To establish content validity of the categories and items identified in each category, two nurse researchers with expertise in chronic illnesses independently sorted the 247 responses into categories. An index of equivalence was completed and only items which maintained a coefficient of .66 or greater were retained (Polit & Hungler, 1987). Of the 247 item responses that were sorted, 4 item responses had an index equivalence of less than .66 and were not included within the final categories.

The findings from this study provided information that supported the content domain of self-disclosure within the nurse-patient relationship. Additional research needs to be conducted to define and refine the extent of the content domain.

Table 1

Definitions of Categories and Examples of Items

Category	Theoretical Definition	Selected Example of Item
1. Health Care	Information that pertains to patient's current health situation, patient's past health history or patient's management of pain.	"I've always been healthy in in the past"; "That I have lots of side effects from medications"
2. Lifestyle	Information that pertains to patient's personal habits, financial situation, work/school, or home/ family.	"What my personal interests and hobbies are"; "How my illness has affected my personal finances"

Table 1 cont.

Definitions of Categories and Examples of Items

Category	Theoretical Definition	Selected Example of Item
3. Personal Beliefs, Thoughts, And Feelings	Information that pertains to patient's personal beliefs, thoughts and feelings regarding self or others.	"That I have to fight discouragement of too many trips to the hospital" "What life goals are incomplete"

Summary

Chapter II provided a review of the literature regarding self-disclosure. Self-disclosure has been widely studied in psychology using Jourard's theory of self-disclosure. The most widely used instrument to measure self-disclosure has been the Jourard Self-Disclosure Questionnaire, which has adequate reliability and validity; however, it was developed and validated using predominately college age students in psychology classes who Jourard considered to be

superior performing individuals. This is not always true in nursing, since patients often do not meet this criterion due to their own health care needs.

There has been limited nursing research regarding self-disclosure. The nursing literature identified that the Jourard Self-Disclosure Questionnaire has been used within the discipline, although psychometric properties for the populations identified have not been established. The nursing literature also documents that while other instruments have been adapted from the Jourard Self-Disclosure Questionnaire, studies have not investigated the psychometric properties of the revised instrument. There has been one study (DeDonder, 1989) conducted on the Jourard Self-Disclosure Questionnaire that examined reliability and validity using chronically ill patients. This study supported the reliability but refuted construct validity of the Jourard Self-Disclosure Questionnaire. The findings from a qualitative study (DeDonder, 1990) provided information that provided support for the content domain of self-disclosure within the nurse-patient relationship. However, these findings need additional analysis to establish content validity for any instrument development.

CHAPTER III

METHODOLOGY

Chapter Three describes the methodology for this study, including the research design, the description of the sample, and ethical considerations. The instruments used are described as well as the procedures for data collection and analysis.

Design

A methodological design was used for this study to develop and test the psychometric properties of an instrument to measure self-disclosure within the nurse-patient relationship. Methodological studies address the development, validation, and evaluation of research tools or techniques. These studies primarily increase knowledge with respect to the methods used in performing scientific research rather than contributing to some substantive area. Methodologically designed studies are indispensable in any scientific discipline, and perhaps especially so when a field is relatively new and deals with highly complex, intangible phenomena such as human behavior or welfare, as is the case in nursing research (Polit & Hungler, 1987).

Subjects and Setting

The convenience sample used for this study consisted of 300 chronically ill subjects. The

subjects (N=300) consisted of 150 chronically ill outpatients from a private internal medicine clinic and 150 chronically ill inpatients hospitalized at a 178 bed rural hospital both situated in a small city of over 29,000 that provides health care services to over 60,000 people in east central Kansas. Permission for the investigator to use both facilities and gain access to the patient population was obtained (Appendix A). To be eligible to participate in the study, subjects had to have a chronic illness, be over the age of 18 years, and be able to read and write the English language. Chronic illness referred to those illnesses which led to at least some of the following characteristics: (1) permanent impairments or deviations from normal, (2) nonreversible pathologic changes, (3) a residual disability, (4) special rehabilitation of the client, and (5) long-term medical and/or nursing management (Lewis & Collier, 1987).

Instruments

Demographic Questionnaire

A demographic questionnaire was designed by the investigator to gather relevant data to profile subjects (Appendix B). Variables included: age, gender, marital status, race, educational level, employment status, medical diagnosis and length of time

chronically ill.

DeDonder Self-Disclosure Questionnaire

The DeDonder Self-Disclosure Questionnaire was developed and psychometric properties were tested in this study. The processes involved in developing and testing an instrument are complex and will be discussed in phases.

Phase I -- Content Validity. Items for the proposed instrument were generated from data obtained from the qualitative study (DeDonder, 1990) which identified 247 pieces of personal information that patients might self-disclose to nurses (Appendix C). All 247 responses were sorted to define and refine the content domain of self-disclosure within the nurse-patient relationship. Categories of content regarding self-disclosure were developed from that study. The three content areas of self-disclosure were health care, lifestyle, and personal thoughts, feelings and beliefs. In this methodological study, three nurse experts in the area of patient self-disclosure were asked to sort all responses into the established content areas. Instructions for the sort were developed (Appendix D). An index of equivalence was calculated for each item using the following equation.

$$\text{Index of Equivalence} = \frac{\text{Number of Agreements}}{\text{Number of Agreements + Disagreements}}$$

In order to establish stability of the categories and items contained within the categories, only items which maintained a coefficient of $\geq .66$ were retained as possible items for the instrument (Polit & Hungler, 1987). Of the original 247 items, 109 items maintained a coefficient of $\geq .66$ and were retained.

To insure complete coverage of the content of domain, the investigator reviewed the literature on self-disclosure to identify any additional items of personal information not included in the items identified. This list was then compared to the proposed instrument items and revisions made.

Phase II -- Item Development. The proposed instrument items were evaluated using the following guidelines for item development as suggested by Sudman & Bradburn (1985), Nunnally (1978), Waltz & Bausell, (1983), and Waltz, Strickland, and Lenz (1984).

1. Use relevant items identified by chronically ill patients.

2. Remove replications and generate unique items for each category of self-disclosure. From the 109 items that maintained a coefficient of .66 after the

sort by experts, 31 items were removed due to replication and redundancy. From the review of literature 2 additional items were developed.

3. Use simple terminology at roughly the 5th grade reading level.

4. Avoid statements that refer to the past rather than the present.

5. Avoid statements that may be interpreted in more than one way.

6. Avoid ambiguous statements.

7. Avoid statements that are likely to be chosen by everyone or no one.

8. Select items that cover the entire domain of interest.

9. Use clear statements that are simple and direct.

10. When possible, use simple sentences limited to 20 words.

11. Each statement should contain only one complete thought.

12. Avoid the use of universals such as all, always, none, and never.

13. Use words such as only, just, and merely with moderation.

14. Avoid words that may be misunderstood.

15. Avoid double negatives.

16. Avoid statements that are emotionally laden or that might trigger bias.

17. Items should contain words that can be understood by those who will complete the scale.

18. If personal or delicate content is included, word the item as non-offensively as possible and place sensitive questions at the end.

The main criterion for determining the sequence of items was that they be arranged in a logical and realistic fashion so that they made sense to the respondent. The final order of items for the DeDonder Self-Disclosure Questionnaire was accomplished using strategies recommended by Sudman and Bradburn (1985) and Waltz, Strickland, and Lenz (1984). These strategies included the following.

1. Begin with questions that are most likely to capture the interest of the respondent and increase motivation to cooperate.

2. In order to make the instrument more logical and less confusing to the respondent, it is desirable to cluster questions concerning a given topic.

3. Once a respondent is thinking carefully about a topic, it is logical to ask all the questions about that topic before switching to another topic.

4. Keep the instrument as short as possible by removing questions that are redundant, do not discriminate, or are not likely to be analyzed.

5. Consider the salience of the questions to the respondents when deciding how long to make the instrument. For salient topics questionnaires can average about sixteen pages. For nonsalient topics, questionnaires are usually limited to two to four pages.

6. Since some demographic questions are threatening, put these questions at the end of the instrument.

The following guidelines for formatting the instrument, as suggested by Sudman and Bradburn (1986), were followed.

1. Use booklet format for ease in reading and turning pages and to prevent lost pages.

2. The appearance of a questionnaire has an important impact on response. The questionnaire should look easy to answer and professionally designed and printed.

3. The title of the study and the name of the investigator conducting the study should be on the first page of the questionnaire.

4. Do not crowd questions.

5. Use sufficiently large and clear type so that there is no strain in reading.

6. Each question should be numbered.

7. Do not split a question between two pages.

8. Use vertical answer format for individual questions.

9. Precode all questions to facilitate data processing and to ensure that the data are in proper form for analysis.

10. Always end the questionnaire with a thank you.

11. Start with the end of a scale that is least socially desirable. Otherwise, the respondent may choose a socially desirable answer without reading the entire set of responses.

Phase III. -- Instrument Scaling. The scaling model for the DeDonder Self-Disclosure Questionnaire was a Likert or "summative" scale. The investigator selected this scaling model for the format because it was relatively easy to construct, usually reliable, and was flexible in measuring different kinds of attitudes (Waltz, Strickland, & Lenz, 1984). According to McIver and Carmines (1981), Likert scaling may be described as a set of items, composed of approximately an equal number of favorable and unfavorable statements, given to a group of subjects. The subjects are asked to

respond to each statement by selecting one of typically five responses. The specific responses to the items are combined so that individuals with the most favorable attitudes will have the highest scores while individuals with the least favorable (or most unfavorable) attitudes will have the lowest scores.

Scale scores would be computed by summing the response scores of the component items with the responses given. For the DeDonder Self-Disclosure Questionnaire the scale score was computed by summing the following integral values for statements, (Sudman & Bradburn, 1986): a value of 5 assigned to "talked to the nurse about this a great deal"; a value of 4 assigned to "talked to the nurse about this quite a bit"; a value of 3 assigned to "talked to the nurse about this a fair amount"; a value of 2 assigned to "talked to the nurse about this some"; and a value of 1 assigned to "none or never talked to the nurse about this at all". Appendix E contains an example of the scale along with directions for completing the questionnaire. Each item was scored identically and each item contributed equally to the total score as suggested by Nunnally (1978). The total score possible for the DeDonder Self-Disclosure Questionnaire ranges from 80 to 400. High scores indicate high levels of

self-disclosure and low scores indicate low levels of self-disclosure.

According to McIver and Carmines (1981) the next phase of scaling required evaluation of the item set. Although specific methods of data analysis follow in the data analysis section, several points regarding evaluation of the Likert scaling model will be made here.

Likert originally proposed two types of "item analysis" methods to evaluate the ability of the individual items to measure the attribute measured by the total scale: correlation analysis and analysis based on the criterion of internal consistency. Having applied both types of item analysis to the data, the investigator is in a position to decide whether to retain individual items. If an item is undifferentiating, it does not contribute to the scale composed of the rest of the items and should be eliminated as a result. Those items that have low item-to-total correlations and those that do not discriminate between groups with extreme attitudes should be dropped from the final scale (McIver & Carmines, 1981).

Some of the reasons why a statement might fail to perform according to original expectations include:

1. The statement may involve a different issue than the one involved in the rest of the statements.

2. The statement may be responded to in the same way by practically the entire group.

3. The statement may be so expressed that it is misunderstood.

4. It may be a statement concerning fact which individuals who fall at different points on the attitude continuum will be equally likely to accept or reject (McIver & Carmines, 1981).

