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Date January 1990

A COMPARISON OF MILITARY AND CIVILIAN
STAFF NURSE PERCEPTIONS OF THE COMMUNICATION PROCESSES
WITHIN THEIR RESPECTIVE ORGANIZATIONS

A Thesis
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LaVerne Puckett

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v

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ABSTRACT

This exploratory study described and compared two groups of hospital staff nurses, military and civilian, in terms of their perceptions of the communication processes within the nursing hierarchy of their respective organizations. The two groups were further compared in terms of reported job satisfaction. Lastly, the relationship between communication variables and job satisfaction was examined.

Data were collected from two hospitals, one Army and one civilian. Both hospitals were large tertiary care facilities. A convenience sample of 89 staff nurses participated from the Army hospital and 92 staff nurses from the civilian hospital. The survey instrument consisted of the sources of information section and the job satisfaction scale from the International Communication Association (ICA) Audit Survey. The researcher developed two demographic data sheets.

Results from t-test analysis offered no evidence that the groups differed in their perceptions of the total amount of information received from the various sources in the nursing hierarchies of their respective organizations. This pattern held true for additional t-test analysis on discrepancy scores between the

amount of information perceived as needed from a particular source of information and the amount of information presently received from that source. Further t-test analysis indicated no statistically significant difference between the groups in terms of reported job satisfaction. Pearson's Product Moment Correlation analysis indicated a modest, positive, significant correlation between total amount of information received from various sources and reported job satisfaction for both groups. Examination of univariate means indicated that for both nurse groups, the source of information demonstrating the greatest discrepancy score was top management. A backward elimination procedure and linear model regression analysis indicated that the information source most salient to job satisfaction differed for the two groups: for the military group, immediate supervisor; for the civilian group, middle management. The level of significance for the study was $p \leq .05$.

For these two nurse groups, response analysis indicated greater similarities than differences. Plausible rationale for the findings are discussed. Implications for nursing researchers, managers, and educators are given.

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CHAPTER 1

THE RESEARCH QUESTIONS

Introduction

Recognizing the importance of effective communication technique is not new to nursing (Wolf, 1986). The curriculum of any nursing program will include instruction on good communication skills in the interpersonal realm. The nurse-client interpersonal relationship has been a hallmark of nursing which took root as early as the late 1940's (Peplau, 1952). This client centered focus of effective communication served nursing well for many years. However, as the health team expanded and nursing roles became more complex, the benefits of effective interpersonal communication in every contact became evident. But only during the past decade has attention been directed toward nursing communication within the organizational context (Morse & Piland, 1981; Worobey & Cummings, 1984).

This is understandable in light of the fact that organizational communication is a young discipline. Research in this area has encountered the challenge of isolating various aspects of communication as abstract variables for study. Even more difficult have been the

attempts to demonstrate relationships between these variables and other factors contributing to the work milieu. Given the diversity of work settings across different organizational structures and the myriad factors contributing to interpersonal communications, there is little wonder that a comprehensive conceptual model of organizational communication has not been developed (Kersten, 1986; Porter & Roberts, 1976). Subsequently, most studies in this field have targeted subjects within a particular organizational structure focusing on a limited number of variables and/or possible relationships among those variables.

Relationships which have been explored with increasing interest link various aspects of organizational communication to job performance (Anderson & Level, 1980; O'Reilly, & Roberts, 1977; Pincus, 1986), job satisfaction (Baird & Bradley, 1978; Everly & Falcione 1976; Marrett, Hage, & Aiken, 1975; Muchinsky, 1977; Pincus, 1986a), and organizational climate (Falcione & Kaplan, 1984; Ireland, Van Auken, & Lewis, 1979; Muchinsky, 1977). But little research on the relationship between organizational communication variables and job satisfaction has been conducted in the nursing profession. Pincus (1986b) noted that,

Few studies of hospital nurses . . . have

attempted to explain how and why communication activities, which affect every facet of nurses' working lives, influence nurses' job satisfaction and job performance. Nursing supervisory personnel, particularly those at executive levels, must be cognizant of the crucial contribution positively perceived communication can make to nurses' morale and productivity (p. 19).

Nurses' job satisfaction has also been emphasized in many studies and related to a variety of factors, including professional burnout (McDermott, 1984), commitment and professionalism (McCloskey & McCain, 1987), stress and job performance (Packard & Motowidlo, 1987), and staff nurse perceptions of head nurse leadership behaviors (Pepper, 1988). However, the relationship between nurses' communication in an organizational context and nurses' job satisfaction has received little attention; thus, the paucity of empirical data provided a stimulus for this study.

Relevance to Nursing

More nurses are employed by hospitals than any other type of health care organization. Hospitals have experienced a tremendous increase in complexity over

the past 20 years. Improved technology has required nurses to become more sophisticated in coordinating patient care and combining forces with the highly specialized multidisciplinary team to deliver the best care possible (Edwards & Brilhart, 1981). More recently, hospitals have been forced into a competitive stance with the advent of the prospective pay system (Pincus, 1986b). This increases the pressure on nurse-managers to provide health care, meeting the organizational goal, within specified time frames while utilizing limited resources for maximum effectiveness. This further emphasizes the importance of effective communication among nurses within the organizational setting.

Understanding the strengths and weaknesses of health care communication within and across the formal and informal communication channels of any given organization will enhance professionalism. Adapting effectively to the inevitable changes of the health care organization requires an appreciation for the structure and functioning of the communications systems. Without this insight, individual efforts are not well directed and may fail to meet requirements; thus, professional performance and morale may suffer (Edwards & Brilhart, 1981).

Nurses who understand formal and informal networks will be better able to define their professional roles within the organizational setting. The interface of professional and organizational goals may be clarified. Further, conflicts or potential conflicts might be identified with greater skill and more easily resolved, resulting in improved quality of nursing care (King, 1981).

Imogene King (1981), a nurse theorist, and Gail Wolf (1986), a nurse executive, have both emphasized the significance of staff members' satisfaction. Low job satisfaction is associated with low retention (Wolf, 1986), low morale, high turnover, increased use of sick time, and increased number of accidents on the job (King, 1981). Both point out that these are key issues for nursing administrators to consider in terms of cost containment. Additionally, such problems might indicate unmet professional needs of the individual nurse, and therefore warrant close scrutiny by nurse administrators. Encouraging staff members to participate in decisions that will affect their jobs is one method of increasing job satisfaction.

