Robin I. Longest. ANALYSIS OF COMMUNICATION BETWEEN NURSES AND PATIENTS ON MECHANICAL VENTILATION. (Under the direction of Dr. Bonnie W. Duldt) School of Nursing, November, 1986.

ABSTRACT

The essence of this descriptive study involved demonstrating the amount of reciprocity in humanistic and nonhumanistic interaction that occurs between the nurse and the mechanically ventilated patient. In addition, the study compared the amount of humanistic interaction that occurs among nurses and those patients being "weaned from" versus "supported by" mechanical ventilation. The project was based on Duldt's Theory of Humanistic Nursing Communication, which recognizes the application of humanistic communication while applying the nursing process as a means of becoming increasingly sensitive and aware of the client's potential.

Random observations of twenty nurse-patient interaction situations were made over a fifteen to thirty minute interval using the instrument Categories of Nurse-Patient Interaction developed by Salyer and Stuart in 1975 to assign positive or negative values to the action-reaction choices observed between the nurse and patient. Subjects consisted of twenty critical care staff nurses employed in a large, Southeastern United States hospital and twenty patients from two critical care areas within that hospital. Patients were

on mechanical ventilation but were awake, alert and capable of interacting nonverbally with others.

Data analysis showed that reciprocity of humanizing and dehumanizing communication behaviors does exist among nurses and patients on mechanical ventilation. In addition, more humanizing communicative behavior was found to exist between nurses and patients being weaned than between nurses and patients supported by mechanical ventilation.

Overall, the results of the study indicate that reciprocal behavior, both humanizing and dehumanizing, does occur in this particular patient care situation. "Silence during the initiation of care" - a nurse action choice, was reciprocated the largest number of times throughout the twenty observation periods. These findings conflict with Duldt's Theory of Humanistic Communication, which inplies that a nurse may realize a client's greatest potential by avoiding dehumanizing communication and replacing it with attitudes, patterns and communication behaviors that humanize. More research is needed to delineate factors that lead to humanizing versus dehumanizing communication behavior in the critical care nurse under critical life situations for the mechanically ventilated patient.

ANALYSIS OF COMMUNICATION BETWEEN NURSES AND PATIENTS ON MECHANICAL VENTILATION

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ANALYSIS OF COMMUNICATION BETWEEN NURSES AND PATIENTS ON MECHANICAL VENTILATION

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STATEMENT OF THE PROBLEM

Communication is an essential part of the nursing process through which information is obtained and care is rendered. All too often, those involved in the care of the critically ill patient are unaware or unmindful of the doubts, fears, the sense of aloneness and the strange unfamiliarity of the environment and equipment that invade the patient's world. These things, coupled with the stress inherent in illness, often overwhelm the patient. To diminish or resolve that stress, the patient needs sensitive, individualized care which can be instituted through humanizing modes of communication.

The essence of this study involves demonstrating the proportion of reciprocity in humanistic and nonhumanistic interaction that occurs between the nurse and the mechanically ventilated patient. In addition, the study compares the amount of humanistic interaction that occurs among nurses and those patients being weaned from versus supported by mechanical ventilation. This is significant in that the amount of humanizing communication which occurs between the nurse and patient could improve or accelerate the patient's movement toward a level of optimal wellness.

Since communication in this situation is difficult due to the inability of the patient to speak, much effort and sensitivity is required by both parties.

Need and Rationale for Study

A large portion of critically ill patients require intensive respiratory care at some point in their illness for support of optimal health. For some, that support may be supplied through supplemental oxygen delivery that selectively increases the fraction of inspired oxygen inhaled by the patient. For others, a more aggressive approach needs to be taken by means of mechanical ventilation, a mechanization of body function which allows energy to be directed toward body repair. For a significant number of these patients, maintenance on and weaning from mechanical ventilation is a psychological as well as physiological crisis. Severe limitations are imposed on these patients, as well as the deleterious effects of immobility, nutritional deficits, dependency, and, most frequently, communication impairment.

Communication, especially verbal, is extremely limited for the mechanically ventilated patient due to the passage of an endotracheal tube or tracheostomy tube through the vocal cords. Unless the nurse is particularly skilled at lip reading or deciphering hand written messages, the patient is unable to ask questions, make requests or verbalize feelings. This limited capacity to interact

meaningfully with others leads to feelings of isolation, helplessness, powerlessness and anger (Berlitz, 1983). Dependency on machinery to help sustain ventilation often leads to alterations in self-concept as the patient is hindered in performing simple activities of daily living. Depersonalization and feelings of dehumanization often occur as the patients feel ignored or confused by the equipment, activities and conversations going on around them (Berlitz, 1983). Patients feel inadequate, vulnerable and dependent on others to satisfy their basic needs.

Duldt describes nursing as that art and science of positive humanistic intervention in changing health states of human beings interacting in the environment of critical life situations. This requires communication, a dynamic interpersonal process involving continuous adaptation and adjustments between two or more human beings engaged in face to face interactions during which each person is continually aware of the other. This process involves an exchange of meaning, facts, and feelings through dialogical communication (Duldt, 1984).

In the opinion of the researcher, nowhere is the ability to maintain dialogical communication more hindered than with the critically ill patient on mechanical ventilation. The nonverbal state of the conscious patient creates a critical life situation, a threat to one's being which is anxiety-producing to the hospitalized adult who already feels debilitated, vulnerable and defenseless to

change his situation (Harken, 1974).

The patient is bombarded by stimuli from the environment, but sensory alterations due to illness often lead to changes in perception and cognition. There are two types of sensory alterations; deprivation and overload. Sensory deprivation, defined as a reduction in the amount and intensity of meaningful stimuli, can include for the ventilator patient such things as loss of smell, inability to eat or taste, limited mobility due to attachment to the ventilator unit and little variation in the patient's spatial relationship with his environment. Also limited contact or complete separation from friends, family and other support groups increases the loss of humanizing experiences for these patients. Sensory overload, defined as highly intense stimulation that is not patterned or meaningful, tends to produce a highly dehumanizing experience. Noise at all levels, from machinery beeping and buzzing to technical conversations held at the patient's bedside, has no real meaning for the person and is rarely interpreted by staff into meaningful stimuli. Unremitting physical discomfort from attachment to the ventilator and associated immobility are almost inescapable. Interrupted sleep cycles contribute to psychosis and impair tissue healing (Berlitz, 1983).

These environmental stressors, uniquely particular to critical care units, tend to overwhelm the patient and make it increasingly difficult to respond cognizably to care

givers. The nurse can hinder or improve the situation by the degree of sensitivity which is demonstrated in interacting with the patient, that is, by humanizing communication. Conversely, nurses can dehumanize the patient by not communicating, by ignoring patient actions and reactions to care, or by otherwise being insensitive to the patient's feelings and needs (Berlitz, 1983, Kiely, 1973).

Past studies in nursing and patient communication have dealt predominantly with the nurse's behavior rather than with nurse-patient interaction. Only in the last twenty to thirty years has research emphasis been focused on the importance of communication in the nurse-patient relationship (Hein, 1973). Peplau, Orlando, and Patterson and Zderad have all proposed interpersonal communication theories with feasible application in psychiatric nursing, but not in the realm of medical-surgical nursing (George, 1980). Verbal communication has been examined more often than non-verbal modes of communication, and the nature of communication problems, their settings and specific situations are only briefly mentioned in nursing literature (Conant, 1967).

The rationale behind this study was to test Duldt's theory of Humanistic Nursing Communication, specifically to lend support to the following relationship statement: "In a given environment, if a critical life situation develops for a client, to the degree the nurse uses humanizing

communication, attitudes and patterns while applying the nursing process, to a similar degree will the health of the client tend to move in a positive direction" (Duldt, 1985, p. 221). Duldt implies humanizing communication as a means for the nurse to become increasingly sensitive and aware of the patient's potential (Duldt, 1985). This study does not attempt to examine the effect of communication on the progression toward health, but to examine how often humanizing and dehumanizing communication behaviors are reciprocated.

Application of the relationship statement to a particular study sample, the non-verbal communicative behavior patterns of critical care nurses and mechanically ventilated patients, seemed an appropriate sample selection for this type of research. Research priorities for critical care nursing, established by the American Association of Critical Care Nurses through a Delphi study in early 1983 identified the need for research of effective nursing interventions in patients with impaired communication to minimize anxiety, helplessness and pain. Need also was established for studies pertaining to the most effective, least anxiety producing techniques for weaning various types of patients from ventilators. These two question areas were ranked among the top ten of seventy-four questions prioritized for research (Lewandowski & Kositsky, 1983).