Phase IV. -- Face Validity. Face validity was established by administering the instrument to three chronically ill patients. These patients were questioned about the readability and clarity of the directions and items. They were asked if the instrument, upon review, appeared to measure what it was intended to measure. Revisions were made as indicated. The DeDonder Self-Disclosure Questionnaire was then complete (Appendix F).

Procedure

The procedure for this study progressed through a sequence of events. First, the study was approved by the University of Kansas Medical Center Human Subjects Committee. Second, for data collection of chronically ill outpatients, patient charts were reviewed by a

registered nurse employed at the internal medicine clinic the day before the scheduled patient's appointments to determine subject eligibility for participation in the study. All patients who met the sampling criteria were approached in person by the investigator at the physician's office to participate in the study. The purpose of the study was explained as well as the consent form. Patients were informed that completion of the DeDonder Self-Disclosure Questionnaire and the Demographic Questionnaire took approximately 15 to 20 minutes and that their treatment at the clinic would in no way be affected by their participation or non-participation in the study.

If the patient agreed to participate, subjects signed the consent form (Appendix G). Directions for completing the DeDonder Self-Disclosure Questionnaire and the demographic questionnaire were reviewed and the questionnaires were distributed. In the process of providing directions to subjects, the investigator directed the subjects to consider the amount of personal information they had disclosed to professional nurses in that clinic setting only and named the three R.N.s working in the office. Subjects completed questionnaires in the physicians office while they waited for lab work to be completed or while they

waited to see the physician or nurse. When a patient was unable to complete the questionnaire during these waiting periods, they were allowed to take the form with them to the treatment room and finish it there. Completed questionnaires were handed back to the investigator who remained in the office during times when patients were completing questionnaires. If a patient was unable to complete the form while at the clinic, they were given a stamped, addressed envelope to mail the completed questionnaire back to the investigator.

For chronically ill inpatients, the investigator reviewed the hospital kardex to determine subject eligibility for participation in the study. Potential subjects were approached in person by the investigator in their hospital room at times that did not interfere with medical or nursing regimens and did not interfere with their health care. The purpose of the study was explained as well as the consent form. Patients were informed that completion of the DeDonder Self-Disclosure Questionnaire and the Demographic Questionnaire took approximately 15 to 20 minutes and that their treatment at the hospital would in no way be affected by their participation or non-participation in the study.

If the patient agreed to participate, subjects signed the consent form (Appendix G). Directions for completing the DeDonder Self-Disclosure Questionnaire and the demographic questionnaire were reviewed and the questionnaires were distributed. In the process of providing directions to subjects, the investigator directed the subjects to consider the amount of personal information they had disclosed to the professional nurses caring for them in this present hospitalization. The investigator identified by name several of the R.N.s who had cared for the patient during the present hospitalization. Patients were instructed that the investigator would remain on the inpatient unit for a designated amount of time and would return to the room periodically to answer any questions. In addition, patients had the phone number of the principal investigator on their copy of the consent form and were given the investigator's office phone number as a mechanism for answering questions. If patients were unable to complete the form before the investigator left the hospital unit, the investigator returned to the patient's room the following day to collect the completed forms. Patients also had the option to complete the questionnaire at their convenience and mail it to the investigator in stamped,

addressed envelopes provided for them on request.

Data Analysis Methods

Data were analyzed using the IBM mainframe computer and standard Statistical Packages for the Social Sciences (SPSSX). Demographic data were analyzed descriptively on all respondents across all variables. Specific data analysis methods for each research question follow.

Research Question 1

What is the content validity for the DeDonder Self-Disclosure Questionnaire (DSDQ) when administered to chronically ill patients? Research question one was answered using content validity. The items on the DeDonder Self-Disclosure Questionnaire were derived from the 247 responses of chronically ill patients and nurses caring for the chronically ill (DeDonder, 1990), verified by the literature, and nurse experts in the field of patient self-disclosure. Initial content validity, including expert and face validity, were obtained as outlined for Phase I and Phase IV.

Research Question 2

What is the construct validity of the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients? Exploratory factor analysis using the principal components method with varimax

rotation was calculated to examine construct validity. Initially an unrestricted factor analysis was conducted. Then, a three factor solution was selected to analyze the three theorized subscales on the DeDonder Self-Disclosure Questionnaire.

Research Question 3

What is the internal consistency reliability for the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients? Research question three was answered by calculating Cronbach's alpha for each subscale and calculating a reliability coefficient for the entire scale. In the case of instruments designed with subscales, such as the DeDonder Self-Disclosure Questionnaire, alpha should be determined for each scale as well as for the overall instrument (Waltz, Strickland, & Lenz, 1984).

Alpha-if-item deleted, and item total score correlation were also computed. Item analysis was completed with calculation of frequencies for each item as well as the mean, range, and standard deviation for each item. An interitem correlation matrix was calculated, as suggested by Likert (McIver & Carmines, 1981), to determine statements that were undifferentiating and need to be eliminated. The Spearman-Brown formula was calculated to determine the

number of items that could be eliminated while maintaining a reliability coefficient above .70.

Ethical Considerations

Ethical considerations for this study followed the guidelines established by the University of Kansas Medical Center Human Subjects Committee. The Human Subjects Committee reviewed and approved the study. No anticipated physical or psychological risks were identifiable for patients or professional staff as a result of this study. There was no cost incurred for patients or for the professional staff.

Prior to signing the consent form, subjects were informed that the study involved measuring communication between patients and nurses, specifically self-disclosure. Subjects were told that the purpose of the study was to establish a valid and reliable instrument intended to measure patient needs. Subjects were informed that their participation was voluntary and that they could withdraw from the study at any time without prejudice. Subjects were also assured that their participation would not affect their medical care, that all responses would remain confidential, and that names of participants, location of participants, or other known history of participants would not be identified in reporting the study.

CHAPTER IV

DATA ANALYSIS

The purpose of this chapter is to present data analysis findings from this methodological study. Demographic data is presented descriptively for all respondents across all variables followed by specific data analysis findings for each research question.

This study developed and tested the psychometric properties of the DeDonder Self-Disclosure Questionnaire (DSDQ) using a patient population with chronic illnesses. A convenience sample (n=300) of 150 chronically ill outpatients from a private internal medicine clinic and 150 chronically ill inpatients hospitalized at a 178 bed rural hospital were studied. All data were collected in a small city of approximately 29,000 that provides health care services to over 60,000 people in east central Kansas. Data were obtained through a demographic questionnaire and the DSDQ. Demographic data were summarized. Scores were calculated for the DSDQ and analyzed for reliability and validity.

Demographic Data

The demographic questionnaire assessed: gender, age, marital status, race, educational level, medical diagnosis, length of time of chronic illness, and

employment status. There were no missing data from the demographic questionnaire. Analysis of the data found that 215 (71.7%) were female and 85 (28.3%) were male. Subjects ranged in age from 20 to 90 with a mean age of 65 years, a mode of 69 years, and a median of 68 years.

Table 2 presents data pertaining to marital status, race, educational level, and employment status. The majority of subjects (69%) were married and Caucasian (97%). The highest educational level for the majority of subjects was 12 years (43.3%). Of the 300 subjects, 50.3% were retired, 22.3% worked full-time, 12.3% were homemakers, 8.3% worked part-time, 4.7% were disabled, 1% were unemployed, .7% were students, and .3% listed other.

Table 3 presents data pertaining to medical diagnosis of subjects and length of time subjects had experienced chronic illness. Of the 300 subjects, 40.7% had a medical diagnosis of chronic cardiovascular disease, 17.3% had chronic musculoskeletal disorders, 14% had chronic endocrine disorders, 9.3% had chronic respiratory disorders, 9% had chronic gastrointestinal disorders, 4% had chronic reproductive system disorders, 2.3% had chronic immunologic disease, 1.3% had chronic renal disease, and 2% had other chronic illnesses. The length of time subjects had experienced

chronic illness ranged from 1 to 44 years with a mean of 8.9 years and a median of 6 years.

Research Question Analysis

Three research questions guided the data analysis for this methodological study. The questions and specific findings follow.

Research Question 1

Research Question 1 asked: What is the content validity for the DeDonder Self-Disclosure Questionnaire (DSDQ) when administered to chronically ill patients? A prespecified plan, as outlined in Chapter III, was followed to facilitate the inclusion of content validity in the instrument as it was developed and will be reviewed. The items for the DSDQ were generated from data obtained from a qualitative study (DeDonder, 1990) which identified 247 pieces of personal information that patients might self-disclose to nurses (Appendix C). All 247 responses were sorted to define and refine the content domain of self-disclosure within the nurse-patient relationship Since categories of content regarding self-disclosure were previously established, those being health care, lifestyle, and personal though, feelings, and beliefs, this study arranged for three nurse experts in the area of patient self-disclosure to sort all responses into the

Table 2

Marital Status, Race, Educational Level, and Employment

Demographic Characteristic	Total	Percent
Marital Status		
Married	207	69.0
Widowed	77	25.7
Divorced	9	3.0
Never Married	5	1.7
Separated	2	.7
Race		
Caucasian	291	97.0
Other	6	2.0
Hispanic	2	.7
Black	1	.3
Educational Level		
Less than 8 Years	4	1.2
Completed 8 Years	20	6.7
Completed 9 - 11 Years	30	10.0
Completed 12 Years	130	43.3
Completed 13-15 Years	55	18.4
Completed 16 Years	26	8.7
Completed 17-20 + Years	35	11.7
Employment Status		
Retired	151	50.3
Employed Full-Time	67	22.3
Homemaker	37	12.3
Employed Part-Time	25	8.3
Disabled	14	4.7
Unemployed	3	1.0
Other	1	.3

(n=300)

Table 3

Medical Diagnosis and Length of Time Chronically Ill

Demographic Characteristic	Total	Percent
Medical Diagnosis		
Cardiovascular Disease	122	40.7
Musculoskeletal Disorders	52	17.3
Endocrine Disorders	42	14.0
Respiratory Disorders	28	9.3
Gastrointestional Disorders	27	9.0
Reproductive Disorders	12	4.0
Immunologic Disease	7	2.3
Renal Disease	4	1.3
Other Diseases or Disorders	6	2.0
Length of Time Chronically Ill		
One to Five Years	143	47.7
Six to Ten Years	75	25.0
Eleven to Fifteen Years	36	12.0
Sixteen to Twenty Years	20	6.7
Twenty-one to Twenty-five Years	10	3.4
Twenty-six to Thirty Years	9	2.9
Thirty-one to Thirty-five Years	1	.3
Thirty-six to Forty Years	3	1.0
Forty-one to Forty-five Years	3	1.0

(n=300)

established content areas of self-disclosure. The three nurse experts were selected for their expertise regarding self-disclosure within the nurse-patient relationship as documented by their research and publications. Instructions for the sort were developed (Appendix D). An index of equivalence was calculated for each item using the following equation.

$$\text{Index of Equivalence} = \frac{\text{Number of Agreements}}{\text{Number of Agreements + Disagreements}}$$

In order to establish stability of the categories and items contained within the categories, only items which maintained a coefficient of $\geq .66$ were retained as items for the instrument (Polit & Hungler, 1987). Of the original 247 items, 109 items with a coefficient of $\geq .66$ when sorted by the nurse experts in the area of patient self-disclosure were retained. From the 109 items with a coefficient of $\geq .66$ after the sort by experts, 31 items were removed due to replication and redundancy.