The importance of these issues has been clearly established. Comparing nurses' communication across various organizational settings would yield an added

dimension, further increasing knowledge of how nurses interact within different administrative structures. While a few studies have focused on nursing communication in hospitals, a thorough literature search has revealed no studies of this concept in a military hospital setting. Understanding how nurses interact in the traditional military rank structure might provide information useful to nursing administrators about the nursing hierarchy in their own organizations.

Theoretical Models

As early as 1956, Talcott Parsons defined an organization as a ". . . special type of social system organized about the primacy of interest in the attainment of a particular type of system goal" (Parsons, 1956, p. 134). Further, he specified an organization as "a functionally differentiated subsystem" within a larger social system, such as a community or society (p. 134).

The introduction of the open systems theory of organizations by Katz and Kahn in 1966 represented a break with the traditional or classical view of organizations as static structures (Georgopoulos, 1972; Shafritz & Ott, 1987). Shafritz and Ott (1987) pointed

out that,

The systems school views an organization as a complex set of dynamically intertwined and interconnected elements, including its inputs, processes, outputs, feedback loops, and the environment in which it operates. A change in any element of the system inevitably causes changes in its other elements. The interconnections tend to be complex, dynamic, and often unknown (p. 234).

In addition to positing a novel approach to organizational functioning, Katz and Kahn (1966) also utilized the concept of an organization as a social system:

All social systems, including organizations, consist of the patterned activities of a number of individuals. Moreover, these patterned activities are complementary or interdependent with respect to some common output or outcome; they are repeated, relatively enduring, and bounded in space and time (p. 252).

Traditionally, the hospital has been the prototype health care organization. Georgopoulos (1972) and King (1981) characterized a hospital as a social system and

a social unit, respectively, with subsystems or subunits which are interdependent and must interrelate in order to achieve organizational goals. Kreps and Thornton (1984) typified a health care organization as a system with interdependent subsystems. Nursing was designated by these social systems proponents as a subsystem or subunit of the organizational system/unit.

Berkowitz and Bennis (1961) stated that hierarchial levels was a universal feature of organizations. This concept was the basis of their study focusing on nursing interactions within and across the nursing hierarchy in seven out-patient departments. Edwards and Brilhart (1981) described a hospital as a bureaucracy, i.e., an organization administered through departments or specialized subdivisions. According to Edwards and Brilhart, (1981), "Bureaucracy provides an ordered hierarchy in the hospital that can take advantage of specialization" (p. 230). They also used the term "pyramidal hierarchy" in referring to the structure of the specialized subdivision of nursing in the hospital setting. Their "pyramidal hierarchy" of nursing had a logical order from apex to base: Director, Supervisor, Head Nurse, Charge Nurses, Staff Nurses (p. 230).

This nursing "pyramidal hierarchy" fits well with

Mintzberg's (1979) organizational configuration for the professional bureaucracy. This configuration emphasizes the operating core as the key factor of the organization, giving professionals greater autonomy to perform services for clients. Additionally, this model allows for parallel hierarchies to exist within the organization. Nurses are the largest group of professionals employed by hospitals, and their health care delivery is client-centered.

A unified model of the concept "organizational communication" has not been developed (Kersten, 1986; Porter and Roberts, 1976). Porter and Roberts (1976) noted that, "Since communication is everywhere in organizations, it is consequently very hard to find, in the sense of trying to separate it out as a phenomenon for investigation" (p. 1554). Despite the obvious impediments to studying this concept, several perspectives have emerged.

Of particular relevance is the systems perspective discussed by Kefelas (1977). In an open systems approach, Kefelas stated, "The process of communication is, for the purpose of illustration, conceptually divided into two major areas: (a) information theory or technical communication, and (b) human or social communication. However, the two aspects of

communication are integral parts of the same whole" (p. 31). He further divides human communication into intrapersonal communication . . . "individual information acquisition and decision making" . . . and interpersonal communication . . . "two- or n-persons communication systems" (pp. 41-42).

Conceptual Framework

The conceptual framework for this study was derived from Imogene King's (1981) conceptual framework of nursing and integrated theoretical elements from the foregoing discussion. Central to King's (1981) concept of nursing is the individual, participating in both intrapersonal and interpersonal communication. The individual interacts via interpersonal communication both with interpersonal systems or groups and social systems.

In the present study, the individual health care provider or nurse is the "personal system". The individual is part of an interpersonal system, "Nursing". Nursing is a social subsystem of the health care organization. Nursing is organized in a pyramidal hierarchy in which channels of responsibility, authority, and accountability are clearly defined. The health care organization is an open social system

within a larger community. The organizational configuration which best characterizes a hospital (health care organization) is a professional bureaucracy that has established parallel hierarchies. Organizational communication processes exist parallel to, are integrated with, and are functionally inseparable from the subsystems of the organization. Human communication is either intrapersonal (individual information acquisition and decision making) or interpersonal (two- or n- persons communication systems, i.e., communication among nurses in the health care organization, or between staff nurses and other information sources in the nursing pyramidal hierarchy).

Purpose of the Study

This study was designed to describe and compare civilian and military hospital staff nurses in terms of their perceptions of the communication processes within the nursing hierarchy of their respective organizations. Further, the two groups were compared in terms of reported job satisfaction. Lastly, the relationship between communication variables and job satisfaction was examined.

Research Questions

1. Does a difference exist between civilian and military nurse groups in their perceptions of:

(a) the amount of information received from various sources in the nursing hierarchy?

(b) the amount of information needed from various sources in the nursing hierarchy?

2. Does a difference exist between civilian and military nurse groups in their reported job satisfaction?

3. For each of the nurse groups:

(a) Which information source provided the most information?

(b) Which information source provided the least information?

(c) Which information source demonstrated the greatest discrepancy between the amount of information needed and the amount of information received?

(d) Which information source demonstrated the least discrepancy between the amount of information needed and the amount of information received?

4. (a) Is there a relationship between the total amount of information received and reported job satisfaction for either nurse group?

(b) If a relationship is demonstrated, which information source is most salient to reported job satisfaction?