Purpose and Scope of Study

The purpose of this study was to examine the proportion of reciprocity in humanizing communicative behavior used by critical care nurses when interacting with patients who were on or were being weaned from mechanical ventilatory support in an intensive care setting. These patients cannot communicate verbally and must rely on non-verbal communication for their needs to be met. When patients are conscious and able to transmit and respond to messages, it is essential that nurse-patient interaction occur (Barnett, 1972). By observation of the nurse-patient interaction in this particular situation, it was hoped that more information might be obtained about the humanizing-dehumanizing patterns that occur.

Research Question

The purpose of the study revolved around the answers to the following questions: (1) What is the association between the proportion of humanizing versus nonhumanizing communicative behaviors that occurs among critical care nurses and patients on mechanical ventilation? and (2) What is the difference between the proportion of humanizing communicative behavior that takes place among nurses and patients being weaned from mechanical ventilatory support as compared to nurses and patients being maintained on mechanical ventilatory support?

Hypotheses

For purposes of analysis, two hypotheses were considered. The first hypothesis examined the question: What is the association between the proportion of humanizing versus nonhumanizing communicative behaviors that occurs among nurses and patients on mechanical ventilation? In null form the hypothesis stated: "The proportion of humanizing communicative behavior patterns by the nurse is not related to the patient action-reaction."

The second hypothesis examined the interaction between a special subset of mechanically ventilated patients, those being weaned from mechanical support versus those patients being maintained on mechanical ventilatory support. The hypothesis in null form stated: "There is no significant difference in the proportion of humanizing communicative behavior which takes place between nurses and patients being weaned from mechanical ventilatory support as compared to nurses and patients being maintained on ventilatory support."

Definition of Terms

In order to adequately interpret the results of the above hypotheses, certain terms need to be defined. These terms include humanizing patterns of interaction, dehumanizing patterns of interaction, reciprocity, mechanically ventilated patients, and weaning.

Humanizing patterns of comunication: those

messages and interactions that reflect sensitive, dialogical, and individualistic attitudes; where emphasis is placed on choice, equality and acceptance of the patient; where positive regard runs high; where empathy, authenticity, and intimacy is shared; in short, being aware of the unique characteristics of being human (Duldt, 1985).

Dehumanizing patterns of communication: those messages and interactions that reflect insensitive, monological, and categorical attitudes, where emphasis is placed on directives, degradation, and negative evaluation of the patient; where disregard and carelessness run high; where tolerance, role playing and isolation occurs; in short, ignoring the unique characteristics of being human (Duldt, 1985).

Reciprocity: a mutual exchange of attitudes or behaviors such that the action of one party triggers the return response in kind. For example, negative, defensive behaviors tend to produce negative, defensive responses (Duldt, 1984).

Mechanically ventilated patient: the patient who

has an endotracheal tube or tracheostomy tube in place and is attached to some form of automated device designed to augment or support the respiratory process. Oxygen support and/or work of breathing may be supported by the mechanical equipment. Breathing takes place by the positive pressure force of the ventilator.

Weaning: the withdrawal of mechanical ventilatory support; either by graduated, spontaneous (negative pressure) breathing trials or by complete disattachment from the ventilator unit. The two most common methods of weaning are variations of graduated spontaneous breathing. (1) Intermittent mandatory ventilation is a weaning process by which machine delivered breaths are gradually reduced, allowing the patient to gradually increase his own spontaneous effort. (2) Spontaneous weaning trials involve trial periods of total spontaneous breathing without aid for gradually longer specified periods of time until the patient can breathe without ventilatory aid.

Chapter II

LITERATURE REVIEW

This chapter examines Duldt's Humanistic Communication Theory as applied to the critical care setting, and specifically, to interaction that occurs between nurses and mechanically ventilated patients. Elements of the theory are explored and emphasized as their relative importance applies to the study. Previous research in the area of communication with mechanically ventilated patients is also discussed as a basis from which this study was derived. Finally, predictions are made as to the findings the present study was designed to explore.

Review of Literature

The symbolic interaction model that supports this proposal focuses on interpersonal communication. Burke, an early researcher of language, notes that human beings differ from other creatures of nature by being able to separate from their natural condition by instruments of their own making, thereby extending their own capabilities (Burke, 1966). Duldt, in her nursing theory of Humanistic Nursing Communication, proposes interactive communication as a basis for care. Adapting Burke's description, Duldt has defined human beings as a living being...."capable of symbolizing, perceiving the negative, transcending his environment by his inventions, ordering his environment,

striving for perfection and self reflecting on his situation" (Duldt, 1984, p. 201).

When this definition of human beings is applied to a perceived crisis situation such as in illness, a different course of events occurs. Illness poses a threat of great magnitude to the individual. The novelty of events, strange environment and people, and the ambiguity of patient outcome increases the patient's anxiety (Duldt, 1984). The awareness of the negative outcome of illness, that is, the possibility of debilitation or mortality, and a tendency toward future orientation creates increased fear and anxiety over outcomes that may or may not occur (Burke, 1966). Also, the patient has difficulty validating his fears because medical language is foreign to him, individual responses differ and comparisons are quite difficult to achieve (Duldt, 1985).

When rendered incapable of verbalization, the patient experiences an increased sense of vulnerability. The patient cannot ask questions about the environment or about procedures or simply voice needs. For the mechanically ventilated patient, fear and anxiety about death, disability and dependency is extremely real. Dependency on staff and machinery is a reality for the critically ill patient in the acute stage but few devices are so apparent visibly and audibly as the ventilator. Patients who require ventilation are often unable to support spontaneous breathing necessary for life. This knowledge is frightening to the alert

patient, for the person begins to question the permanence of the situation. The threat of permanent disability threatens self image and sense of worth. As the possible disability is confronted, the process of mourning over loss of body function begins (Berlitz, 1983).

The physical attachment to the ventilator system often becomes an emotional attachment as well. Subsequently, many patients will view the machine as an extension of the self, and view manipulation of the machine by staff as intrusion into the patient's personal body space. Others feel dehumanized by the amount of attention the ventilator receives from the staff in comparison to themselves. Some persons fight to maintain control in this situation by being manipulative and demanding, others regress to total dependency and passively allow others to care for them. Some persons begin to prepare for death, others for life as a disabled individual. In either situation, the patient views himself as a victim of a hopeless situation (Berlitz, 1983).

This parallels closely the six factors of a dehumanizing experience that Leventhal recounts. Dehumanization, as he defines it "is that feeling that one is isolated from others and is regarded as a thing rather than a person" (Leventhal, 1975, p. 120). Given that a person perceives, interprets and responds to the environment, dehumanization occurs through factors which include:

(1) Separation of the physical and psychologic self.

(2) Isolation of the psychologic self.

(3) Uncertainty and cyclic thought.

(4) Planlessness and loss of competency.

(5) Emotional distress, hopelessness and despair.

(6) Barriers to communication.

(Leventhal, 1975, pp 120-122). The critically ill patient on mechanical ventilation moves through each of these stages as illness and the need for respiratory support presents itself.

To circumvent these feelings requires a nurse sensitive to the needs inherent in this special situation, who can communicate in a humanizing manner. Duldt defines a nurse as a human being who practices nursing, intervening through application of the nursing process to develop a plan of nursing care for a specific client or group of clients. The client is seen as a human being who is experiencing a potential or actual critical life situation, that is, a situation in which there is a threat to one's health state in which one's existential state of being is salient. Health is defined as one's state of being and becoming; self-awareness indicative of one's adaptation to the environment. The purpose of nursing is to intervene, support, help maintain and augment the client's state of being (Duldt, 1985, p. 196).

Duldt's theory of nursing through interpersonal communication assumes that survival is based on one's

ability to communicate with others. In order to share feelings and facts about the environment, a "buzzing world of strange sensations must be sorted out to determine which are most important" (Duldt, 1985, p. 195). This sorting can be achieved through communication, which is an innate imperative for humans. However, communication, as are our other capabilities, is used and misused, therefore the way in which one communicates determines what one becomes (Duldt, 1985).

Interpersonal communication then, is a humanizing factor which is an innate element of the nursing process and occurs between the nurse and the patient. It is "the means by which the nurse becomes increasingly sensitive and aware of the client's potential" (Duldt, 1985, p. 196). The goal of the humanistic nurse is to break the cycle of dehumanizing attitudes and interaction patterns and replace those with attitudes and patterns that humanize (Duldt, 1985).