To insure complete coverage of the content of domain, the investigator reviewed the literature on self-disclosure again to identify any additional items of personal information not included in the items

identified for the instrument. From the review of literature, 2 additional items were developed and incorporated into the instrument. These additions included an item on who the patient received emotional support from and an item regarding their spiritual beliefs and needs.

Face validity, as a primitive type of content validity (Burns & Grove, 1987), was established by administering the instrument to three chronically ill patients. These patients were questioned about the readability and clarity of the directions and items. They were asked if the instrument, upon review, appeared to measure what it was intended to measure. They agreed that the instrument "appeared" to measure communication of ordinarily private personal information to nurses. Therefore, initial content validity, including face validity and expert validity, were obtained.

Research Question 2

Research Question 2 asked: What is the construct validity of the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients? Construct validity was analyzed by principal components factor analysis with varimax rotation with factor loading criteria set at $\geq .40$.

Factor Analysis. The initial unrestricted factor analysis yielded 13 factors which accounted for 72% of the variance. This solution was unable to be interpreted. Since the DSDQ was developed from three conceptual subscales, the data from the 80 items were then forced into a three factor solution. Analysis of the data indicated that 53.6% of the variance was explained by this factor solution. Table 4 presents the eigenvalues, percent variance explained, and cumulative percent variance explained by these three factors.

Table 4

Eigenvalues, Percent Variance Explained, and Cumulative Percent Variance Explained by Three Factors

Factor	Eigenvalue	% Variance Explained	Cumulative %
1	35.74343	44.7	44.7
2	4.73328	5.9	50.6
3	2.41474	3.0	53.6

(n=300)

Analysis of Subscales. Analysis of the subscales revealed that all but one item, item 41, loaded on the

three factors, with a factor loading $\geq$ .40. A total of seven items demonstrated factorial ambiguity by crossloading at $\geq \pm$ .40 on more than one factor.

Subscale 1, Health Care, consisted of items 1 through 30 and, if conceptually congruent, would all load on a single factor. Table 5 presents factor loadings for items on Subscale 1 where 25 items loaded on Factor 1 with the exception of 5 items, 1, 2, 4, 6, and 12, which cross loaded on Factor 2.

Subscale 2, Lifestyle, consisted of items 31 through 47 and, if conceptually congruent, would all load on one factor. Table 6 presents factor loadings for items on Subscale 2 where 14 items loaded on Factor 1 with the exception of item 41 which did not load on any factor. Item 39 cross loaded on Factor 2.

Subscale 3, Personal Beliefs, Thoughts, and Feelings, consisted of items 48 through 80 and, if conceptually congruent, would all load on one factor. Table 7 presents factor loadings for items on Subscale 3 where 31 items loaded on Factor 1 with the exception of item 71 which cross loaded on Factor 2.

Factor analysis, as a method to establish construct validity of the DSDQ, supported a unidimensional scale. The three factor solution showed insufficient support for the three theorized subscales on the DSDQ.

Table 5

Factor Loadings for Items on Subscale One - Healthcare

Item	Description	Factors 1	2	3
1	Amount of pain	.52	.43	
2	What brings pain on	.48	.44	
3	Who to turn to in pain	.54		
4	Comfort level	.53	.43	
5	When I feel worst	.64		
6	Side effects of meds	.42	.48	
7	Dealing with side effects	.60		
8	Read & understand meds	.70		
9	Amount of stress	.71		
10	Coping with limitations	.71		
11	Current state of health	.67		
12	Current symptoms	.65	.50	
13	Personal health history	.65		
14	What I know about illness	.66		
15	Length of time with illness	.76		
16	Disabilities	.70		
17	If I am chronically ill	.66		
18	Greatest problem	.72		
19	Various illness	.68		

Table 5 (continued)

Factor Loadings for Items on Subscale One - Healthcare

Item	Description	Factors 1	2	3
20	Illness and diet	.62		
21	Sticking to diet	.63		
22	Problems with senses	.48		
23	If I sleep well	.56		
24	Healthy in the past	.64		
25	Biggest health problem	.75		
26	Problem I deal with now	.77		
27	Treatments I've used	.68		
28	Concern about treatment	.57		
29	New goals I've set	.68		
30	Plans for future health	.76		

(n=300)

Table 6

Factor Loadings for Items on Subscale Two - Lifestyle

Item	Description	Factors 1	2	3
31	Who significant others are	.58		
32	Source of emotional support	.71		
33	Family means a lot to me	.72		
34	Reaction of significant other	.61		
35	Help at home	.64		
36	Ability to help at home	.60		
37	Ways I stay informed	.70		
38	Financial concerns	.65		
39	Financial decision making	.54	.49	
40	How supported financially	.53		
41	Occupation	.33		
42	What to do in spare time	.62		
43	Personal interests/hobbies	.67		
44	Personal lifestyle	.69		
45	Personal habits	.62		
46	That I'm a quiet person	.64		
47	That I like privacy	.65		

(n=300)

Table 7

Factor Loadings for Items on Subscale Three - Personal Beliefs, Thoughts, and Feelings

Item	Description	Factors 1	2	3
48	Independent individual	.70		
49	Optimistic person	.71		
50	Caring person	.73		
51	Don't like uncertainty	.71		
52	Upset when I can't do things	.71		
53	Who I share feelings with	.74		
54	Feelings about illness	.80		
55	Fighting discouragement	.73		
56	Can be cranky and demanding	.69		
57	Listened to & understood	.78		
58	Vulnerable to being hurt	.73		
59	Fears I have	.71		
60	Spiritual beliefs/needs	.65		
61	Embarrassment about illness	.53		
62	Positive or negative outcome	.68		
63	Significance of diagnosis	.66		
64	What has helped the most	.73		

Table 7 (cont.)

Factor Loadings for Items on Subscale Three - Personal Beliefs, Thoughts, and Feelings

Item	Description	Factors 1	2	3
65	Affect of illness	.81		
66	Any positive outcome	.68		
67	Worst result of illness	.79		
68	What I see as my future	.62		
69	Incomplete life goals	.60		
70	Living wills/extreme measures	.60		
71	Desire to live or die	.60	-.42	
72	Personal strengths	.73		
73	Perception of worth	.75		
74	Most important needs	.73		
75	When I feel the best	.72		
76	Ways nurse best cares for me	.75		
77	Want good communication	.78		
78	Want total honesty	.76		
79	Want time to communicate	.70		
80	I like cheerful nurses	.70		

(n=300)

Research Question 3

Research Question 3 asked: What is the internal consistency reliability for the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients? Research question 3 was answered by calculating Cronbach's alpha for each subscale and calculating a reliability coefficient for the overall instrument. In the case of instruments designed with subscales, such as the DSDQ, alpha should be determined for each scale rather than only for the overall instrument (Waltz, Strickland, & Lenz, 1984).

Reliability Analysis. Internal consistency reliability, using Cronbach's alpha, was computed for the total DSDQ and for the three subscales and are presented in Table 8. Cronbach's alpha for the total DSDQ was .9836, indicating a high internal consistency reliability. In addition, Cronbach's coefficient alphas were computed for the three subscales. Subscale 1, Healthcare, consisted of items 1 through 30 and had an alpha of .9632. Subscale 2, Lifestyle, consisted of items 31 through 47 and had an alpha of .9236. Subscale 3, Personal Thoughts, Feelings, and Beliefs, consisted of items 48 through 80, and had an alpha of .9724.

Table 8

Internal Consistency Reliability of the DSDQ

	Cronbach's Alpha
Total DSDQ	.9836
Subscale 1	.9632
Subscale 2	.9236
Subscale 3	.9724

(n=300)

Corrected Item Total Score Correlations. Corrected item total score correlations for the three subscales and alpha-if-item deleted were calculated (Appendix H). Correlations for Subscale 1 ranged from .4998 to .7893, Subscale 2 ranged from .3035 to .7450, and Subscale 3 ranged from .5455 to .8168. All items on Subscales 1 and 3 contributed to the alpha values, however, item 41 on Subscale 2 did not contribute to alpha. Therefore, the reliability analysis provided support for the internal consistency reliability of the DSDQ as a measure of self-disclosure.

Additional Analysis

Total DSDQ Scores

Data analysis of the total score possible on the DSDQ was completed. The total score on the DSDQ could

range from 80 to 400. High scores indicated high levels of self-disclosure and low scores indicated low levels of self-disclosure. Subject's scores on the DSDQ ranged from 80 to 347. Appendix I presents subject total scores on the DSDQ. The mean score was 127.98, the median was 112, and the mode was 80 indicating that chronically ill patients had low levels of self-disclosure with nurses.

Although the purpose of this methodological study was to develop and test the psychometric properties of the DSDQ, additional analysis was conducted on the total DSDQ score. The mean DSDQ score was calculated for a variety of subcategories of various demographic characteristics to examine possible trends that might focus the direction of future research. Table 9 presents mean DSDQ scores for a variety of demographic characteristics. Pearson product moment correlations were computed between mean DSDQ scores, age and educational level. There was no significant relationship between DSDQ score and age ($r = -.0433$) or between DSDQ score and educational level ($r = -.1080$). T-tests for differences in the mean DSDQ score by gender and setting are presented in Table 10. There was no significant difference in the mean DSDQ score between males and females. There was a significant

Table 9

Mean DSDQ Scores on Selected Demographic Characteristics

Demographic Characteristic	Mean DSDQ Score	Cases
Gender		
Male	128.36	85
Female	127.83	215
Environmental Setting		
Inpatient	143.96	150
Outpatient	112.00	150
Age		
Younger than 55 years	141.69	54
55 to 65 years old	124.22	68
Older than 65 years	125.26	178
Educational Level		
Less than 12 years	133.64	54
Completed 12 years	130.04	130
Greater than 12 years	123.03	116
Medical Diagnosis		
Cardiovascular Disease	123.73	122
Musculoskeletal Disorders	116.31	52
Endocrine Disorders	134.40	42
Respiratory Disorders	151.25	28
Gastrointestional Disorders	140.93	27
Reproductive Disorders	116.67	12
Immunologic Disease	145.14	12
Renal Disease	124.50	4
Other Diseases or Disorders	108.67	6

difference in the mean DSDQ score between inpatients and outpatients ($t = -5.67$, $p < .0001$). Additional research would be essential to investigate the possible effect that personal characteristics might have upon self-disclosure.

Table 10

T-tests for Differences in Mean DSDQ Score by Gender and Environmental Setting

Demographic Characteristic	Mean Score	Standard Deviation	t_{298}
Gender			
Male	128.36	52.13	.08
Female	127.83	51.07	
Setting			
Inpatient	143.96	36.75	-5.67*
Outpatient	112.00	58.42	

*$p<.001$

Item Analysis

Item analysis was conducted on the DSDQ. Analysis included assessment of the frequencies, mean, standard deviation, kertosis, skewness, and range of individual items (Appendix J). The DSDQ was scaled on a 5-point

rating scale, where 1 indicated the subject told the nurse nothing about this aspect of themself, 2 indicated the subject had talked some about this item to the nurse, 3 indicated the subject had talked about the item a fair amount to the nurse, 4 indicated the subject had talked quite a bit about the item to the nurse, and 5 indicated the subject had talked to the nurse a great deal about the item. Item means for the DSDQ ranged from 1.160 to 2.220 (SD $\pm$ .627 to 1.445). In all of the 80 items (100%), subjects selected the full range of options.