CHAPTER II

REVIEW OF LITERATURE

Introduction

Over the past 30 years, the field of organizational communication has gained support as an emerging discipline. The origins of this young discipline can be traced to organizational theory, human relations, and social psychology. But researchers and theorists alike have been confronted with numerous practical and theoretical difficulties. Despite the volume of research which has been conducted and published, the lack of a unifying perspective remains as the pervasive criticism of the field since its beginnings (Goldhaber, Porter, Yates, & Lesniak, 1978; Kersten, 1986; Porter & Roberts, 1976; Roberts, O'Reilly, Bretton, & Porter, 1975).

Dance, cited in Roberts et al. (1975), reviewed the communication literature in an attempt to identify themes within 95 different definitions of the term "communication". Unable to formulate a comprehensive definition, Dance concluded that, "...we are trying to make the concept "communication" do too much for us" (p. 502). However, the conceptual and methodological

uncertainty has not diminished the recognized importance of the construct.

The increasing emphasis on the field of organizational communication has spread from academia to managers and executives in the work setting. Effective communication processes, crucial to the functioning of any organization, must be a prime objective of management (Anderson & Level, 1980; Snyder & Morris, 1984). Kreps and Thornton (1984) maintain that organizations exist because organizational communication provides individuals ". . . with the ability to coordinate their behaviors and to organize their tasks" (p. 155). Because it is a key element in every aspect of organizational functioning, researchers have explored almost every possible facet of organizational communication (Hellweg & Phillips, 1980; Roberts & O'Reilly, 1974).

Several investigators have examined relationships between various aspects of communication and other organizational variables. Some of the earliest work focused on the structure of the organization and discussed communication in terms of formal channels (Conrath, 1973; Penley, 1977; Porter & Roberts, 1976; Goldhaber et al., 1978). Informal communication channels, grapevine information, have also been studied

(Laplace, 1983; Marrett, Hage, & Aiken, 1975; Wooten, 1981). Directionality of communication is another area which has been extensively reviewed (Gatewood, Boulton, Hatfield, & Huseman, 1982). Directionality or flow of information includes vertical (upward and downward) communication (Anderson & Level, 1980; Harriman, 1974; Muchinsky, 1977; Roberts & O'Reilly, 1974) and horizontal communication (Marrett, Hage, & Aiken, 1975; Minter, 1974; Morse & Piland, 1981). The relationship between various communication variables and job satisfaction has been extensively studied also (Baird & Bradley, 1978; Berkowitz & Bennis, 1961; McCloskey & McCain, 1987; Montague, 1986; Muchinsky, 1977).

Nurses have participated as subjects in many studies from each of these categories, but have seldom been the focus, as a professional group. Pertinent studies from each of the foregoing categories will be discussed with the nursing profession as the primary focus.

Organizational Structure and Communication Theory

Two prominent schools of thought on structure and communication pertain to the formal organizational chart and the concept of centralization of authority. The classical structuralist approach to communication

advocated adherence to formal network channels outlined by the authoritative structure (Porter & Roberts, 1976; Roberts et al., 1975). This remains a useful method of understanding communication processes (Kreps & Thornton, 1984; Wooten, 1981). Edwards and Brilhart (1981) also described the organizational chart as a guideline for the desired flow of communication, but in the health care organization they noted that communication flow could be in any direction. Flow was dependent on the coordination necessary to meet the health care requirements of each client. However, they stated that individuals in the formal chain should also be informed when communication takes place outside of formal channels, to prevent breaking the formal management chain.

Georgopoulos (1972) maintained that formal authoritative lines exist mainly to minimize the uncertainty of networking in hospitals. Additionally, the effectiveness of the health care organization is more dependent upon the "social efficiency" of the system than formal networks or technology (p. 109). Though utilitarian, the formal organizational chart appears less than an ideal means of understanding information channels within the health care organization.

Several characteristics are associated with the concept of centralization of authority. Extreme centralization in an organization exists when one individual holds the power for all decision making. Decentralization lies at the opposite end of the continuum; power for decision making is delegated to many different individuals (Mintzberg, 1979). Rarely will an organization be characterized by total centralization or decentralization of authority. More commonly the structure will fall somewhere in the middle of the continuum.

Theoretically, the centralized organization has a tall hierarchy and the communication emphasis is downward with less feedback (Roberts et al., 1975). The traditional military model exhibits this scalar type chain of command, with downward communication and decision making being top oriented with little or no input requested from the individual worker (Ireland et al., 1979; Mintzberg, 1979; Sorenson, 1985).

Organizational Structure and Communication Research

Franz and Jones (1987) conducted a survey of city employees in the suburbs of Chicago, 120 of whom were police officers. The police departments participating in the study had a military model organization which

contrasted with the structures of other departments (i.e. libraries, utility workers, etc.). Responses from the police officers indicated that (a) upward communication was not encouraged, (b) overall communication tended to be downward and (c) they were discontented with this pattern. Further, when compared to other city employees, the police officers felt they were not included in their department's decision making processes.

Both Patricia Harris (1984), a clinical nurse specialist, and Jo Kirsch (1988), a graduate nursing program director, advocate that a decentralized managerial structure is most appropriate for nursing personnel. The level of decision making is more participatory leading to a greater sense of autonomy in providing health care. Results of communication studies in health care organizations also support this idea. In a communication effectiveness study of 91 nurses, Worobey and Cummings (1984) found that listening skills were rated as highly important when dealing with patients, physicians, nurses and administrators. Additionally, communication skills in advising administrators were also rated as important.

Results from Baird and Baird's (1985) survey of 1,507 nurses across the country confirm these findings.

When asked about input into the decision process of the organization, nurse executives felt their input was solicited and expressed satisfaction with this aspect of the communication processes at their level. However, nurse supervisors were less optimistic and staff nurses were dissatisfied with the amount of input they were able to contribute to decisions which affected them.

Porter and Roberts (1976) cited findings by Bavelas and Barrett (1951) and Leavitt (1951). Both conducted empirical studies of small group communication under controlled conditions. The centralized groups were faster and more accurate when problem solving an issue with few details. With complicated situations, the decentralized group was faster and more accurate. Average group member satisfaction was greater in the decentralized group regardless of the complexity of the situation.

Anderson and Level (1980), surveyed 236 nursing personnel and found that greater satisfaction was experienced with administrative-relevant communication than with task-relevant communication. It was inferred that nurses, professionals with a high degree of training, had a low need for task related information from managerial personnel, but desired more

administrative information.