The elements of nursing include caring, coaching, and communing. Caring is valuing, touching or being concerned with a person's state of health. Coaching involves planning and incorporating the teaching-learning process to provide support and encouragement to clients as they strive to meet health goals. Communing involves a dialogical, intimate, humanizing communication occuring between two or more people - not only just "being there", but "being with" the patient. For communing to occur, trust, self-disclosure and feedback

are essential (Duldt, 1985).

In the case of the mechanically ventilated patient, communing takes place in a nonverbal manner and requires a nurse sensitive and aware of one's own feelings as well as those of the patient's. The nurse needs to be aware of one's feelings as a variable in the nurse-client relationship and how it affects communication. That is, when the patient initiates a negative action, is the nurse able to continue responding positively, recognizing that the patient's action fulfills a need or creates a situation which can be used to move the patient toward health? Or when the patient reacts to an action by the nurse, is the response seeking more information, or simply reacting to the environment? Duldt states that in a given environment, if a critical life situation develops for a patient, to the degree the nurse uses humanizing communication patterns while applying the nursing process, to a similar degree will the health of the patient tend to move toward the positive side of the attitude continuum (Duldt, 1985, p. 221).

Review of Related Research

At present time the researcher's computerized search of all literature has yielded only one other project pertaining to nurses' communication patterns with the mechanically ventilated patient. Jean Salyer and Betty Stuart proposed a study at the University of Alabama in 1975 to describe the content of nurse-patient interaction between nurses working

in medical intensive care areas and patients intubated for the purpose of mechanical ventilation. The researchers developed a tool, Categories of Nurse-Patient Interaction, which included categories identified as specific content of nurse-patient interaction; that is, they describe nurse action and patient reaction as well as patient action and nurse reaction. A nurse action was defined as an interaction initiated by the nurse which elicits a reaction from the patient. A patient action represented an interaction initiated by the patient which elicits a reaction from the nurse. Since interaction involves reciprocal behavior, patient and nurse reactions were also described. A nurse reaction represented a response to an interaction initiated by the patient while a patient reaction represented a response to an action initiated by the nurse. In totality, the tool consisted of twelve action categories and twenty-nine reaction categories (Salyer & Stuart, 1975). (See Appendix A, p. 45).

Salyer and Stuart further refined the tool by assigning positive or negative values to each action and reaction choice for use in data analysis and interpretation. Positive communication included "the transmission and reception of a message marked by or indicating acknowledgement, reassurance, acceptance, approval, or affirmation" (Webster, 1974). These value identifications closely parallel the description of humanizing versus dehumanizing attitudes set forth by Duldt in her

interpersonal communication theory. Since this tool facilitates examination of these attitudes and the reciprocal behaviors that occur in this particular patient-nurse environment, this researcher believes the Categories of Nurse-Patient Interaction an appropriate tool to use in this research.

Expectations of the Research

Interpretation of Salyer and Stuart's work showed that a tendency exists for positive actions to yield positive reactions and for negative actions to elicit negative reactions (Salyer & Stuart, 1975, p. 11). If the nurse is truly sensitive to the patient's physical and emotional state, it would seem reasonable to expect the nurse to respond in a humanizing manner; that is, respond positively even to negative patient actions. Analysis of their data did not bear out this expectation, leading this researcher to believe that a lack of humanizing, individualized communication between nurses and patients does exist.

By looking at the patients being weaned versus maintained on mechanical ventilation, one might perceive the weaning group as having potential for more humanizing communication, since an active therapy is leading to a goal (breathing without the ventilator). Yet, an abundance of weaning modalities exist. Each modality varies in the amount of nurse-patient contact that is absolutely necessary. Some methods require very little nurse action

other than the monitoring of various alarms that indicate inadequate ventilation on the part of the patient. By looking at the responses that occur in this group, the researcher hopes to ascertain if a lack of humanizing communication also exists here. Research has borne out that psychological factors have a great bearing on the success rate and efficiency in which patients are weaned (Berlitz, 1975; Grosbach-Landis, 1980; Yarnal et al., 1981). If humanizing communication does not take place in this process of weaning, then nurses are failing in their role to help advance the patient to the highest level of well-being possible.

Chapter III

METHODOLOGY

This chapter describes the methodology used to compare and analyze the proportions of humanizing and nonhumanizing behavior patterns which took place in a particular sample of nurses and ventilated patients described below. The design of the study as well as data collection and analysis are discussed.

Design

This was a descriptive study of a convenient sample population of patients and their nurses. Subjects were observed by the researcher in an intensive care setting.

Sample

The patient sample included all persons on mechanical ventilation via intubation or tracheotomy. The criteria for the patient sample included the post-operative patient eight to twenty-four hours after surgery, the long term "difficult to wean" patient, the chronic obstructive pulmonary diseased patient and the patient with acute pulmonary disorders. Since interaction involved the ability to transmit and receive messages, all patients were alert and not receiving such paralyzing drugs as Pavulon, Metubine, or Anectine. Since narcotic/analgesic agents are used in the post-operative patient it was determined that patients who were

dosed with narcotics sparingly (no more than every two to four hours with Demerol 50 to 100 milligrams intramuscularly or Morphine Sulfate up to 10 milligrams intramuscularly or intravenously) could be included in the sample. The patients selected also were able to communicate their needs or respond nonverbally, that is, through the use of lip-speaking, gesturing, writing, or through similar behaviors.

Setting

The area in which this study was conducted consisted of seven critical care units, two of which were predominantly used. These two units, one medical unit and one combined cardiothoracic/surgical unit, were located within an established university hospital in the Southeastern United States. Nursing personnel observed in the study included registered nurses employed in these units. No attempt was made to control for the educational level of the nurses. However, the amount of intensive care nursing experience by each staff member was controlled by deleting from the sample those nurses not permanently assigned to the units and nurses who had worked in the unit for less than six weeks.

Instrument

The tool chosen to describe the content of interaction between the nurse and the patient was devised by Salyer and

Stuart at the University of Alabama in 1975. Categories of Nurse-Patient Interaction (See Appendix A, p. 45) includes categories identified which were considered specific content of nurse-patient interaction; that is, they describe (a) nurse action and patient reaction and (b) patient action and nurse reaction. A nurse action was defined as an interaction initiated by the nurse which elicits a reaction from the patient. A patient action represented an interaction initiated by the patient which elicits a reaction from the nurse. Since interaction involves reciprocal action, patient and nurse reactions were also described. A nurse reaction represented a response to interaction initiated by the patient while a patient reaction represented a response to an action initiated by the nurse. In totality, the tool consisted of twelve action categories and twenty-nine reaction categories (Salyer & Stuart, 1975).

Salyer and Stuart further refined the tool by assigning positive or negative values to each action and reaction choice for use in data analysis and interpretation. Positive communication included "the transmission and reception of a message marked by or indicating acknowledgement, reassurance, acceptance, approval, or affirmation" (Webster, 1974) for the purpose of need satisfaction. Negative communication included "the transmission and reception of a message which expresses rejection, refusal, denial, negation, or prohibition"

(Webster, 1974). These value identifications closely parallel the description of humanizing versus dehumanizing attitudes set forth by Duldt in her Humanistic Communication Theory. Since this tool facilitates looking at these attitudes and the reciprocal behaviors which occur in this particular patient-nurse environment, this researcher believed the Categories of Nurse-Patient Interaction an appropriate tool to use in this research. Positive coded communicative behaviors were considered humanizing and negative coded behaviors were considered dehumanizing.

Reliability and validity of the tool were determined in an earlier pilot study by Salyer and Stuart in which five nurse-patient interaction periods were observed, each of five minutes duration. Co-observers were used and reliability estimated through computing the percentage of agreement between the two independent observers each having observed the same interactions. Following the pilot study, categories identified as descriptive of nurse-patient interaction were accepted into the present tool (Salyer & Stuart, 1975).

In order to parallel Salyer and Stuart's work, their worksheet (see Appendix A, p. 59) listing the action choices on the left margin and reaction choices on the upper margin was used in this study. Interactions were recorded by placing a tally mark in the square on the grid at the point which corresponds with the appropriate action-reaction

choices on the X-Y axis.

Data Collection

Data collection followed the prescribed policies as listed below:

a. Each observation period consisted of fifteen to thirty minutes preceded by a five minute period of orientation for the observer. Orientation by the observer was necessary to "focus in" on the particular situation being observed as well as to reduce subject reactance to observation by the researcher.

b. The observer neither verbally communicated with the patients or nurses during the observation period, nor gave aid in patient care.

c. Every action and reaction was recorded during the fifteen to twenty minute period of data collection after the five minute orientation.