Spearman-Brown Formula

Estimation of the reliability of a shortened version of the DSDQ was completed using the Spearman-Brown formula. The reliability of the shortened version was estimated with the following formula (Waltz, Strickland, & Lenz, 1984, 156).

$$r1/2 = \frac{1/2\ r}{1 + (1/2 - 1)r}$$

Where r is the original reliability (.98), 1/2 is the length of the shortened test (40 items), and r1/2 is the estimated reliability of the shortened test. Using this formula if the DSDQ was shortened to half its original length, or 40 items, the estimated reliability would be .96.

Summary

Chapter IV presented the findings from this methodological study. The data indicted that reliability and validity was initially established for the DSDQ. Some items, however, would be deleted as indicated from this data analysis to revise the DSDQ.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, NURSING IMPLICATIONS AND RECOMMENDATIONS

Summary

The purpose of this methodological study was to develop and test the psychometric properties of the DeDonder Self-Disclosure Questionnaire. DeDonder's conceptual framework of patient self-disclosure was the organizing framework (Figure 1). A basic assumption for this framework is that within the discipline of nursing, the nurse-patient relationship is an interactive process. This interactive process exists as an open system and receives input from the external environment. Within the nurse-patient interactive process, an impetus exists that will facilitate the process of patient self-disclosure. As the process continues, the patient conducts a risk assessment as to the benefits versus the risks of sharing personal information. If the patient believes that the risk is high and the benefits low from sharing the personal information, then the decision will be negative and result in no self-disclosure. If the patient believes that the risk is low and the benefits high from sharing the personal information, then the decision will be positive and result in self-disclosure.

Self-disclosure, regardless of the outcome, has an effect on the nurse-patient interactive process.

Using DeDonder's conceptual framework of patient self-disclosure, a convenience sample (n=300) of chronically ill outpatients from a private internal medicine clinic and chronically ill inpatients hospitalized at a 178 bed rural hospital were studied. All data were collected in a city of approximately 29,000 that provides health care services to over 60,000 people in east central Kansas. Data were collected using a demographic questionnaire and the DeDonder Self-Disclosure Questionnaire (DSDQ).

Content validity, both expert and face, were obtained for the DSDQ prior to data collection. Construct validity for the DSDQ was analyzed by principal components factor analysis with varimax rotation and supported a unidimensional scale. Cronbach's alpha for the total DSDQ was .9836, indicating a high internal consistency reliability.

Discussion

Research Question 1 asked: What is the content validity for the DeDonder Self-Disclosure Questionnaire (DSDQ) when administered to chronically ill patients? The DeDonder Self-Disclosure Questionnaire contained 80 questions. Items were generated for the DSDQ from a

qualitative study (DeDonder, 1990) in order to provide adequate coverage of the content domain of self-disclosure within the nurse-patient relationship. Data from that qualitative study were submitted to three nurse experts in the area of patient self-disclosure to analyze the items to determine whether they represented adequately the content domain of patient self-disclosure. An index of equivalence was calculated for each item to establish stability and only items with a coefficient of $\geq .66$ were retained as items for the instrument. Face validity was established by administering the instrument to three chronically ill patients and making appropriate revisions. Initial content validity, including face validity and expert validity, was established. A prespecified plan, as outlined in Chapter III, was followed to facilitate the inclusion of content validity in the instrument as it was developed, consistent with recommendations from Waltz & Bausell (1983), Burns & Grove (1987), and Polit & Hungler (1987).

Research Question 2 asked: What is the construct validity of the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients? Construct validity was analyzed by principal components

factor analysis with varimax rotation and factor loading criteria set at $\geq .40$. The initial unrestricted factor analysis yielded 13 factors which accounted for 72% of the variance. This solution was unable to be interpreted. Since the DSDQ was developed from three theorized subscales, the data from the 80 items were forced into a three factor solution. Analysis of the data indicated that 53.6% of the variance was explained by this factor solution. Factor 1 accounted for 44.7% of the variance with 79 of the 80 items loading on this single factor. Factor analysis, as a method to establish construct validity of the DSDQ, supported a unidimensional scale. The three factor solution showed insufficient support for the three theorized subscales on the DSDQ.

These findings might be attributed to several factors. In the development of the DSDQ, the investigator established categories of content area of self-disclosure: health care, lifestyle, and personal thoughts, feelings, and beliefs. However, it is apparent that while these categories identified different content areas of self-disclosure and were established as subscales for the DSDQ, the study did not support them as underlying dimensions of the construct self-disclosure. Findings supported the

instrument as unidimensional. Chelune (1979) identified that self-disclosure could be studied from both a unidimensional and multidimensional approach. It would appear that the DSDQ is perhaps a valid measure of one parameter of self-disclosure identified by Chelune (1979): amount or breadth of personal information disclosed.

It is apparent from these findings that additional systematic exploration, testing and evaluation of DeDonder's conceptual framework, including the DSDQ, must be completed. Replication of research that tests a promising theory is a strategic aspect in theory development. Therefore, findings from the factor analysis, as a method to establish construct validity of the DSDQ, support the need for continued development of the DSDQ as well as theory development regarding self-disclosure within the nurse-patient relationship.

Research Question 3 asked: What was the internal consistency reliability for the DeDonder Self-Disclosure Questionnaire when administered to chronically ill patients? Cronbach's alpha for the total DeDonder Self-Disclosure Questionnaire was .9836, indicating a high internal consistency reliability. In addition, Cronbach's coefficient alphas were computed for the three subscales and ranged from .9236 to

.9724. The reliability analysis provided support for the internal consistency reliability of the DSDQ. These high reliability coefficients were an important indictor of the construct validity of the DSDQ.

Additional analysis, including the interpretation of the total DSDQ scores, examination of the item analysis of the DSDQ, and completion of the Spearman-Brown Formula, was conducted. The overall level of self-disclosure on the DSDQ could range from a score of 80, meaning the subject had told the nurse nothing about any of the 80 items on the instrument, to a score of 400, meaning the subject had talked a great deal about all the items on the instrument to the nurse.

Subject's scores on the DSDQ ranged from 80 to 347. The mean score for the entire sample was 127.98, the median was 112 and the mode was 80 indicating that overall, chronically ill patients self-disclosed to nurses in a limited nature. This finding was consistent with a study conducted by Johnson (1979). That study examined self-disclosure and anxiety in nurses and patients in a clinical setting and results indicated a tendency for patients to disclose very little to nurses. In 1980, Johnson conducted another study to examine the level of reciprocal disclosure

between nurses and patients in a clinical hospital setting. The results of the study indicated that there were very low levels of self-disclosure between nurse and patient subjects across all units. DeDonder (1989) conducted a methodological study on the Jourard Self-Disclosure Questionnaire (JSDQ) and concluded that chronically ill patients had limited self-disclosure with nurses as measured by the JSDQ.

These findings, regarding low levels of patient self-disclosure, might be attributed to several factors or concepts delineated within the conceptual framework. First, a basic assumption identified for DeDonder's conceptual framework of patient self-disclosure is that in the discipline of nursing the nurse-patient relationship is an interactive process. This interactive process exists as an open system and receives input from the external environment. Therefore, one factor that might account for the limited amount of self-disclosure is the environment where patients received care and completed the DSDQ. Subjects within this study who were inpatients had a higher mean DSDQ score than subjects who were outpatients. Environmental factors that might have affected self-disclosure include the following: environmental noise, lack of privacy, uncomfortable

accommodations, presence of other people, or expectation of the presence of other people. In addition, the setting might be a variable as it relates to geographic region or size of community. For example a rural midwest setting may affect self-disclosure differently than an urban west coast setting.

Second, in DeDonder's conceptual framework, the concept of personal characteristics of both the patient and the nurse are involved in the process of risk assessment. Therefore, other factors that might account for the limited amount of self-disclosure were the personal characteristics of the patients completing the DSDQ. Personal characteristics of the nurses who cared for these patients may also impact the amount of self-disclosure. The investigator identified a variety of personal characteristics of patients and nurses that might have affected self-disclosure. They included the following: (a) emotional factors such as anger, anxiety, excitement, resentment, antagonism, grief, or overall temperament; (b) physical factors such as tiredness, acuity of illness, medical diagnosis, pain, gender, and age; (c) intellectual factors such as educational level, language use, or knowledge levels; and (d) social factors such as differences in culture, language, accent, socioeconomic class, race, ethnic

groups, and professional status. Therefore, the environment, as well as personal characteristics of both patients and nurses, may have significant effects on self-disclosure as presented in DeDonder's conceptual framework of patient self-disclosure and were not controlled for during this study.

Item analysis of the DeDonder Self-Disclosure Questionnaire was completed. Item means for the DSDQ ranged from 1.160 to 2.220 (SD $\pm$ .627 to 1.445). In all of the 80 items (100%), subjects selected the full range of options. Corrected item total score correlations were calculated for each item. Correlations ranged from .3035 to .7450 with the majority of items (87%) having strong positive correlations above .60. The results of the item analysis lend additional support to the reliability and validity of the DSDQ.

Estimation of the reliability of a shortened version of the DSDQ was completed using the Spearman-Brown formula. Using this formula the DSDQ could be shortened to half its original length, or 40 items, with an estimated reliability of .96. This finding would substantially reduce the subjects' response burden and would be beneficial when working with patients in a health care setting.

Limitations

The results of this study must be considered in view of several methodological limitations. Random sampling methods were not employed in this study. Convenience sampling was used to provide an accessible sample and because of the limitations imposed by the sampling technique, all conclusions were made related to the studied subjects only. Since the DSDQ was designed specifically for chronically ill patients, its applicability to other patients is limited. It is anticipated that this study could be extended to other settings, with modification to the DSDQ as necessary, to validate or repudiate the findings.

Conclusions

This study was designed as a methodological study to develop and test the psychometric properties of the DSDQ. Methodological studies are designed to increase knowledge with respect to the methods used in performing scientific research rather than contributing to the substantive area. Therefore, the primary conclusion from this study is that the DeDonder Self-Disclosure Questionnaire (DSDQ) had high reliability as well as content and construct validity with chronically ill patients. It is acknowledged that the establishment of reliability and validity is an

ongoing process and additional psychometric testing, using a variety of subjects and settings, would be essential.

Although a clear limitation of this study was the small sample size and the limited setting, overall, it was substantiated that chronically ill patients self-disclose minimally to nurses. Both of these conclusions have implications for nurses, as well as implications for revision of DeDonder's conceptual framework of patient self-disclosure.

Implications for Nursing

This methodological study resulted in the development and psychometric testing of an instrument to measure self-disclosure (DSDQ). The DSDQ, with additional refinement and psychometric testing on a wide variety of subjects using randomization, could provide information used to foster or nurture the nurse-patient relationship. If self-disclosure could be measured accurately with patients, nursing could examine factors which facilitate or inhibit self-disclosure between nurses and patients in the clinical setting. Furthermore, nursing could examine the therapeutic and/or social effects of clinician self-disclosure to patients. Findings from such studies could impact nursing practice as well as

nursing education.