Summary

The organizational chart serves a necessary function by defining formal communication channels and outlining authoritative structure. However, it is insufficient in describing hospital communication processes. Interdepartment communication that crosses formal channels, often occurs in hospitals to facilitate providing optimum health care, the primary organizational goal. Though the military model appears to adhere closely to formal channels in communication processes and operates in a highly centralized fashion, the employees performing the work of the organization tend to display dissatisfaction with the system. The studies reviewed indicate that nurses as a professional group (a) required less downward communication of task relevant information; (b) desired a less centralized organizational structure; and (c) preferred a high degree of participation in the decision making processes of their organization.

Vertical Communication

The term vertical implies a dimension with two directions: up and down. In an organizational

context, vertical communication suggests an established hierarchy, generally governed by formal vertical networks within the organization to sustain message flow. An awareness of the determinants which provide the basis for rank order relationships in the hierarchy is important to an understanding of factors which could affect informational flow.

Status (the importance of a position) and power (relative ability to control or influence individuals and/or events) are two key determinants or factors which provide the basis for rank order relationships (Porter & Roberts, 1976). Though exceptions can be found, a person holding a high position in the organizational hierarchy generally will have both a higher status and greater power than a position at the base of the hierarchy. The influence of these positional variables are a constant, underlying each interaction of persons within the hierarchial structure.

Many other factors also contribute to communication interactions, but their influence is contingent upon person and situation. Galbraith (1973) points out that each link in the hierarchy, each superior-subordinate dyad, is a unit with ongoing upward and downward communication processes. Each unit

has the capability of altering vertical communications. He views this as a drawback for efficient functioning.

Downward Communication

Downward communication is the most fundamental of all informational flow (Kreps & Thornton, 1984). Katz and Kahn (as cited in Jablin, 1979; Gatewood et al., 1982) developed a typology of downward communication content: job instructions, job rationale, policies and procedures, performance feedback, and indoctrination of goals. Some concepts relating to downward informational flow which have been explored dealt with filtering of information from the apex of the organization to the worker level, gatekeeping (Smith, Richetto, & Zima, 1972), and communication style of the manager (Baird & Bradley, 1978).

Baird and Bradley's (1978) study of 150 workers randomly selected from two medium sized organizations indicated that content of information and the manner in which it was communicated (manager's communication style) were related to the employee's relationship with the supervisor. The four content variables which correlated positively and most significantly to both quality of relationship and quality of communication were: stresses happy relationships, reinforces good

performance, encourages effort, and emphasizes teamwork. The four communication style variables having the greatest positive correlation to both quality of relationship and quality of communication were: listens carefully to others, shows concern, friendly with others, and attentive to others. This indicated that the manner in which the supervisor communicates content might be of equal or perhaps greater importance to the employee than the content of the message.

In an attempt to identify perceptions of downward communication among nurses at various performance levels, Anderson and Level (1980) evaluated survey responses of 236 nursing employees (RNs, LPNs, nurse assistants) from two hospitals. Supervisor ratings determined the performance level of each participant as superior, above average, or average. No statistically significant difference was found in the perceptions of any of the performance groups in either hospital for downward communication of task-relevant or administrative-relevant content. This signified that management personnel (nursing supervisors) were communicating in a consistent manner to staff nurses regardless of the employee's (subordinate's) performance evaluation.

Communication interactions of 90 out-patient department nurses were studied by Berkowitz and Bennis (1961). Initiation and content of interactions across hierarchial levels were evaluated from survey responses. The results demonstrated a pattern of contact initiation that was inversely related to the hierarchial position of the person being contacted. It appeared that those of higher status in the hierarchy were more likely to initiate a superior-subordinate interaction. The content of interactions seemed to undergo a filtering action. Task content (patient care information) was more often communicated upward or horizontally to peers. However, the subordinates for this sample of nurses were ancillary staff, clerical or housekeeping; there is little need to pass this sort of information to these personnel. Organizational content (working conditions and administrative policy) was most often communicated upward. Interpersonal content (social niceties and joking) took place most often among co-workers. Within the same hierarchial level, task content represents the type of information communicated most often; next most often was organizational content, then interpersonal content.

Another aspect of downward communication that has been considered more recently is the amount of

information from top management and worker satisfaction. Interviews conducted with employees of a nonprofit blood center revealed much dissatisfaction resulting from the lack of information from top management. This was termed a "communication gap" (Sypher & Ray, 1984, p.783).

A survey of 1,057 nurses across the country also pointed out dissatisfaction at the staff nurse level regarding a lack of information from nurse executives in the higher echelons of the hierarchy (Baird & Baird, 1985). Although executives were generally satisfied with communication flow, this study suggested that the needs of staff nurses might not be adequately assessed.

In Franz and Jones's (1987) study of communication in police departments with the military model organization, front line officers demonstrated a frankly suspicious attitude toward members of the upper levels of the department. This was partially attributed to poor intraorganizational communication.

Upward Communication

Upward communication provides management with feedback about routine operations and the adequacy of downward communication (Kreps & Thornton, 1984). Some of the factors which have been posited to influence a

subordinate's interaction with his/her supervisor are: perceived career influence on the worker by the supervisor, trust, and various aspects of individual communication styles.

Read (1962) conducted a study of 52 superior-subordinate dyads in middle management positions in an industrial hierarchy. Data were gathered via interviews and survey questionnaires. The results indicated that upward communication inaccuracy increased when the supervisor was perceived as being highly influential and not trusted by the subordinate. The subordinate's trust in the supervisor, however, seemed to be the primary factor in determining the accuracy of upward information.

The study of superior-subordinate communication conducted by Jablin (1980) involved 136 subjects from three different business/industrial organizations. Seventy-five percent were female, 52% were employed by a health care institution, and 50% reported holding a lower hierarchial position. His results lend support to Read's (1962) work. He found that subordinates who perceived their supervisors to be low in work related influence (decision making about work assignments, work methods, and evaluation of work performance) were less satisfied with their supervisor and reported less open

communication in the dyad than subordinates perceiving supervisors as moderate or high in influence.

Additionally, subordinates perceiving their supervisor as a supportive leader expressed greater satisfaction with the supervisor and more open communication than workers reporting supervisors as non-supportive. The managerial implications for supervisors having a moderate to high degree of influence are significant. By developing a supportive leadership style, these supervisors can more readily increase subordinate satisfaction and openness than by attempting to increase influence.