To ensure the rights of those involved in the research, written consent was obtained from the clinical director of the critical care units being observed. Also a letter explaining the purpose of the research was sent via memorandum to nursing personnel on each unit involved. The letter explained that the purpose of the research was to observe patterns of communication but would in no way be used as an evaluation of nursing care (See Appendix C, pp. 64-66).

Analysis of Data

To analyze the association between nurse action and patient reaction, two proportions (P) were computed from each of the nurse-patient observation situations. The proportion of nurse-patient actions that led to a positive patient reaction, or P1, was computed as: P1 = (number of nurse positive actions leading to a positive patient reaction) divided by (total number of positive actions). The calculated P2 represented the proportion of nurse negative actions that led to positive patient reactions and was computed as: P2 = (number of nurse negative actions leading to a positive patient reaction) divided by (total number of negative actions). The Wilcoxon signed rank test for matched pairs was utilized to determine if patients were more likely to communicate positively after the nurse communicated in a positive humanizing way or after she initiated a negative dehumanizing action.

To analyze the association between patient action and nurse reaction two other proportions were computed. The proportion of patient positive actions that led to a positive nurse reaction, or P3, was computed as: P3 = (number of patient positive actions leading to a positive nurse reaction) divided by (total number of positive actions). The final proportion, P4, was derived as the proportion of patient negative actions that led to a positive nurse reaction and was computed as: P4 = (number of patient negative actions that led to a positive nurse

reaction) divided by (total number of negative actions). This also was analyzed using the Wilcoxon signed rank test for matched pairs with a significance level assigned of $p < .05$ to determine if nurses were more likely to react positively and humanizing if patients initiated positive actions or negative actions.

To determine whether a higher proportion of humanizing communication existed between nurses and those patients being weaned as compared to those patients being supported, the Wilcoxon rank sum test of significance for independent samples was used. In each of the data entries the dependent variable, the proportion of positive nurse actions, was calculated as S1 = (number of positive nurse actions) divided by (number of positive nurse actions + number of negative nurse actions). To analyze nurses' response to patient initiated action the variable S2 was calculated as S2 = (number of positive nurse reactions) divided by (number of positive nurse reactions + number of negative nurse reactions).

From these data, comparisons were made of nurse communication with mechanically supported ventilator patients and with patients being weaned from ventilatory support. An item analysis was also established to determine the frequencies of the various responses among the nurses and patients. Through these various techniques hypothesis testing occurred.

Chapter IV

ANALYSIS AND INTERPRETATION OF DATA

Data derived from the previously mentioned design is presented and statistically analyzed in this chapter. Both hypothesis statements are discussed in relation to data obtained by the researcher. Limitations to the study are also examined.

Presentation of Data

The total population sample for this study consisted of twenty patients and twenty nurses at a major university center in the medical and cardio-thoracic/surgical intensive care units. Patients were chosen at random following the criteria previously described (See page 20). Nurses were chosen accordingly by their assignment to the patients selected. Educational levels of the nurses involved were not controlled but experiential levels were controlled in that all nurses involved had at least three months of prior critical care experience. For general inspection, the twenty observation sessions were tabulated into frequencies of positive and negative actions and reactions on part of the nurses and patients (See Table I, p.28). Observations one through thirteen are inclusive of those patients being supported on mechanical ventilators. Observations fourteen through twenty represent the patient samples that were being weaned.

Table I

General Distribution of Response Frequencis

Observation	N+>P+	N+>P-	N->P+	N->P-	P+>N+	P+>N-	P->N+	P->N-
SUPPORTED								
(1)	2	2	*	*	4	*	1	3
(2)	1	3	*	7	*	1	*	*
(3)	3	2	1	2	4	1	*	*
(4)	1	1	*	2	1	1	*	1
(5)	3	*	*	6	4	*	*	*
(6)	3	3	*	3	2	*	1	2
(7)	3	*	*	4	*	2	*	*
(8)	11	1	*	6	4	1	2	5
(9)	12	8	*	*	7	2	*	1
(10)	7	*	2	4	7	*	1	*
(11)	17	7	*	*	11	2	3	*
(12)	1	2	1	6	*	*	3	*
(13)	1	1	*	7	*	1	*	*
WEANED								
(14)	1	*	*	*	3	*	*	*
(15)	6	*	*	1	5	*	1	*
(16)	8	2	*	*	6	*	1	1
(17)	13	*	*	*	5	*	2	*
(18)	7	1	*	*	4	*	*	1
(19)	7	2	1	*	6	*	*	*
(20)	7	1	*	*	6	*	*	*
Total	114	36	5	48	79	11	15	14

Note: * = no response recorded.

For each nurse-patient pair, two proportions were computed: P1, the proportion of nurse positive actions that yielded a positive patient reaction and P2, the proportion of nurse negative actions that yielded a positive patient reaction. In eight of the twenty nurse-patient pairs the nurse did not initiate a negative communication, making it impossible to compute P2 on those pairs. For the remaining twelve pairs, P1 was greater than P2 in eleven pairs. The mean of P1 (.920) was significantly higher than the mean of P2 (.145), Wilcoxon T (N=12) = 2, $p < .01$ (See Table II, p.

29). Therefore the null hypothesis, which stated there was no relation between the proportion of humanizing communicative behavior patterns by the nurse and the patient action-reaction was rejected. According to the data, patients were more likely to communicate positively after the nurse initiated a positive communication than after she initiated a negative communicative behavior.

Table II

Observed Nurse Action - Patient Reaction Proportions

Observation	P1	P2	(P1-P2) D	Rank D	Signed Rank
(1)	*	*	*	*	*
(2)	.25	0	.25	3	+
(3)	.60	.33	.27	4	+
(4)	.50	0	.50	6	+
(5)	1.00	0	1.00	11	+
(6)	.50	0	.50	6	+
(7)	1.00	0	1.00	11	+
(8)	.92	0	.92	9	+
(9)	*	*	*	*	*
(10)	1.00	.33	.67	8	+
(11)	*	*	*	*	*
(12)	.33	.14	.19	1	+
(13)	.50	0	.50	6	+
(14)	*	*	*	*	*
(15)	1.00	0	1.00	11	+
(16)	*	*	*	*	*
(17)	*	*	*	*	*
(18)	*	*	*	*	*
(19)	.78	1.00	.22	2	-
(20)	*	*	*	*	*

Mean .92 Mean (.145)

Σ rank (+) = 76

Σ rank (-) = 2

T = 2 n = 12

p < .01

Notes: P1 = proportion of nurse positive actions that yield a positive patient reaction

P2 = proportion of nurse negative actions that yield a positive patient reaction

12 Nurse-Patient Pairs (10/13 on respirator, 2/7 being weaned).

* = no response recorded.

Table III

Observed Patient Action - Nurse Reaction Proportions

Observation	P3	P4	(P3-P4) D	Rank D	Signed Rank
(1)	1.00	.25	.75	6	+
(2)	*	*	*	*	*
(3)	*	*	*	*	*
(4)	.50	0	.50	2.5	+
(5)	*	*	*	*	*
(6)	1.00	.33	.67	5	+
(7)	*	*	*	*	*
(8)	.80	.28	.52	4	+
(9)	.78	0	.78	7	+
(10)	1.00	1.00	0	-	*
(11)	.84	1.00	.16	1	-
(12)	*	*	*	*	*
(13)	*	*	*	*	*
(14)	*	*	*	*	*
(15)	1.00	1.00	0	-	*
(16)	1.00	.50	.50	2.5	+
(17)	1.00	1.00	0	-	*
(18)	1.00	0	1.00	8	+
(19)	*	*	*	*	*
(20)	*	*	*	*	*
Mean	.902	Mean	.487	Σ rank (+) = 35	
				Σ rank (-) = 1	
				T = 1 n = 8	
				p = .031	

Notes: P3 = proportion of positive nurse reactions to positive patient actions

P4 = proportion of positive nurse reactions to negative patient actions

* = no response recorded.