Additional implications follow that must be reviewed in light of the small convenience sample for this study and relate to the finding that overall patients had limited self-disclosure with nurses. Nursing must continue to educate society about the unique nature of the discipline, including the advance level of education and the resulting expertise of the professional nurse. Subjects verbally reported that they did not self-disclose to nurses because they did not believe nurses would care "about all that." Various subjects would complete the questionnaire and state they had "no idea they could talk to the nurse about all the things" on the questionnaire. There are possible implications for nurses regarding time management and prioritizing care. One subject stated "if nurses would ask about all these questions, I'd talk about them, however, I'm not going to lay my problems on anybody". In caring for patients, nurses' interactive styles may be too structured and task-oriented to allow sufficient patient self-disclosure. Subjects reported that nurses tended to ask most about pain and comfort level and so they tended to self-disclose more regarding those areas.

Communication is an essential part of nursing

intervention and often serves as an intervention itself. A major nursing implication from the study is the need for continued nursing research regarding communication between the nurse and patient and the consequences of this communication for the patient.

Revision of Conceptual Framework

Abstract concepts, such as self-disclosure, can be operationalized and measured in an almost infinite variety of ways with varying degrees of success (Zeller & Carmines, 1980). This methodological study examined only one concept within DeDonder's conceptual framework: self-disclosure. The study did not attempt to measure other concepts or examine relationships within the framework. Although the discussion section in this chapter elaborated on other concepts within the framework (environment and personal characteristics) the purpose of this methodological study was to develop and test the psychometric properties of the DSDQ. Results of the study support the need for revision of DeDonder's conceptual framework of patient self-disclosure.

First, findings related to content validity of the DSDQ support that within the nurse-patient relationship patients have three content areas that they self-disclose about: health care, lifestyle, and

personal thoughts, feelings, and beliefs. However, when determining the construct validity of the DSDQ, it was apparent that while these categories identified different content areas of self-disclosure they were not underlying dimensions of the construct self-disclosure. Factor analysis, as a method of establishing construct validity, supported the DSDQ as a unidimensional instrument. The one dimension of self-disclosure that the DSDQ appeared to measure was amount of personal information shared. Therefore, a revised conceptual framework would reflect that self-disclosure has a variety of underlying dimensions, including amount of personal information shared. It would be hypothesized that the other underlying dimensions might be, as suggested by Chelune (1979), intimacy of the personal information disclosed; duration or rate of disclosure; affective manner when disclosing; and self-disclosure flexibility or the ability of an individual to modulate their disclosure level according to the interpersonal and situational demands of various social situations. Continued empirical testing of these hypothesized dimensions of self-disclosure would need to be completed.

Findings regarding the limited amount of patient self-disclosure in this study continue to suggest that

the process of risk assessment is an integral component within the conceptual framework of patient self-disclosure. For this study, risk assessment was defined as "the process of identifying risk factors that cause a feeling of doubt or a feeling of vulnerability" (p. 7). Identified risk factors that might impact on the patient's process of risk assessment included the personal characteristics of patients and nurses and other unknown elements, for example, environment. However, there was no attempt to measure those concepts within this methodological study. Thus, future theory development would support measuring these concepts to further test the conceptual framework.

Revision of DeDonder's conceptual framework of patient self-disclosure, based on this study, would include the alteration of several conceptual definitions. Self-disclosure was originally defined for this study as "the voluntary communication of ordinarily private personal information to one or more individuals. This information could not be learned from any other source" (p. 7). The following statement would be added to this definition to facilitate clarification; self-disclosure must originate from the self, not other individuals or other written sources.

In addition, the definition of self-disclosure would be expanded to reflect five underlying dimensions of the construct: amount, intimacy, duration or rate, affect, and flexibility. The DSDQ, as a measure of personal information shared, might be utilized to measure one dimension of self-disclosure after revision and additional psychometric testing.

Reciprocity was another concept defined within DeDonder's conceptual framework of patient self-disclosure that requires revision. According to Jourard (1971), reciprocity occurs with self-disclosure. Jourard maintained that a person's self-disclosure must be responded to by the other person involved in the situation. During the process of theory derivation (DeDonder, 1986), the concept of reciprocity was altered to reflect a nursing perspective. However, after implementing this study, it was clear that the derived definition for this concept, was confusing and not consistent with the usual definition of the term. In the future, after additional concept analysis, this concept might be renamed as "acceptance". It is anticipated that the concept of acceptance may imply acknowledgment of self-disclosure and may signal acceptance verbally or nonverbally, for example nodding the head.

Communication was an additional concept defined within DeDonder's conceptual framework of patient self-disclosure as discussed in Chapter I. It is acknowledged that self-disclosure is only one component of the multidimensional concept of communication. Additional analysis of the concept communication and evaluation of the effect self-disclosure has as a component would be warranted to facilitate clarification of the conceptual framework.

Assumptions for DeDonder's conceptual framework of patient self-disclosure were identified in Chapter I. However, additional assumptions were identified during the process of this methodological study. It is an additional assumption of the investigator that patients could have effective communication with nurses without self-disclosure occurring. In addition, it is an assumption that patients could be satisfied with the relationship they have with nurses without self-disclosing and in addition, could be satisfied with the care they receive.

The need for revision of DeDonder's conceptual framework of patient self-disclosure was an implication from this methodological study. This implication will be addressed in more detail in recommendations for future research.

Recommendations for Future Research

The results of this methodological study suggest that further research would be beneficial in order to adequately investigate the construct of self-disclosure and DeDonder's conceptual framework of patient self-disclosure. Four recommendations for future research, based on the results of this study, follow.

First, future studies need to be conducted to continue the systematic exploration, testing and evaluation of DeDonder's conceptual framework of patient self-disclosure. This methodological study was an initial attempt to measure one concept within the conceptual framework: self-disclosure. The results support that the DSDQ measured one dimension of self-disclosure: amount of personal information. The next step, regarding the conceptual framework, would be to conduct another concept analysis of self-disclosure and reexamine the possible underlying dimensions. Perhaps it would then be appropriate to conduct analyses on the other concepts identified in DeDonder's conceptual framework of patient self-disclosure. After the completion of these concept analyses, revision of the conceptual framework would continue. Studies could then be designed to conduct additional theory testing. For example, research could be conducted to investigate

and perhaps validate other hypothesized dimensions of self-disclosure (intimacy, duration or rate, affect, and flexibility). Depending on the concept analyses and theory analysis, additional studies could be conducted to examine other variables within the framework, such as how the environment affects the amount of self-disclosure.

A study might be designed to examine the amount of self-disclosure that occurs within the environment of a home health setting. Additional studies within the hospital environment could be designed to answer a variety of questions. For example, what are the implications of timing under the current conditions of brief hospitalization and short-term relationships and does rural versus urban setting affect self-disclosure?

Studies could also be conducted to examine how personal characteristics of patients and nurses affect patient self-disclosure and how this concept fits within the conceptual framework. For example, how self-disclosure is affected by age, race, gender, temperament, medical diagnosis and educational level of both patients and nurses. Studies could be designed with purposive samples that might contribute clarification to the concept of personal characteristics thereby clarifying the conceptual

framework.

DeDonder's conceptual framework of patient self-disclosure currently limits self-disclosure to written or spoken communication. In the future, studies might be designed to examine the effect of non-verbal communication with self-disclosure. This type of study would add clarification to the framework including the definition of self-disclosure and the underlying dimensions (for example, affect).

The second recommendation for future study is the revision of the DeDonder Self-Disclosure Questionnaire. The present study provided data that could be analyzed to revise the DSDQ. After revising the DSDQ, the need for replication of this study, using a larger, random sample to evaluate the psychometric properties, would be essential. Since the DSDQ was developed from a qualitative study that elicited both nurses' and patients' suggestions for self-disclosure items (DeDonder, 1990), a qualitative study should be conducted again that only elicits personal information from patients as potential items for the revised instrument. After psychometric properties are established for the revised DSDQ, then studies could be conducted with a variety of patients in various health care settings to examine and quantify levels of

self-disclosure.

The third recommendation for future study is revision of the demographic questionnaire prior to its use with a chronic population. Investigation of what the term "chronically ill" means to patients would be beneficial. It was apparent that many patients with chronic illnesses did not perceive it as chronic or as illness or else they failed to accept the diagnosis of chronic illness. One patient stated she had asthma for 10 years and in parenthesis put "(not chronic)". Another individual stated "none" as to chronic illness, yet the nurse stated he had documented osteoarthritis, diverticulitis, and hypertension of longstanding duration. Another individual stated his medical diagnosis was "breathing problems", crossed out chronic and put "none" in the area regarding length of chronic illness. When asked in person how long he'd had breathing problems (actually COPD) he said at least 10 years.

The final recommendation for further research is for additional methodological studies to be conducted to examine various methods of data collection that record the actual self-disclosure of the patient and nurse, such as audio- and videotape recordings. The goal would be to determine congruence among self-report

data, direct observations, and perhaps even physiological measures of outcome of self-disclosure.

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Appendix A

Access to Population

12th and Chestnut • Emporia, Kansas 66801 • 316-343-6800

September 27, 1990

TO WHOM IT MAY CONCERN:

I have been informed by Jean DeDonder, R.N., M.N., a doctoral nursing candidate at the University of Kansas that the purpose of this research study is to gather information about communication between patients and nurses. This information is for use by Jean DeDonder in completing her doctoral dissertation under the direction of a faculty member, Sharon Summers, R.N., Ph.D.

I understand that inpatients at Newman Memorial County Hospital will be asked to complete the Dedonder Self Disclosure Questionnaire. I am aware that the patients' responses will remain confidential and that names of participants, location of participants, or other known history of participants will not be identified in reporting this study.

I understand that patients' participation will not involve any physical or psychological risk, but I understand that the University of Kansas Medical Center College of Health Sciences and Hospital does not maintain a policy of medical treatment or compensation for physical injuries incurred as a result of participating in biomedical or behavioral research. I understand that patients may withdraw at any time from the study without prejudice. Patients will be informed that their health care will not be jeopardized by withdrawing from the study.

This study has been explained to me, and I am willing for patients to participate as long as the individual patients give their consent in writing to such participation.

In addition, this study was presented to the Newman Hospital Medical Staff Executive Committee and approved at their meeting on September 27, 1990.

[redacted]

Thomas H. McCall
Administrator

THM:sc

Physician Consent Form

I give my permission for Jean DeDonder, R.N., Merle Bolz, R.N., or Sarah Tidwell, R.N. to contact my patients at the Internal Medicine Clinic, explain the study "A Methodological Study of Self-Disclosure in Chronically Ill Patient", and ask the patients to participate in the study. I understand that the patients will be contacted while they wait for their blood work to be completed and that their participating in this survey will in no way interfere in the operation of the clinic. I understand that if a patient is unable to complete the questionnaire before their lab work is completed they may remain at the clinic until they are finished or will be given a stamped, addressed envelope and asked to finish the survey at their convenience and mail it back to the investigators in the envelope provided.

I understand that patients who are asked to participate will be assured that confidentiality will be maintained and no names of the subjects will be identified in reporting the results of this study. I understand that the patients may withdraw from the study at any time by requesting to do so or by not completing the questionnaire.

I understand that this study will in no way minimize the quality or quantity of medical care the patient will receive, nor will it interfere with overall patient care.

