To the Graduate Council:

I am submitting herewith a dissertation written by Dava Headden Shoffner entitled "Communication with Patients and Professional Burnout in Pediatric Nurses." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Sandra Twardosz, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:

Vice Provost and Dean of The
Graduate School

COMMUNICATION WITH PATIENTS AND PROFESSIONAL BURNOUT IN PEDIATRIC NURSES

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Dava Headden Shoffner

June 1988

ACKNOWLEDGEMENTS

Many people have been of significant help to me during the course of my study which culminated in this research effort. I am especially indebted to my major professor, Sandra Twardosz, who patiently encouraged me throughout this process as I wrote, re-wrote, moved sentences and paragraphs, and even deleted superfluous paragraphs I had just painfully written. Her knowledge of the process of direct observation as a data collection technique was invaluable. Other members of my committee also contributed in important ways as they critiqued my work and encouraged my efforts each with their individual skills and knowledge base.

My gratitude is also extended to several people in the College of Nursing. Sandra Paul Thomas, my colleague, provided a tremendous support system and was a readily available and knowledgeable resource for answers to my numerous questions. Mike Lusk, who grew to expect to hear from me regularly, guided my through my many bouts of problems with computers and disks. My dean, Sylvia Hart, and my special friend Johnie Mozingo were two others, among many, who were most supportive of me during the process of data collection, analysis, and writing.

I am especially indebted to my husband, Marty, who never let me lose sight of my goal. His unfailing patience and his lovely sense of humor, both of which survived unwashed clothes, uncooked meals, an untidy home, and a tired wife were absolute necessities during this long period of being both a student and an employee.

My sons and daughter, Mark, Scott, and Anne were also supportive. Cooking for themselves and washing their own clothes was the "standard operating proceedure". A special thank-you goes to Anne for the many summer hours she spent in the library finding references. Mark was a super research assistant; he was careful and precise in coding information, transferring data, and calculating reliability scores. Scott continued to encourage me with a pat on the shoulder and a big smile; his encouragement extended to a major rescue from a computer "glitch" at 2 A.M.

This project is the result of much support, love, and input from friends and family. To them I extend my gratitude.

ABSTRACT

Despite widespread recognition that the period of childhood is critical for developing self-concept and acquisition of feelings and behaviors that persist into adulthood, little is known about pediatric nurse communication behaviors that have the potential for influencing self-esteem and emotional well-being. The present exploratory study described the frequency of pediatric nurses' interpersonal communication behaviors referred to as confirmation, disconfirmation, and affection, and the relation of these behaviors to selected professional characteristics of the nurse and personal characteristics of the nurse and patient.

Descriptive data on 18 nurses in 3 metropolitan hospitals were obtained by observation of nurse behaviors and self-report. Demographic data on 50 pediatric patients were obtained by parental report. Correlation measures were used to test the relationship of the communication behaviors to professional burnout (Staff Burnout Scale for Health Professionals), and to nurse and child characteristics. No professional or personal characteristics of nurses were found to correlate with the nurse communication behaviors. Child characteristics of age, frequency of hospital admissions, and type of illness correlated with nurse behaviors. Correlates with

young age were affectionate words (r = .33, p<.01), passive affectionate contact (r = .33, p<,01), and total affectionate behaviors (r = .26, p<.05). Frequent hospital admissions correlated with nurse disconfirming responses (r = .32, p<.05), and admission for surgical procedures correlated with confirmation by the nurse (r = .29, p<.05). Results suggest that pediatric nurses tend to communicate in ways that promote self-esteem and emotional well-being, but that patient characteristics may influence the frequency and type of communication behaviors.

TABLE OF CONTENTS

CHAPTER PAGE

I. INTRODUCTION....1
Purpose and Rationale....2
Conceptual Framework....8
Summary and Objectives....14
Assumptions....15

II. REVIEW OF RELATED LITERATURE....16
Confirmation and Disconfirmation....16
Affection and Touch....29
Professional Burnout....35
Child Influences on Adults....38
Integration of Related Literature....40

III. METHODS....42
Hypotheses....42
Setting and Sample....43
Operational Definitions....45
Measurement Tools....47
Procedures....57
Collection of Data....60
Inter-observer Reliability....64
Data Analysis....71

IV. RESULTS....74

V. DISCUSSION....90
Nurse Behaviors and Characteristics....91
Child Characteristics....94
Limitations of the Study....96
Major Implications for the Nursing Profession....101
Implications for Future Research....104

LIST OF REFERENCES....109

APPENDIXES....124

APPENDIX A. CONFIRMATION/DISCONFIRMATION RATING INSTRUMENT....125
APPENDIX B. AFFECTION MEASUREMENT SYSTEM....126
APPENDIX C. DATA COLLECTION TOOL....127
APPENDIX D. STAFF BURNOUT SCALE FOR HEALTH PROFESSIONALS....128

APPENDIX E. NURSE BIOGRAPHICAL DATA AND LIFE-CHANGE INDEX.....129
APPENDIX F. PATIENT INFORMATION FORM.....130
APPENDIX G. CONSENT FOR FILMING ADULTS.....131
APPENDIX H. CONSENT FOR FILMING CHILDREN.....132
APPENDIX I. CONSENT OF AUTHORIZED HOSPITAL ADMINISTRATIVE PERSONNEL.....133
APPENDIX J. INFORMED CONSENT FORM.....134

VITA.....135

LIST OF TABLES

TABLE PAGE

1. Summary of Interobserver Reliability for Eleven Behaviors.....68

2. Means, Medians, Standard Deviations, and Ranges of Scores for Variables, Nurse Subjects.....75

3. Totals of Disconfirming Behaviors.....78

4. Mean Scores for Burnout, Stress, and Nurse Behaviors for Day, Evening, and 12-Hour Shift Nurses.....81

5. Mean Frequency of Behaviors per 30-second Interval In Nurses with Extreme Scores on Stress and Burnout.....83

6. Correlations Between Child Characteristics and Nurse Behaviors.....84

7. Mean Nurse Behaviors Per Interval by Child Age Group.....87

CHAPTER 1

INTRODUCTION

Many children have to be hospitalized for either brief, acute illnesses; long, chronic illnesses; minor or disfiguring surgery; or recovery from burns. Despite the recognition that the period of childhood is critical for the developing self-concept (Adler, 1927; Coopersmith, 1967; Laing, 1971; Mack, 1983; White, 1963) and for the acquisition of feelings and behaviors that persist into adulthood, little is known about the role of the pediatric nurse in these developmental processes. Hospitalized children may experience painful procedures, loss of privacy, and changes in body appearance that tend to make them especially vulnerable and sensitive to environmental input. Such environmental input is most frequently in the form of nurse-patient interaction. Few researchers have attempted to identify how the nurse contributes to the creation of an environment that encourages satisfying interpersonal communication, and whether nurses communicate in ways that promote the self-esteem and emotional well-being of hospitalized children.

Nurses have collected data and drawn conclusions about their own practice; sociologists, child development specialists, psychologists, and other professionals have

studied nurses extensively. However, in all of this research there has tended to be a strong reliance upon data collection by questionnaires and interviews aimed at determining the nurses' and patients' perceptions of nursing care (Brown, Tanner, & Padrick, 1984). There have been few efforts to support the findings or provide complementary views of the issue by using direct observation methods. We are limited, therefore, in our ability to describe how pediatric nurses in the hospital setting actually structure the interpersonal environment by verbal and non-verbal communication with their patients.

Purpose and Rationale

The primary purpose of this project was to describe selected communication behaviors of pediatric staff nurses. Nurses can structure the interpersonal environment in the hospital setting with a variety of behaviors; the three that have been identified for this project are confirmation, disconfirmation, and affection. A secondary purpose was to determine if the rate of these behaviors is related to selected personal and professional characteristics of the nurse including the degree of professional burnout evident, or to selected characteristics of the child. Study of these interpersonal communication behaviors is valuable because the degree to

which they are present or absent in their varying forms has been associated with varying levels of self-esteem (Barber & Thomas, 1986; Chess & Thomas, 1984; Fromm, 1956; Laing, 1962; Sullivan, 1953), and mental and physical well-being (Bowlby, 1969; Harlow, 1962; Montague, 1978; Sullivan, 1953).

The environment for hospitalized children includes a wide range of hospital personnel with whom they interact. Members of the nursing staff, however, tend to have the most frequent opportunities for input. Nurses provide care around the clock and often are responsible for administering uncomfortable or painful treatments, as well as pain relieving ones. In addition, nurses are in a position to offer children opportunities to feel that they have handled pain and fears in appropriate ways, and that their behavior can have either a positive or negative effect on the environment. Thus through the quality of interaction with the children, the nurse may influence the development of self-esteem.

It has been theorized that self-esteem arises from two sources, internal and external (Adler, 1927; Chess & Thomas, 1984; Franks & Morolla, 1976; White, 1963). White's developmental approach (1963) describes internal sources of self-esteem as being rooted in the child's experiences of power at influencing the environment, and

external sources as the reflected appraisals of others. Sullivan (1953) referred to the broader term, the "self-system", and theorized that it developed in response to the mother and the aggregation of mothering persons. Mack (1983) supports the importance of environmental forces in the development and protection of the self-esteem with this comment:

> Just as the beginning sense of being of value grows for the infant out of the shared matrix of loving interactions with its mother . . . , so our sense of personal value will always to a degree depend upon relationships with the outside world. (p. 9)

Successful experiences with the environment that foster good self-esteem include both positive input, with praise and acceptance, and guidelines, such as limit setting and firm disagreement (Cotton, 1983). The behavior of significant others in the environment in accepting the views of children while not necessarily agreeing with them assists the children in developing self-esteem or feelings that they are objects of worth (Coopersmith, 1967).

The broad concept of mental and physical well-being also can be linked to environmental input. Sullivan (1953) speaks of the need for tenderness and peripheral contact by infants and children in their movement toward psychological well-being. The deleterious effects of lack of affectionate behaviors and the significance of human touch on mental and physical health have been described by

theorists, researchers, and anthropologists (Bowlby, 1969; Harlow, 1962; Montague, 1978; Sullivan, 1953).

The nurse may be a part of the environmental forces in one or more ways: (a) as a significant other, (b) as a role model to parents or guardians, and (c) as a part of the aggregate of mothering persons described by Sullivan (1953). A significant other is one who is a reinforcer of behaviors or events. Reinforcement may occur because the person chooses to value the input of the significant other, or because the significant other is perceived as having power to control the well-being of the person.

Although the nurse on the pediatric unit may or may not be a mothering and nurturing person, she/he is almost always perceived by the children (patients) as a significant other, a person with both power and authority. Rosenberg (1973) has identified some of the characteristics of a relationship that produces a "significant other" as being of high intensity and long duration (as in long or severe illnesses), and marked by the authority of the "significant other" to withhold or provide rewards or gratification. Even brief hospitalizations expose children to interaction with the nurse as a person with some degree of authority; however, long hospitalizations, repeated hospitalizations, or even brief ones in which children experience painful procedures, are more likely to result in

the nurse being seen as a significant person in the environment. Environmental input in the form of threats, putdowns, or failures to show the children that they are valued may assume a great deal of importance during the hospitalization because self-esteem in children has been shown to be negatively influenced during systemic illnesses (Mack, 1983), surgery (Riffee, 1981), disturbances in daily routines (Campbell, 1964; Campbell, 1967; Wattenberg & Clifford, 1964), and chronic illnesses, disfiguring surgery or accidents (Bowden, Feller, Tholen, Davidson, & James, 1980; Mack, 1983; Moen, Wilcox & Burns, 1977; Swift, Seidman, & Stein, 1967).

The nurse has the responsibility for serving as the role model to parents or guardians. Failure to demonstrate behaviors that are associated with the development of positive mental and physical health, or to reinforce these desirable behaviors in parents or guardians is a failure to deliver high quality nursing care.

The third way in which the nurse may be seen as a participant in the environmental forces acting on the hospitalized child is with caretaking behaviors that are inherent in the mothering role (e.g. feeding, dressing, diapering, or transferring from one spot to another.) Although required caretaking behaviors were not considered in this project, caretaking did provide opportunities for

the nurse to display verbal and non-verbal behaviors that are considered nurturing (i.e. mothering) and that have been linked to the promotion of mental and physical well-being.

In could be argued that many children are hospitalized for brief, acute episodes, and that short-term interpersonal contacts with any individual nurse or aggregate of nurses would not be likely to have significant impact on long term emotional or physical well-being. However, consistency of positive forms of nursing behaviors can assume importance when the following are considered:

1. Hospitalized children may be particularly vulnerable to environmental input because of the strangeness of the situation and the perceived power of the nurse.

2. Emotional trauma may be minimized by children's perception that nurses are caring individuals.

3. More children with chronic illnesses are surviving longer and are receiving long-term care both at home and with repeated hospitalizations.

4. Attitudes toward the entire health-care system (i.e. future admissions, preventive care, and other related experiences) may be colored by a single hospitalization experience.

Conceptual Framework

Interpersonal Communication

Interpersonal communication is critical in the delivery of professional nursing care. Imogene King (1981) has developed a conceptual model of professional nursing based on the assumption that the focus of nursing is human beings interacting with their environment in a way that leads to a state of health for the individuals. She identified one of the major problems for health professionals as "the discovery of new knowledge about human transactions with the environment that are conducive to maintaining healthy individuals" (p.8).

King (1981) sees the nurse and the patient as two personal systems interacting to form an interpersonal system. The goal of this systems framework of nursing is to help people maintain health. Health in King's conceptual framework refers to the achievement of maximum potential for daily living through continuous adjustments to stressors in the internal and external environment. A major role for the nurse is to assist the patient in appropriate ways to make these adjustments. The goal of such adjustments should be positive self-regard and a maximization of the potential for mental and physical well-being. King points out that

> Self is perceived in relation to another person and to objects in the environment. Interactions with relevant others give one a sense of self. Self is an integral part of a person's human experience. If these experiences are positive, the self is enhanced; if negative, the self may need some assistance. (p.27)

Because interpersonal communication is a critical part of the developing perception of the environment in relationship to oneself, and because pediatric nurses both communicate with the patients and serve as role models for the parents, it is appropriate and important to study the communication of nurses. One way of conceptualizing interpersonal communication is as confirming and disconfirming responses. Laing (1962) describes a confirming response as one that is relevant to the behavior that evokes it. It is direct and grants the action significance and validity. A confirming response may be a smile, a frown, a touch, or a disagreement; the critical aspect of it is its relevance to the evoking behavior. Even rejection of the content message may be confirmatory if it is direct and not tangential, and if it recognizes the evoking action and grants it significance and validity (Laing, 1962). Confirming responses have been linked by theorists with increased self-esteem, self-worth, and mental stability in the person to whom the responses are directed (Buber, 1957; Heineken & Roberts, 1983; Laing, 1962; Seiburg & Larson, 1971; Watzlawick, Beavin, &

Jackson, 1967). Disconfirming responses (or the synonymous term non-confirming) are those responses that tend to negate or discount feelings or actions (Laing 1962). Disconfirming responses such as ignoring verbal or non-verbal cues or telling children they do not really feel the way they have indicated (e.g."That didn't hurt."), have been linked with altered self-esteem, alienation of people from each other, and even schizophrenia (Heineken, 1982b; Laing, 1962; Sluzki, Beavin, Tarnopolsky, & Vernon, 1976).

Nurses also communicate with children by showing affection. Affectionate behaviors may be reponses to cues exhibited by the children, or they may be behaviors initiated by the nurse. Affectionate behaviors include verbal communication such as use of pet names, offering praise, and laughing with the children. Non-verbal forms of affectionate behavior include both active touch, as in patting, and passive touch, as in holding a hand or sitting so that body parts are touching. Although touch and affectionate behaviors often are discussed briefly in nursing texts and in monographs and articles on the dying patient, only a few authors have dealt with touch as a comfort measure and described differences in perception of touch (Heslin, Nguyen, & Nguyen, 1983; Knable, 1981; Kubler-Ross, 1969; Penny, 1979; Tobiason, 1981; Triplett & Arneson, 1979).

Confirming, disconfirming, and affectionate behaviors are not mutually exclusive. An affectionate behavior is usually a confirming one also; however, it may be a disconfirming one. For example, if a child is expressing anger, and receives in return a broad smile from another person, that child has been disconfirmed no matter how much love and affection was intended by that smile. The expressed emotion was discounted and negated rather than being accepted, validated, and perhaps explored.

The relation between affectionate behavior and confirming or disconfirming responses has not been explored and reported. In addition, it is not known what the roles of affection, confirming, and disconfirming are in pediatric nursing or the extent to which these behaviors occur. Knowledge of nursing communication behaviors such as these will allow the members of the profession to more accurately identify what it is that nurses do to facilitate children's positive self-esteem and positive interaction with the environment, and therefore assist the child toward better mental and physical health.

Stress

King (1981) points out that knowledge about the concept of stress is vital for understanding the interpersonal systems that make up her conceptual framework of nursing. Stress is an energy response to

other people or to events in the environment. It may have either a negative or positive outcome. Although stress may produce growth, unrelieved and unremitting stress may be very psychologically wearing. King's major focus is on stressors in the lives of the patient and family and how the nurse may facilitate coping. However, she also speaks of the need to consider the stress in the nurse and to provide for necessary intervention. Both personal and job related stressors may be intense enough to influence the nurse's ability to communicate appropriately. To the author's knowledge, there is no reported research that examines the relation between personal stress and altered interpersonal communication behavior in nurses.

A consequence of job-related stress overload is the phenomenon known as professional burnout. As members of helping professions, nurses are among a group at higher risk than other professionals for developing burnout (Maslach, 1982). Burnout in its varying degrees has occurred when the professional no longer directs his or her emotional and physical energies toward the problems that were once of concern. The strain of the job setting and the developing attitude that one's efforts can make no significant change in the circumstances eventually lead to apathy and a pulling away from the people with whom the professional is working (Maslach, 1982). This withdrawal

has the potential for creating a negative impact on nurse/patient interaction.

Open Systems

In King's theoretical model of nursing (1981), the patient and nurse interact and exchange information as open systems. Not only does the nurse influence the patient, but the patient has the potential to influence behaviors of the nurse. Age and sex have each been demonstrated by a number of researchers to influence child behaviors (e.g. Fagot, 1974; Goldberg & Lewis, 1979; Maccoby, 1980; Whiting & Edwards, 1974). In addition, adults such as parents and teachers have been shown to respond differently to male and female children and to interpret the same behaviors differently in males and females (e.g. Botkin, 1983/1984; Block, 1978; Condry & Condry, 1976; Moss, 1967, 1974).