Jablin also conducted a study (1982) on openness in superior-subordinate communication. Data were collected from 15 different organizations: three insurance companies, two health care facilities, two public utilities, and four manufacturing firms. Questionnaires from 830 subjects were utilized. The sample was 49% female and 15% were respondents from the health care facilities. The effect of organizational size, hierarchical level, and superior's span of control was investigated. Subordinates in the lowest level of their hierarchy perceived significantly less openness in the superior-subordinate dyad than subordinates in the higher levels of the hierarchy. In organizations

of less than 1,000 employees, subordinates perceived less communication openness than subordinates in organizations of greater than 1,000. Differences in the supervisor's span of control did not significantly affect perceived openness in the dyad. This finding was somewhat surprising. It seems reasonable to expect that as a supervisor's span of control increases, less time could be allocated each employee. It was posited that a quality versus quantity issue surfaced with this finding. The quality of the interaction might affect the subordinate's perceived openness of the relationship more than the frequency of upward communication.

Findings from Muchinsky's (1977) study of 695 employees of a large public utility demonstrated a high positive correlation between trust in supervisor and satisfaction with supervision. Additionally, satisfaction with communication was most highly and positively correlated with satisfaction of supervision.

In Woodlock's (1983) study of perceived effective communication within the work setting, data from 950 employees of several substance abuse rehabilitation facilities were analyzed. Results indicated that interpersonal variables, trust and management style, accounted for 33% of the variance in effective

communication (dependent variable). Specifically, trust demonstrated the greatest influence on communication. It was posited that without mutual trust and the development of a collaborative environment, openness and accuracy of communication processes would diminish.

Athanassiades (1974) investigated communication processes of female subordinates of a large business firm in a southern city of the United States. Survey responses were obtained from male as well as female subordinates for comparison. Of particular interest was the distortion of upward communication by the subordinates in relation to ascendancy drive, security needs, risk taking propensity, and perceived autonomy. In the insecure group, low risk takers were more apt to distort upward communication than high risk takers. In the secure group, ascenders distorted information significantly more than non-ascenders. Subordinates perceiving a less autonomous environment distorted information more than those perceiving a higher degree of autonomy.

Subjects were categorized as professional, managerial, or clerical. When categories were compared no significant differences were found for the managerial and clerical group, so these categories were

combined. A comparison of professional to managerial groups revealed that security levels were similar. However, professional women reported greater ascendancy, were higher risk takers, and distorted information less than managerial women.

A subject group of male subordinates from the same firm was matched with the female group in regard to responses on ascendance, autonomy, and security scores. The distortion scores of these pairs indicated that female subordinates distorted information significantly more than their male counterparts. Regardless of gender, however, responses of those in supervisory positions agreed that discrimination did exist against women in business and government organizations. Further, the females in managerial positions reported having a greater sense of non-participation, felt they had less authority than was necessary to do their jobs, and felt less liberty to express disagreement with their superiors.

Worobey and Cummings (1984) surveyed 91 hospital nurses to measure communication skills. Results indicated that nurses perceived advising, giving instructions, and routine information exchange with administrators to be to be an important aspect of their communication processes. Forty-three percent of the

nurses in the sample were employed by a hospital which had an ongoing communication training and development program. Nurses in this group were reported to have greater access to nursing administrators through a variety of channels in their facility. These nurses also gave themselves higher ratings on communication skills competence. Perhaps more frequent contact affords a measure of confidence when dealing with superiors.

Honeycutt and Worobey (1987) surveyed 131 hospital nurses to determine predictors of communicator style. The most important predictors for having good communication with a supervisor were the terms: friendly, flexible, and argumentative. However, in reporting variables which predict good communication style usage by the supervisor, the most significant terms were: flexible, relaxed, precise, and attentive. When contrasting self reported use of variables with perceived supervisory use, nurses responded that their supervisors used more of the variables which predict a good communicator.

The second portion of this study focused on the importance that nurses attributed to specific communication skills and their assessment of self competence in these skills. Responses from 83 nurses

demonstrated that communication with administrators was of least importance when compared with communicating with patients, other nurses, or physicians.

Nevertheless, their responses still attributed a significant level of importance to communication skills for the nurse-administrator relationship while also assigning lower ratings for self-competence in these skills.

Berkowitz and Bennis (1961) examined reports of the importance of an interaction to the nurse based on the hierarchial level of the other person. Interactions with superiors were rated somewhat more important to the nurse than interactions with co-workers and significantly more important than with subordinates. Nurses also responded that interactions with superiors were slightly more satisfying than with peers and significantly more so than with subordinates. It was posited that superiors were an important resource for the worker. That is, by virtue of the superior's position, they were the link for the staff nurse to positive and negative reinforcements offered by the organization. Along with the finding that the frequency and initiation of interaction was inversely related to the hierarchial status of the other person, the findings suggested that when a nurse interacts with

a superior it could pertain to a matter which would impact on unit functioning. Initiation of contact upward could be motivated by some problem over which the staff nurse would have no control. Results also yielded insight from the staff nurse's view regarding a communication dilemma within the organizational hierarchy. Interactions that are most important and most satisfying are the least frequent and can be initiated the least by the nurse, unless some difficulty provides an incentive.

Horizontal Communication

Three categories of horizontal or lateral organizational communication have been identified: interactions among co-workers, interdepartmental communication, and interaction between persons in line and staff positions (Porter & Roberts, 1976). Because interactions among co-workers is the most common type, it will be the focus of this review. Information flow between members of the same hierarchial level provides a means for co-workers to problem solve by sharing relevant information and thereby contributes to unit effectiveness in accomplishing organizational goals (Kreps & Thornton, 1984).

At least three studies utilizing the same

instrument have been conducted to determine which communication skills were perceived as most important in nurses' professional relationships (Morse & Piland, 1981; Honeycutt & Worobey, 1987; Worobey & Cummings, 1984). One of the relationships evaluated by each of these studies was the nurse-nurse relationship. The nine communication skills on the instrument were: advising, persuading, instructing, routine information exchange, public speaking, small group discussions, giving orders, listening, management of conflict.