[redacted]

Physician Signature

10/12/90

Date

James A. Barnett, M.D.
Internal Medicine Associates
[redacted]
Emporia, Kansas 66801

Physician Consent Form

I give my permission for Jean DeDonder, R.N., Merle Bolz, R.N., or Sarah Tidwell, R.N. to contact my patients at the Internal Medicine Clinic, explain the study "A Methodological Study of Self-Disclosure in Chronically Ill Patient", and ask the patients to participate in the study. I understand that the patients will be contacted while they wait for their blood work to be completed and that their participating in this survey will in no way interfere in the operation of the clinic. I understand that if a patient is unable to complete the questionnaire before their lab work is completed they may remain at the clinic until they are finished or will be given a stamped, addressed envelope and asked to finish the survey at their convenience and mail it back to the investigators in the envelope provided.

I understand that patients who are asked to participate will be assured that confidentiality will be maintained and no names of the subjects will be identified in reporting the results of this study. I understand that the patients may withdraw from the study at any time by requesting to do so or by not completing the questionnaire.

I understand that this study will in no way minimize the quality or quantity of medical care the patient will receive, nor will it interfere with overall patient care.

[redacted]

Physician Signature

10/15/90

Date

W. Brock Kretsinger, D.O.
Internal Medicine Associates
[redacted]
Emporia, Kansas 66801

Physician Consent Form

I give my permission for Jean DeDonder, R.N., Merle Bolz, R.N., or Sarah Tidwell, R.N. to contact my patients at the Internal Medicine Clinic, explain the study "A Methodological Study of Self-Disclosure in Chronically Ill Patient", and ask the patients to participate in the study. I understand that the patients will be contacted while they wait for their blood work to be completed and that their participating in this survey will in no way interfere in the operation of the clinic. I understand that if a patient is unable to complete the questionnaire before their lab work is completed they may remain at the clinic until they are finished or will be given a stamped, addressed envelope and asked to finish the survey at their convenience and mail it back to the investigators in the envelope provided.

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I understand that this study will in no way minimize the quality or quantity of medical care the patient will receive, nor will it interfere with overall patient care.

[redacted]

Physician Signature

10/15-/5.

Date

Gould C. Garcia, M.D.
Internal Medicine Associates
[redacted]
Emporia, Kansas 66801

Physician Consent Form

I give my permission for Jean DeDonder, R.N., Merle Bolz, R.N., or Sarah Tidwell, R.N. to contact my patients at the Internal Medicine Clinic, explain the study "A Methodological Study of Self-Disclosure in Chronically Ill Patient", and ask the patients to participate in the study. I understand that the patients will be contacted while they wait for their blood work to be completed and that their participating in this survey will in no way interfere in the operation of the clinic. I understand that if a patient is unable to complete the questionnaire before their lab work is completed they may remain at the clinic until they are finished or will be given a stamped, addressed envelope and asked to finish the survey at their convenience and mail it back to the investigators in the envelope provided.

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I understand that this study will in no way minimize the quality or quantity of medical care the patient will receive, nor will it interfere with overall patient care.

[redacted]

Physician Signature

10-15-90

Date

James Geitz, M.D.
Internal Medicine Associates
[redacted]
Emporia, Kansas 66801

Appendix B

Demographic Questionnaire

Demographic Questionnaire

PLEASE FILL IN THE BLANKS OR CIRCLE THE CORRECT ANSWER:

1. WHAT IS YOUR PRESENT MARITAL STATUS?

Married Widowed Divorced

Separated Never Married

2. WHAT IS YOUR SEX?

Male Female

3. WHAT IS THE HIGHEST GRADE OR EDUCATIONAL LEVEL YOU FINISHED?

Grade School	High School	College	Other
01	9	13	21
02	10	14	
03	11	15	
04	12	16	
05		17	
06		18	
07		19	
08		20+	

4. WHAT IS YOUR MEDICAL DIAGNOSIS OR CHRONIC ILLNESS?

_____

5. HOW LONG HAVE YOU HAD YOUR CHRONIC ILLNESS?

_____

6. PLEASE CIRCLE YOUR RACE.

caucasian black hispanic

asian descent other

7. WHAT IS THE MONTH, DAY, AND YEAR OF YOUR BIRTH?

MONTH DAY YEAR

8. PLEASE CIRCLE YOUR EMPLOYMENT STATUS.

Employed full-time Employed part-time

Unemployed Retired Student

Disabled Homemaker Other

Appendix C

Response Items from Object Content Test

RESPONSE ITEMS UNDER CATEGORY OF HEALTH CARE

What is the patient's problem

Signs/symptoms

Baseline data--height, weight, lab values

What my disease actually is and how it affects my diet

Current list of medications patient is on

Current symptoms, changes in condition

Past treatments used--successful

Able to read and understand how to use medication

Meds taken vs. meds ordered

Became "disabled" in 1968

Length of illness--stage of illness

Patient's personal health history

Length of illness

When was the problem diagnosed

Assessment of systems, GI, circulatory, etc.

Disabilities now present as a result of chronic illness

After coming out of an insulin reaction, I always have chills, headache and nausea, usually they go away within 2 hours.

The only problem I do have is my blood sugar dropping during the night and I don't wake up once in a while.

I faint easily when blood is taken.

My ability to reach articles I need.

Duration/changes of signs and symptoms

How much pain I'm having.

My comfort in bed.

Fluid restrictions?

Mobility--how to turn or handle with least pain

What makes you most comfortable

Hearing problems

Physical limitations

Is there pain involved? What brings it on--what makes it go away?

My condition of my illness and what results might be expected

Eye problems

How long I've been dealing with my problem

Vital signs

Medications currently taking including over the counter

Any surgery performed

The best way for me to handle side effects.

What specific problem presents right now

Compliance with meds and diet

Degree of compliance with previous instructions

Physical changes

Medical diagnosis

Have they seen specialist in the field of their illness

Comfort level--is it tolerable?

Blood pressure

Cholesterol count

Blood sugar

Current symptoms

What is each medicine suppose to do

Knowledge of illness

I enjoy having my back rubbed

Have a strong gag reflex

Any hospitalizations or surgeries

Other medication being taken at this time

Illnesses I've had

Is patient compliant with medical regime

If I had a recent injury and was still suffering in any way.

Nutrition recommendations--how patient views them, compliance, understanding of recommendations, and success with them.

Previous illness or problems with surgery.

Present condition if any.

How long since you had a good checkup

Any problems with vision, hearing, smelling, taste, etc.

Medical interventions now being used.

Any problems with gait

Drug allergies

Condition of general health

Prosthesis--glasses, canes, walkers, crutches, braces

Medication taken for illness

Does patient have knowledge of medications

History of illness

How effective has that help they've been receiving been

That I have lots of side effects from medication

When do you feel your worst

What are patients expectations

Any sexual frustrations since becoming ill

Their mental status

Stress seems to cause me to have low blood sugar during the night even though I have eaten.

I've always been healthy in the past.

Employment history

Who does the client turn to when in pain?

Marital status and effect of illness on sexuality

RESPONSE ITEMS UNDER CATEGORY OF LIFESTYLE

Family health history

Are they concerned re: financial matters

What is the family's history of handling life crisis

Communication with social system--TV, phone, newspaper

How do you think your illness has affected your family.

How my husband feels about this surgery.

That I was married for 45 years.

Any problems with memory

Daily routine

Who would the patient be willing to receive help from

How often bowels work--needs laxative

How to contact family

Family members

Type of housing (or shelter)

Health insurance/coverage

Who is responsible for paying bills and making financial decisions.

Extended family and involvement

Distance from extended family

What my personal interests and hobbies are

Available help at home--is it adequate

Name

Past life style

Socioeconomic status/insurance

Dentures

Financial considerations

My family means a lot to me

History of family illness

Eating habits (likes and dislikes)

Relationship with significant other--sexual expression

Any aides used in the bathroom

What help have they been receiving

My family background

Who helps me at home

If the nurse knew if I was a quiet person.

How is your family coping.

Are you responsible for care of others.

Home environment--living arrangements

Appetite

Usual time to go to bed.

Whether I wear depends or not.

Living arrangements.

Employment opportunities? (Desire by patient)

Significant others

Type of diet they follow.

What support systems are available to this patient (as the patient views it.

Education and ability to read.

Any people outside of household who are able to provide help.

Does patient have or need assistance at home.

Number of people in the household.

Transportation

How has your illness affected your personal finances.

Are people in household able to provide some help to client.

Education

My age

What they are use to doing for themselves.

What self-care practices patient uses.

Diversions

Profession

Have you been sleeping well

Family involvement

Need of social services to assist with finances

How supported financially

Ability to move about in daily duties each day.

What activities are difficult.

Is your family able to assist you with activities of daily living, finances, emotional support.

My occupation.

What resources (community) have you and your family utilized.

Ability to carry out activities of daily living.

Personal habits, i.e. smokes, diet, activities, exercise.

Usual time to awaken.

Hobbies/what to do in spare time.

Need help with shower and shampoo.

Are they getting support from family and friends.

Want a very comfortable chair.

Will the family unit tolerate outside help in the home.

When and what can I eat.

Hobbies or outside the home activities/interests.

What other resources are needed for you or your family.

Person to call in case of emergency.

Aides used to ambulate.

Is this patient physically able to care for himself.

Safety concerns--burns, falls, etc.

Like my own toilet tissue (have hemorrhoids)

How mobile the patient is.

That I need to go to the bathroom frequently.

Tobacco, alcohol, and drug use.

If the nurse knew my favorite side of the bed.

I enjoy a bath and clean bed.

Home remedies/health practices.

RESPONSE ITEMS UNDER CATEGORY OF PERSONAL BELIEFS, FEELINGS AND THOUGHTS

When can I get out of here.

Does the patient consider himself chronically ill.

When will the Doctor be in.

Will this thing return.

What immediate concerns are the patient needing addressed.

How they have been dealing with their limitations.

Tell me if something is wrong and why.

What short term goals does the patient have.

That I see this surgery with more positive outcomes than negative.

What doctor I prefer if my doctor is unavailable

What does the individual know about diagnosis

Wondering whether or not surgery was the right thing to do.

How can the nurse best help as stated by the client.

What my plans are for next few weeks during recovery.

What has helped you the most through it all.

How does the client believe that the diagnosis has affected him the most.

Has there been anything positive happen to you or your family because of your illness.

Am I an alai with the family or the patient

Am used to doing anything I wanted, and now am restricted.

I am usually an independent and fairly determined individual.

I am usually optimistic

What changes have you had to make in your plans for the future.

I do get upset with myself as I can't do as usual.

Is there a history of trust with health care workers.

I like efficient cheerful nurses.

What do you feel has been the worst result of your illness on you or your family.

I especially enjoy discussing experiences of last 50 years.

Feelings about the chronic illness.

Desire to live or die.

That I have to fight discouragement of too many trips to the hospital.

Wouldn't like telling a stranger about very personal things.

What long term goals are seen by the patient.

What coping methods does the patient utilize.

That we can be cranky, demanding when we are ill.

How do you feel about chronic illness.

Does the patient feel he is being listened to and understood.

If they would want a minister present at any time.

What life goals are incomplete.

What does the patient wish to do that he does not feel is possible and why.

Living will--no code blue--feelings about extreme measures.

What does the client visualize as the future.

Understand my intense desire to try and obtain back my motion.