Possible effects of age, sex, and other child/patient characteristics on nursing behaviors have not been reported in the literature. In addition to age and sex, potentially important child characteristics are race, type of hospitalization, or number of hospitalizations. If the nurse and patient interact in an open system such as King describes, there seems to be a high likelihood that characteristics of the patient will be a determinant of nurse behaviors.

Summary and Objectives

It is important to study communication behaviors of nurses because interpersonal communication is a critical element in how developing children perceive the environment in relationship to themselves, and because pediatric nurses both directly communicate with the child and serve as role models to parents. Although positive interpersonal communication and opportunities for children to express feelings and attitudes have been identified as functional in assisting the children to reach their potential, only two studies have been reported that consider dysfunctional (disconfirming) behaviors in adults interacting with emotionally healthy children (Sundell, 1972; Mozingo, 1983). No investigations have been reported that describe either confirming, disconfirming, or affectionate behaviors exhibited by pediatric nurses.

This project was designed to:

1. Describe rate of occurrence of selected verbal and nonverbal behaviors in pediatric nurses. These behaviors are confirmation, disconfirmation, and affection.

2. Determine if there is a relationship between the rate of occurrence of these communication behaviors and the degree of professional burnout experienced.

3. Determine if there is a relationship between the rate of these communication behaviors in the nurse and the amount of self-reported personal stress.

4. Determine if there is a relationship between the rate of occurrence of these communication behaviors and selected personal and professional characteristics of the nurse (such as type of education, number of children at home, and other factors.)

5. Determine if there is a relationship between the rate of these communication behaviors in the nurse and selected characteristics of the child (such as age, length of hospitalization, and others.)

Assumptions

In developing this project the following assumptions were made:

1. All behavior communicates something.

2. Verbal and non-verbal communication occurring simultaneously may give conflicting messages.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter will present a limited review of empirical work on the interpersonal communication patterns of confirming, disconfirming, and affection, and on professional burnout, and child influences on adults. The literature will then be summarized in a manner that relates it to this project.

Confirmation and Disconfirmation

> The basis of man's life with man is twofold, and it is one - the wish of every man to be confirmed as what he is, even as what he can become, by men; and the innate capacity in man to confirm his fellow-men in this way. (Buber, 1957,p.102).
>
> Man wishes to be confirmed in his being by man and wishes to have a presence in the being of the other (Buber, 1957, p.104).

The German theologian Martin Buber spoke succinctly in the above sentences of the need of each of us as humans to be recognized in the eyes of other humans as having value. This confirmation of worth comes through communication with others. The psychotherapist, R. D. Laing (1962), points out that although the degree of confirmation and the modes through which it is expressed vary,

> the crux seems to be that it is a response by the other that is relevant to the evocative action, in according recognition to the evocatory act, and accepting its significance . . . . (p. 89)

A confirming act is a direct response that "gives recognition to the evoking action and grants it its own significance and validity" (Laing, 1962, p.89). This response may not be in agreement or may not carry a content message that the recipient desires to hear, but rather than negating or discounting feelings and actions, it recognizes and acknowledges them. Seiburg and Larson (1971) in their address to the International Communication Association Convention expressed these ideas even more simply and concisely: confirmation is "any behavior that causes another person to value himself more; disconfirmation refers to any behavior that causes him to value himself less" (Ms. p. 1). Although it might appear that these two definitions are not compatible, the delivery of the content of a disagreeing or unpleasant message may still be done in a manner that says to the recipient "I believe you are wrong, but I value and respect you and believe you are a worthwhile person." Any other verbal or non-verbal message, even though it may recognize the evoking action, does not confirm the recipient.

Watzlawick, Beavin, and Jackson (1967) devoted a large portion of their theoretical work Pragmatics of Human

Communication to what they described as three possible responses to a communication. A communication may be (a) confirmed (accepted), (b) rejected (denied - "You are wrong"), or (c) the sender of the communication may be disconfirmed. They point out that confirmation is "probably the greatest single factor ensuring mental development and stability that has so far emerged from [their] study of communication" (p. 84). Disconfirmation is not

> concerned with the truth or falsity...of [the person's] definition of himself, but rather negates the reality of [that person] as the source of such a definition. (p. 86)
>
> In other words, while rejection amounts to the message "You are wrong," disconfirmation says in effect "You do not exist." (Watzwalwick, Beavin, & Jackson, 1967, p. 86)

This feeling of disconfirmation may lead to "alienation" and "loss of self" (Watzlawick, Beavin, & Jackson, 1967, p. 86). It is critical to note that disagreement, or even discipline, is not to be equated with disconfirmation; Engle (1980) speaks of mutual esteem and openness of communication as elements of confirmation even when disagreement occurs. "Although agreement and disagreement are not equally rewarding forms of response, both acknowledge that communication has been attempted" (Barnlund, 1968, p. 352). Watzwalwick, Beavin, and Jackson (1967) agree with Barnlund that rejection (i.e. denial of

content) may not be destructive because it constitutes a limited acknowledgement of the subject, (i.e. You have an opinion; I disagree with it.)

One of the early discussions of disconfirmation in the psychotherapeutic literature appeared in 1962 when Laing referred to his clinical observation that in families of schizophrenics there is a lack of genuine confirming by parents toward each other as well as toward their children, even in the absence of large amounts of disconfirmation. Although some basic texts on communication, behavioral dynamics, and psychiatric nursing have begun to contain references to confirmation and disconfirmation (Jourard, 1980; Lego, 1984; Northouse & Northouse, 1985; Stuart & Sundeen, 1983), there has been minimal research using these communication concepts. Much of the material available is therefore of a theoretical and observational nature without empirical validation.

Two doctoral students from the University of Denver (Sieburg, 1969; Sundell, 1972) utilized these concepts as the basis for their work, but there is no evidence that any of their results were published. Seiburg (1969) developed a coding system and identified specific behaviors for both functional and dysfunctional communication. Although she discussed disconfirmation and confirmation, her coding system at that point was not divided into those two

categories. Functional communication behaviors, those that confirmed the recipient, were clear and unambiguous in content and relevance; dysfunctional communication, on the other hand, disconfirmed the recipient. These dysfunctional behaviors included (a) impervious responses (failure to minimally acknowledge the attempt to communicate); (b) tangential responses (the denial of the content and intent of the message so that the response does not fit the initial statement, but rather emphasizes an incidental aspect); (c) projective responses (those that deny the experience of the recipient and express the experiences of the sender such as "You can't possibly be hungry."); and (d) inadequate or ambiguous responses (a complex set of behaviors often seen in schizophrenics that include incomplete or unclear messages and vague use of pronouns).

Because no other instrument existed with which to compare the results of the use of the Sieburg behavioral coding system, construct validity was established by the known-groups method. "Effective" and "ineffective" small groups were identified by community group leaders using criteria drawn from human relations principles of organizational management. The groups were videotaped in unstaged activities and analyzed using the Sieburg behavioral categories. Effectiveness or ineffectiveness of

the groups was related to the frequency of occurrence of functional or dysfunctional responses.

Sieburg and Larson (1971) in a report to the International Communication Association used the terms "confirming" and "disconfirming" to describe interpersonal relationships; confirming responses met the criteria of being both relevant and clear. This study of a non-clinical or "normal" population (professionals in the field of communication) was significant because the concept of confirmation/disconfirmation had not previously been carefully considered outside of the psychiatric or psychotherapeutic setting. Subjects were asked to separate response items from 24 categories into those they most and least enjoyed. These items included categories such as interruptions, advice giving, disagreement about content, direct acknowledgement, incoherent response, and supportive response. Factor analysis allowed Sieburg and Larson to conclude that "normal" interpersonal responsiveness could be divided into two basic dimensions, disconfirming and confirming. The category of rejection, as described by Watzlawick, Beavin, and Jackson (1967) was subsumed into the confirming category if disagreement or rejection occurred at the content level, and disconfirming if the rejection occurred at a metacommunication or relational level.

Sundell (1972) used the Sieburg behavioral categories (1969) and the dimensions of disconfirming and confirming to look at reciprocal relations in interactions between 37 teachers and their students in grades 7,8, and 9. Content analysis with the Seiburg tool produced evidence of two behavioral groups within the teacher and student populations. Then with cluster analysis, he demonstrated that a reciprocal relationship existed in their behaviors. Confirming behaviors tended to elicit confirming responses and disconfirming behaviors elicited disconfirming responses.

Recently a nurse researcher, Jan Heineken, became interested in disconfirmation as a form of dysfunctional communication and published findings that may have relevance to nurse/patient communication, to parent education, and to intervention in less than optimal parenting. Heineken (1982a) slightly modified Seiburg's 1969 instrument to develop the Sieburg-Heineken Modified Confirmation-Disconfirmation Rating Instrument (CDRI). (Although Seiburg called this instrument a rating instrument, it is actually a tool for scoring behavioral categories.) This instrument uses one category of confirming behaviors and six categories of disconfirming ones (indifferent, tangential, inadequate, ambiguous, impervious, and disparaging). In modifying the tool,

Heineken placed the functional metacommunication and content responses into one category of confirmation behaviors, changed titles of two categories while keeping their content intact, and placed some behaviors into a new category named disparagement. Some examples of confirming responses are expressing agreement, disagreement, or neutrality; expressing feelings; asking for feelings or opinions; and clarifying another's feelings. Some of the disconfirming responses include failing to respond, avoiding eye contact, interrupting, shifting focus ("I'm scared about that." "I'm ready to go eat lunch."), negating expressions of feelings ("You don't really want that fattening candy."), using an ambiguous response ("Come here, honey." in an icy tone), disparaging or demeaning the individual ("You never get that right."), and giving an unrelated or tangential response ("See what I painted." "You got paint all over your clothes!")

Heineken (1982b) used the CDRI in a study comparing psychiatric patients with a control group and found that psychiatric patients used significantly more disconfirming behaviors than control group members. These results supported the "premise that disconfirming responses are associated with dysfunctional communications" (p.112). In light of Watzlawick, Beavin, and Jackson's (1967) discussion of disconfirmation as a pathologic form of

communication leading to altered self-esteem, and of Sundell's (1972) finding of the reciprocal nature of disconfirming responses, Heineken reiterates the belief that a high number of disconfirming behaviors may alter self-esteem and alienate people from one another.

Mozingo (Personal Letter to J. Heineken), also a nurse researcher, adapted the CDRI for use in mother/child dyads by identifying behaviors commonly seen in mothers of toddlers. This form of the CDRI was used in a three-year follow-up study of the effect of early maternal-infant contact in adolescent mothers. Although no significant differences were found between the treatment and control groups, the occurrence of disconfirming communications was noted to be 46% and 50% respectively. One adolescent mother used 25 disconfirming responses to her child within a one hour observation period (Mozingo, 1983). Although there are no norms yet for mother/child interactions because this adaptation of the CDRI has only been used once, Heineken (1983a) pointed out that when using the CDRI with adults, groups of normal individuals have been noted to use disconfirmation in no more than 10-15% of their responses.

The most current bibliography on interpersonal confirmation (Cissna, 1979) and a chapter in a more recent book on human communication (Cissna & Seiburg, 1981) both list a variety of theoretical papers and of research

(published and unpublished) on confirmation and disconfirmation. None of these papers deal specifically with the important topic of confirming and disconfirming responses to children. Any type of communication that a child initiates is a request to the receiver to confirm (or accept and recognize) him/her as a person with feelings, opinions, and needs.

> Interpersonal communication has always been a tool of maturation and individuation, strengthening an individual's ability to cope with others, adding to his joy in life, enabling him to overcome limitations of space and time....(Reusch, 1973, p. xii)

Certainly, dysfunctional communication patterns such as disconfirmation neither add to a child's joy nor serve as a vehicle for maturation, increasing self-understanding, or coping.

At all stages of development, interpersonal communication patterns are important variables. The human infant's cry is a powerful communicator and the ability of the infant to interact and to learn has been demonstrated by a number of researchers (Bower, 1977; Brazelton, 1961, 1973, 1978; Brazelton, Koslowski, & Main, 1974; Meltzoff & Moore, 1977). Positive, healthy development in infants in the form of secure attachment to the mother has been associated with maternal sensitivity and responsiveness to infant signals (Ainsworth & Bell, 1969; Ainsworth & Wittig, 1969; Levy, 1959; Sander & Julia, 1966). Attachment, an

ethological-evolutionary construct, refers to an affectional tie between two persons or two animals that endures over time and that remains present when the individuals are separated, thus resulting in proximity seeking behavior (Bowlby, 1958, 1969; Ainsworth, 1964, 1967). Secure attachment of the infant to the mother (or proximity seeking in reunion episodes) as opposed to avoidance or contact resistance, is correlated with willingness of the infant to explore the environment, and an ability to use the mother for comforting (Vaughn, Egeland, Stroufe & Waters, 1979). In discussing maternal behaviors that tend to be associated with secure attachment in human infants, Ainsworth and Bell (1969) describe the willingness and ability of the mother to consider the baby's point of view, to permit active participation by the baby in activities, and to allow the baby the experience of influencing the mother's behavior. Maternal behaviors such as these are consistent with confirming responses and inconsistent with all categories of disconfirmation.

The toddler period is a stressful one for parents and other caregivers because children in this age group are especially mobile and curious; in addition they indulge in behaviors such as tantrums, negativism, and insistence upon performing forbidden acts. The responses of parents and significant adults in the environment during this difficult

time are one source of development of a child's self-esteem and personal identity. A large body of theoretical and empirical work attests to the importance of the amount of love, respect, and approval perceived in the environment as a source of self-esteem (Adler, 1927; Chess & Thomas, 1984; Cooley, 1916, 1922; Erickson, 1968; Franks & Morella, 1976; Horney, 1945, 1950; Maeher, Mensing, & Nafzger, 1962; Mead, 1934; Shorkey, 1980; Sullivan, 1953; and Videbech, 1960).

The love and respect necessary for toddlers to develop worthwhile feelings about themselves will be communicated to them in ways that may be referred to as confirming behaviors. According to Givelber (1983), one task of parents in the development of self-esteem in toddlers and children is the "mirroring of affect and achievement" (p. 164). Mirroring, in this sense, is simply confirming or acknowledging the presence of the child's feelings and behaviors. Children who are regularly disconfirmed and "left feeling discounted, negated, or even ignored (Heineken, 1983b, p. 21) will not have the opportunity for successful experience with the environment that facilitates positive self-esteem (Chess & Thomas, 1984; Cotton, 1983).

A group of researchers is currently investigating a concept referred to as affect attunement (Stern, Hofer, Hart, & Dare, 1985). This behavioral process is akin to confirmation because it involves responding to what infants

appear to be experiencing. It allows infants to perceive how they are perceived, a form of social perception. Affect attunement is a broader and more comprehensive set of behaviors than mirroring, imitation, echoing, or affect matching because it is often non-cognitive in form and taps the emotional or internal state of the infant (e.g. moving in rhythm to the child's noise making or briefly contouring facial expressions to match the child's). Appropriate attunement may both confirm children's experiences and validate their existence.

When parents and adult caregivers regularly act in a manner that does not confirm children, the children may have difficulty with peer relations as well as lower self-confidence and emotional instability (Heineken & Roberts, 1983). Heineken and Roberts (1983) point out, in the one published clinical paper on children and disconfirmation, that the child reaching out to other children by using these learned disconfirming behaviors "will experience dysfunctional interactions and relationships, which in turn will reinforce his previously weakened self-concept" (p. 79).

Although confirmation and disconfirmation have been widely discussed in the literature on self-esteem and on human communication, there has been very little in the published nursing research about these two communication

behaviors. Nothing has been reported about the frequency of these behaviors in nurses working with children. Because confirmation has such potential for the promotion of self-esteem, and regular disconfirmation such potential for interfering with development of self-esteem, there is a need for describing how nurses use these behaviors in structuring the interpersonal environment for hospitalized children.

Affection and Touch

A wide range of behaviors that generally may be considered as expressions of affection have been identified as important variables in the social, emotional, and cognitive development of children in families (Ainsworth, Blehar, Waters, & Wall, 1978; Barber & Thomas, 1986; Olson, Bates, & Bayles, 1984; Smock & Rothblum, 1979). Affection as a concept includes specified verbal and non-verbal behaviors as well as a global concept often referred to as "warmth." An absence of these behaviors directed toward human and animal infants, on the other hand, has been associated with failure to thrive, poor sleep patterns, aggressive behavior, social apathy, and inability to form stable affectional relationships (Bowlby, 1951; Harlow & Harlow, 1969; Spitz, 1983).

The elusive concept "warmth" has been described as behaviors that relax interpersonal tension and show consideration and friendliness (Reed, 1962). This type of warm interaction does not preclude firmness or demands for high levels of performance. It can be demonstrated that children respond positively to warmth. Students of teachers in lower grades who score high on warmth demonstrate a greater increase in interest in science and in achievement in vocabulary and math than students whose teachers score low on warmth (Reed, 1962). "Warm" behaviors are not synonomous with affection or confirming ones, but are not inconsistent with those concepts.

Touching may be a form of affectionate behavior; however, there are many other kinds of touch - caregiving, comforting, sexual, restraining, aggressive, and painful or uncomfortable touch. Montague (1978) in his book Touching: The Human Significance of the Skin cites numerous research findings, theoretical papers, and clinical observations to draw the conclusion that the need for touch is universal, even though the amount that is needed and the way it is acceptably expressed may vary considerably across cultures.

Touch as a means of expressing affection or offering comfort has received minimal attention in the nursing research literature, although basic nursing texts frequently address the need for touch in providing care

(e.g. Olds, London, & Ladewig, 1984; Stuart & Sundeen, 1983; Widenbach, 1967; Wolff, Weitzel, Zoronow, & Zsohar, 1983). The nursing literature of the last decade is, however, full of articles and empirical work on therapeutic touch, a learned technique that cannot in any way be equated with touching as a form of affection and comfort (e.g. Borelli & Heidt, 1980; Krieger, 1974; Krieger & Paper, 1979; Randolph, 1984). Therapeutic touch involves using ones own hands and a process referred to as "centering" to produce a biological force believed to bring about therapeutic change in the patient. Results of the large body of recent empirical work on therapeutic touch have been inconclusive.