Morse and Piland (1981) asked 256 hospital nurses to rate the relative importance of these nine skills using a five point Likert scale. Their responses indicated the following skills, in descending order, as most important in the nurse-nurse interactions: listening, routine information exchange, conflict management, small group discussion, instructing. Also, respondents reported that listening was the single most important skill across all relationships evaluated.

In addition to an importance rating for each of the skills in different professional relationships, Worobey and Cummings (1984) asked 91 hospital nurses to give a self-competency rating for each of the skills. Again, listening was rated as an important skill across all relationships and generally self competency scores

were high for this skill. Additional skills rated as important to the nurse-nurse interaction were: instructing, routine information exchange, and conflict management.

Honeycutt and Worobey (1987) found that nurses reported more openness with peers than with supervisors or subordinates. Communicator styles which predicted effective communication with a peer were: relaxed, friendly, flexible, and open. Across all three relationships (supervisor, peer, subordinate), friendly and flexible were consistent predictors. For individual communication skills, listening, once again, was perceived to be the most important skill across all relationships. In descending order of importance, ratings for skills in the nurse-nurse interaction were: listening, conflict management, routine information exchange, instructing, and small group discussion. When nurses were asked to rate their own competency, listening was first followed by routine information exchange, instructing, small group discussion, and conflict management. The perceived difference in importance and self-competency of conflict management skills merits attention.

The study of interaction processes and content of information exchange by Berkowitz and Bennis (1961)

revealed a selective pattern of content exchange. For out-patient department nurses, task content (patient care information) was more readily transmitted upward to superiors and laterally to peers than to subordinates (who were not nurses). Organizational content (working conditions and administrative policy) most often was transmitted upward. Interpersonal content (discussing personnel, social niceties and joking) was transmitted laterally. In a comparison of types of content transmitted within the unit among co-workers, task content was most often transmitted with no significant difference found between the amount of organizational content and interpersonal content transmitted.

There have been some studies linking structural characteristics of the organization with the amount of inter-unit communication. Penley (1977) cites findings by Hage, Aiken, and Marrett (1971) which suggest that the volume of horizontal communication increases in a positive linear association to decentralization of decision making processes. As more decision making takes place at lower echelons, co-workers are more likely to collaborate among themselves.

Gatewood et al. (1982) studied variations of

communication patterns in relation to various job characteristics by surveying 454 maintenance specialists at three different air bases. Responses indicated that high levels of job interdependence (the degree to which the worker was required to work and cooperate with others to complete job tasks) were associated with an increase in certain types of information transfer among inter-unit work members. Information exchanged tended to be job instructions, deadlines, rules, policies, and solicited or volunteered task related input. Also noted was a relationship between job autonomy and amount of instruction related information. Higher levels of autonomy resulted in decreased amounts of task instructions, task objectives, and deadlines from both peers and supervisors.

Summary

According to the studies discussed, nurses view peer communication as a distinctly different type of interaction process. Certain communication skills and styles were perceived as more appropriate in the nurse-nurse interaction than in other professional relationships. Some types of information are more likely to be transmitted among unit members (patient

care and interpersonal content) than others. Given the high level of interdependence of their work, it seems reasonable to think that peer interactions provide many resources for the nurse. Collaboration for problem solving offers support for the nurse as well as enhancing quality in patient care and ultimately serving to accomplish organizational goals.

Informal Communication

Informal communication processes do not necessarily follow prescribed formal organizational channels. Often referred to as the "grapevine", these processes might follow to a certain extent formal channels, but are unstructured and therefore function outside the confines of formal networks (Kreps & Thornton, 1984; Wooten, 1981). Some contend that an informal communication system develops in response to a failure of the formal networks in providing needed information to employees (Laplace, 1983; Marrett et al., 1975). Wooten (1981) maintains that informal channels exist but become activated only as a consequence of unmet communication needs of employees.

Edwards and Brilhart (1981) suggested that in hospitals many communication relationships will develop outside the formal network structure. The dynamic

hospital environment requires extensive collaborative efforts to meet patient care needs, and information flow could be in any direction. There is also the contention that formal and informal networks coexist, cannot be separated, but function and serve somewhat different purposes (Davis, 1973; Kreps & Thornton, 1984).

Regardless of its origins, the advantages and disadvantages of this ill-defined but functional information source are readily recognized. While often serving a need for providing information, credibility is frequently questioned because the source usually can not be identified (Davis, 1973; Kreps & Thornton, 1984; Wooten, 1981). It is interesting to note that Thiry's (1977) findings pointed out the misgivings that nurses had in relying on informal sources of information. ". . . The grapevine was not considered a relevant means of communication for nurses" (p. 3131B).

Administrators have advocated recognizing the existence of the grapevine or informal channels and using these channels to the advantage of the organization (Davis, 1973; Kreps & Thornton, 1984; Laplace, 1983; Wooten, 1981). Wooten (1981) suggested that the informal system is sometimes considered faster and, once links are identified, can be used to offset

misinformation or to clarify issues of concern in the formal networks.

Job Satisfaction

Job satisfaction is a multivariate construct and has been researched extensively. Numerous conceptual frameworks have been utilized by investigators. Two conceptual frameworks often used are Maslow's Hierarchy of Needs (Downs, 1977), and Herzberg's Two Factor Theory (Downs, 1977; Pincus, 1986b),

Needs theories such as Maslow's have been used as one approach to interpret job satisfaction. Maslow identified five needs in an order of primary motivation from the most basic to the highest order need: physiological, security, social, ego, and self-actualization needs. Higher needs do not become motivators until the more basic needs are adequately met. Individuals have different levels of motivations about their jobs, and their motivation and level of satisfaction might change over time.

McCloskey and McCain (1987) investigated perceptions of job satisfaction and commitment of 150 newly hired nurses. Survey responses were obtained during the first week of hospital orientation, after 6 months and again after 12 months of employment.

Results indicated that job satisfaction dropped over the first 6 months, but was maintained at a steady level over the following 6 months. Nurses reported greatest satisfaction with social rewards, (sense of belonging, contact with others). They were less satisfied with safety rewards (security needs, shifts, employee benefits). The least satisfaction was expressed for psychological rewards (self-actualization needs, control over working conditions, responsibility, recognition).