To analyze the association between patient action and nurse reaction two proportions; P3, the proportion of positive nurse reactions to positive patient actions and P4, the proportion of positive nurse reactions to negative patient actions were calculated. In nine of the twenty nurse-patient pairs the patient never initiated a negative communication, making it impossible to compute P3 or P4. In three other pairs P3 was equal to P4, P3 = P4 = 1, reducing

the Wilcoxon N to eight (that is, the nurse always reacted positively, regardless of patient action). For the remaining eight pairs, P3 was greater than P4 in seven pairs. Mean P3 (.902) was significantly higher than mean P4 (.487), Wilcoxon T (N = 8) = 1, p = .031 (See Table III, p. 30). Therefore nurses were more likely to communicate positively after the patient initiated a positive communication than after a negative communication. The null hypothesis, which stated there was no relation between the proportion of humanizing communicative behavior patterns by the nurse and the patient action-reaction was again rejected.

To analyze the proportion of humanizing communication which took place between the nurse and patient-being-supported versus patient-being-weaned, the dependent variable, proportion of positive nurse actions, was determined for both patient groups; (number of positive nurse actions) divided by (number of positive nurse actions plus number of negative nurse actions). The Wilcoxon rank sum test for independent samples was used to determine statistical significance. Also the proportion of positive nurse reactions was determined; (number of positive nurse reactions) divided by (number of positive nurse reactions plus number of negative nurse reactions). Of the twenty nurse-patient pairs, seven patients were being actively weaned. Looking at communication in which the nurse initiated action, the mean proportion of humanizing nurse

communication was .965 for the patient-being-weaned group and .588 for the patient-being-supported group, a statistically significant difference, S(Ns = 7, 13) = 41.5, .01 < p < .02 (See Table IV, p.32). These data reject the null hypothesis which states there is no significant difference in the proportion of humanizing behavior that takes place between nurses and patients being weaned from mechanical ventilatory support versus nurses and patients being maintained on ventilatory support. These data support the notion that nurses were more likely to initiate humanizing behavior to the group being weaned than to the supported group.

Table IV

Proportion of Positive Nurse Actions in Supported versus Weaned Patients

Supported	Rank	vs	Weaning	Rank	
1.00	45		1.00	4.5	
.36	17		.86	10	
.62	13		1.00	4.5	
.50	15		1.00	4.5	
.33	18		1.00	4.5	
.67	11.5		.90	9	Wilcoxon Rank Sum Test
.43	16		1.00	4.5	of Significance
.67	11.5				S = 41.5
1.00	4.5	M= .965			.01 < p < .02
.54	14				
1.00	4.5	n1 = 7			
.30	19	n2 = 13			
.22	20				

M= .588

Notes: DV: proportion of positive nurse action = (number of positive nurse actions) divided by (number of positive nurse actions + number of negative nurse actions).

n1 = number of weaning patient observations

n2 = number of supported patient observations

Looking at communication in which the nurse responded to patient actions, the mean proportion of humanizing nurse communication was .952 for the patient-being-weaned group and .570 for the patient-being-supported group, a statistically significant difference S(Ns = 7, 13) = 43.5, .01 < p < .02 (See Table V, p.33). Again the null hypothesis stating no difference was rejected, and the data indicated that the nurses were more likely to respond in a humanizing manner to patient initiated action in the patient-being-weaned group than to the patient-being-supported group.

Table V

Proportion of Positive Nurse Reactions In Supported versus Weaned Patients

Supported	Rank	vs Weaning	Rank	
.62	14	1.00	4.5	
0	19	1.00	4.5	
.80	11.5	.87	9.5	
.33	17	1.00	4.5	
1.00	4.5	.80	11.5	
.60	15	1.00	4.5	Wilcoxon Rank Sum
0	19	1.00	4.5	Test of Significance
.50	16			S = 43.5
.70	13	M= .952		.01 < p < .02
1.00	4.5			
.87	9.5	n1 = 7		
1.00	4.5	n2 = 13		
0	19			

M= .570

Notes: DV: proportion of positive nurse reactions = (number of positive nurse reactions) divided by (number of positive nurse reactions + number of negative nurse reactions).

n1 = number of weaning patient observations

n2 = number of supported patient observations

Chapter V

DISCUSSION, INTERPRETATION AND RECOMMENDATIONS

Data interpretation from this study lends support to the Humanizing Communication Theory developed by Dr. Duldt as it relates to critical care settings. That is, in a critical life situation for the client, the nurse who uses humanizing communication while applying the nursing process develops a means by which one can become increasingly sensitive and aware of the client's potential (Duldt, 1985). This study describes the reciprocity of humanizing and dehumanizing communication occurring between nurses and patients. Statistical significance of each hypothesis is revealed and discussed below.

Discussion

According to the data analysis, patients were more likely to communicate positively after the nurse initiated a positive communicative behavior than after she initiated a negative communicative behavior. And conversely, nurses were more likely to communicate positively after the patient initiated a positive communicative behavior than after a negative communicative behavior. Overall, a general tendency existed for positive actions to yield positive reactions and for negative actions to yield negative reactions. These findings strongly support Salyer and Stuart's work with communication between nurses and patients

in this particular environment (See Appendix D, p. 67). This indicates that reciprocity does exist to an extent in communication between nurses and mechanically ventilated patients. Of particular interest was to note that: (1) In eight out of twenty observations, the patients did not initiate any type of negative action at all and; (2) In eight of twenty observations there was no response whatsoever by patients to a negative nurse action (See Table I, p.28). It is questionable whether patients generally do not communicate negatively for fear of negative repercussions or whether they resign themselves to whatever the environment offers them.

In an item analysis, the most commonly observed nurse negative action choices were "silence during the initiation of patient care" and "silence during administration of patient care" (sixteen and twenty-three times respectively in the twenty observation periods - See Appendix B, p. 60). These silences were always met with a negative coded response by the patient. A majority of the nurses' positive actions revolved around asking questions or explaining procedures whereas a majority of the patients' positive responses revolved around nodding the head and attempting to follow directions. The most noted positive nurse response to patient initiated behavior was by asking or clarifying questions whereas the most noted negative response to patient initiated behavior was leaving the patient and carrying out the patient's request in silence (See Appendix

B, p. 60).

Implications for Nursing Practice

In this study it appeared that overall, some of the nurses do demonstrate a lack of sensitivity to patients' feelings and do fail to individualize their communication with patients. If the nurse is responding in a humanizing and therapeutic manner, one would expect the nurse to exhibit positive communication even though the patient may exhibit negative behavior. The results of this study did not support this proposition. If the nurse is sensitive to the emotional stress of hospitalization, of intubation, and of mechanical ventilation, then it would seem reasonable to expect the nurse to respond positively to a negative patient action. The implications exist that either the nurses observed in the study may have been unable to deal with their patients' responses to stressors inherent in the critical care environment or the nurses may have had trouble dealing with their own stress precipitated by this particular care situation. This speculation deserves further study.

In regard to the weaning versus supported ventilator patient-nurse communication patterns, this study revealed a tendency of nurses to act and react in a more humanizing manner toward the patient who is actively being weaned versus being supported. This implies that perhaps nurses are encouraged by the progression of the weaning patient and

react more positively to this specific situation. No effort was made to control for the type of weaning which took place in this study (IMV versus spontaneous t-bar trials); however, the activity level and attentiveness of the nurse in this care situation may also be heightened due to the dangers of failure involved in weaning. Therefore the nurse might be more likely to maintain a humanizing communication pattern with this type patient in order to encourage the patient's progress and diminish the patient's fear of failure to wean, or fear of the weaning process.

These data seem to support two premises. First, that the level of humanizing communication by the nurse increases as a change in the patient's level of wellness occurs or is anticipated to occur. Secondly, due to inherent dangers in weaning (anxiety leading to shortness of breath, increased production of secretions, and muscle fatigue that all lead to hypoxia and hypercapnea), the nurse may be more attentive and retain closer physical proximity to the patient who is being weaned, thus facilitating more opportunities for humanizing communication. These implications need to be addressed in further research.

Recommendations for Further Research

In addition to the premises mentioned above, the findings of this study raise numerous questions regarding the preparation of the critical care nurse and the reactions to the stressors inherent in critical care. First, do

critical care nurses have the ability to apply interpersonal communication theory in their daily practice? Second, are critical care nurses supported in their abilities to handle their own stress therapeutically in the critical care environment? Third, what factors in the mechanically supported patient's care versus the weaning ventilator patient's care affect interpersonal communication patterns between the nurse and patient? Fourth, does silence during the administration of care inhibit patient-initiated communication or encourage it? And finally, what pre-existing attitudes exist among critical care nurses about mechanically ventilated patients that affect the care of such patients? Further research of these questions and of this particular research may offer answers to the communication and care problems inherent in this particular patient population. Also, further evaluation and use of the Categories of Nurse-Patient Interaction tool to observe nurses working with intubated patients can provide more objective data to critique care and strengthen the nurse's humanizing communication skills.