Barnett (1972) identified hospital areas in which touch was used most frequently for purposes other than direct caregiving; these were high stress units such as pediatrics, labor and delivery, recovery, and intensive care units. However, little is known about how nurses touch patients and how the touch is perceived. Hesling, Nguyen, and Nguyen (1983) in a project considering touch in adults concluded that the meaning of touch varies with the sex of the two people involved as well as the relationship of the two. They demonstrated that in the culture of the United states touch by people of the same sex is viewed with uneasiness, and that men are more concerned about the

sex of the person touching (that is, somewhat uncomfortable with the same sex person whether a close friend or stranger) and women are concerned about the degree of acquaintance (that is, somewhat uncomfortable with strangers of either sex touching).

These findings seem to support those of Deaugustinis, Isani, and Kumler (1963) who reported findings that in only half of the cases interviewed in a psychiatric setting did the initiator and receiver of touch interpret the meaning of the touch in the same manner. The implications of these findings for the nurse giving care to older children and adolescents have not been considered. Both caregiving touch and affectionate touch may be perceived differently in male and female patients depending on whether they are young children, older children, or adolescents.

Kubler-Ross (1969) in her widely read work on death and dying spoke of handholding as the single most meaningful gesture the nurse can offer to a dying person. In a recent empirical work on handholding (Knable, 1981) nurses identified handholding that was not associated with doing physical care as important for providing emotional support. The researcher was able to demonstrate the usefulness of handholding in eliciting positive psychological responses (but not physiologic ones) in 15 critically ill adults. These positive responses included

smiling, nodding, looking at the nurse, and turning the body toward the nurse. The nurse research associates were instructed to determine appropriate times for handholding and observe patient responses. There were 221 positive responses and 85 negative responses, e.g. turning away or withdrawing hand. No statistical analysis was reported.

Sommer (1980) demonstrated the effectiveness of reassuring touch on physiologic manifestations of anxiety during the transition phase of labor. The addition of handholding by the nurse to routine obstetrical care resulted in decreased levels of anxiety as manifested by lower blood pressure, fewer verbal expressions of anxiety, and decreased perception of anxiety in labor during the post partum period.

Penny (1979), in a study of 150 newly delivered women, reported the women's perceptions of touch experiences during labor. The most frequent responses to the question "Why do you think you were touched?" were "to help, touch was asked for, reassurance, and comfort." Although the women did identify some negative touch experiences such as checking cervical dilation or determining quality of contractions, they also identified touch as a means of conveying caring and concern. Most frequent responses to the question "Why do you think you were touched?" were "reassurance, caring, someone was there with me, security,

pain relief, and comfort." Types of touch by the nurse were differentiated by the women also; some touches were described as "gentle" and others were considered as "businesslike" and "procedural." In this sample white patients perceived touch more positively than did non-white patients and divorced or single women perceived touch more negatively than did married or separated women. The author attributed some of the findings to the small number of non-white staff nurses caring for this group of patients as well as the fact that most married women in this study had their husbands with them, whereas most single or divorced women had either other family members or just hospital personnel with them.

Sullivan's (1953) theoretical discussion of touch includes the need for tenderness and "peripheral contact" in caring for infants and children. A study of comfort measures for children compared the use of verbal, verbal with sequential touch, and simultaneous tactile/verbal measures to soothe distressed hospitalized males and females aged 3 days to 44 months (Triplett & Arneson, 1979). Significant advantages of tactile soothing emerged when comparing only verbal soothing methods to sequential verbal/tactile methods. Simultaneous verbal/tactile soothing was demonstrated as effective in soothing children at all age groups within five minutes.

Although few would deny the need of most people for affection, many questions are unanswered about culturally acceptable expressions of affection, differences in perceptions of affectionate behaviors, and the use of affection in its various forms by health care providers. In the present climate of high-technology health care, it seems appropriate to approach an investigation of the use of affection with patients by first describing the frequency of occurrence of the behaviors in nurses, the caregivers who have the most interaction with the child/patient.

Professional Burnout

Professional burnout is a phenomenon that has received a great deal of attention in the last decade. Cherniss (1980) has described burnout as "the process of change in which the professional's attitudes and behavior change in negative ways in response to job strain" (p. 5). Characteristically the professional with burnout demonstrates some degree of apathy, detachment from patients/clients, stagnation, ineffectiveness, and loss of idealism, energy, and sense of purpose (Edelwich & Brodsky, 1980; Skinner, 1979; Storlie, 1979). Jones (1982a, 1982b) showed significant correlations in a mixed group of hospital employees between burnout and arguments with

supervisors (r = .26, p<.05), arguments with co-workers (r = .29, p<.01), serious on-the-job mistakes (r = .24, p<.01,), and a tolerant attitude toward employee theft in those who admitted thefts (r = .33, p<.01).

Maslach (1982) points to elements of the setting as the precipitating factor in burnout, and describes it as a response to chronic everyday stress with the source of the stress being close work with people. Professionals at highest risk for burnout are those who work in situations in which the "human spirit is pitted against circumstances intractable to change" (Storlie, 1979, p. 2108).

Although nurses who work in special care areas are at high risk for development of burnout (Jones, 1980a), all nurses are vulnerable to the process. The gradual shift from a positive, caring attitude to a negative and uncaring one is often associated with spending less time talking with patients and more time interacting with peers (Maslach, 1982). General changes have been described in patterns of communication with patients/clients. One of these involves behaving as if one really does not have time to be there (Edelwich & Brodsky, 1980; Skinner 1979). Storlie (1979) says that with any professional experiencing burnout, "mandatory actions are carried out, but the emotional investment that transforms a task into an art form is missing" (p. 2108). Nothing has been reported that

describes the manner in which communication patterns such as affection, confirmation, or disconfirmation change in the professional experiencing burnout.

Several studies have considered the relationship of personal life stress and on-the-job behaviors or perceptions of occupational stress for professional and non-professional workers. Pecoraro, Theriot, and Lafont (1984) in a study of a variety of workers determined that parents of latchkey children are less productive during the time their children are at home alone. This same study showed that more assembly line accidents also occur during these hours. In contrast, Ivancevich (1986) demonstrated no relationship between personal stress as measured by an adapted version of the Holmes and Rahe Schedule of Recent Events and job performance as measured by units of output. Using the Schedule of Recent Events, Carranza (1973) showed an association between personal life stresses and less desirable aspects of several performance variables in high school teachers. Johnson (1985) found that perceived occupational stress in full time nurses was positively related to personal stressors (as measured by the Schedule of Recent Events.)

Bhasat (1983) offered a theoretical view of the relationship between the experience of stressful life events and workplace behaviors that are valued by the

organization. His somewhat complex conceptual model included seven propositions that can best be summarized as: Mental and emotional involvement with either negative or positive stresses will lead to cognitive outcomes that may decrease involvement in job related concerns. The model also includes mediating factors such as cognitive restructuring, emotional and social support, and other stressors.

Child Influences on Adults

An important part of the environment in which nurses function consists of the patients with whom they interact. A large body of literature in recent years points to the effect of children on their caregivers. Prominent in this literature is the work on mother-infant interaction reported by Lewis and Lee-Painter (1974) and by Brazelton, Koslowski, and Main (1974). These researchers developed and tested interactional models that initiated a wave of research on interaction and reciprocity.

Certain characteristics of the child have been shown to affect parenting behaviors. A major characteristic that influences parent behavior is sex of the child. Thoman, Leiderman, and Olson (1972) suggest that these differences in parent behavior begin at birth. Mothers in their study, vocalized more to their infant girls, but tended to respond

to their infant boys by holding them closely and offering them distractions. These findings were corroborated by findings of Moss and Robson (cited in Korner, 1974) and Lewis (1972). Moss and Robson (cited in Korner, 1974) showed that the state of infant alertness was a determinant of how mothers interacted with their infants. Differences in the ability of the infant to be soothed also have been reported (Brazelton, 1961; Korner & Thoman, 1972). Korner (1974) points out that these differences may ultimately affect caregivers' responses to children. Brazelton (1961) reported a case of a mother who became so demoralized by what she perceived as her inability to mother her irritable child that she became completely ineffectual.

Behaviors of teachers have been shown to differ with varying characteristics of children. Although the influence of the child's sex has been often studied, there have been conflicting findings. Several researchers reported more teacher attention to boys (Alfgren, Aries, & Oliver, 1979; Cherry, 1975). However, Fagot (1973) reported more overall teacher attention to girls. Botkin's (1983/1984) findings were similar; teachers in the preschool setting for her study consistently expressed more affection to and social interaction with female children than male children.

No reported studies point specifically to how nurses respond to the varying characteristics of their pediatric patients. The possibility exists that the reason for an admission to the hospital, number of previous admissions, and number of days in the hospital, as well as age, race, and sex may be important variables in the system in which the nurse and the pediatric patient interact.

Integration of Related Literature

The development of positive mental and physical health in infants and children can be tied to events and behavior of significant others in the environment. Elements of environmental input that have been identified as important include interpersonal communications such as confirming and disconfirming responses and affectionate behaviors. Affectionate behaviors such as touching, smiling, laughing with, and calling by affectionate names may also be considered confirming behaviors if they acknowledge an evoking behavior and cause the recipient to value him/herself more. It is possible to confirm and disconfirm simultaneously by the use of both verbal and non-verbal behaviors. (An example would be the avoidance of eye contact or walking away from the patient while at the same time answering a question.) It is also possible to show affection and to disconfirm at the same time by using

verbal and non-verbal behaviors. (An example would be the patting a questioning patient with a comment such as "Now why would you want to know that?")

The pediatric nurse is in a unique position of serving as a role model to parents and often as a significant adult in the environment. The lack of descriptive literature on nurse behaviors toward children (such as confirmation, disconfirmation, and affection) points to a need for more research. Factors that may affect nurse communication with clients also need to be identified and correlated with levels of confirming, disconfirming, and affectionate behaviors. Professional burnout and personal characteristics of the nurse and patient are factors which also may have an impact on how nurses and patients interact. Because little is known about the impact of burnout or personal stress on nurse behaviors, and because personal characteristics of nurses and patients have not been considered in research efforts, there is value in exploring both of these areas.

CHAPTER III

METHODS

Hypotheses

The primary goal of this project was to describe selected communication behaviors of pediatric staff nurses. In addition, the following four hypotheses were tested:

1. A positive relationship exists between professional burnout and disconfirming responses to pediatric patients by staff nurses.

2. A negative relationship exists between professional burnout and confirming responses toward pediatric patients by staff nurses.

3. A negative relationship exists between professional burnout and affectionate behaviors toward pediatric patients by staff nurses.

4. A positive relationship exists between affectionate behaviors and confirming responses directed to pediatric patients by staff nurses.

In addition to testing the above hypotheses, the project was designed to determine if there are correlations between nurses' affectionate, confirming, or disconfirming behaviors and the amount of personal stress being experienced, the shift being worked, possible fatigue (as reflected in number of days into the work cycle), personal

and professional characteristics of the nurse, and selected characteristics of the patient.

Setting and Sample

Data were gathered on nurses in four nursing units in three hospitals in the same metropolitan area. No data were gathered on nurses in the emergency department, operating room, recovery room, or intensive care units. Patients in operating and recovery areas are often heavily sedated and nurses do not interact with them in the same manner as on a general nursing unit. Nurses in the emergency unit and intensive care units were excluded from this sample because the extreme stresses on the child in these units make them a different population of recipients of nursing. In addition, the nurses in these units are a different population because they have been identified as being in a much higher job trauma range than the nurses on the general pediatric care unit (Jones, 1980a).

The nursing units where data were collected consisted of both private and semi-private rooms. Each unit had a central nursing station from which the nurses worked, and in which charts, medicines, and supplies were stored. Each of the units was based in a hospital where professional nursing students and faculty were frequently present for

student clinical experiences, thus the nurses were accustomed to being observed.

Data were gathered on a volunteer convenience sample of 18 nurses. Criteria for the nurses to be included were: (a) have practiced nursing for a minimum of two years total, but not necessarily consecutive, (b) have practiced pediatric nursing for a minimum of six months just prior to participation in this study, and (c) be employed in a staff nurse position on a pediatric nursing unit (with the exception of those units described above). Of the nurses who were present at the times the investigator chose for recruitment, every nurse who met criteria agreed to participate. Ages of the nurses ranged from 22 to 49 years with the time since completing their basic nursing education ranging from 2 to 26 years. The sample was slightly skewed toward younger nurses with fewer years in nursing practice. Numbers of years as a pediatric nurse ranged from 2 to 27. (Three of the subjects reported their time as a pediatric nurse as a longer period than that time since completing their basic education. It is believed that they included time as either a Liscensed Practical Nurse or a Pediatric Nursing Assistant.) Fourteen subjects reported that their entire career as a nurse had been spent in some form of pediatric nursing. Three of the 18 nurses were working part-time at the time of the data collection.

Ten subjects had children of their own and nine of them still had children living at home. Ten subjects reported having either a diploma or an associate degree, and eight had a baccalaureate degree. Only one black nurse was noted among potential candidates and she agreed to be a subject. No male nurses were employed on any of the four units. The sample consisted of 9 nurses on day shift (7 a.m. to 3 p.m. or 7 a.m. to 7 p.m.), 6 nurses on evening shift (3 p.m. to 11 p.m.), and 3 nurses on night shift (7 p.m. to 7 a.m.).

Operational Definitions

Disconfirmation

Disconfirmation is any verbal or non-verbal response of the nurse that falls into one of the six disconfirming categories on the Seiburg-Heineken Modified Confirmation-Disconfirmation Inventory, copyrighted as the CDRI and used with permission of the author. (The measurement system is described in Appendix A with the present researcher's data collection tool as Appendix C.) The six categories of disconfirming responses are indifferent, tangential, impervious, inadequate, ambiguous, and disparaging.

Confirmation

Confirmation is any response that recognizes and acknowledges the child's implied or expressed feelings or behavior. Any response of the nurse that cannot be coded as disconfirming on the CDRI is a confirming one. (See Appendices A and C.)

Affection

Affection is any behavior of the nurse directed toward the patient that falls into one of four categories of the Affection Measurement System (Twardosz, Schwartz, Fox, & Cunningham, 1979). (See Appendices B and C for descriptions and data collection tool.) As described in Chapter 1, the concepts of affection and confirmation or disconfirmation are not mutually exclusive. Overlap and scoring of both behaviors may occur if the affectionate behavior is a response to the child's behavior. If the nurse initiates the behavior, it is scored only as an affectionate behavior.

Professional Burnout

Professional burnout is the amount of adverse emotionally-based reaction to the stresses of the job situation as measured by the Staff Burnout Scale for Health Professionals (SBS-HP), a 30-item inventory used by

permission of London House Management Consultants. (Attached as Appendix D.)

Personal Stress

Personal stress is the amount of major life change, either desirable or undesirable, experienced in the past two years as measured by the Holmes and Rahe Social Readjustment Rating Scale (also commonly known as the Life-Change Index). (Attached as Appendix E.)

Measurement Tools

Confirmation/Disconfirmation Rating Instrument

The Seiburg-Heineken Modified Confirmation Inventory (copyrighted as the Confirmation/Disconfirmation Rating Instrument or CDRI) was first developed by Seiburg (1969) as a seven category system for describing communication behaviors in groups. Rating Instrument is a misnomer because the tool actually codes frequency of various behaviors. The response categories were intended to represent all behaviors including those usually regarded as "noise." If the response could not be coded as dysfunctional, it was evaluated as functional communication according to the criteria for terminology in use for that study. Reliability of the tool was determined by (a) intraclass correlation in which the sum of all scorings by each rater in each response category was compared (r = .98

without consideration of observer error, $\underline{r}$ = .97 when observer error was included), (b) item by item agreement and disagreement (mean percent of agreement = .72), and (c) Spearman correlations between pairs of judges (coefficients of .91, .91, and .88).

Construct validity for the category system as a whole was established by the known-groups method using community groups categorized by other criteria as "effective" or "ineffective." This is a suggested procedure for indirect validation of an instrument when no other instrument is available with which to directly compare the instrument being investigated (Kerlinger, 1973). Chi-square for the entire tool was significant ($\underline{p}<.001$), indicating that the tool could be used to distinguish the functional or dysfunctional character of interpersonal responsiveness.

Not all of the seven categories were significant in differentiating effective and ineffective interaction. The categories called in the original tool metacommunicative, projective, and inadequate responses occurred with almost equal frequency in effective and ineffective groups. One category, ambiguous response, occurred in higher, though non-significant, rates in groups who had been identified as having ineffective interpersonal relationships. Sieburg felt that it was not appropriate to eliminate these responses without further testing because the infrequency

of the occurrence of many of the behaviors might account for the non-significant findings and because the population on which the tool was being validated was a non-clinical one.

Heineken (1982a) reported modifications of Seiburg's tool. Two categories of disconfirming behaviors underwent name changes, and another disconfirming category was added. (See Appendix A for the resultant categories.) Additional validity checks were not deemed necessary by Heineken. Inter-rater reliability was established by applying Kendall's coefficient of concordance W (yielding a value of .97), and attainment of a mean percentage of inter-observer agreement of 94% in item-by-item comparison. Heineken copyrighted the modified version as the Confirmation/ Disconfirmation Rating Instrument (CDRI), but requested that it be properly known as a modification of the Seiburg tool (Personal letter, 1983).

Mozingo (1983) adapted the CDRI for use in identifying categories of responses directed by adolescent mothers toward their children. Inter-observer reliability was 85% on confirming responses and 64% on disconfirming responses with an overall of 74.5%. Because a total number of responses within an observation period was used rather than an interval-by-interval method, it was not possible to

determine if the coders were seeing the same behaviors in the same intervals.

Affection Measurement System

The Affection Measurement System used in this study was developed by Twardosz et al. (1979) to provide an objective method of measuring expressions of affection. In order to develop a socially validated system, students were asked to observe adults interacting with children in day care centers, and to write down behaviors that they believed expressed affection. Four affectional behavior categories were identified: (a) smiling, (b) affectionate words, (c) active physical contact, and (d) passive physical contact. The system was tested and revised until an acceptable interobserver agreement was obtained. After training, interobserver agreement scores for occurrence and non-occurrence of behaviors in adults ranged from .68 to .95 across behaviors.