Feelings re: life support measures for self.

What about body image, "psyche", associated with chronic illness

Do they expect heroic efforts to keep them alive.

Does patient understand significance of diagnosis.

I don't like uncertainty

Spiritual practices--grace with meals, communion, prayer.

That we all are more vulnerable to having our feelings hurt.

Religious preference.

Sometimes you want services to be over in a hurry.

That nurses on the day shift should visit with me early on the shift and take some time to sit down so I have a chance to tell how I do feel.

When do you feel your best.

What patient feels is greatest problem with illness.

Like privacy.

I care about people.

To have a good communication chain between myself, doctor, and nurse.

What fears do they have.

This illness is discouraging.

I am very emotional since brain surgery.

Any cultural practices or religious beliefs that might affect the way care was given.

Who have you told about how you feel about your illness

How does the patient perceive his worth to those closest.

Be totally honest about my condition at all times.

To be honest and courteous.

Patient's opinion about most important needs.

Does the patient feel there is adequate rapport with the medical staff.

Embarrassment felt related to condition

What is the patient's history of handling life crisis.

Do you have a living will.

Have you set any new goals because of your illness/condition.

Who do you talk to when you are happy? Sad? Depressed? Has this changed?

Cultural values

Perceived strengths.

RESPONSE ITEMS NOT INCLUDED IN CATEGORIES

A complete knowledge of my type of illness.

What the patient perceives is his health problem.

That I spent four years in the Pacific in the war.

What is the client doing to relieve stress or cope.

Appendix D

Instructions for Card Sort

Cover Letter

Thank you for agreeing to sort the items collected in a previous study from chronically ill patients and nurses caring for the chronically ill regarding personal information that should be shared with nurses caring for them. These items will be developed into an instrument that would measure self-disclosure and would be used eventually to improve patient care. I realize this will be a time-consuming project for you and I'm truly appreciative of your assistance and input.

There is no correct or incorrect way to sort the items into categories. Therefore, I ask you to carefully consider the definition of each category as you sort the items.

Enclosed you will find:
1 Package of Response Items on 3x5 Inch Cards
3 Category Envelopes Defining Self-Disclosure
1 "Does Not Fit" Category Envelope
1 "Is Not Self-Disclosure" Envelope
1 Instruction Sheet

If at all possible, I would like to have this sort completed by September 28, 1990. If you have any questions, please feel free to call me at the numbers shown below.

Thank you so much for your valuable time and assistance. This is a very important part of my dissertation which I hope will improve nurses' understanding of chronically ill patients.

Sincerely,

Jean Lorson DeDonder, R.N., M.N.
Work: 316-[redacted] (Ext. [redacted])
Home: 316-[redacted]

Instruction Sheet

There are five envelopes, each with a definition taped to the outside. Three of the definitions are for categories of self-disclosure. One of the definitions, "Does Not Fit", is a category for those items that are self-disclosure but do not fit into the established three categories. Another definition, "Is Not Self-Disclosure", is a category for those items that are not examples of self-disclosure. Study each of the five definitions as it appears on the back of each category envelope.

The response items have been printed on 3 x 5 inch cards. There are no "right" or "wrong" answers in this sort. I am asking you to do three things:

FIRST, read the response item and evaluate whether the item is an example of self-disclosure or not. Self-disclosure is defined as the voluntary communication of ordinarily private personal information THAT COULD NOT BE LEARNED FROM ANY OTHER SOURCE. If the item is not an example of self-disclosure, place it in the "Is Not Self-Disclosure" envelope provided.

SECOND, if the item is an example of self-disclosure, consult the definitions for the established categories of self-disclosure and place each response item in the category that you believe is appropriate. If you think the item does not fit into any of the established categories then place the item in the "Does Not Fit" envelope provided.

THIRD, the response items were taken verbatim from patients and nurses. As you read the response items, please evaluate the wording for the following:

Is its meaning clear to you?
Can it be easily understood?

If you feel that changes are needed to make the item more understandable, please write your suggestions on that card.

When you have completed sorting all the response items, place them in the appropriate category envelope and seal. Place the five sealed category envelopes in the padded mailer, seal the mailer and mail it back to me. Thank you for your assistance.

Appendix E

Instructions for Questionnaire

When you need health care, you probably have talked with a nurse about personal information. The following are items you may have discussed with a nurse caring for you.

Please read each item and circle the number that best describes if you have talked about the item with a nurse and if so, how much you have discussed.

For example:

HOW MUCH HAVE YOU TALKED ABOUT THIS TO THE NURSE...

	NONE	SOME	A FAIR AMOUNT	QUITE A BIT	A GREAT DEAL
1. That I have side effects from medications.	1	2	3	4	5

You would circle the number that best describes if you talked about this item with the nurse. If you have not discussed the item, you would circle the number 1.

If you have any questions about completing this form, please ask the person who gave it to you to complete. When you have completed the form, please hand it back to that same person. Thank you for your time in completing this form.

Appendix F

DeDonder Self-Disclosure Questionnaire

HOW MUCH HAVE YOU TALKED ABOUT THIS TO THE NURSE.....

		None	Some	A Fair Amount	Quite A Bit	A Great Deal
1.	The amount of pain I have.	1	2	3	4	5
2.	What brings pain on or makes it go away.	1	2	3	4	5
3.	Who I turn to when I'm in pain.	1	2	3	4	5
4.	If my comfort level is tolerable.	1	2	3	4	5
5.	The time of day I feel my worst.	1	2	3	4	5
6.	That I have side effects from the medications I'm on.	1	2	3	4	5
7.	The best way for me to deal with side effects.	1	2	3	4	5
8.	My ability to read and understand how to use the medications I am on.	1	2	3	4	5
9.	The amount of stress I experience.	1	2	3	4	5
10.	How I've been coping with my limitations.	1	2	3	4	5
11.	My current state of health.	1	2	3	4	5
12.	My current symptoms.	1	2	3	4	5
13.	My personal health history.	1	2	3	4	5
14.	What I know about my illness.	1	2	3	4	5
15.	The length of time I've been dealing with my illness.	1	2	3	4	5
16.	Any disabilities I have because of my illness.	1	2	3	4	5
17.	If I consider myself to be chronically ill.	1	2	3	4	5

HOW MUCH HAVE YOU TALKED ABOUT THIS TO THE NURSE.....

		None	Some	A Fair Amount	Quite A Bit	A Great Deal
18.	What I believe is my greatest problem with my illness.	1	2	3	4	5
19.	The various illnesses I've experienced.	1	2	3	4	5
20.	My illness and how it affects my diet.	1	2	3	4	5
21.	Problems with sticking to my suggested diet.	1	2	3	4	5
22.	Any problems I have with vision, hearing, smelling, or taste.	1	2	3	4	5
23.	Whether I've been sleeping well.	1	2	3	4	5
24.	That I've been healthy in the past.	1	2	3	4	5
25.	What I believe is my biggest health problem.	1	2	3	4	5
26.	The specific health problem I must deal with right now.	1	2	3	4	5
27.	The treatments I've used in the past.	1	2	3	4	5
28.	My concern that the current treatment is not helping.	1	2	3	4	5
29.	Any new goals I've set because of my illness.	1	2	3	4	5
30.	My plans for the future regarding my health.	1	2	3	4	5
31.	Who my significant others are.	1	2	3	4	5
32.	Who I receive emotional support from.	1	2	3	4	5
33.	That my family means a a lot to me.	1	2	3	4	5

HOW MUCH HAVE YOU TALKED ABOUT THIS TO THE NURSE.....

		None	Some	A Fair Amount	Quite A Bit	A Great Deal
34.	The reaction of my significant other to my current health status.	1	2	3	4	5
35.	Who helps me at home.	1	2	3	4	5
36.	If the people I live with are able to help me with any needs I have.	1	2	3	4	5
37.	Ways I stay informed-- T.V., phone, newspaper.	1	2	3	4	5
38.	Any concerns I have about finances.	1	2	3	4	5
39.	Who makes the financial decisions.	1	2	3	4	5
40.	How I am supported financially.	1	2	3	4	5
41.	My occupation or employment opportunities.	1	2	3	4	5
42.	What I do in my spare time.	1	2	3	4	5
43.	My personal interests and hobbies.	1	2	3	4	5
44.	My personal lifestyle.	1	2	3	4	5
45.	My personal habits of of smoking, eating, or exercising.	1	2	3	4	5
46.	That I am a quiet person.	1	2	3	4	5
47.	That I like my privacy.	1	2	3	4	5
48.	That I am usually an independent individual.	1	2	3	4	5
49.	That I am usually an optimistic person.	1	2	3	4	5
50.	That I care about people.	1	2	3	4	5
51.	That I don't like uncertainty.	1	2	3	4	5

HOW MUCH HAVE YOU TALKED ABOUT THIS TO THE NURSE.....

		None	Some	A Fair Amount	Quite A Bit	A Great Deal
52.	That I get upset with myself sometimes because of things I can't do.	1	2	3	4	5
53.	The people I share my feelings with the most.	1	2	3	4	5
54.	My feelings about this chronic illness.	1	2	3	4	5
55.	That I have to fight discouragement.	1	2	3	4	5
56.	That I can be cranky and demanding when I am ill.	1	2	3	4	5
57.	That I want to be listened to and understood.	1	2	3	4	5
58.	That I'm vulnerable to having my feelings hurt.	1	2	3	4	5
59.	The fears I have.	1	2	3	4	5
60.	My spiritual beliefs and needs.	1	2	3	4	5
61.	Any embarrassment I feel related to my illness.	1	2	3	4	5
62.	That I see the current treatment I'm receiving with more positive outcomes than negative.	1	2	3	4	5
63.	The signicance of my diagnosis.	1	2	3	4	5
64.	What has helped me the most through my illness.	1	2	3	4	5
65.	How the illness has affected me the most.	1	2	3	4	5
66.	If there has been anything positive happen to me because of my illness.	1	2	3	4	5
67.	The worst result of my illness on me.	1	2	3	4	5

HOW MUCH HAVE YOU TALKED ABOUT THIS TO THE NURSE.....

		None	Some	A Fair Amount	Quite A Bit	A Great Deal
68.	What I see as my future.	1	2	3	4	5
69.	Any life goals that are incomplete.	1	2	3	4	5
70.	Living wills or feelings about extreme measures.	1	2	3	4	5
71.	My desire to live or die.	1	2	3	4	5
72.	The strengths I perceive in myself.	1	2	3	4	5
73.	How I perceive my worth to those closest to me.	1	2	3	4	5
74.	My opinion about my most important needs.	1	2	3	4	5
75.	The times I feel my best.	1	2	3	4	5
76.	The ways the nurse can best care for me.	1	2	3	4	5
77.	That I want good communication between myself, the doctor and the nurse.	1	2	3	4	5
78.	That I want the doctor and the nurses to be totally honest about my condition at all times.	1	2	3	4	5
79.	That I want the nurse to take some time and sit down so I have a chance to tell how I feel.	1	2	3	4	5
80.	That I like efficient, cheerful nurses.	1	2	3	4	5

Appendix G

Participant Consent Form

Participant Consent Form

I have been informed that the purpose of this research study is to gather information about communication between patients and nurses. This information is for use by Jean DeDonder R.N., a doctoral student in nursing at the University of Kansas, in completing her doctoral studies under the direction of a faculty member, Dr. Sharon Summers ([redacted]).