A limitation to generalization of this study, one observer, might be eliminated by use of co-observers on all interactions to establish inter-rater reliability of the instrument used in the study, Categories of Nurse-Patient Interaction. A larger patient-nurse sample would increase the validity of the research results. Finally, comparing nurse and patient interactions over a defined period of

time; that is, random observations of one nurse with three different patients, might yield significant information about individual nurses' patterns of communication.

This particular critical care patient population might also lend itself as useful for addressing other Humanistic Communication Theory relationship statements. For example, Duldt states that when a person experiences dehumanizing communication, one tends to move outward to the next interaction patterns of assertiveness, confrontation, conflict, and finally separation (Duldt, 1985, p. 222). Further research could deal with movement through various communication patterns as humanizing or nonhumanizing communication is experienced by the nurse and patient.

In summary, the need for sensitive, humanizing communication between nurses and patients on mechanical ventilation exists. However, the results of this descriptive study indicates that humanizing communication is not always the norm in this particular patient care situation. Some reciprocity of communication, both dehumanizing and humanizing does exist in these situations. However, for realization of the client's greatest potential, reciprocity of dehumanizing communication would best be avoided by the nurse. Review of the literature reveals that the basis for this tendency toward reciprocity of dehumanizing communication behavior might be due to feelings of helplessness and anxiety on the part of both patient and nurse. The results of this study indicate that more

research is needed to delineate the factors which lead to humanizing versus dehumanizing communication patterns as well as how to prepare the critical care nurse to deal with this frustrating but challenging aspect of intensive care nursing.

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APPENDIX A: THE INSTRUMENT CATEGORIES OF NURSE-PATIENT INTERACTION
WORKSHEET FOR CATEGORIES OF NURSE-PATIENT INTERACTION

Nurse Action Choices

SOCIAL CONVERSATION is communication which is conducive to friendliness or social relationships with the patient and not communication directed toward physical care of the patient. Social interaction is a basic human need and is, therefore, coded as a positive (+) Nurse Action Choice because it reflects an attempt to meet the psychological needs of the patient - the need for sensory input which will assist in maintenance of psychosocial equilibrium (Carlson, 1970). "It is believed that getting to know the ill human being is as valid and necessary a nursing activity as is performing procedures or rendering physical care" (Travelbee, 1971, p. 98).

PRAISE, ENCOURAGEMENT, or positive criticism of the patient's action or behaviors includes (a) commendation for attempts to follow directions, (b) praise for actions the nurse considers desirable or valuable, and (c) encouragement for continuation of the behavior. It is coded as a positive (+) Nurse Action Choice because by providing reassurance, in the form of praise or encouragement, reduction of anxiety may be accomplished (Travelbee, 1971; Beland, 1970).

VERBAL CLARIFICATION or attempting to understand a nonverbal message being communicated by the patient includes

questions asked by the nurse in an attempt to determine what a patient indicates he needs or wants to know. Clarification can include repeating a statement in a questioning manner or asking the patient to repeat the nonverbal message. This category is coded as positive (+) because it indicates affirmation that what the nurse is interpreting is, in actuality, the message being communicated by the patient. The nurse should explore with the patient any communication that she/he does not understand (Travelbee, 1971; Beland, 1970).

ASKING QUESTIONS to elicit information from the patient includes efforts to determine needs not previously communicated to the nurse, but does not include acts of clarifying previously communicated nonverbal messages or social conversation. It is coded as a positive (+) Nurse Action Choice because it represents an attempt to elicit specific information from the patient - a component of therapeutic communication (Hein, 1973). Closed questions are the type most frequently used for the purposes of obtaining specific information from a patient and/or allowing the patient a choice (Hein, 1973). Some examples of these questions are: (a) Do you need to be suctioned? (b) Do you want to turn now or later?

EXPLANATION OF A PROCEDURE performed on or for the

patient includes explaining what is to be done to and/or for him as well as sensations he might expect during the procedure. This Nurse Action Choice is coded as positive (+) because reduction of anxiety is accomplished by supplying needed information to the patient (Travelbee, 1971).

GIVES DIRECTIONS or instructions with which the patient is requested to comply is a positive (+) Nurse Action Choice because it is giving the patient an opportunity to have input into his care. In the dictionary, the word 'request' is defined as "to ask as a favor..." (Webster, 1963, p. 729). This indicates recognition by the nurse of the patient's need for autonomy (Stone and Church, 1968).

GIVES COMMANDS (authoritative instuctions) with which the patient is expected to comply is coded as a negative (-) Nurse Action Choice because it does not allow the patient the opportunity to function with some degree of autonomy. This category includes many one-word commands such as Stop!, Quit!, and directions given in a harsh and/or loud tone of voice not necessitated by the patient's inability to hear or a noisy environment.

CRITICIZING or indicating disapproval is coded as a negative (-) Nurse Action Choice because it indicates rejection of the patient and his behavior. The nurse

verbally criticizes or nonverbally indicates disapproval of patient behavior by frowning or verbally reprimanding the behavior in a belittling or condemning manner.

SILENCE DURING INITIATION OF PATIENT CARE is coded negatively (-) because silence can have an adverse effect (Hein, 1973). Lack of information about an impending procedure creates anxiety (Travelbee, 1971; Beland, 1970). When the nurse initiates patient care of any type without explaining the procedure to the patient, she is denying the patient information and is, therefore, creating anxiety.

SILENCE DURING THE ADMINISTRATION OF PATIENT CARE which lasts longer than thirty seconds after the initiation of patient care is a negatively coded (-) Nurse Action Choice. The nurse either mantains silence or does not initiate further communication with the patient. This action choice is coded negative because anxiety levels begin to rise as periods of silence become more frequent or prolonged (Hein, 1973).

Patient Action Choices

INITIATION OF A NONVERBAL COMMUNICATION which does not indicate hostility or aggression ia a Patient Action Choice which is coded positively (+) because it indicates that the

process of communication has begun - the patient has reached out to initiate interaction (Barnett, 1972). The patient initiates a nonverbal communication by the use of physical gestures such as waving hands or tapping the bed rail, mouthing words, or writing notes to the nurse.

INITIATION OF A NONVERBAL COMMUNICATION which expresses HOSTILITY or ANGER is a negatively coded (-) Patient Action Choice which is marked by the use of physical gestures which reflect aggression. These gestures include banging the bed rails loudly, throwing objects for attention, or others which can be considered aggressive.

Nurse Reaction Choices

ANSWERS A QUESTION is coded as a positive (+) Nurse Reaction Choice because it indicates that the message was received and that the nurse is acknowledging the patient's question.

TOUCHES THE PATIENT AND CARRIES OUT THE PATIENT REQUEST is a Nurse Reaction Choice which is manifested by the nurse reaching out to the patient and touching him in some way which conveys solace or comfort (Barnett, 1972) and is coded as a positive reaction choice because by reaching out to someone, for whatever reason, the process of communication

is begun (Barnett, 1972). Tactile communication can be a powerful tool at the nurse's disposal when used sensitively and at the proper time (Sutterly and Donnelly, 1973).

SAYS SHE IS TOO BUSY AT THE TIME BUT WILL RETURN is a Nurse Reaction Choice which is appropriate if the patient makes a request which does not necessitate immediate attention. It might include the nurse telling the patient she will bring him a glass of water the next time she returns to the room or other non-vital activities. It should not include acts of ignoring requests for suctioning of the airway, for example. It is coded as a positive (+) reaction choice because it indicates that the nurse has acknowledged the patient's request and will attempt to meet the patient's needs.

FOLDS ARMS ACROSS CHEST AND MAKES NO VERBAL RESPONSES TO THE PATIENT is a negative (-) Nurse Reaction Choice because it indicates " 'I am closed to any advance. I will not listen to you, or hear you' " (Fast, 1978, p.88). According to Birdwhistell, no body position or movement, in and of itself, has a precise meaning (Fast, 1970); however, because the nurse makes no verbal response, it indicates rejection.

RESPONDS IN AN ANGRY MANNER is a Nurse Reaction Choice

which is coded negatively (-) because it indicates hostility. The nurse criticizes or in other ways indicates disapproval, has a frown on her face, and may shake her finger at the patient.

RESPONDS IN A FIRM MANNER is a Nurse Reaction Choice which is coded positively (+) because the nurse is confronting the patient directly about some behavior which is inappropriate or unacceptable. The nurse is not criticizing or rejecting the patient; she is letting him know that his behavior needs to be modified.