Concurrent validity of the categories and behavior examples was established by asking community volunteer raters to evaluate taped segments of interaction. Pearson product-moment correlations between community ratings and actual occurrence of the behaviors yielded evidence of moderate relationships for all four affectionate behaviors. This system, unlike the previously described CDRI, involves

both nurse-initiated behaviors and responses to patient behaviors.

Staff Burnout Scale for Health Professionals

The SBS-HP is a 30-item inventory that assesses negative emotionally based reactions to the stresses of the job situation, and that can be administered in approximately 20 minutes. The SBS-HP assesses adverse cognitive (e.g. "I often think about finding a new job."); affective or emotional (e.g. "I frequently get angry and irritated with my patients."); behavioral (e.g. "I avoid patient contact when I go to work."); and psychophysiological (e.g. "I experience headaches while on the job.") reactions that make up the burnout syndrome (Jones, 1980b). Scores may range from 20 to 140. Ten of the items are a distortion or "lie" scale and allow the researcher to identify which subjects tend to fake low burnout (Jones refers to this as "fake good") on the items. Jones (1980c) suggested that scores of 7 or above invalidate the use of the scale for that subject. Preliminary work by Jones yielded a mean of 2.74 with a standard deviation of 2.12 on the lie scale.

Spearman-Brown split-half reliability for Jones SBS-HP scale is .93. Item analysis correlating each item of the scale with the total score was performed to determine

internal consistency. The average item-with-total score correlation (using Pearson product-moment correlation) was .71 with all items correlating with total score ($p<.001$ or less).

Construct validity was established by correlating the SBS-HP scores to eight criterion measures (Jones, 1980b). There was a positive correlation with all criterion measures except physical illness and on-the-job mistakes. Correlations were: patient to staff ratios ($r = .42$, $p<.05$), absenteeism ($r = .49$, $p<.01$), tardiness rates ($r = .37$, $p<.05$), searches for new employment undertaken ($r = .49$, $p<.01$), disciplinary action received ($r = .46$, $p<.01$), and alcohol use ($r = .57$, $p.01$). Correlations for the other two criterion were not reported.

Social Readjustment Rating Scale (Life-Change Index)

The development of the Social Readjustment Rating Scale was reported in 1967 by Holmes and Rahe as a 43-item check list of major life changes. The impetus for the development of such a weighted scale was the growing body of research that associated social events that required adaptation with physical illness (Holmes & Rahe, 1967). A volunteer convenience sample of 394 subjects was asked to rate the 43 items, that had been identified by the authors based on clinical experience, according to the

relative degree of readjustment perceived necessary. These items included undesirable events (e.g. forclosure, death of spouse, jail term) as well as those that might be desirable or undesirable (e.g. marriage, retirement, vacation). Consensus on the relative order and magnitude of coping/adaptation required by the items was high, as demonstrated by the high coefficients of correlation (Pearson's r) between the discrete groups in the sample (e.g. male vs female, protestant vs Jewish). All correlation coefficients were above .90 except that of white and black subjects, which was .82. The authors point out that the high degree of consensus indicates that agreement about the magnitude of these events transcends race, age, education, religion, marital status, education, and social class. This scale is widely used and is available from many library and textbook sources for use by researchers and clinicians.

Nurse Biographical Data

In order to examine the potential mediating role of nurse factors on the rate of both affection and confirmation/disconfirmation behaviors, biographical data were collected about each nurse. This data included age, sex, type of education and interest in further education, years of practice, number of children and children at home. The biographical tool is attached as Appendix E.

Patient Information

In order to examine the possible role of patient factors on the frequency of both affection and confirming or disconfirming behaviors, child data were collected by the researcher after the nurse observations were completed. This data included age, sex, reason for admission, days in the hospital, and number of previous admissions. The questionnaire used to collect these data is attached as Appendix F.

Pilot Project

A pilot project was carried out in April and May of 1986 by this researcher for the purposes of adapting the CDRI and the Affection Measurement Tool for use in the pediatric hospital setting, testing them in that setting, and developing a training manual and videotapes for training observers. The researcher first observed four volunteer nurses interacting in their practice setting and gathered examples of actual responses that fit into the identified categories of confirming and disconfirming responses, and affectionate behaviors. A 40 page self-paced programmed training manual was developed for training observers. Modifications of the manual occurred as problems arose in differentiating behaviors. Interval-by-interval coding by the researcher of the behaviors of the

four volunteer nurses occurred over a period of three weeks. The accumulated time was 167 minutes. The researcher and four trained observers (senior students in the College of Nursing, UTK) then observed in pairs using 30 second, one minute, or two minute intervals as assigned for that observation period. The time intervals were varied in an attempt to determine whether longer intervals were associated with a decrease in inter-observer reliability. The four observers met with the researcher weekly in order to discuss the continuing process of adaptation and improvement, and to suggest changes in the training manual.

Inter-observer reliability for the four observers and the researcher was calculated. The percentage of agreement was calculated by the general formula:

$$\frac{\text{agreements}}{\text{agreements + disagreements}} \times 100$$

In order to avoid spuriously high findings, especially with infrequently occurring behaviors (Hartmann, 1977), agreement of non-occurrence of behavior was not included in the calculations. The mean percentage effective agreement was determined using the formula:

$$\frac{B}{B + A + D} \times 100 = \%\ \text{effective agreement}$$

when B = Agreement on occurrence by both observers

A = Occurrence recorded by observer 1 but not 2

D = Occurrence recorded by observer 2 but not 1

Confirming behaviors for the twelve observation periods of the pilot project were summed and found to have a 90% effective agreement. The disconfirming behaviors when summed for percent effective agreement were: indifference 64%, tangential 33%, impervious 67%, inadequate 100%, and ambiguous 0%. The occurrence of these disconfirming behaviors was rare. For example, the single ambiguous response was seen by one observer and not seen by the other, resulting in 0% agreement. There was 100% agreement that disparaging behavior did not occur. Effective agreements for the four affectionate behaviors when summed were: smile 84%, affectionate words 84%, active contact 71%, and passive contact 58%.

Based on input from the observers and the problems with inter-observer agreement (anything less than 80% effective agreement was not acceptable), the learning manual was modified and an additional training tape was developed. An example of the changes made in the manual is the placement of tangential and impervious responses on the same page in order to better contrast these two behaviors.

The examples for each behavior were evaluated by the observers and were believed to be appropriate for the categories as described in the instructions for use of the tool (Heineken, 1982). Evaluation of accuracy of the

examples given for the categories of behavior was obtained by submitting the training manual to a nurse researcher who has previously used the tool in a adult/child setting (Mozingo, 1983), and to the developer of the CDRI, Heineken. Both of these researchers identified the examples of behavior as appropriate for the categories.

Procedures

Training Materials

A simulated videotape of nurse/child interactions was made for the pilot project. In order to improve the inter-rater reliability on some of the behaviors being observed, an additional videotape was made for training for data collection. The behaviors that had lowest agreement scores were emphasized on the second tape. The adult in the second tape spoke faster and used more non-verbal communication, and was therefore more difficult to code. The difference in style and mannerisms of the adults on tape two provided more variation in the training for data collection. As with the pilot project, the adult and children used in developing the training films were recruited from the university community. Informed consent was obtained for filming. (See Appendix G and Appendix H.)

Recruitment of Subjects

Hospital administrative units were approached for permission to gather data on information exchange between pediatric nurses and their patients. (Attached as Appendix I.) The focus of this project was to be nurse communication behaviors only, with no child behaviors recorded. Administrators received reassurance that the researchers would only observe nurses who were willing to participate, and would leave the room of any patient or family who expressed discomfort either verbally or non-verbally with the presence of an observer.

Four nurses who participated in the pilot study were asked to participate in the training portion of this project only. All four agreed. These four were not subjects for data collection.

The PI visited the in-patient units in which permission was granted to gather data in order to recruit nurses from both day and evening shifts to participate. All nurses were recruited who met criteria and who were present at the times the charge nurse had indicated as most appropriate for explaining the project. By recruiting at change-of-shift times a mix of day, evening, and night nurses was obtained. (See description of sample for specifics.) Informed consent was obtained from all participants. (Attached as Appendix J.)

Observer Training

Observers were seven senior students in the College of Nursing enrolled in independent study. Four students were involved the first half of the quarter and three the second half. This split was necessary because of other course commitments. They were given approximately four days to carefully study a self-paced training manual prior to taking a written exam on the contents. Four of the seven students did not score the required 90% on the first exam and were involved in additional study, group discussion, and feedback from the PI before retaking the exam. All four passed with greater than 90% on the second attempt and the observers moved into the second phase of training.

The second phase involved viewing and coding training tapes in the small groups with the PI controlling the time intervals for stopping and starting the tape and leading the discussion of agreements and disagreements on observations. These tapes were available to the observers for practice between small group sessions. When the PI believed the students understood the system and had all questions answered, the observers were assigned in pairs to record behaviors of four nurses who had participated in the pilot project. The observer designated as the primary observer timed intervals and signaled the reliability observer by tapping a pen on the clip-board which held the

score sheet. After each pair recorded for approximately two hours on the nursing unit, inter-observer reliability was determined, and the group met to discuss problems. Observers were assigned a different nurse and were paired differently for the second (and third if needed) recording sessions. At the end of that time all pairs were able to achieve greater than 80% effective agreement of occurrence of behaviors. Observers generally had 100% agreement of non-occurrence of disconfirming behaviors and on passive contact. The continuing checks on inter-observer reliability during data collection are described later in this chapter.

Collection of Data

Collection of Observational Data

Data were collected on each nurse by one observer after inter-observer reliability reached an acceptable level during initial training. Observation intervals began when the observer entered the room with the nurse. Each lasted 30 seconds with a 10-second interval following to complete coding of behaviors. All eleven behaviors were coded simultaneously and each behavior was coded as often as it occurred. The decision to code behaviors simultaneously was supported by the experience of Maerov, Brummett, Patterson, and Reid (1978) who reported reliable

simultaneous coding of 18 verbal and non-verbal behaviors in observing family behavioral interaction, and by Frame's (1979) research showing accurate recording of up to 14 separate behaviors using the interval-by-interval method. Recording of most of the behaviors took place as the behavior occurred so the 10-second interval was ample to complete coding.

Subjects were observed until a minimum of 60 full intervals had been coded (i.e. 30 minutes of behavior). All full intervals over the 60 required ones were included in the data. No partial intervals were included. Based on pilot work, it was anticipated that the time needed to collect that amount of data would be approximately 4-7 hours. During the pilot, training sessions, and first observation weeks much observer time was spent waiting for the nurse to complete charting, prepare medications, gather supplies, and do other tasks prior to entering a patient room. During the pilot project observers noted fatigue at approximately 2 1/2 to 3 hours; therefore, each observer was instructed to spend no more than 3 hours in the patient unit on each observation day.

Each observer was assigned to either two or three subjects. In order to decrease bias, the original plan was to assign initial observation times in a random manner on a grid. This proved to be impossible because of the

differences in scheduling practices of the different institutions and nursing units and the availability of observers. (One example of such a problem is that on all four units the six week work schedule is not available until a few days before the previous one ends. In order to begin observations, it was necessary to start with a one or two week schedule.)

Considerations that were made for assigning observations were time in the work cycle (i.e. days 1, 2 or 3 or days 4, 5, 6, or 7), half of shift (first or last), and agency. Because three nurses worked part-time, six worked 12 hour schedules (i.e. three days on and three off), and several sometimes worked on other units, there were only 4 of the 18 subjects who could be observed late in their work cycle. It was possible to evenly divide the observation periods so that half of the subjects were observed in the first half of their shift and half were observed in the second half of their shift. This assignment could not be handled in a random manner, however, because of the commitment of the researcher to the observers to complete observations by 11 P.M., and because of the scheduling difficulties with inter-observer reliability checks. Agencies were rotated so that observations were occurring on two of the four involved units during any week of observation. In all but one

instance nurses were scheduled for observation on two successive days in order to maintain their position of early or late in the work cycle. (Split observations of this nurse were done at the same position in the work cycle.)

Collection of Professional Burnout Data

After the final observation period the student observer provided the nurse with the SBS-HP scale (attached as Appendix D) and waited for the form to be completed. In every instance the nurse was able to stop activities long enough to complete the scale.

Collection of Biographical and Life Change Data

The observer also had the biographical data form and the Life-Change Index Scale (attached as Appendix E) available on the final observation day. The data form included such items as type of formal education, age range, number of children at home, and other personal factors that might affect nurse behavior.

Collection of Patient Biographical Data

Upon receiving the information from the observer about patient room numbers in which nurse behavior data was collected, the investigator went to the nursing unit in

order to get permission to get patient data from the parent or guardian. (This form is attached as Appendix F.)

An unanticipated (and therefore unplanned for) problem was the extremely rapid turnover of patients resulting in loss of data if the PI was not able to get to the unit immediately. Some children were discharged while the observer was still on the unit. Others were discharged within a few hours after the observer collected the data; one patient went home at 10 P.M. In the instance of one severely brain-damaged child with an extended stay, no parent was available for the entire period of data collection. In two other instances the parents requested not to have their rest disturbed.

A data base was collected on 50 patients. Some of these patients were cared for by more than one nurse subject. Because of this overlap, nurse/patient data is available for 61 interactions out of a possible 118 total interactions. (An interaction is a nurse/patient contact; it may be any number of 30 second intervals in length.)

Inter-observer Reliability

Experience in the pilot project showed that it was possible to accurately code longer observation intervals; however, the 30-second interval was chosen in order to increase the likelihood that both observers were recording

the same behavior at the same time interval. This is critical to calculation of inter-observer reliability.

In order to maintain a high level of inter-observer agreement and to prevent observer drift, observers were scheduled in pairs for a reliability check twice during the three weeks of observation. Weekly meetings were held with the observers and the PI for the purpose of discussing problems with category behavior identification and observer drift, identifying specific problems, and re-training if necessary.

Reliability observers were scheduled to go to the unit on the second day that the nurse was being observed in order to give one day for the nurse to get comfortable with an observer. They were expected to arrive shortly after the observer who was collecting data, and to stay for a minimum of one clock hour. Unexpectedly, nurses on one unit spent considerably more time in patient rooms than those on the other three units and the minimum of 60 intervals was reached in the first observation day with four nurses. In addition, work schedules were unexpectedly changed twice so that on the only days the nurses could be observed, there were no other raters available for reliability checks. Therefore twelve of the eighteen scheduled inter-observer checks were completed. There were

348 total intervals of reliability checks (174 minutes). (Range of intervals coded 5 - 54, Mean intervals 22.)

Data from the reliability checks were placed in a 2 X 2 contingency table in which:

Cell A = occurrence scored by observer 1 but not 2

Cell B = occurrence scored by both observers

Cell C = nonoccurrence scored by both observers

Cell D = occurrence scored by observer 2 but not 1

Percent effective agreement of occurrence included all behaviors recorded even if they occurred more than once in an interval. The formula suggested by Hartmann (1977) that was applied is:

$$\frac{B}{A + B + D} \quad X\ 100$$

This formula, also known as scored interval (S-I) reliability (Hawkins & Dotson, 1975) is particularly sensitive to agreement of occurrence when the behaviors happen infrequently. The ommission of Cell C (intervals of agreement of non-occurrence) tends to avoid a spuriously high calculated percent and gives a more accurate picture of how well the two raters agree on occurrence.

The mean effective percentage of agreement scores for the four affectionate behaviors were: smile 83%, affectionate words 95%, active contact 75%, and passive contact 93%. Mean effective percentage of agreement for confirming behaviors was 83%. There is not agreement

among professionals about acceptable effective percentage agreement score. Hartmann (1977) points out that 80% is generally acceptable; however, 70% may be acceptable with complex scoring systems (Hartmann & Wood, 1982). (See Table 1 for a summary and comparison of results of all inter-observer reliability checks on the eleven behaviors.)

Although some disconfirming behaviors were recorded during the training sessions and during the data collection process, only one was recorded during inter-observer reliability checks. Observer 1 recorded a single instance of indifference that observer 2 did not record; this resulted in a 0% agreement of occurrence. The change of a single unit by either observer would have yielded 100% agreement.

Hawkins and Dotson (1975) address this problem of extreme variability in agreement of either occurrence or non-occurrence for infrequently occurring behaviors. They summarize the thinking of other researchers in their suggestions for the calculation of agreement scores for both the occurrence, or scored intervals (S-I) and non-occurrence, or unscored interval (U-I). A clearer picture of how accurate the scoring is may then be presented by reporting the mean of the S-I and the U-I for the behavior.

Table 1.

Summary of Interobserver Reliability for Eleven Behaviors

Behavior	Occurrence Agreement[a]	Non-occurrence Agreement[b]	Mean SI-UI	Kappa
Smile	83	89	86	.86
Affectionate Words	95	97	96	.99
Active Contact	75	97	96	.99
Passive Contact	93	99	96	.85
Confirmation	83	70	77	.89
Indifference	0	99	50	0
Tangential	-	100	-	0
Impervious	-	100	-	0
Inadequate	-	100	-	0
Ambiguous	-	100	-	0
Disparaging	-	100	-	0

[a]Scores are reported as mean effective percentage agreement of occurrence. May be referred to as Scored Intervals (SI).

[b]Scores are reported as mean effective percentage agreement of nonoccurrence. May be referred to as Unscored Intervals (UI).

The formula for this is (S-I + U-I)/2. Percent effective agreement of non-occurrence was calculated by the formula:

$$\frac{C}{A + C + D} \quad X\ 100$$

See Table 1 for a summary of agreement of U-I.

Agreement of non-occurrence of the four affectionate behaviors ranged from 89% to 99%. Agreement of non-occurrence of confirmation was the lowest with a 70% effective agreement of non-occurrence. Agreement of non-occurrence was 100% for all disconfirming responses except indifference which was 99%.

Means of scored intervals and unscored intervals for affectionate behaviors were 86% for smiles and active contact and 96% for affectionate words and passive contact. The mean score for confirmation was lower (77%), and the score for the only recorded disconfirming response (indifference) was very low (50%).

The Kappa statistic was calculated at the completion of observations as an additional measure of interobserver reliability. (See Table 1.) The formula is one that indicates the proportion of agreements corrected for chance agreements. It is a particularly useful statistic for low frequency behaviors. Although behaviors that occurred more than once per interval are being coded for data analysis, a second 2 X 2 table was made to display the presence or

absence of a behavior in an interval (i.e. multiple behaviors were treated as one) so that the Kappa statistic could be applied. The formula is:

$$\frac{Po - Pc}{1 - Pc}$$

where Po is the proportion of observed agreements and Pc is the proportion of chance or expected agreements.