I understand that my participation in this study will require completing the DeDonder Self-Disclosure Questionnaire. This questionnaire contains a number of questions regarding personal information about my health care, lifestyle, feelings, and beliefs I may have shared with nurses. I understand that my responses will remain confidential, and that names of participants, location of participants, or other known history of participants will not be identified in reporting this study.

I understand that my participation in this study is voluntary and I will not receive compensation for participation in this study. I understand that my participation will not involve any physical or psychological risk to me. I understand that the University of Kansas Medical Center does not maintain a policy of medical treatment or compensation for injuries incurred as a result of participation in biomedical or behavioral research.

I understand that I may withdraw at any time from the study without prejudice. I understand the consent form and agree to participate in this research study. I understand I may keep a copy of this signed participant consent form for my records.

Participant's Signature	Investigator's Signature
Date	Date

Appendix H

Corrected Item Total Correlation and Alpha-If-Item Deleted

Corrected Item Total Correlation and Alpha-If-Item Deleted (n=300)

Sub-Scale	Item	Scale Alpha	Alpha - If Item Deleted	Corrected Item Total Correlation
1		.9632		
	1		.9624	.6122
	2		.9627	.5703
	3		.9627	.5665
	4		.9624	.6076
	5		.9620	.6806
	6		.9630	.5306
	7		.9619	.6872
	8		.9615	.7345
	9		.9618	.6946
	10		.9619	.6868
	11		.9615	.7352
	12		.9613	.7657
	13		.9618	.7054
	14		.9620	.6919
	15		.9611	.7893
	16		.9614	.7551
	17		.9623	.6312
	18		.9615	.7469

Sub-Scale	Item	Scale Alpha	Alpha - If Item Deleted	Corrected Item Total Correlation
	19		.9619	.6907
	20		.9623	.6433
	21		.9623	.6328
	22		.9631	.4998
	23		.9624	.6227
	24		.9622	.6520
	25		.9614	.7551
	26		.9609	.8163
	27		.9618	.7075
	28		.9629	.5408
	29		.9623	.6389
	30		.9618	.7149
2		.9206		
	31		.9204	.5737
	32		.9177	.6774
	33		.9169	.7450
	34		.9198	.6011
	35		.9170	.7009
	36		.9181	.6631
	37		.9170	.7015
	38		.9192	.6333

Sub-Scale	Item	Scale Alpha	Alpha - If Item Deleted	Corrected Item Total Correlation
	39		.9212	.5688
	40		.9210	.5620
	41		.9259	.3035
	42		.9181	.6655
	43		.9168	.7070
	44		.9176	.6878
	45		.9201	.5831
	46		.9200	.6185
	47		.9194	.6114
3		.9724		
	48		.9716	.6847
	49		.9714	.7252
	50		.9714	.7323
	51		.9714	.7255
	52		.9715	.7034
	53		.9714	.7423
	54		.9711	.7767
	55		.9713	.7506
	56		.9714	.7254
	57		.9710	.8168
	58		.9714	.7838

Sub-Scale	Item	Scale Alpha	Alpha - If Item Deleted	Corrected Item Total Correlation
	59		.9714	.7230
	60		.9720	.6127
	61		.9722	.5455
	62		.9719	.6340
	63		.9718	.6498
	64		.9714	.7240
	65		.9710	.7955
	66		.9717	.6667
	67		.9711	.7881
	68		.9719	.6221
	69		.9720	.6229
	70		.9719	.6206
	71		.9718	.6529
	72		.9714	.7484
	73		.9711	.7805
	74		.9714	.7496
	75		.9714	.7415
	76		.9712	.7627
	77		.9711	.7909
	78		.9713	.7696

Sub-Scale	Item	Scale Alpha	Alpha - If Item Deleted	Corrected Item Total Correlation
	79		.9714	.7243
	80		.9720	.7084

Appendix I

Subjects Total Scores on the DSDQ

Summary of Subjects Total Scores on the DSDQ (n=300)

Score	Total	Percent	Cumulative Percent
80	21	7.0	7.0
81	7	2.3	9.3
82	2	.7	10.0
83	3	1.0	11.0
84	5	1.7	12.7
85	8	2.7	15.3
86	8	2.7	18.0
87	8	2.7	20.7
88	1	.3	21.0
89	5	1.7	22.7
90	3	1.0	23.7
91	4	1.3	25.0
92	6	2.0	27.0
93	7	2.3	29.3
94	5	1.7	31.0
95	2	.7	31.7
96	4	1.3	33.0
97	1	.3	33.3
98	2	.7	34.0
99	3	1.0	35.0
100	8	2.7	37.7

Score	Total	Percent	Cumulative Percent
101	4	1.3	39.0
102	5	1.7	40.7
103	4	1.3	42.0
104	3	1.0	43.0
105	3	1.0	44.0
106	1	.3	44.3
107	3	1.0	45.3
108	4	1.3	46.7
109	3	1.0	47.7
110	4	1.3	49.0
111	1	.3	49.3
112	3	1.0	50.3
113	3	1.0	51.3
114	4	1.3	52.7
115	7	2.3	55.0
117	4	1.3	56.3
118	2	.7	57.0
119	2	.7	57.7
121	7	2.3	60.0
122	4	1.3	61.3
123	4	1.3	62.7
124	1	.3	63.0

Score	Total	Percent	Cumulative Percent
125	2	.7	63.7
126	3	1.0	64.7
127	1	.3	65.0
128	1	.3	65.3
129	2	.7	66.0
130	2	.7	66.7
132	1	.3	67.0
133	2	.7	67.7
134	2	.7	68.3
136	2	.7	69.0
137	1	.3	69.3
138	1	.3	69.7
139	2	.7	70.3
140	1	.3	70.7
141	3	1.0	71.7
142	1	.3	72.0
143	1	.3	72.3
144	4	1.3	73.7
145	1	.3	74.0
146	4	1.3	75.3
147	2	.7	76.0
148	4	1.3	77.3

Score	Total	Percent	Cumulative Percent
149	3	1.0	78.3
150	1	.3	78.7
151	1	.3	79.0
152	2	.7	79.7
154	2	.7	80.3
155	2	.7	81.0
156	2	.7	81.7
157	2	.7	82.3
158	1	.3	82.7
160	1	.3	83.0
161	1	.3	83.3
163	1	.3	83.7
167	1	.3	84.0
170	1	.3	84.3
173	2	.7	85.0
174	4	1.3	86.3
176	1	.3	86.7
178	1	.3	87.0
184	1	.3	87.3
185	1	.3	87.7
187	2	.7	88.3
190	1	.3	88.7

Score	Total	Percent	Cumulative Percent
195	1	.3	89.0
202	1	.3	89.3
205	1	.3	89.7
210	1	.3	90.0
215	1	.3	90.3
216	1	.3	90.7
217	1	.3	91.0
219	1	.3	91.3
223	1	.3	91.7
225	1	.3	92.0
228	1	.3	92.3
229	2	.7	93.0
230	1	.3	93.3
232	1	.3	93.7
233	1	.3	94.0
240	1	.3	94.3
241	1	.3	94.7
242	1	.3	95.0
245	1	.3	95.3
249	2	.7	96.0
253	1	.3	96.3
256	1	.3	96.7

Score	Total	Percent	Cumulative Percent
257	1	.3	97.0
269	1	.3	97.3
274	1	.3	97.7
275	1	.3	98.0
282	1	.3	98.3
296	1	.3	98.7
298	1	.3	99.0
300	1	.3	99.3
311	1	.3	99.7
347	1	.3	100.0

Appendix J

Item Analysis of the DSDQ

Item Analysis for the 80 Items on the DSDQ (n=300)

Item	Mean	Standard Deviation	Kurtosis	Skewness
01	2.103	1.008	.356	.916
02	1.767	.914	1.042	1.194
03	1.663	.987	2.121	1.621
04	1.777	.933	.693	1.082
05	1.570	.906	2.552	1.717
06	1.743	.990	2.019	1.511
07	1.530	.916	3.816	1.989
08	1.753	1.112	1.303	1.484
09	1.750	1.028	1.356	1.408
10	1.720	1.039	1.894	1.574
11	2.150	1.101	.147	.896
12	2.153	1.093	.176	.885
13	1.973	1.118	.484	1.108
14	2.157	1.248	- .176	.916
15	2.010	1.198	.328	1.121
16	1.683	1.090	1.885	1.655
17	1.327	.822	7.714	2.823
18	1.617	.938	2.858	1.741
19	1.757	.956	2.026	1.475
20	1.823	1.118	1.257	1.409

Item	Mean	Standard Deviation	Kurtosis	Skewness
21	1.637	1.017	2.332	1.716
22	1.413	.844	6.753	2.530
23	1.833	1.050	1.035	1.263
24	1.703	1.035	1.858	1.583
25	1.620	1.026	2.828	1.844
26	1.987	1.199	.304	1.127
27	1.687	1.006	2.279	1.653
28	1.460	.904	5.143	2.292
29	1.357	.773	6.489	2.519
30	1.450	.843	5.483	2.269
31	1.443	.925	4.983	2.347
32	1.627	1.073	3.024	1.933
33	2.220	1.406	- .488	.911
34	1.397	.826	6.533	2.524
35	1.703	1.052	2.291	1.694
36	1.573	1.017	3.924	2.103
37	1.703	1.017	1.921	1.664
38	1.277	.776	10.461	3.237
39	1.160	.579	23.047	4.550
40	1.233	.669	13.112	3.476
41	1.403	.723	5.064	2.107

Item	Mean	Standard Deviation	Kurtosis	Skewness
42	1.660	.898	1.752	1.448
43	1.763	.985	1.628	1.419
44	1.507	.867	4.197	2.038
45	1.590	.874	3.710	1.838
46	1.280	.661	7.181	2.637
47	1.430	.895	6.022	2.480
48	1.593	.982	2.502	1.784
49	1.587	.969	3.153	1.885
50	1.850	1.157	1.024	1.392
51	1.577	1.053	3.580	2.057
52	1.550	.999	4.186	2.132
53	1.383	.867	6.343	2.577
54	1.643	1.029	2.998	1.851
55	1.433	.914	6.398	2.555
56	1.410	.882	7.419	2.691
57	1.403	.896	6.443	2.594
58	1.270	.706	9.215	3.004
59	1.410	.912	7.126	2.694
60	1.410	.908	6.243	2.576
61	1.283	.701	9.136	2.945
62	1.580	.875	2.589	1.651

Item	Mean	Standard Deviation	Kurtosis	Skewness
63	1.510	.886	4.623	2.115
64	1.563	.978	3.235	1.940
65	1.593	1.048	3.359	1.997
66	1.383	.875	5.939	2.517
67	1.460	.948	5.286	2.383
68	1.353	.733	4.913	2.264
69	1.233	.627	9.788	3.053
70	1.310	.826	9.425	3.092
71	1.257	.828	13.409	3.717
72	1.360	.828	6.214	2.586
73	1.413	.959	5.897	2.577
74	1.337	.832	7.176	2.738
75	1.483	.871	3.896	2.038
76	1.607	.981	3.183	1.862
77	1.943	1.243	.527	1.265
78	1.977	1.294	.487	1.283
79	1.580	1.065	3.291	2.023
80	2.090	1.445	- .388	1.046