CARRIES OUT A REQUEST WITHOUT SPEAKING TO THE PATIENT is coded as a negative (-) Nurse Reaction Choice. Even though the nurse carries out the patient's request, by maintaining silence the nurse is not meeting the patient's need for sensory input.

CARRIES OUT A REQUEST AND SPEAKS CONGENIALLY TO THE PATIENT is coded as a positive (+) Nurse Reaction Choice because it indicates acknowledgement of the patient's needs as well as the need for continued sensory input.

DOES NOT RESPOND TO THE PATIENT is coded as a negative (-) Nurse Reaction Choice because it indicates either that the communication was not received or that it was not acknowledged by the nurse.

IGNORES INAPPROPRIATE BEHAVIOR is coded as a positive (+) Nurse Reaction Choice. The nurse continues activities which she was engaged in when the patient began the inappropriate behavior; she does not leave the patient because of the behavior. When no reinforcement of a behavior is administered (i.e., attention), extinction of an undesirable behavior usually follows (LeBow, 1973; Blackman and Silberman, 1971).

VERBALLY REPRIMANDS THE PATIENT is coded as a negative (-) Nurse Reaction Choice. To reprimand behavior implies that the nurse has the right to pass judgement on the patient's actions (Hays and Larson, 1963). This reaction choice includes acts of calling inappropriate activities to the patient's attention without offering an alternative behavior and/or criticizing the patient's behavior.

LEAVES THE PATIENT is coded as a negative (-) Nurse Reaction Choice because by withdrawing, the nurse is not acknowledging that the patient has a need or is refusing to meet that need. This reaction choice does not include leaving the patient to obtain materials necessary to give patient care or to get something requested by the patient.

ACKNOWLEDGES THE PATIENT AND ACCEPTS THE BEHAVIOR is a Nurse Reaction Choice exemplified by the nurse speaking to

or touching the patient in acknowledgement, continuing to meet needs in any way and by communicating with the patient without retaliation or counter-hostility (Carlson, 1970). It is coded positively (+) because it conveys acceptance of behavior because the nurse is not blaming or judging the patient's behavior (Travelbee, 1971).

CLARIFIES NONVERBAL COMMUNICATION BY ASKING A QUESTION is coded as a positive (+) Nurse Reaction Choice because it is appropriate for the nurse to clarify any communication which she does not understand (Travelbee, 1971).

Patient Reaction Choices

NO RESPONSE is a negatively (-) coded Patient Reaction Choice because it can be interpreted to mean withdrawal (Carlson, 1971) or lack of acknowledgement.

SMILING is coded as a positive (+) Patient Reaction Choice because -- even though it may indicate ambivalence, passive hostility, or pleasure and is open to interpretation because more information is needed to make an accurate assessment of how the individual really feels (Beland, 1970)-- it indicates acknowledgement of communication.

NODS HEAD is coded as a positive (+) Patient Reaction Choice because it indicates acknowledgement of communication.

HOSTILE PHYSICAL GESTURE such as attempting to hit or kick, or in any way physically resist the nurse is coded as a negative (-) Patient Reaction Choice because it is an overt reaction to anxiety (Travelbee, 1971) and represents the tendency of an organism to do something harmful to another organism or to itself (Carlson, 1970). "By striking at another person an individual can express hostility toward that person" (Barnett, 1972, p. 103).

NON-HOSTILE PHYSICAL GESTURES such as reaching for the nurse's hand or arm, or - without being given direction to do so- helping the nurse by changing the position for a procedure. etc., are coded as positive (+) Patient Reaction Choices because reaching out to someone begins the process of communication (Barnett, 1972).

TURNS AWAY FROM THE NURSE is coded as a negative (-) Patient Reaction Choice because it can indicate rejection or withdrawal.

CONTINUES BEHAVIOR RESULTING IN PRAISE is coded as a positive (+) Patient Reaction Choice. The nurse has, in many instances, established herself as a source of positive reinforcement by freely administering positive reinforcers such as praise (LeBow, 1973).

DOES NOT CONTINUE PRAISED BEHAVIOR is a Patient Reaction Choice that is coded negatively (-). Behaviors are

not continued unless the patient can derive satisfaction from the behaviors, engaging in the desired behavior has to be worth the effort (LeBow, 1973).

BECOMES AGITATED BECAUSE THE NURSE IS UNABLE TO UNDERSTAND is a Patient Reaction Choice that is coded negatively (-) because the patient is expressing anxiety due to the fact that the message sent was incorrectly received. This category is exemplified by such acts as shaking of the head in disagreement, rolling of the eyes, or other actions which might indicate agitation.

APPEARS CONFUSED AND WANTS CLARIFICATION is coded as a positive (+) Patient Reaction Choice because it indicates that the patient realizes that he is not receiving the message correctly. Any communication which is not understood should be explored (Travelbee, 1971). Confusion is manifested by such acts as a quizzical expression on the face, a frown, writing or "mouthing" a message to the nurse -- all of which indicate that the patient is unsure of what he has been asked or told.

DOES NOT FOLLOW DIRECTIONS OR COMMANDS is coded as a negative (-) Patient Reaction Choice because it indicates that: (a) the communication was not correctly received or interpreted, (b) the patient is refusing to follow directions or commands, (c) the patient is rejecting the way in which the instructions were given or the person giving

the instructions, or (d) the patient is too physically ill to follow the instructions.

ATTEMPTS TO FOLLOW DIRECTIONS is coded as a positive (+) Patient Reaction Choice because it indicates that the patient feels he has received the communication correctly and that the patient is not rejecting what he has been told to do.

EXPRESSES NEGATIVE FEELINGS ABOUT FOLLOWING DIRECTIONS OR COMMANDS is coded as a negative (-) Patient Reaction Choice because it indicates that the patient is refusing to follow instructions because (a) he does not understand what he has been told or (b) he is anxious and is reacting by refusing to cooperate. "Negative feelings" are thought to be expressed by the patient nodding that he does not want to do something which he has been asked to do, by "mouthing" his negative feelings to the nurse, or by communicating these feelings in any other nonverbal manner. It does not include nods to questions asked by the nurse or nods to any social conversation.

GRIMACES IN RESPONSE TO PAIN, DISCOMFORT, OR DISPLEASURE is coded as a negative (-) Patient Reaction Choice. Pain behaviors such as grimacing are likely to have been learned and are considered as undesirable behaviors (LeBow, 1973.). This is not to imply that patients not be allowed to express their feelings. However, facial

expressions are a common source of information about a patient's emotional state (Beland, 1970) and grimaces are considered underirable.

CRIES is coded a negative (-) Patient Reaction Choice because "shedding of tears is usually associated with 'bad' feelings such as pain, sorrow, helplessness, and anger" (Beland, 1970, p. 232).

References to Appendix A

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INSTRUMENT WORKSHEET

Social conversation (+)	Praises or encourages (+)	Verbally clarify a non-verbal message (+)	Asks questions (+)	Explains a procedure performed (+)	Gives directions (+)	Gives commands (-)	Criticizing or indicating disapproval (-)	Silence during initiation of care (-)	Silence during administration of patient care (-) (30 seconds)	PATIENT ACTION CHOICES	Initiation of non-verbal communication (+)	Expresses hostility or anger (-)	PATIENT REACTION CHOICES
													No response (-)
													Smile (+)
													Nods head (+)
													Hostile physical gesture (-)
													Non-hostile physical gesture (+)
													Turns away from nurse (-)
													Continues behavior resulting praise (+)
													Does not continue praised behavior (-)
													Becomes agitated because nurse is unable to understand (-)
													Appears confused and wants clarification (+)
													Does not follow directions or commands (-)
													Attempts to follow directions or commands (+)
													Expresses negative feelings about following directions (-)
													Grimaces in response to pain etc. (-)
													Cries (-)
													NURSE REACTION CHOICES
													Answers questions (+)
													Touches patient then carries out the patient's request (+)
													Says she is too busy at the time but will return (+)
													Folds arms across chest and makes no verbal response to patient (-)
													Responds in an angry manner (tone of voice, facial expression imp.) (-)
													Responds in a firm manner (appropriate) (+)
													Carries out request without speaking to patient (-)
													Carries out request and speaks congenially to patient (+)
													Does not respond to patient (-)
													Ignores inappropriate behavior (+)
													Verbally reprimands patient (-)
													Leaves patient (-)
													Acknowledges the patient and accepts the behavior (+)
													Clarifies non-verbal communication by asking questions (+)