Interpretation of the Kappa statistic is as follows (Hartmann, 1977):

Maximum of +1 - no disagreements and both observers exhibit variation in scoring categories

Zero - proportion of chance agreements is equal to number of observed agreements

Negative values -proportion of observed agreements is less than chance agreements.

With the exception of the Kappa scores on disconfirmation, Kappa scores ranged from .85 on passive contact to .98 on active contact. The .89 score on confirmation was reassurring in light of the lower mean for the scored interval-unscored interval. Kappa scores on all disconfirming behaviors were zero. If there are zero's in any cell, Kappa will be zero.

Inter-observer reliability scores for the behaviors were highly satisfactory except for 0% effective agreement of occurrence of indifference that resulted from the response scored by one observer one time. The 100%

effective agreement of non-occurrence of the other disconfirming responses was acceptable in light of the observers' ability to score these behaviors in both the pilot project and the training sessions for data collection.

Data Analysis

Two separate data sets were developed for analysis. One set included all demographic data on the nurses, personal stress scores, professional burnout scores, and rates of behaviors for all observations. The second set included nurse behaviors identified with specific patients on whom descriptive data were available.

For the nurse data, central tendencies were obtained for all continuous variables (i.e. stress, burnout, age, and number of years as a nurse.) The results were examined for variability, skewedness, and kurtosis. Frequency tables for discrete variables (i.e. the dichotomous variables and the ones with several levels) were inspected to ascertain if variability was present in the sample. The first hypothesis could not be tested because of the infrequent occurrence of the involved behavior. The second and third hypotheses were tested by the use of correlations between the scored behaviors and the professional burnout score. Hypothesis four was

tested by the use of correlation between the two behaviors. Correlations were then obtained between the discrete and continuous nurse demographic variables, the behaviors, and the personal stress scores.

For additional examination of the data, nurse subjects were divided into groups (e.g. early or late in work cycle; high, moderate, or low personal stress as measured by the Social Readjustment Scale; day, evening, and 12-hour shift) and mean frequencies of behaviors were calculated. Groups were too small for t-tests or ANOVA's to be of value. However, inspection of mean behavior frequencies (along with standard deviations) showed some trends that were described.

Nurse behaviors with specific pediatric patients were analyzed using correlations. Child characteristics were available for a total of 61 nurse/patient interactions of varying lengths. All patients on the pediatric unit were considered to be pediatric patients. The mean age of the patients was 8.5 with a range of 2 weeks to 19 years. Nurses interacted with female patients 29 times and male patients 32 times. Some patients interacted with more than one nurse, and nurses in most cases interacted with more than one patient. Because it was impossible to control the interactions in the hospital setting, it was necessary to attempt to determine if correlations had been unduly

influenced by any inadvertent weighting. Mean rates of the behavior found to be associated with patient category were calculated for each nurse caring for patient(s) in the category being examined (i.e. younger or older, single or repeated hospitalizations, and surgical or medical condition). These rates were summed and a mean rate of the behavior of all nurses caring for the category of patient was calculated. Rates associated with the dichotomous patient variables were then perused for similarity to the correlations. Data from nurses not interacting with patients in both of the dichotomous categories were excluded in each analysis.

CHAPTER IV

RESULTS

In this chapter descriptive data for the sample and results of the tests of each hypothesis will be presented. These will be followed by a description of the relationship of affectionate behaviors and confirming responses to a variety of professional factors and personal characteristics of the nurses, and to selected characteristics of the patients. Although disconfirmation occurred infrequently and inter-rater agreement could not be accurately computed, the data will be discussed briefly.

Descriptive Statistics for Total Sample

Table 2 presents means, medians, standard deviations, and minimum and maximum scores for all variables in the study except disconfirming behaviors and demographics. Mean rates of behaviors of nurses were calculated for the 30-second intervals of observation by summing the frequency of the behavior and dividing by the number of intervals. The number of nurse subjects is 18 for all variables in the table except for professional burnout. Two nurses were deleted in analyses involving burnout because of scores of 7 on the lie scale. (This scale is described in Chapter III.)

Table 2.

Means, Medians, Standard Deviations, and Ranges of Scores for Variables[a], Nurse Subjects

Variable	N	Mean	Median	S.D.	Range
Stress Variables					
Professional Burnout	16[c]	49.75	51	13.31	27-74
Personal Stress	18	192.11	149.5	107.58	64-399
Behavior Variables[b]					
Smiles	18	.31	.26	.21	.01-.73
Affectionate Word	18	.19	.15	.12	0-.5
Active Contact	18	.09	.08	.06	.01-.21
Passive Contact	18	.03	.01	.04	0-.13
Total Affection	18	.62	.58	.27	.26-1.1
Confirming	18	.85	.72	.45	.36-1.9

[a]Group data on disconfirming behaviors are not included in this table.

[b]Behaviors are in mean frequency per 30-second interval.

[c]Two subjects who scored 7 or above on the lie scale were omitted.

As seen in Table 2, the range for each of the affectionate behaviors is narrow. The most commonly occurring rate for each was at or close to the lowest end of the range. Although smiles and active contact were roughly normally distributed within a narrow range, affectionate words and passive contact were very positively skewed. One nurse had a rate of affectionate words nearly three standard deviations above the mean. Two high nurse scores created the positive skew for passive contact. Confirmation was positively skewed by scores of two nurses at two standard deviations above the mean.

Smiles were the most frequently occurring form of affectionate behavior ($\underline{M}$ = .31 per interval), with passive contact the least frequent ($\underline{M}$ = .03 per interval.) Confirmation occurred more frequently ($\underline{M}$ = .85) than affectionate behavior ($\underline{M}$ = .62).

Scores on the Holmes and Rahe Life-Change Index were positively skewed. The majority of the sample (ten nurses) experienced low personal stress, as defined by the authors of the tool (scores of 0-150). Three experienced mild stress (scores of 151-199), one moderate stress (scores of 200-299), and four major stress (scores of 300 or over.) Professional burnout scores on the SBS-HP were roughly normally distributed. However the mean of 49.75 for this sample was lower than staff burnout scores for the two

groups of hospital-based nurses on which norms were developed. Jones (1980c) reported these two group means as 52.9 (N = 36) and 57.5 (N = 38). Mean scores for this sample also were lower than those reported by Jones (1980c) in a validity study of 49 hospital employees. Mean scores were 54.2 for 23 mental health technicians, 62.5 for 18 nurses, and 64.9 for alcoholism counselors.

Only 40 disconfirming responses were recorded during the 1324 intervals that were coded. Table 3 summarizes these responses. Eleven nurses demonstrated no disconfirming responses. Of those nurses who exhibited disconfirming responses, five had total disconfirming scores ranging from one to six. Only two nurses were coded as demonstrating greater than six disconfirming responses and both of these subjects showed indifference as their only form of disconfirmation.

Tests of Hypotheses

The first hypothesis, that a positive relationship exists between professional burnout and disconfirming responses, could not be tested because of the infrequent number of disconfirming responses.

The second hypothesis, that a negative relationship exists between professional burnout and confirming responses, was tested using the Pearson correlation. There

Table 3.

Totals of Disconfirming Behaviors

Disconfirming Behavior	Total Occurrence	Range For Individuals
Indifference	35	0-12
Tangential	1	0-1
Impervious	1	0-1
Inadequate	1	0-1
Ambiguous	0	-
Disparaging	2	0-1

Note: N = 18

was no relationship between burnout and confirming responses (r = .18, p = .29). A scatterplot showed no trend in any direction. The second hypothesis was not supported.

The third hypothesis, that a negative relationship exists between professional burnout and affectionate behavior, was tested using a Pearson correlation. There was no relationship between these two variables (r = -0.03, p = .923). A scatterplot showed no trend in any direction. The hypothesis was not supported.

The fourth hypothesis, that a positive relationship exists between affectionate behavior and confirming

responses, also was tested using a Pearson correlation. Because the same behavior might be scored as both an affectionate behavior and a confirming response and because they are related conceptually, it is not surprising that there was a positive correlation between these two variables (r = .49, p = .001). The hypothesis was supported.

Examination of Nurse Variables

Correlation coefficients were calculated between a variety of personal characteristics and professional factors not addressed in the hypotheses that could be related to the nurse behaviors being studied. These behaviors and characteristics appear in Figure 1. None of these correlated with either affectionate or confirming behaviors.

Stress score
Age of nurse
Number of years since completion of basic program
Number of years as pediatric nurse
Status (full or part time)
Education (Baccalaureate, Diploma/AD)
Formal class in past two years
Presently taking a class
Number of children
Children at home
First or second half of shift
Early or late days in work cycle

Figure 1. Personal Characteristics and Professional Factors Possibly Affecting Nurse Behaviors

Although correlation coefficients were not significant, there appears to be a trend toward differences in the amount of staff burnout and the amount of personal stress reported by nurses on day, evening, and 12-hour shifts. As shown in Table 4, day and 12-hour shift personnel reported somewhat higher levels of burnout, whereas the evening shift of nurses reported higher levels of personal stress. (Statistical procedures such as t-tests or ANOVA's were not done because of the small numbers in each group. Although there is variation in stress scores, an examination of the scores does not point to systematic differences in reported stress and professional burnout by shift. In spite of the seeming differences in these scores, the mean number of confirming responses and affectionate behaviors per interval of observation appear to be fairly stable across groups.

When nurses were grouped by extreme scores on burnout and stress, a similar pattern emerged. The four nurses scoring in the upper quartile on staff burnout had scores ranging from 59-74. Lowest quartile scores were 27-39. Personal stress scores as measured by the Social Readjustment Scale were grouped as suggested by the authors. Low scores were 0-150 (n=10) and high scores 300 and over (n=2). Inspection of these scores showed no trends toward a decrease in affection and confirmation in

Table 4.

Mean Scores for Burnout, Stress, and Nurse Behaviors for Day, Evening, and 12-Hour Shift Nurses

	Shift		
Nurse Variable	Day (n=7)	Evening (n=5)	12-hour (n=4)
Staff Burnout	53.0 (12.6)	40.8 (13.0)	55.2 (11.2)
Stress	162.9 (107)	195.0 (124)	159.0 (27.7)
Confirming	.93 (.51)	.97 (.49)	.56 (1.3)
Affectionate (Total)	.59 (.32)	.61 (.19)	.59 (.37)
Smiles	.26 (.23)	.34 (.22)	.24 (.18)
Affectionate Words	.18 (.06)	.18 (.09)	.24 (.22)
Active Contact	.12 (.06)	.05 (.03)	.08 (.06)
Passive Contact	.03 (.05)	.02 (.03)	.03 (.06)

Note: Standard deviations are in parenthesis. Behaviors are in frequency per 30-second interval.

the groups with the higher stress scores or burnout scores. (See Table 5.)

Another interesting observation made from perusal of the data was the higher rate of confirming responses in the younger nurses (age 30 or less) than in the two groups of older nurses. Although the correlation coefficient between nurse's age and confirmation was not significant (r = .39, p = .31), when grouped by age the young group gave 1.01 confirming responses per observation interval. The group called "middle aged" and the "older nurse" had rates of 0.80 and 0.50 respectively. Younger nurses in this sample appeared to confirm their pediatric patients twice as often as the older nurses.

An interesting and unexpected positive correlation occurred between staff burnout and point in the work cycle. Nurses completing the SBS-HP early in their work cycles tended to have higher burnout scores than those completing it later in the work cycle (r = .52, p = .04).

Examination of Patient Variables

Relationships of selected characteristics of the patients with behaviors of the nurses were examined by correlation techniques. Table 6 displays the findings related to these characteristics. The results of this correlation should be viewed with some caution because of

Table 5.

Mean Frequency of Behaviors per 30-Second Interval in Nurses With Extreme Scores on Stress and Burnout

Nurse Behaviors	Low Stress (n=10)	Higher Stress (n=2)	Low Burnout (n=4)	Higher Burnout (n=4)
Confirming	.85	.67	1.13	.92
Total Affection	.59	.58	.61	.56
Smiles	.25	.23	.30	.28
Affectionate Words	.22	.18	.23	.19
Active Contact	.08	.13	.06	.09
Passive Contact	.04	.03	.01	.003

Note: Although four nurses had high stress scores, two of these were not included in this analysis because they were the two who were excluded from burnout analysis.

Table 6.

Correlations Between Child Characteristics and Nurse Behaviors

	Child Characteristics				
Nurse Behaviors[a]	Age	Sex[b]	Number Admissions	Illness Category[c]	Hosp Days
Smiles	-.07	.17	-.09	-.23	.03
Affectionate Words	-.33**	.12	-.11	-.13	.12
Active Contact	-.19	.12	-.16	-.08	-.09
Passive Contact	-.33**	-.11	-.03	-.13	.16
Affectionate (Total)	-.26*	.17	-.14	-.23	.05
Confirmation	-.05	-.12	.10	-.29*	-.06
Disconfirmation	-.08	-.18	.32*	.11	.17

*$p<.05$
**$p<.01$

[a]Behaviors are per 30-second interval.

[b]Child sex is coded 0=male, 1=female.

[c]Illness category is coded 0=surgical, 1=medical.

the previously discussed inability to control the number of patients a nurse cared for or the number of nurses interacting with a single patient. Child age was inversely related to the rate of affectionate words, passive contact, and total affectionate behaviors of the nurse. Child sex did not correlate with any nurse behaviors.

Table 6 also shows some surprising and interesting correlations. Number of admissions for the illness was positively correlated with rates of disconfirming responses. Confirming responses were negatively related to category of illness (0=surgical, 1=medical). Illness category was entered into the correlation as a dichotomous variable with 0 representing a child admitted for a surgical procedure and 1 representing a child admitted for medical treatment. An inverse relationship indicates an increased number of confirming responses associated with surgical patients. (So few were admitted for injuries that they were omitted from this portion of the analysis.)

The nature of the data on nurse-patient interaction was problematic because one nurse frequently interacted with more than one patient, and one patient often had more than one nurse. An example of what might have occurred is that a nurse who scored particularly high on confirming responses might have cared for five surgical patients and no medical patients. In order to determine if these

uncontrolled weightings created inaccurate correlations, all significant findings were further examined in the following manner. Mean rates of the behavior found to be associated with patient category were calculated for each nurse caring for patient(s) in the category being examined (i.e. younger or older, single or repeated hospitalizations, and surgical or medical condition). The rates were summed and a mean rate of the behaviors of all nurses caring for patients in the category was calculated. Data from nurses not interacting with patients in both of the dichotomous categories were excluded in each analysis. In each instance the summed means were consistent with the correlational data.

Table 7 shows a higher mean rate of affectionate words and total affectionate behaviors directed toward younger children than toward older ones. This is consistent with the inverse correlations reported in Table 6. As shown in Table 7, the mean rate of passive affectionate contact directed toward younger children was very small (.04); however, there was no passive affectionate contact directed toward the older children by any nurse. Of the eleven who interacted with both age groups, five nurses used passive contact with the younger children. This finding is consistent with the significant inverse relationship shown in Table 6.

Table 7.

Mean Nurse Behaviors Per Interval by Child Age Group

Nurse Behaviors[a] (N = 11)[b]	Child Age	
	8 or younger	9 or older
Affectionate Words	.27 (.27)[c]	.11 (.12)
Passive Contact	.04 (.06)	0
Affectionate (Total)	.91 (.60)	.54 (.47)

[a]Behaviors are per 30-second interval.

[b]Eleven nurses interacted with both younger and older patients.

[c]Standard Deviations are in parenthesis.

Confirming responses were correlated with patients admitted for surgical conditions. (See Table 6). When mean rates of behavior were calculated for the seven nurses who interacted with both medical and surgical patients, the rate for surgical patients was twice that of medical patients. Surgical patients received 1.82 confirming responses (SD = 1.0) and medical patients received .90 (SD = .58) confirming responses per interval.

The significant correlation between disconfirming responses and recurrent hospital admissions (See Table 6)

should be viewed with caution because there were too few disconfirming behaviors to accurately compute interobserver reliability. However, when mean rates of nurse behavior were calculated as previously described, children with recurring hospital admissions received disconfirming responses at a higher rate (M = .04, SD = .05) than did those with this single hospitalization (M = .01, SD = .02). The large standard deviations occurred because of the rare instances of disconfirmation among the twelve nurses who interacted with both categories of children.

Despite the fact that child sex did not correlate with any nurse behaviors, the researcher chose to examine total affectionate behaviors directed toward males and females in the same manner as the behaviors with significant correlations. Mean of total affectionate behaviors toward females was 1.03 (SD = .54) and toward males was .65 (SD = .36). From these figures it can be seen that for the thirteen nurses who interacted with both male and famale patients, the total affectionate behaviors toward females were nearly double that directed toward males.

Summary of Findings

The hypothesis of the relationship of professional burnout to disconfirming responses could not be tested because of the low rate of disconfirmation.

Professional burnout was not related to either affectionate or confirming behaviors. However, burnout scores were lower than the normed reference groups, and higher scores might have correlated with these behaviors. Confirming and affectionate behaviors were related to one another. This was not a surprising finding because of their conceptual similarity and because of the overlap in scoring. Correlations between selected personal characteristics or professional factors of the nurse and the behaviors being studied were not significant.

The most powerful finding from the analysis is that neither personal stress nor professional burnout at the levels reported by this sample were associated with how these nurses performed the aspects of their job that were being studied. Both correlation coefficients and the grouping of nurses by extreme scores demonstrated this. Very small numbers of subjects made the use of further statistical analysis inappropriate.

Affectionate words, passive contact, and total affectionate behaviors were inversely related to child age. Frequent hospital admission was related to disconfirming behaviors in the nurse, and admission for surgical procedures was related to confirming behaviors.

CHAPTER V

DISCUSSION

This study represents a modest beginning in identifying the occurrence of specific communication behaviors in pediatric nurses and in evaluating the correlation of selected nurse and patient characteristics with these communication behaviors. Because this type of research in nursing is new, it must be considered exploratory. Nursing as a vocation is very old. Nursing as an academic discipline and a profession, however, is relatively new and much exploratory research is needed in order to develop a theoretical basis for practice. Although developing trends may be seen, the reader is cautioned not to draw conclusions about the relationship of various nurse demographics and child characteristics to the behaviors studied in this small sample. Three of the four proposed hypotheses were not confirmed, but the implications of the findings are significant for all professionals concerned with the welfare of developing children. This chapter will include the outcomes, limitations, and significance of the study. Implications for future research will be addressed.