Specific items showing the greatest drop in satisfaction ratings over the year were: opportunities to attend educational programs, compensation for working weekends, recognition of work from superiors, career advancement opportunities, amount of encouragement and positive feedback. Satisfaction with participation in decision making also declined over the 12 month period. Findings were similar for both nurses in their first jobs and nurses who had been previously employed. The authors postulated that nurses begin a new job with certain expectations. As these expectations are not met, job satisfaction declines. Employers would do well to assess the potential employees' expectations and either make greater efforts to meet those or to inform the applicants what they can

realistically expect from the organization.

Herzberg's Two Factor Theory stems from 10 factors which he originally posited as the elements of job satisfaction (Downs, 1977). These factors were: intrinsic aspects of the job, supervision, working situation, wages, opportunity for advancement, security, company, social aspects of the job, communication, and benefits. Consolidating these factors, Herzberg posited two factors which define his present theoretical model. The intrinsic factor includes items of job satisfaction which motivate the worker, i.e., recognition, responsibility, growth. The extrinsic, or hygiene, factor is comprised of pay, supervision, benefits, and working conditions (Downs, 1977).

The idea that satisfaction and dissatisfaction are not at opposite ends of a continuum is the crux of Herzberg's model (Downs, 1977; Pincus, 1986b). The intrinsic factor motivators serve to enhance job satisfaction, while dissatisfaction results from unmet extrinsic factors or environmental needs. Pincus (1986b) interprets Herzberg's extrinsic factors to include interpersonal relationships in the work environment. He additionally points out that Herzberg's Two Factor model might not account for all

the elements of nurses' perceived job satisfaction.

While most researchers considered job satisfaction to be multidimensional, specific determinants might vary. Studies were conducted which attempted to determine the dimensions which a particular professional group perceived as contributing to job satisfaction (Everly & Falcione, 1976; Ivancevich, Matteson, & McMahon, 1980).

Everly and Falcione (1976) conducted a study to delineate the factors which staff nurses perceived as salient to their job satisfaction. One hundred forty-four staff nurses from four metropolitan hospitals participated in the study. Specifically evaluated were relationships with co-workers, supervisory personnel, and immediate supervisor. Analysis indicated that four statistically independent factors accounted for 58.8% of the total variance in nurses' perceived job satisfaction. Factor I dealt with interpersonal relationships in the work environment and 23.7% of total variance was attributed to this factor. Factor II related to internal work rewards. Items evaluated pertained to the opportunity which the present work setting offered toward professional growth and development. This factor accounted for 15.7% of the total variance in the proposed model. Factor III

considered employee benefits and pay. These issues accounted for 11.9% of the variance and were third in level of importance for nurses in contributing to their job satisfaction. Factor IV, administrative policies, accounted for 7.5% of the variance. Issues here involved hospital policies and service recognition. The findings suggested that while nurses considered interpersonal relationships, opportunities for professional growth and development as prime motivators and major contributors to job satisfaction, benefits/pay and concern for administrative policies were also important.

Ivancevich et al. (1980) investigated the differences in perceived job satisfaction between nurses of two hierarchical levels. A total of 687 RN's participated in the survey; 134 head nurses with supervisory duties and 553 staff nurses. (The concept of job satisfaction for the study consisted of six facets: self-actualization, autonomy, esteem, social, job security, and pay.) Some of the organizational climate variables which were predictors for the facets of job satisfaction differed for supervisory and staff nurses. Similar for both levels was low hindrance (amount of busy work interfering with primary duty), and managerial behaviors showing concern for the

employee. For the supervisory nurses, a positive social situation and managerial behaviors which promote employee motivation for job performance were predictors of job satisfaction. For staff nurses, close managerial supervision was also a predictor of job satisfaction.

Factors which predict certain facets of job satisfaction for supervisory nurses differed from those for staff nurses. Ivancevich et al. (1980) posited that health care managers would do well to consider hierarchical level when designing programs to enhance employee morale or developing programs to facilitate communication.

Summary

The studies reviewed indicate that nurses as professionals perceive job satisfaction to be a multi-dimensional construct. Among the contributing facets are items which reveal the importance of communication in the work setting. This was noted directly in interpersonal relationships with peers, superiors, and subordinates. Indirectly, this was suggested in items such as recognition for work and a desire for more administrative information. Attempts to clarify the link between communication and job

satisfaction have increased in number over the past few years (Downs, 1977).

Job Satisfaction and Communication Issues

Richmond, McCroskey, and Davis (1982) investigated the relationship between employee satisfaction and management communication style. Four sample groups participated in the study: 250 teachers, 45 supervisors from a manufacturing firm, 23 state employed supervisors (some were from nursing and mental health facilities), and 102 upper management employees of a federal reserve system. The five dimensions of job satisfaction measured were supervision, work, pay, promotion, and co-workers. Results indicated that for all four sample groups the management communication style (MCS) of the immediate supervisor was a significant predictor of satisfaction with supervision. For the teachers and the federal system employees, the MCS of the immediate supervisor was a predictor for satisfaction with work. For the teachers, state employed supervisors, and the federal employees, the MCS of the supervisor was a significant predictor for satisfaction with co-workers and of promotions. The MCS of upper management was a predictor of satisfaction with pay and promotions for all the sample groups.

Baird and Diebolt (1976) studied the responses of a group of 40 subordinates and five supervisors from clerical departments of a manufacturing firm. These departments had from 4 to 13 workers each. The six variables measured were job satisfaction, relationship with company, relationship with supervisor, frequency of communication with supervisor, frequency of communication with subordinate, and role congruence. Job satisfaction was significantly and positively correlated to quality of relationship with the company, quality of relationship with supervisor, and frequency of communication with supervisor. The subordinate's relationship with the company was also significantly and positively related to the quality of relationship and frequency of communication with their supervisor. It is evident that the supervisor serves a pivotal role in the employee's work environment.

Muchinsky (1977) examined the relationships of organizational communication to organizational climate and job satisfaction variables. A random sample of employees from a large public utility resulted in 695 usable data sets. The sample was 52% female. Five dimensions of job satisfaction were measured: work, supervision, pay, promotions, co-workers. Seven organizational communication dimensions were measured:

trust, influence, desire for interaction, accuracy, downward communication, horizontal communication, and satisfaction with communication.