APPENDIX B: INSTRUMENT WORKSHEET WITH OBSERVED FREQUENCIES: ITEM ANALYSIS

INTRUMENT WORKSHEET

ITEM ANALYSIS

(29) Expresses hostility or anger (-)	(88) Initiation of non-verbal communication (+)	PATIENT ACTION CHOICES	(23) Silence during administration of patient care (30 seconds) (-)	(16) Silence during initiation of care (-)	(5) Criticizing or indicating disapproval (-)	(8) Gives commands (-)	(24) Gives directions (+)	(36) Explains a procedure performed (+)	(29) Asks questions (+)	(16) Verbally clarify a non-verbal message (+)	(20) Praises or encourages (+)	(27) Social conversation (+)	(f) NURSE ACTION CHOICES
													PATIENT REACTION CHOICES (f)
			12	9	1			4	4	1	2	4	No response (-) (37)
							1	2			2	13	Smile (+) (18)
							2	10	19	6	3	8	Nods head (+) (48)
			1	2				1					Hostile physical gesture (-) (4)
									2	3	1	2	Non-hostile physical gesture (+) (8)
							2						Turns away from nurse (-) (2)
							3	6			6		Continues behavior resulting praise (+) (15)
													Does not continue praised behavior (-) *
			1	2	2		1	1	2	6			Becomes agitated because nurse is unable to understand (-) (15)
						1	1	6	2				Appears confused and wants clarification (+) (10)
			1			4	4	2					Does not follow directions or commands (-) (11)
				1		1	8	4			5		Attempts to follow directions or commands (+) (19)
			1		1	2	2						Expresses negative feelings about following directions (-) (6)
			6	2	1						1		Grimaces in response to pain etc. (-) (10)
			1										Cries (-) (1)
													NURSE REACTION CHOICES
	18												Answers questions (+) (18)
	15												Touches patient then carries out the patient's request (+) (15)
1	1												Says she is too busy at the time but will return (+) (2)
	1												Folds arms across chest and makes no verbal response to patient (-) (1)
2													Responds in an angry manner (tone of voice, facial expression imp.) (-) (2)
9	6												Responds in a firm manner (appropriate) (+) (15)
	7												Carries out request without speaking to patient (-) (7)
	6												Carries out request and speaks congenially to patient (+) (6)
3	2												Does not respond to patient (-) (5)
2	2												Ignores inappropriate behavior (+) (4)
3	1												Verbally reprimands patient (-) (4)
5	3												Leaves patient (-) (8)
3	10												Acknowledges the patient and accepts the behavior (+) (13)
1	16												Clarifies non-verbal communication by asking questions (+) (17)

APPENDIX C: CONSENTS AND OTHER MAILINGS

10314 Kingstree Court
Richmond, Virginia 23236
May 8, 1985

Robin Presnell, R.N.
P.O. Box 229
Wrightsville Beach, North Carolina 28480

Dear Robin:

I am pleased that you want to use the data collection instrument Categories of Nurse-Patient Interaction in your graduate research. In return for permission to use our tool, please forward a copy of your proposal to me so that I can share it with Bettie. In addition, once you have used the tool, if you have suggestions regarding its improvement, please feel free to share them with us.

Good luck to you in your studies. I look forward to seeing your study IN PRINT.

Sincerely,

Jeanne Salyer

Jeanne Salyer, R.N., M.S.N.

MUSC MEDICAL CENTER
Clinical Nursing/Critical Care
(803) 792-3261

MEDICAL UNIVERSITY OF SOUTH CAROLINA
171 Ashley Avenue
Charleston, South Carolina 29425-0601

February 3, 1986

Robin Presnell, RN, CCRN
Staff Nurse, SICU
MUSC Medical Center
Charleston, S.C. 29425

Dear Ms. Presnell,

Having met with you to discuss your research project and your data collection methods, I am pleased to offer you the availability of the Surgical Intensive Care Unit and the Medical Intensive Care Unit. It appears that these two units will afford you the opportunity to collect the necessary data.

If I can be of any further assistance to you, please do not hesitate to contact me. Good luck with you research.

Sincerely,

Patti S. McCue RN

Patti S. McCue, RN, BSN
Critical Care Clinical Director for Cardiopulmonary/Burn

PSM:cw

7930 J-3 St. Ives Road
North Charleston, South Carolina 29418

Dear Ms

As a graduate student at East Carolina University and as a practicing critical care nurse, I have been interested in the nurse-patient communication process, especially with those patients requiring mechanical ventilation. For this reason I am presently beginning a project to examine the content of nurse-patient interaction in this special situation.

Since your institution is most frequently involved with patients requiring mechanical ventilation, I am requesting your written permission to observe this type interaction process in your critical care areas. These obtruse observations will be made randomly with patients and nurses, with actual observation time at fifteen to thirty minutes. In no way will the researcher interact with the patient or nurse during this period of observation and anonymity will be preserved.

The purpose of the project is to describe and categorize the content of nurse-patient interaction in the critical care unit. Observations will be made to include nurse action and patient reaction as well as patient action and nurse reaction. It is believed that often, due to the patient's inability to communicate verbally, nurses become unaware to their needs. Hopefully this study will serve to categorize those responses, both verbal and nonverbal.

The research, Analysis of Nonverbal Communication Behaviors Between Nurses and Patients on Mechanical Ventilation, will be submitted in partial fulfillment of the requirements for the degree of Master of Science in Nursing in the Department of Nursing in the Graduate School at East Carolina University in Greenville, North Carolina.

I would like to begin data collection in late January or early February. At any time I am on the unit as an observer the clinical director for that unit, head nurse and supervisor for that shift will be notified in advance. If I can clarify or give any additional information that is needed please feel free to contact me at home (572-8071) or at work (792-2291).

Thank you for your prompt attention to this matter.

Sincerely,

Robin Presnell

ROBIN PRESNELL RN CCRN
Graduate Student
East Carolina University

MEMORANDUM

TO: NURSING STAFF
Critical Care Units

From: Robin Presnell, RN, CCRN
Graduate Student - East Carolina University
Medical-Surgical Nursing

Subject: MASTER'S THESIS RESEARCH

Beginning in early February, 1986 the above named student from East Carolina University, Greenville, North Carolina will begin collecting data for an independent research project. The observations will be limited to include patterns of communication. During the periods of observation, the researcher will not give direct patient care nor will there be communication verbally with the patient or the nursing staff. Nursing care observation will not be made or evaluated. Your cooperation will greatly assist in data collection for this research.

Thank you.

APPENDIX D: COMPARISON OF SALYER AND STUART'S FREQUENCIES TO FREQUENCIES IN THIS STUDY

The results of the present study closely parallel the results of Salyer and Stuart's work in 1975. Each study's researcher observed twenty nurse-patient pairs and their interaction for a period of fifteen to twenty minutes, noting responses on the tool Categories of Nurse-Patient Interaction. Table A illustrates the frequencies of responses in each study.

Table A

Comparison of Salyer and Stuart's

Frequencies to Frequencies in this Study

	Salyer & Stuart	Longest
N+ → P+	59	114 (S:65, W:49)
N+ → P-	46	36 (S:30, W: 6)
N- → P+	4	5 (S: 4, W: 1)
N- → P-	74	48 (S:47, W: 1)
P+ → N+	19	79 (S:14, W:55)
P+ → N-	11	11 (S:11, W: 0)
P- → N+	0	15 (S:11, W: 4)
P- → N-	4	14 (S:12, W: 2)
Total Responses	217	322

Note: S = Supported
W = Weaned

In comparing each category of action-reaction for the two studies, similar tendencies exist. Both studies reveal a large number of frequency pairs to be reciprocal.

Positive action produces positive reaction and negative action produces negative reaction. In general, numbers of positive nurse actions are higher in this study than in Salyer and Stuart's study, but this might be influenced by the fact that seven of the twenty pairs were situations in which patients were being actively weaned. A dramatic finding is that Salyer and Stuart report no one time where the nurse responded positively to the patient's negative initiated action. Although the frequency is low, there were a few positive nurse responses to negative patient action in the present study.

Salyer and Stuart also report only thirty-four instances of patient initiated action whereas this study reports one hundred nineteen patient initiated actions. These frequencies appear also to be influenced by the weaning variable. And finally, examining the Salyer and Stuart item analysis, one other similarity appears. The response "silence during the administration of care" was reported as the largest negative nurse action recorded. Each patient response to this action was a negative response. The present study also reports "silence during administration of care" as a high frequency nurse negative action.