Nurse Behaviors and Characteristics

There were very few disconfirming responses by the nurses, and indifference was the only form of disconfirmation scored more than twice during the entire data collection period. In spite of higher levels of indifferent behaviors scored by two nurses, frequencies of confirmation and affectionate behaviors were not lower than those of other nurses. It does not appear that indifference replaced more positive behaviors in the nurses' repertoire of behaviors, but rather occurred in conjunction with them. From the type of data collected it was not possible to determine the exact circumstances under which these indifferent behaviors occurred. Perhaps the nurse was involved in a procedure requiring concentration or the child was one who chronically demanded attention in inappropriate ways. However, the absence of these behaviors in large numbers seems to indicate that the nurses' interpersonal communication practices reflect King's theoretical model in which the nurse's role is to structure the environmental input in ways that give the children a positive sense of self and assist them in the continuous adjustment to stressors in the environment.

No relationship was demonstrated between levels of professional burnout or personal stress and either affectionate or confirming behaviors. It is

important to note that the Holmes and Raehe Life Change Event Scale does not consider reaction to stress, but only the presence of stressor events. However, it appears that these professionals were able to separate themselves enough from the emotions associated with stressful events to communicate with their patients in useful and appropriate ways. Exploration of mediating factors as previously described in the conceptual model of stress and workplace behaviors (Bhasat, 1983) may provide clues to why the presence of stressors did not correlate with a decrease in confirmation and affection. The large body of theoretical work by Lazarus (e.g. 1980, 1984) also supports the idea of mediating factors. He describes daily up-lifts, or experiences and events that are salient and favorable to well-being, and the role of these up-lifts in opposing the effects of experiences or conditions that are perceived as salient and threatening to well-being. Perhaps frequent up-lifts in the form of positive feedback from patients and families, observation of improvement in patient health, or support of professional peers occur with enough regularity and intensity to block effects of personal and occupational stressors.

Educational level, desire to pursue further education, experience with children of their own, or time in the work cycle or shift did not correlate with the behaviors being

studied. The only nurse characteristic that appeared to be associated with the manner in which nurses communicate is that of age. Although there was no correlation using exact age, when nurses were grouped by age, the younger nurses (under 30) confirmed nearly twice as often as did the others. This trend should be explored further.

The correlation between affection and confirmation was not surprising because there was some overlap in scoring. The correlation between these two behaviors and the lack of correlation between either of them and other variables seem to support the idea that affection and confirmation are conceptually similar.

There was no apparent systematic relationship between personal stress and professional burnout in this sample. This finding is not consistent with the report of Johnson (1985) who demonstrated a positive relationship in a sample of 93 nurses (r = .65) between personal stressors, as measured by the Holmes and Rahe Schedule of Recent Events, and perceived occupational stress, as measured by the Slesinger Job-Related Strain Index. Differences in results of the studies may stem from the present study's small sample size, the use of a somewhat homogeneous sample of pediatric nurses, the different tools used to tap job

related stresses, and the relatively low level of professional burnout reported by this sample.

Child Characteristics

Within King's theoretical model, nurses and patients interact as an open system; thus each may influence behavior of the other. Selected child characteristics were analyzed in this study to determine if they influenced nursing behaviors. The inverse relationship of child age to total affectionate behaviors indicates that as age increased the number of affectionate behaviors decreased. One might speculate that young children have features and characteristics that are particularly appealing to adults, and that these features and characteristics elicit certain behaviors from the caretaker. From an ethological viewpoint, this explanation has validity. The young of most species begin life as totally dependent on caretakers and require certain behaviors from these caretakers in order to survive and thrive in their environments. During the prolonged maturation period of human children a wide range of caretaker behaviors are required to support both physical and emotional development. From a social psychology viewpoint, elicitation of caretaker behaviors by the child would be described as a part of an interaction system with reciprocal behaviors that are complementary, and that change

and adapt as the members of the system evolve. Thus, as children mature, they may require fewer affectionate behaviors and both their behaviors and physical appearance change in ways which elicit fewer such behaviors.

Number of admissions for essentially the same illness prior to this hospitalization was positively related to number of disconfirming responses. This pattern was not related to the number of days the child had been in the hospital. It is critical to remember that there is no interobserver agreement score for the occurrence of disconfirming responses, and indifference was the only disconfirming behavior that occurred more than twice. Because this was such a surprising finding, however, it deserves to be mentioned as a trend that should be investigated further. Frequently hospitalized children may be in greater need of confirmation, attention, and emotional support than those with single hospitalizations. Perhaps these children had, over a period of several hospitalizations, developed behavior and interaction patterns that tended to elicit disconfirming responses.

A significant relationship was demonstrated between admission for surgical procedures and the rate of nurse confirming behaviors. There is not an immediate logical explanation for the relationship between reason for admission and nurse behaviors. It is possible that nurses

perceived greater psychosocial needs in children admitted for surgery both prior to the procedure and in the postoperative recovery period, or that the children initiated more interaction so the nurses responded more. It would have been helpful to have more information about the children. Knowledge of variables such as type of surgery (e.g. simple tonsillectomies or major surgical procedures) and status (i.e. preoperative or postoperative during observation) might have provided clues for explaining this relationship.

Limitations of the Study

Sampling and Generalization

Because of the procedures used in recruiting nurse subjects, it is believed by the researcher that most of the pediatric nurses in the city who met criteria were included in the sample. Although the sample was not random, the use of such a large portion of the population should help overcome this limitation. The findings of this study can possibly be generalized to other pediatric hospital units that frequently and regularly have students and faculty present for clinical experiences. This researcher believes that the frequent presence of students (who ask questions and pattern their behavior after staff) and faculty (who should be excellent role models) often affect practice in

ways that carry over to times when faculty and students are not present. Generalization of findings to any other nursing populations may not be appropriate.

Procedural Limitations

A major limitation when using direct observation for data collection is reactivity to the presence of an observer. There is not a high level of agreement among researchers about the effects of direct observation, and the question of how long it takes for habituation to occur is still an empirical one. Some studies have demonstrated that observer presence alters behavior (White, 1977; Hay, Nelson, & Hay, 1977) although others have shown essentially no alteration in behaviors (Hagan, Craighead, & Paul, 1975; Nelson, Kapust, & Dorsey, 1978). Two groups of researchers identified only a small portion of behaviors being altered by the presence of an observer (Dubey, Kent, O'Leary, Broderick, & O'Leary, 1977; Mercatoris & Craighead, 1974). Of special significance to this project is the report that the number of positive interactions of adults with children increases when being directly observed (Baum, Forehand, & Zegiob, 1979). However, two other groups of researchers reported that behaviors that are being observed do not always change in a socially desirable direction (Kirschenbaum & Karoly, 1977; Litronowik & Freitas, 1980).

Kazdin (1982) comments that findings are inconsistent regardless of whether one's behavior is being observed, one is observing and recording one's own behavior, or one is observing and recording another's behavior. He also points out that the directional effects (whatever they are) may be weak and transient, and that other variables may be creating the effect.

Although the amount of reactivity present in the nurse behaviors in this study is unknown, the fact that each of the nurses who was observed was practicing in a teaching hospital may decrease the level of reactivity. They are quite accustomed to having students present on the unit and to having procedures observed by students. Using student observers may have created less reactivity than would have been present with RN observers or other observers.

Three other procedural limitations have been identified for this study:

1. All attempts at random assignment of nurses to observation times were thwarted by variations in scheduling within and between agencies, specific work schedules, and the necessity for rescheduling some observations in one unit with a chronic low census.

2. The unexpected brief amount of time required on the nursing unit to collect data on four subjects resulted in fewer interobserver reliability checks than scheduled.

3. The unanticipated rapid discharge of patients that frequently occurred resulted in a smaller data base on patients than was desirable. The number of patients on whom data was available per nurse ranged from 0 to 6. This problem could be avoided in a future study by having the observer obtain the patient data form upon completion of observations for that day.

4. Different nurses interacted with different numbers and types of patients in the work setting, and some patients interacted with several nurses. This created a possible problem of weighting that could not be controlled and that could only be evaluated to a limited degree.

Measurement

Many variations in nurse behaviors cannot be measured by the CDRI alone. Because confirmation is defined so broadly, certain patterns of nurse behaviors would not be recorded. Examples include the nurse who confirms in many ways with nods of understanding, comments such as "I know it hurts," and careful explanations, but rarely or never offers praise or approval. In addition, certain non-verbal behaviors such as slapping the hands of a child would not be coded as disconfirming when using the definitions provided for the CDRI. Because the CDRI measures responses rather than nurse initiated behaviors, the pattern of nurse-patient interactions with sleeping children or children in a coma

could be better identified by use of a different measurement tool.

The surprising finding of a positive correlation between professional burnout and point in the work cycle suggests a possible problem with the validity of the SBS-HP. A possible explanation for this finding might be that the nurses who have recently returned to work after a break of two or three days are exhibiting a response similar to those of people who work on a Monday-Friday schedule and dread the coming of Monday morning. Available documents on the SBS-HP do not indicate whether the time in the work cycle was considered in establishing validity. The Staff Burnout Scale for Health Professionals (SBS-HP) was chosen as the measurement tool for burnout in this study because it is shorter than the other available tool and has been demonstrated by one researcher to measure the same phenomenon (Lowman, 1985). However, Brown (1985) points out that it taps only the severest manifestations of burnout, and that only four of the thirty items specifically refer to a health care setting.

Major Implications for the Nursing Profession

The most significant finding from data on this sample is that neither higher personal stress levels nor higher

professional burnout levels seem to have a negative impact on the behaviors being studied. In a period when nursing professionals are striving to clearly identify and delineate the role of nursing in curing as well as caring, it is critical to document the ability of nurses to continue to structure the interpersonal environment of their patients in a positive manner even in the face of either adverse personal or professional situations. The interpersonal communications that are a part of the caring and the curing functions may range from simple to complex. All of them, however, should have the purpose of assisting the patient toward positive self-regard and maximization of the potential for mental and physical well-being. Health care dollars are being carefully allocated in the current climate of cost-effectiveness concerns. The nursing profession needs to pursue additional documentation that quality care continues in spite of the presence of adverse circumstances.

Nursing administrators should note that, for the nursing staff in this study, stress did not adversely affect the ability to communicate in positive ways with the patients. However, the high cost to the individual of unrelieved personal and professional stress may adversely affect other aspects of care by interfering with other

parts of the professional role, and might result in excessive absences or high employee turnover rates. Both of these are costly to the agency and should be given attention by administration. Strategies for prevention of professional burnout and coping with personal and professional stress have been developed by a number of authors and researchers, and suggestions are available for self-help techniques as well as formal prevention programs in the agency (Cherniss, 1980; Kelley, 1984; Maslach, 1982; Pines & Caffrey, 1982; and Randolph, 1982). Professional burnout is not an all-or-none phenomenon, but rather a continuum, and authors often have not differentiated techniques of prevention from those that may decrease its intensity.

Although King's theories of nursing were used in developing the framework for this study, it is no accident that every nursing theorist from Florence Nightingale to modern day researchers and theorists consider the interactions of the nurse with the recipient of nursing care to be critical elements in helping people reach and maintain their optimal wellness potential. Nightingale (1859/1969) in her Notes on Nursing told us, "It is the nurse's function to put the patient in the best condition for nature to cure him" (p. 133).

Nursing educators and child development specialists may want to note that there is some support for the value of both training and modeling in increasing supportive nurturant and affectionate behaviors. Kaplan and Conn (1984) demonstrated that training in the classroom setting for caregivers in day care centers lead to an increase in nurturant behaviors and increased involvement in the children's emotional development. Similarly, Shreve, Twardosz, and Weddle (1983) showed that group affection activities and prompt cards to remind teachers to express affection during daily routines could be used to increase affectionate behaviors in day care teachers. Pirot and Schubert (1977), in an experimental study, demonstrated that modeling "warm" physical affectionate contact to a group of children induced a significant increase in affectionate behavior during a following play period. The children who were exposed to modeled "neutral" physical contact or modeled "warm" verbal contact did not show the significant increase in affectionate behavior.

Excellence in nursing demands that caring be more than just a spontaneous behavior, but that it be a deliberate and knowledgeable response to an identified need. The need of many patients for a "warm" response, touch,

confirmation, and affection should be taught in the classroom, modeled by faculty for nursing students and parents, and reinforced in student behaviors. Students of nursing should be encouraged to be sensitive to the cues of the patient about touch and affection, and to allow these cues to direct frequency and type of touch. Although spontaneity should not be lost through the process of education, the response to the patient based on knowledge of needs may well be more appropriate.

Implications for Future Research

There is a need for continuing research on the nurse behaviors of confirmation, disconfirmation, and affection. A large study including a wide variety of pediatric settings should be done replicating and expanding many or all of the elements included in this study. Questions that should be answered include: Do any populations of pediatric staff nurses disconfirm patients regularly? What are the normative levels of confirmation and affection for nurses with various age groups of pediatric patients? Do male nurses behave differently toward their pediatric patients than female nurses, and if so, in what ways? Do younger nurses consistently confirm behaviors more frequently than their older peers?

In order to determine if there is any value to answering the above questions, we also must determine whether the nurse is truly a "significant other" to the short-term and long-term pediatric patient, whether the nurse's modeling of behaviors can change parent behaviors over a period of time, and how important these aspects of care are to child development. If nurse communication behaviors are important and if nurse modeling and teaching can change parent behaviors positively, the next question may be how to increase or decrease the behaviors of nurses in appropriate situations. Should formal education or inservice education programs address these behaviors explicitly, and should performance evaluations include these behaviors?

An understanding of the active role of the hospitalized child in initiating the affection behaviors and confirming or disconfirming responses is clearly needed and many questions remain to be answered. Is there reciprocity and interaction, or do nurses tend to confirm most behaviors? Are nurses more affectionate toward young children because of certain behaviors or characteristics? What is different about children who have been hospitalized numerous times and those who are in for initial

hospitalizations? Are children in for medical reasons different in some subtle way from children admitted for surgical procedures? Do other socio-cultural facets of the child and family such as joint or single income, parental marital status, or rural versus suburban residence, consistently interact with previously identified factors to produce child-nurse interactions? Do parents perceive the nursing care in the same manner as the nurse who is delivering it?

The need for more observational research in nursing seems obvious. A wider variety of data sources are needed and the ability to collect data on child behavior and additional child demographics is essential. A major hurdle that will have to be dealt with is the resistance to behavioral research involving children by committees on human subjects both at the university level and the hospital level. Rights of privacy are fiercely protected within many hospitals and in many clinic settings, and researchers must demonstrate why they should have legitimate access to the patient or even know that the patient is in the setting. One answer to this problem lies in continuing to educate nurses in research techniques and in assisting those in practice settings to recognize

questions that need to be answered. These nurses clearly have "legitimate access" and can be co-investigators with educators and researchers.

The need continues for better tools for measurement of the phenomena of interest. Observation tools for coding reciprocal behaviors in nurses and pediatric patients need to be developed, pilot tested, and validated in order to more accurately view the interaction within the open system. Self-report instruments and interview schedules for measuring the same phenomena would be more time- and cost-effective. Although self-report has been criticized by some researchers, the accuracy of self-report of affect as compared to observed behaviors in married couples has been reported (Gottman, 1985; Gottman & Levenson, 1985; Jacobson, 1985). Use of self-report tools and interview schedules combined with observation could expand our knowledge of nursing actions. Such multimethod approaches allow for cross validation of instruments and for a more systematic approach to an understanding of nurse-patient systems.

Brazelton, the well-known pediatrician and child advocate, wrote in 1983:

> My hope is that, as a result of Spitz's challenges to us, the next 35 years will result in more important work on the psychosomatic interactions in children who must undergo the traumatizing effects of hospitalization, surgery, and separation

from home. An increase in our understanding of the interaction between affective and physical systems in small children could lead to major advances in pediatrics. (p. 439)

LIST OF REFERENCES

LIST OF REFERENCES

Adler, A. (1927). The practice and theory of individual psychology. New York: Harcourt, Brace, Javanovich.

Ainsworth, M. D. S. (1964). Patterns of attachment behavior shown by the infant in interaction with her mother. Merrill-Palmer Quarterly, 10, 51-58.

Ainsworth, M. D. S. (1967). Infancy in Uganda: Infant care and the growth of love. Baltimore: Johns Hopkins.

Ainsworth, M. D. S., Blehar, M. C., Waters, M. C., & Wall, S. (1978). Patterns of attachment: A psychological study of the strange situation. Hillsdale, N. J.: Lawrence Erlbaum.

Ainsworth, M. D. S. & Bell, S. M. (1969). Some contemporary patterns of mother-infant interaction in the feeding situation. In A. Ambrose (Ed.), Stimulation in early infancy (pp. 133-170). New York: Academic Press.

Ainsworth, M. D. S. & Wittig, B. A. (1969). Attachment and exploration behavior of one year olds in a strange situation. In B. M. Foss (Ed.), Determinants of Infant Behavior, IV (pp. 111-136). London: Methuen.

Alfgren, S. H., Aries, E. J., & Oliver, R. R. (1979). Sex differences in the interaction of adults and preschool children. Psychological Reports, 44, 115-118.

Barber, B. R. & Thomas, D. L. (1986). Dimensions of fathers' and mothers' supportive behavior: The case for physical affection. Journal of Marriage and the Family, 48, 783-794.

Barnett, K. (1972). A theoretical construct of the concepts of touch as they relate to nursing. Nursing Research, 21, 102-109.

Barnlund, D. C. (1968). Interpersonal communication: Survey and studies. Boston: Houghton-Mifflin.

Baum, C. G., Forehand, R., and Zegiob, L. E. (1979). A review of observer reactivity in adult-child interactions. Journal of Behavioral Assessment, 1, 167-178.

Bhasat, R. S. (1983). Effects of stressful life events on individual performance effectiveness and work adjustment processes within organizational settings: A research model. Academy of Management Review, 8(4), 660-671.

Block, J. H. (1978). Another look at sex differences in the socialization behaviors of mothers and fathers. In J. Sherman and F. Denmark (Eds.), Psychology of women: Future direction of research (pp. 29-87). New York: Psychology Dimensions.

Borelli, M. & Heidt, P. (Eds.). (1980). Therapeutic touch: A book of readings. New York: Springer.

Botkin, D.R. (1983/1984). Children's gender: Affectionate and social interaction behavior differences among children and teachers in day care centers. (Doctoral dissertation, University of Tennessee, 1983). Dissertation Abstracts International, 44(10), 3174-A.

Bowden, M. L., Feller, L., Tholen, D., Davidson, T. N., & James, M. H. (1980). Self-esteem of severely burned patients. Archives of Physical Medicine and Rehabilitation, 61, 449-452.

Bower, T. (1977). The perceptual world of the child. Boston: Harvard University Press.

Bowlby, J. (1951). Absence of mother. Maternal Care and Maternal Health. (Monograph 2). Geneva: World Health Organization.

Bowlby, J. (1958). The nature of the child's ties to his mother. International Journal of Psychoanalysis, 39, 350-373.

Bowlby, J. (1969). Attachment and loss: Volume 1, Attachment. New York: Basic.

Brazelton, T. B. (1961). Psychophysiologic reactions in the neonate. I. The value of observation of the neonate. Journal of Pediatrics, 58, 508-512.

Brazelton, T. B. (1973). Neonatal Behavior Assessment Scale. Philadelphia: Lippencott.

Brazelton, T. B. (1978). Introduction. In A. Sameroff (Ed.). Organization and stability of newborn behavior. Monographs: Society for research in child development, 43(5-6), 1-13.

Brazelton, T. B., Koslowski, B., & Main, M. (1974). The origin of reciprocity: The early mother-infant interaction. In M. Lewis and L. Rosenblum (Eds.), The effect of the infant on its caregiver (pp. 49-76). New York: Wiley.

Brown, J. S., Tanner, C. A., Padrick, K. P. (1984). Nursing's search for scientific knowledge. Nursing Research, 33, 26-32.

Brown, R. D. (1985). Staff Burnout Scale for Health Professionals. In J. Mitchell (Ed.), The Ninth Mental Measurements Yearbook (Vol. 2, pp. 1440-1441). Lincoln, Nebraska: Buros Institute of Mental Measurements, University of Nebraska.

Buber, M. (1957). Distance and relation. Psychiatry, 20, 97-104.

Campbell, S. (1964). Peer relations in childhood. Review of Child Development Research, 7, 289-322.

Campbell, P. (1967). School and self-concept. Education Leadership, 24, 510-515.

Carranza, E. (1973). A study of the impact of life changes on high school teacher performance in the Lansing school district as measured by the Holmes and Rahe Schedule of Recent Experience. Dissertation Abstracts International, 33, 4996-4997-A.

Cherniss, C. (1980). Professional burnout in human services. New York: Prager.

Cherry, L. (1975). The preschool teacher-child dyad: Sex differences in verbal interaction. Child Development 46, 532-535.

Chess, S. & Thomas, A. (1984). Origins and evolution of behavior disorders. New York: Brunner/Mazel.

Cissna, K. N. L. (1979). Interpersonal communication bibliography. Unpublished document from Department of Communication, University of Southern Florida.

Cissna, K. N. L. and Sieburg, E. (1981). Patterns of interactional confirmation and disconfirmation. In C. Wilder-Mott & J. H. Weakland (Eds.), Rigor and imagination: Essays from the legacy of Gregory Bateson (pp. 253-282). New York: Praeger.

Condry, J. & Condry, S. (1976). Sex differences: A study of the age of the beholder. Child Development, 47, 812-819.

Cooley, C. H. (1916). Social organization. New York: Charles Scribner.

Cooley, C. H. (1922). Human nature and the social order. Glencoe: Free Press.

Coopersmith, Stanley (1967). The antecedents of self-esteem. San Francisco: W. H. Freeman.

Cotton, N. S. (1983). The development of self-esteem and self-esteem regulation. In J. E. Mack & S. L. Ablon (Eds.), The development and sustenance of self-esteem in childhood (pp. 122-150). New York: International Universities.

Deaugustinis, J., Isani, R. A., and Kumber, F. R. (1963). Ward study: The meaning of touch in personal communication. In S. Burd & M. Marshall (Eds.). Some Clinical Approaches to Psychiatric Nursing (pp. 271-306) New York: McMillan.

Dubey, D. R., Kent, R.N., O'Leary, S. G., Broderick, J. E., & O'Leary, K. D. (1977). Reactions of children and teachers to classroom observers: A series of controlled investigations. Behavior Therapy, 8, 887-897.

Edelwich, J. & Brodsky, A. (1980). Burnout. New York: Human Sciences Press.

Engle, N. S. (1980). Confirmation and validation: The caring that is professional nursing. Image, 12 (3), 53-56.

Erickson, E. H. (1968). Identity, youth, and crisis. New York: Norton.

Fagot, B. I. (1973). Sex related stereotyping of toddlers' behaviors. Developmental Psychology, 9, 429.

Fagot, B.I. (1974). Sex differences in toddler's behaviors and parental reaction. Developmental Psychology, 10, 554-558.

Fagot, B. I. (1978). The influence of sex of child on parental reaction to toddler children. Child Development, 49, 459-465.

Frame, R. E. (1979). Interobserver agreement as a function of the number of behaviors observed simultaneously. Psychological Record, 29, 287-296.

Franks, D. D. & Morolla, J. (1976). Effacious action and social approval in interacting dimensions of self-esteem: A tentative formulation through construct validation. Sociometry, 37, 324-341.

Fromm, E. (1956). The art of loving. (World Perspective, Vol. 9). New York: Harper & Row.

Givelber, F. (1983). The parent-child relationship and the development of self-esteem. In J. E. Mack & S. L. Ablon (Eds.), The development and sustenance of self-esteem in childhood (pp. 163-176). New York: International Universities.

Goldberg, S. & Lewis, M. (1979). Play behavior in the year-old infant: Early sex differnces. Child Development, 40, 21-23.

Gottman, J. M. (1985). Observation measures of behavior therapy outcome: A reply to Jacobson. Behavioral Assessment, 7, 317-321.

Gottman, J. M. & Levenson, R. (1985). A valid procedure for obtaining self-report of affect in marital interaction. Journal of Consulting and Clinical Psychology, 53, 151-160.

Hagan, R. L., Craighead, W. E. & Paul, G. L. (1975). Staff reactivity to behavioral observation. Behavior Therapy, 6, 201-205.

Harlow, H. F. (1962). Social deprivation in monkeys. Scientific American, 207(5), 136.

Harlow, H. F. & Harlow, M. K. (1969). Effects of various mother-infant relatinships on Rhesus monkey behaviors. In B. M. Foss (Ed.), Determinants of infant behaviors, IV (pp. 16-40). London: Methuen.

Hartmann, D. P., (1977). Considerations in the choice of interobserver reliability estimates. Journal of Applied Behavior Analysis, 10, 103-116.

Hartmann, D. P., and Wood, D. D. (1982). Observational methods. In A. Bellock, M. Hersen, and A. E. Kozdin (Eds.), International handbook of behavior modification and therapy (pp. 102-121). New York: Plenum.

Hawkins, R. P., & Dotson, V. A. (1975). Reliability scores that delude: An Alice in Wonderland trip through the misleading characteristics of interobserver agreement scores in interval recording. In E. Ramp and G. Semb (Eds.), Behavior analysis: Areas of research and application (pp. 359-376). Englewood Cliffs, NJ: Prentice Hall.

Hay, L. R., Nelson, R. O. & Hay, W. W. (1977). The use of teachers as behavioral observers. Journal of Applied Behavior Analysis, 10, 345.

Heineken, J. (1982a). Confirmation-Disconfirmation Rating Instrument (copyrighted).

Heineken, J. (1982b). Disconfirmation in dysfunctional communication. Nursing Research, 31, 211-213.

Heineken, J. (1983a). Does anyone out there know I'm here?....Confirmation tells patients if they are cases to be disposed of or persons to be cared for. Nursing Management, 14 (16), 16-17.

Heineken, J. (1983b). Treating the disconfirmed psychiatric client. Journal of Psychosocial and Mental Health Services, 21, 21-25.

Heineken, J. & Roberts, F. B. (1983). Confirming, not confirming: Communicating in a more positive manner. The Journal of Maternal-Child Nursing, 8, 78-80.

Heslin, R., Nguyen, T. D., & Nguyen, M. L. (1983). Meaning of touch: The case of touch from a stranger or same sex person. Journal of Nonverbal Behavior, 7, 147-157.

Holmes, T. H. & Rahe, R. H. (1967). The social readjustment rating scale. Journal of Psychosomatic Research, 11, 213-218.

Horney, K. (1945). Our inner conflicts. New York: Norton.

Horney, K. (1950). Neurosis and human growth. New York: Norton.

Ivancevich, J. M. (1986). Life events and hassles as predictors of health symptoms, job performance, and absenteeism. Journal of Occupational Behaviour, 7, 39-51.

Jacobson, N. S. (1985). The role of observational measures in behavior therapy outcome research. Behavioral Assessment, 7, 297-308.

Johnson, A.N. (1985). Relationship of life change events to nurses' perceptions of occupational stress. Dissertation Abstracts International, 46, 477-B.

Jones, J. W. (1980a September 13-14). Environmental and cognitive correlates of staff burnout: Implications for rational restructuring. Paper presented at First Annual Chicago Conference on Behavior Analysis, Chicago.

Jones, J. W. (1980b, May 1-3). The staff burnout scale: a validity study. Paper presented at the 52nd Annual Midwestern Psychological Association, St. Louis.

Jones, J. W. (1980c). The staff burnout scale for health professional: Preliminary test manual. Park Ridge, Illinois: London House Management.

Jones, J. W. (1982a, August 24-28). Dishonesty, staff burnout, and employee theft. Technical Report No. E2. presented at 89th Annual Conference of American Psychological Association, Division of Industrial Psychology, Los Angeles.

Jones, J. W. (1982b, November 2-4). Measuring staff burnout. Technical Report No. E3. Presented at First National Conference on Burnout and Work Stress, Philadelphia.

Jourard, S. M. & Landsman, T. (1980). Healthy personality: An approach from the viewpoint of humanistic psychology. New York: McMillan.

Kaplan, M.G. & Conn, J.S. (1984). The effects of caregiver training on classroom setting and caregiver performance in eight community day care centers. Child Study Journal, 14, 79-98.

Kazdin, A. E. (1982). Observer effects: Reactivity of direct observation. In D. P. Hartman (Ed.), Using observers to study behavior (pp. 5-19). San Francisco: Jossey-Bass.

Kelley, V. D. (1984). The effectiveness of a training workshop on burnout in nurses. Dissertation Abstracts International, 45(7), 2296-B.

Kerlinger, F. N. (1973). Foundations of behavioral research, (2nd edition). New York: Holt, Rinehart & Winston.

King, I. M. (1981). A theory for nursing: systems, concepts, process. New York: John Wiley & Sons.

Kirschenbaum, D. S., & Karoly, P. (1977). When self-regulation fails: Tests of some preliminary hypotheses. Journal of Consulting and Clinical Psychology, 45, 1116-1125.

Knable, J. (1981). Handholding: One means of transcending barriers of communication. Heart and Lung, 10, 1106-1110.

Korner, A. (1974). The effect of the infant's state, level of arousal, sex, and ontogenetic stage on the caregiver. In M. Lewis and L. A. Rosenblum (Eds.), The effect of the infant on its caregiver (pp. 105-118). New York: John Wiley.

Korner, A. & Thoman, E. (1972). The relative efficacy of contact and vestibular-proprioceptive stimulation in soothing infants. Child Development, 43, 443-453.

Krieger, D. (1974). Healing by the laying-on-of-hands as a facilitator of bioenergetic change: the response of in-vivo hemoglobin. Psychoenergetics, 1, 12-15.

Krieger, D. & Paper, E. (1979). Searching for evidence of physiological change. American Journal of Nursing, 79, 660-664.

Kubler-Ross, E. (1969). On death and dying. New York: McMillan.

Laing, R. D. (1962). Self and others. London: Tavistock Press.

Laing, R. D. (1971). The politics of the family and other essays. New York: Random House.

Lazarus, R. S. (1980). The stress and coping paradigm. In C. Eisdorfer, D. Cohen, & A. Kleinman (Eds.). Conceptual Models for Psychopathology (pp. 173-209). New York: Spectrum.

Lazarus, R. S. (1984). Puzzles in the study of daily hassels. Journal of Behavioral Medicine, 7, 375-389.

Lego, S. (1984). The American handbook of psychiatric nursing. Philadelphia: J. B. Lippincott.

Levy, D. M. (1959). The demonstration clinic. Springfield, IL: C. C. Thomas.

Lewis, M. (1972). State as an infant-environment interaction: An analysis of mother-infant interactions as a function of sex. Merrill-Palmer Quarterly, 18, 95-121.

Lewis, M. & Lee-Painter, S. (1974). An interactional approach to the mother-infant dyad. In M. Lewis & L. Rosenblum (Eds.). The effect of the infant on its caregiver (pp. 21-48). New York: John Wiley.

Litrownik, A. J. & Freitas, J. L. (1980). Self monitoring in moderately retarded adolescents: Reactivity and accuracy as a function of valence. Behavior Therapy, 11, 245-255.

Lowman, W. (1985). Stress and burnout in intensive care nurses in selected Southeastern hospitals. Dissertation Abstracts International, 46, 794-795-B.

Maccoby, E. E. (1980). Social development: Psychological growth and the parent-child relationship. New York: Harcourt, Brail, Jovanovich.

Mack, J. (1983). Self-esteem and its development: an overview. In J. E. Mack & S. L. Ablon (Eds.), The development and sustenance of self-esteem in childhood (pp. 1-42). New York: International Universities.

Maehr, M. L., Mensing, J., & Nafzger, S. (1962). Concept of self and the reaction of others. Sociometry, 25, 353-357.

Maerov, S. L, Brummeth, B. Patterson, D. R., Reid, J. B. (1978). Coding of family observations. In J. B. Reid (Ed.), A social learning approach to family intervention: Observations in Home Settings (Vol. 2, pp. 21-36). Eugene, Oregon: Castilia.

Maslach, E. (1982). Burnout: the cost of caring. Englewood Cliffs, NJ: Prentice-Hall.

Mead, G. H. (1934). Mind, self, and society. Chicago: University of Chicago.

Meltzoff, A. W. & Moore, K. M. (1977). Imitation of facial and manual gestures by human neonates. Science, 198, 75-78.

Mercatoris, M. & Craighead, W. E. (1974). Effects of non-participant observation on teacher and pupil classroom laboratory. Journal of Educational Psychology, 66, 512-519.

Moen, J. L., Wilcox, R. D., & Burns, J. K. (1977). PKU as a factor in the development of self-esteem. Journal of Pediatrics, 90, 1027-1029.

Montague, A. (1978). Touching: The human significance of the skin (2nd ed.). New York: Harper & Row.

Moss, H. A. (1967). Sex, age, and state as determinants of mother-infant interaction. Merrill-Palmer Quarterly, 13, 19-36.

Moss, H. A. (1974). Early sex differences and mother-infant interaction. In R. C. Friedman, R. M. Richard, & R. L. Vande Wiele (Eds.). Sex differences in behaviors (pp. 149-163). New York: Wiley.

Mozingo, J. N. (1983, November 1). Early maternal-infant contact and attachment in teenage mothers: initial findings and three year follow-up (Abstract). Proceedings of 3rd Annual Fall Conference on Children and Youth. Conducted at St. Joseph Hospital, Memphis, TN.

Nelson, R. O., Kapust, J. A., & Dorsey, L. L. (1978). Minimal reactivity of overt classroom observation on student and teacher behaviors. Behavior Therapy, 9, 695-702.

Nightingale, F. (1959/1969). Notes on nursing: What is is and what it is not. New York: Dover.

Northouse, P. G. & Northouse, L. L. (1985). Health communication: A handbook for health professionals. Englewood Cliffs, NJ: Prentice Hall.

Olds, S. B., London, M. L., & Ladewig, P. A. (1984). Maternal-newborn nursing: A family centered approach, (2nd Ed.). Menlo-Park, California: Addison-Wesley.

Olson, S. L., Bates, J. E., & Bayles, K. (1984). Mother-infant interaction and the development of individual differences in children's cognitive competencies. Development Psychology, 20, 66-79.

Pecararo, A., Theriot, J., & Lafont, P. (1984). What home economists should know about latchkey children. Journal of Home Economics, 76 (4), 20-22.

Penny, K. S. (1979). Postpartum perception of touch received during labor. Research in Nursing and Health, 2(1), 9-16.

Pines, A. & Kafry, K. D. (1982). Coping with burnout. In J. W. Jones (Ed.), The burnout syndrome: Current research, theory, and interventions (pp. 139-143). Park Ridge, IL: London House.

Pirot, M. & Schubert, J. (1977). Modeling affectionate behavior in young children. Social Behavior and Personality, 5, 369-376.

Randolph, G. (1984). Therapeutic and physical touch. Nursing Research, 33, 33-36.

Randolph, S. A. (1982). Peer support groups: The Ohio Model for alleviating staff burnout. In J. W. Jones (Ed.), The burnout syndrome: Current research, theory, and interventions (pp. 165-171). Park Ridge, IL: London House.

Reed, H. (1962). Implications for science education: Teacher competence research. Science Education, 40, 473-486.

Riffee, D. (1981). Self-esteem changes in hospitalized school-age children. Nursing Research, 30, 94-96.

Rosenberg, M. (1965). Society and the adolescent image. Princeton, NJ: Princeton University.

Rosenberg, M. (1973). Which significant others? American Behavioral Scientist, 16, 829-860

Ruesch, J. (1973). Therapeutic communication. New York: W. W. Norton.

Sander, L. W. & Julia, H. L. (1966). Continuous interactional monitoring in the neonate. Psychosomatic Medicine, 28, 822-835.

Shorkey, C. T. (1980). Sense of personal worth, self-esteem, and anomie of child-abusing mothers and controls. Journal of Clinical Psychology, 36, 817-820.

Shreve, C., Twardosz, S. & Weddle, K. (1983). Development and evaluation of procedures to encourage teacher affectionate behavior in day care centers. Behavior Therapy, 14, 706-713.

Sieburg, E. (1969). Dysfunctional communication and interpersonal responsiveness in small groups. Unpublished doctoral dissertation, University of Denver, Denver.

Sieburg, E. & Larson, C. (1971). Dimension of interpersonal responsiveness. Paper presented at International Communication Association Convention, Phoenix, Arizona.

Skinner, K. (1979, December). Burnout: Is nursing dangerous to your health? Journal of Nursing Care, 8-30.

Sluzki, C., Beavin, J, Tarnopolsky, A, & Veron, E. (1976). Transactional disqualification. In C. Sluzki & D. Ransom (Eds.), Double-bind: The foundation of the communicational approach to the family (pp. 219-236) New York: Grune and Stratton.

Smock, D. & Rothblum, E. (1979). Self-disclosure among adolescents in relation to parental affection and control patterns. Adolescence, 14, 333-340.

Sommer, P. (1980). Obstetrical patient's anxiety during transition of labor and the nursing intervention of touch. Dissertation Abstracts International, 40(12), 5610-B.

Spitz, R. A. (1983). Hospitalism: an inquiry into the genesis of psychiatric condition in early childhood. Dialogues from infancy: Selected papers (pp. 5-22). New York: International Universities.

Stern, D. N., Hofer, L., Hart, W. & Dore, J. (1985). Affect attunement: The sharing of feeling states between mother and infant by means of inter-modal fluency. In T. M. Field and N. A. Fox (Eds.), Social Perception in Infants (pp. 249-268). Norwood, NJ: Ablex.

Storlie, F. V. (1979). Burnout: The elaboration of a concept. American Journal of Nursing, 79, 2108-2111.

Stuart, G. W. & Sundeen, S. J. (1983). Principles and Practice of Psychiatric Nursing. St. Louis: Mosby.

Sullivan, H. S. (1953). The interpersonal theory of psychiatry (1953). New York: Norton.

Sundell, W. (1972). The operation of confirming and disconfirming verbal behavior in selected teacher-student interactions. Unpublished doctoral dissertation, University of Denver, Denver.

Swift, C. R., Seidman, F., & Stein, H. (1967). Adjustment problems in juvenile diabetes. Psychosomatic Medicine, 24, 557.

Thoman, E. B., Leiderman, P. H. & Olson, J. P. (1972). Neonate-mother interaction during breastfeeding. Developmental Psychology, 6, 110-118.

Tobiason, S. J. (1981). Touching is for everyone. American Journal of Nursing, 81, 728-730.

Triplett, J. & Areson, S. (1979). The use of verbal and tactile comfort to alleviate distress in young hospitalized children. Research in Nursing and Health, 2, 17-23.

Twardosz, S., Schwartz, S., Fox, J., & Cunningham, J. L. (1979). Development and evaluation of a system to measure affectionate behavior. Behavioral Assessment, 1, 177-190.

Vaughn, B., Egeland, B., & Stroufe, L. and Waters, E. (1979). Individual differences in infant-mother attachment at twelve and eighteen months: Stability and change in families under stress. Child Development, 50, 971-975.

Videbach, R. (1960). Self-concept and the reactions of others. Sociometry, 23, 351-359.

Wattenberg, W. & Clifford C. (1964). Relations of self-concepts to beginning achievement in reading. Child Development, 35, 461-467.

Watzlawick, P., Beavin, J. H., and Jackson, D. D. (1967). Pragmatics of human communication. New York: Norton.

White, R. (1963). Ego and reality in psychoanalytic theory. Psychological Issues (Vol. 3, #3, Monograph 11). New York: International Universities.

White, G. D. (1977). The effects of observer presence on the activity level of families. Journal of Applied Behavior Analysis, 10, 734.

Whiting, B., & Edwards, C. P. (1974). A cultural analysis of sex differences in the behavior of children age three through eleven. In R. A. Levine (Ed.), Culture and personality: Contemporary readings (pp. 188-201). New York: Aldine.

Widenbach, E. (1967). Family centered maternity nursing (2nd Ed.) New York: Putnam.

Wolff, L., Weitzel, M. H., Zornow, R. A. & Zsohar, H. (1983). Fundamentals of Nursing (7th Ed.). Philadelphia: Lippencott.

APPENDICES

APPENDIX A

CONFIRMATION/DISCONFIRMATION RATING INSTRUMENT

This copyrighted tool is being used with permission of Dr. Jan Heineken. Although originally developed for use with adults and designed to quantify reciprocal behaviors, it has been adapted and used by Dr. Johnie Mozingo (1983) to quantify disconfirming responses of adolescent mothers directed toward their infants and toddler.

It is important to note that only responses of the nurse to an utterance or behavior of the patient will be coded in this adaptation of the system. All responses which do not disconfirm are coded as confirming responses.

Examples of Confirming Responses:

- Expresses agreement, disagreement, or neutrality
- Expresses own feelings
- Supports or confirms
- Asks for elaboration

Categories of Disconfirming Responses and Some Examples:

Indifferent response-
- Ignoring a behavior
- Changing the subject while child is speaking
- Avoiding eye contact
- Interrupting

Tangential response-
- Shift of focus (See my picture! /You got your dress dirty.)
- Pseudo-response in order to change the subject

Impervious response-
- Distortion or denial of another person's self expression
- Negation of another's expression of feeling

Inadequate response-
- An incomplete response
- A qualified response

Ambiguous response-
- Contains more than one message
- Contains non-verbal behavior incongruent with the verbal one

Disparagement response-
- Laughter directed at the speaker
- A response uttered that demeans the speaker

APPENDIX B

AFFECTION MEASUREMENT SYSTEM

This measurement system as described by Twardosz, Schwartz, Fox, and Cunningham (1979) in Behavioral Assessment, 1, 177-190, includes the four measures of affection. Examples of each are provided.

Smiling and laughing-
- Smiling at the person
- Laughing with the person

Affectionate words-
- Using pet names
- Praising the person
- Praising the person to another person in the presence of the first person

Active affectionate physical contact-
- Patting
- Playing in an affectionate manner such as gentle tickling or rough-housing
- Any touching which lasts less than 5 seconds and which is not necessary for caregiving
- Rubbing

Passive affectionate physical contact-
- Sitting or standing so that any body parts remain in contact for longer than 5 seconds when not required for caretaking

APPENDIX C

DATA COLLECTION TOOL

Nurse Code ____
Date ____
Room # ____
(Use separate code sheet for each room # each interaction)
Setting ____

Day of cycle & week (1-10) ____
Shift: D E 12 hr (circle)
Time: 1/2 1st half of shift / 2nd half of shift (circle)

Initials of observer ____
Initials of reliability observer ____

SM	AW	AC	PC	CONF.	INDF	TANG	IMPR	INADeq	AMBG	DISP	Comment

SM	AW	AC	PC	CONF.	INDF	TANG	IMPR	INADeq	AMBG	DISP	Comment

All intervals are 30 sec.; Mark out any (partial intervals)

Total time this page ____

XHS 3/87

APPENDIX D

STAFF BURNOUT SCALE FOR HEALTH PROFESSIONALS

SBS-HP©

Name _____ Social Security # _____ Position _____

INSTRUCTIONS

For each statement check the one answer which best reflects how much you agree or disagree with each statement. Answer according to how you currently feel in each case.

	(1) Agree Very Much	(2) Agree Pretty Much	(3) Agree a Little	(4) Disagree a Little	(5) Disagree Pretty Much	(6) Disagree Very Much
1. I feel fatigued during the workday	☐	☐	☐	☐	☐	☐
2. Lately, I have missed work due to either colds, the flu, fever, or other illnesses	☐	☐	☐	☐	☐	☐
3. Once in a while I lose my temper and get angry on the job	☐	☐	☐	☐	☐	☐
4. All my work habits are good and desirable ones	☐	☐	☐	☐	☐	☐
5. I experience headaches while on the job	☐	☐	☐	☐	☐	☐
6. After work I often feel like relaxing with a drink of alcohol	☐	☐	☐	☐	☐	☐
7. I never gossip about other people at work	☐	☐	☐	☐	☐	☐
8. I feel that the pressures of work have contributed to marital and family difficulties in my life	☐	☐	☐	☐	☐	☐
9. I am never late for an appointment	☐	☐	☐	☐	☐	☐
10. I often have the desire to take medication (e.g., tranquilizers) to calm down while at work	☐	☐	☐	☐	☐	☐
11. I have lost interest in my patients and I have a tendency to treat these people in a detached, almost mechanical fashion	☐	☐	☐	☐	☐	☐
12. At work I occasionally think of things that I would not want other people to know about	☐	☐	☐	☐	☐	☐
13. I often feel discouraged at work and often I think about quitting	☐	☐	☐	☐	☐	☐
14. I frequently get angry at and irritated with my patients	☐	☐	☐	☐	☐	☐
15. I am sometimes irritable at work	☐	☐	☐	☐	☐	☐
16. I have trouble getting along with my fellow employees	☐	☐	☐	☐	☐	☐
17. I am very concerned with my own comfort and welfare at work	☐	☐	☐	☐	☐	☐
18. I try to avoid my supervisor(s)	☐	☐	☐	☐	☐	☐
19. I truly like all my fellow employees	☐	☐	☐	☐	☐	☐
20. I always do what is expected of me at work, no matter how inconvenient it might be to do so	☐	☐	☐	☐	☐	☐
21. I am having some work performance problems lately due to uncooperative patients	☐	☐	☐	☐	☐	☐
22. All the rules and regulations at work keep me from optimally performing my job duties	☐	☐	☐	☐	☐	☐
23. Sometimes at work I put off until tomorrow what I ought to do today	☐	☐	☐	☐	☐	☐
24. I do not always tell the truth to my supervisor or co-workers	☐	☐	☐	☐	☐	☐
25. I find my work environment depressing	☐	☐	☐	☐	☐	☐
26. I feel uncreative and understimulated at work	☐	☐	☐	☐	☐	☐
27. I often think about finding a new job	☐	☐	☐	☐	☐	☐
28. Worrying about my job has been interfering with my sleep	☐	☐	☐	☐	☐	☐
29. I feel there is little room for advancement at my place of employment	☐	☐	☐	☐	☐	☐
30. I avoid patient interaction when I go to work	☐	☐	☐	☐	☐	☐
	(1)	(2)	(3)	(4)	(5)	(6)

NURSE BIOGRAPHICAL DATA

Please answer the following questions about yourself. It is not identify yourself.

1. Age _____.
2. Years since completion of basic nursing program _____.
3. Years in nursing practice (include part-time employment) _____.
4. Years in pediatric nursing practice (include any type of pediatric nursing) _____.
5. Full-time _____, Part-time _____ (Check your current status).
6. Number of years in this status (related to above question) _____.
7. Your sex (circle the appropriate answer) M F
8. Please circle your basic nursing education
   Diploma AD Baccalaureate
9. Please circle your level of interest in getting formal education past that which you now have (1= no interest and 5= high interest)
   1 2 3 4 5
10. Have you completed a formal educational program such as a credit bearing class within the past year? yes no
11. Are you presently admitted to or in a formal ecucation program? yes no
12. Number of children of your own _____.
13. Number of children under age 19 living in your home currently _____.

LIFE-CHANGE INDEX

Please check those life changes that you have experienced personally during the past two years.

Death of a spouse	____
Divorce	____
Marital separation	____
Jail term	____
Death of close family member	____
Personal injury or illness	____
Marriage	____
Fired at work	____
Marital reconciliation	____
Retirement	____
Change in health of family	____
Pregnancy	____
Sex difficulties	____
Gain of new family member	____
Business adjustment	____
Change in financial state	____
Death of close friend	____
Change to different work line	____
Change in number of arguments with spouse	____
Mortgage over $20,000	____
Foreclosure of mortgage or loan	____
Change in work responsibilities	____
Son or daughter leaving home	____
Trouble with in-laws	____
Outstanding personal achievement	____
Spouse beings or stops work	____
Begin or end school	____
Change in living conditions	____
Revision of personal habits	____
Trouble with boss	____
Change in work hours or conditions	____
Change in residence	____
Change in schools	____
Change in recreation	____
Change in church activities	____
Change in social activities	____
Mortgage or loan less than $20,000	____
Change in sleeping habits	____
Change in number of family get-togethers	____
Change in eating habits	____
Vacation	____
Christmas (if approaching)	____
Minor violations of the law	____

APPENDIX F

PATIENT INFORMATION DATA

1. Age of child_____

2. Gender of child_____

3. Race_____

4. How many days in hospital_____

5. Illness category (check as many as appropriate)
   Medical_____
   Injury related_____
   Surgical_____
   Repeated admissions for essentially same illness_____
   Single admission for this illness_____
   Other_____ (Describe)

DATE OF OBSERVATION_____
ROOM NUMBER_____

APPENDIX G

CONSENT FOR FILMING

I agree to be filmed simulating selected verbal and non-verbal interactions with a child. I understand that these films will be introduced as simulated material and may be used as training films for observers, as classroom illustrations, or for presentation to professional audiences.

In addition, I understand that there is no risk to me from participating in this filming and that the long term benefits which may accrue are related to increased knowledge about communication pattterns between pediatric nurses and their patients. I will be free to withdraw from this filming at any time without any penalty.

Any questions will be answered by Dava H. Shoffner, 974-4151.

Signature

Data

APPENDIX H

CONSENT FOR FILMING

Permission for my child to be filmed:

I give permission for my child, , to be filmed interacting with me or another adult for the purpose of training observers in identifying selected behaviors, and for possible classroom instruction or presentation to a professional audience. I understand that there is no risk involved and that either I may withdraw my child or my child may withdraw at any time without any penalty. I understand that the possible long term benefits which may accrue are related to increased knowledge about how pediatric nurses and their patients communicate.

Any questions I have will be answered by Dava H. Shoffner, 974-4151.

Signature Date

Consent for filming, ages 10-18:

I am willing to be filmed with an adult doing such things as smiling, asking questions, complaining, arguing, or asking for something. I understand that I will be told how to behave and I can refuse to do or say anything that makes me uncomfortable. I understand that this film will be introduced as an acted performance, not real-life. I am also willing to have nursing students and other professional people such a nurses, doctors, or social workers to see these films later.

I understand that I can withdraw from the filming if I am uncomfortable. Any questions will be answered by Dava H. Shoffner, 974-4151.

Signature Date

Method of gaining verbal assent, children under 10:

Young children (under age 10) will be told that we would like for them to act in from of the video camera in ways like some children behave in hospitals, that they will be told how to act, and that they can quit if they are uncomfortable. Then they will be asked if they are willing to do this.

APPENDIX I

CONSENT OF AUTHORIZED HOSPITAL ADMINISTRATIVE PERSONNEL

Permission is granted for Dava H. Shoffner, R.N. to conduct observations of information exchange between pediatric nurses and their patients in this institution and to collect selected other data as described below.

I understand that:

1. Individual nurses will be contacted and asked to participate, will sign an informed consent, and will be free to withdraw at any time.

2. Data will be collected by observation and by pen-and-paper tallying of selected nurse behaviors.

3. The focus of this project is on nurse communication. Data will be collected by the primary nurse researcher and by senior nursing students trained in use of the tool.

4. The observer will be introduced to the patient and family as a nurse who wants to learn more about what nurses do. In the event of expression by the patient or family of discomfort at the presence of the observer, the observer will leave the room.

5. On the day of the observation (or during that calendar week) the primary researcher will gather the following data about the patient from a family member or guardian: age, race, gender, length of time in hospital, and category of illness (surgical, accidental, medical, chronic, single episode). They will be given the option of not providing the information; provision of information implies agreement to participate.

6. The nurses will be asked to fill out a brief biographical data form (less than 5 minutes) and a form to measure degree of staff burnout (less than 20 minutes) at a time which does not interfere with their provision of care for their patients.

7. All data will be kept confidential and reporting of the data in any oral or written form will be done in a manner which will protect the identity of the individual nurses, the patients, and the facility involved.

Signature

Title

Date

Signature

Title

Date

APPENDIX J

INFORMED CONSENT FORM

I understand the following:

1. In agreeing to participate in this project on information exchang in nursing, I am giving permission to be observed by the primary nurse researcher and at other times by two senior nursing students as I provide care to pediatric patients. The total time of observation may vary from four to ten hours (not consecutively) and will be scheduled at my convenience.

2. There will be no anticipated risks to me from participating in the study. The information obtained is expected to help identify and measure specific ways in which professional nurses contribute to health care.

3. There will be no anticipated risks to my patients or their parents as a result of my participation in the study; the researchers will not be gathering any data about the patient or family. If any patient or family expresses discomfort at the presence of an observer, the observer will leave.

4. The primary researcher will ask questions of the family or guardian at a later time; they will be given the option of answering the questions, and their provision of the information implies agreement.

5. I will be asked to provide basic biographical data (form will require less than 5 minutes) and to fill out a data collection sheet related to staff burnout (less than 20 minutes) and a life-change event scale (less than 10 minutes) at the end of the observation period.

6. All information obtained will be kept confidential by the nurse researcher. I will be assigned a code number and only that code will appear on data sheets. All data will be collected by observation and pen-and-paper tallying of selected behaviors. Reporting of the data in any oral or written form will be done in a manner that will protect the identity of the individual nurses and the facility involved.

7. Any questions or problems should be directed to Dava H. Shoffner, College of Nursing, 974-4151.

8. My participation in this project is voluntary and I may withdraw at any time without any penalty.

I freely consent to participate in this project under the conditions stated above.

Signature_____

Date_____

VITA

Dava Headden Shoffner was born in 1940, the daughter of a couple who valued education and commitment to completion of any task that was started. Clearly these values were to become ingrained in her and were to serve her well.

After completing high school in a fine, small rural school, Dava attended and graduated from the College of Nursing, University of Tennessee, Memphis. Thirteen years of working as a staff nurse, being a wife and mother, and doing very little of an intellectually stimulating nature were followed by thirteen quite different years.

From 1975 to 1988 Dava taught at the College of Nursing, University of Tennessee, Knoxville and pursued three advanced degrees. An MS in Child and Family Studies was followed by an MS in Nursing. Gradually the decision was made that it was appropriate to continue in the direction already started.

A big commitment like a doctorate must be a joint family undertaking because the entire family is affected. Husband and three children encouraged Dava to set the goal and to "go for it." Continuing to work at the college, do a passable job as wife and mother, and study has been a challenge that resulted in a lot of learning, periods of

fun, and many new gray hairs. It is with considerable pleasure and relief that the Headdens and the Shoffners will attend the June 1988 graduation ceremonies.