Items which were correlated most highly and positively to satisfaction with work were, in descending order: satisfaction with communication, trust, accuracy, influence, and downward communication. Items correlating positively with supervision were: trust, influence, satisfaction with communication, accuracy, and desire for interaction. Dimensions correlating positively with co-workers were: accuracy, trust, satisfaction with communication, and desire for interaction. Trust and satisfaction with communication correlated with all dimensions of job satisfaction. Both correlated most strongly with satisfaction with supervision. Interestingly, horizontal communication correlated negatively, and in order of decreasing significance with supervision, promotions, pay, and work. There was a positive correlation between horizontal communication and co-workers. The authors postulated that dissatisfied workers might tend to communicate more with peers rather than using other channels to meet their needs.

Gender Issues, Managerial Communication, and Job Satisfaction

The nursing profession, being predominantly female, provides an excellent opportunity for the study of communication issues of female managers. Camden and Kennedy (1986) surveyed 608 nurses from a large teaching hospital, a Veteran's Administration Hospital, and a small, private psychiatric hospital. All respondents had female supervisors, and 95.2% of the subjects were female. Two of the instruments used in the study were the same as utilized by Baird and Bradley (1979) to measure the perceptions of respondent's immediate supervisor's communication content and style, employee morale, and overall job satisfaction. Responses for the supervisor's perceived style of expression were assessed and coded as items indicative of either stereotypical female or male communication behaviors.

In this study, supervisory communication behaviors which correlated positively and most significantly with quality of supervisor communication, in descending order, were: promoting happy relations, receptive to ideas, open, approving, and friendly. Correlating with job satisfaction, in descending order, were: promotes happy relations, approving, shows concern, friendly,

and receptive to ideas. All of these communication behaviors were coded as stereotypically feminine. Typically male behaviors (dominant, directs conversation, quick to challenge) had the lowest correlations both with quality of supervisory communication and employee job satisfaction. These findings indicated that staff nurses who had a female supervisor utilizing stereotypical masculine styles of communication reported lower levels of morale and job satisfaction.

Camden and Kennedy (1986) asserted that education and administrative departments should be aware of these negative implications for promoting the adoption of typically masculine managerial styles for female managers. Though this study provides some much needed insight into gender issues for managerial communication style, the method of assigning behaviors into stereotypical categories for coding purposes seemed arbitrary to this author.

Job Satisfaction and Communication Issues Among Nurses

Nurses in Thiry's (1977) survey expressed the greatest communication satisfaction with their supervisor-subordinate relationships. Nurses reported

the the most dissatisfaction with personal feedback and overall communication climate, ironically these were the two items that correlated most significantly with job satisfaction. Thiry asserted that, ". . . nurses need more information about the organization as a whole; its goals, financial status, response to government actions, and handling of internal conflicts" (p. 3131-B). Comparing groups by employment position, hospital and staff nurses were least satisfied consistently, and most satisfied were nurses who worked in small offices and nursing homes. This satisfaction appeared to be related to the structural simplicity of the organizations and the pleasant interpersonal relationships these nurses reported experiencing. Nurses who were employed by more hierarchial and structurally complex organizations, expressed decreased satisfaction.

The relationship between job satisfaction and communication among nurses was also studied by Montague (1986). Responses from 227 nurse employees of an inner city hospital indicated that attitudes toward organizational communication significantly correlated with job satisfaction. Positive attitudes toward communication best predicted multifaceted job satisfaction as assessed by Stamps' Revised

Occupational Satisfaction Scale for Hospital Nurses.

Baird and Baird (1985) assessed the attitudes toward various elements of the work setting of nurses holding different hierarchical positions. One area evaluated was communication. From nurses in top management positions to nurses in staff positions satisfaction decreased for every area measured. The nine items demonstrating the greatest drop in satisfaction included all four of the communication items. The investigators inferred that top management personnel being more involved with organizational processes and decision making might not perceive the information inadequacy experienced by staff nurses. Therefore, these issues tend to remain unidentified and may worsen as staff nurses perceive their needs being ignored by their nurse managers. Once again, the crucial role of the staff nurse-immediate supervisor relationship becomes apparent as the link between top levels and the worker.

Among the variables of communication satisfaction which Pincus (1986a, 1986b) studied was employee perception of upper management communication. The study group consisted of 327 nurses from an urban, eastern teaching hospital; 84% were non-supervisory staff nurses. After dividing the sample group into two

categories, all nurses and supervisory nurses, Pincus (1986a) reported the significant correlations between these variables and job satisfaction for the two categories. For all nurses, correlating positively and most significantly were: supervisor communication, communication climate (general satisfaction with the communication environment), personal feedback, upper management communication, and organizational integration (information relevant to job performance). Interestingly, horizontal communication, though significantly correlated to job satisfaction, was rated the seventh out of eight possible ratings (subordinate communication was not included). Additionally, dissatisfaction with communication from upper management demonstrated a positive correlation with overall job satisfaction. Pincus (1986a, 1986b) discussed the potential benefit that top level management could have on employee job satisfaction by increasing informational flow from their level to the individual worker.

For the supervisor group, significant correlations with job satisfaction were: supervisor communication, and communication climate. Subordinate communication and horizontal communication were not significantly correlated. Communication with top management had a

negative and weak correlation with job satisfaction.

It is noteworthy that for both groups supervisory communication demonstrated the strongest positive correlation with job satisfaction, accounting for 48% of the variance. Communication with upper management and horizontal communication accounted for 17% and 13% of the job satisfaction variance, respectively (Pincus, 1986b).

Summary

Empirical data point out the importance of communication in the organizational setting to perceptions of job satisfaction. Of specific importance is communication between the staff nurse and the immediate supervisor, and to a somewhat lesser extent, between the staff nurse and upper management. Additionally, factors such as communication style and frequency of interactions appear to influence the perceived job satisfaction.

Despite the amount of research in the areas of nurses and communication, and nurses and job satisfaction, studies with a specific focus on nurses, organizational communication, and job satisfaction are lacking. It has been pointed out that nurses in different organizational settings report different

levels of job satisfaction which might be attributed to interpersonal relationships in the work setting or the structure of the organization (Thiry, 1977).

Additionally, the importance of nurse-nurse communication has been reviewed in several of the foregoing studies and the discontent of staff nurses with communication in the hierarchy has been pointed out (Baird & Baird, 1985; Pincus, 1986a, 1986b).

Specifically, investigating staff nurses' perceptions of the communication processes in their hierarchy across different organizational settings might yield further insight into the area of organizational communication for the nursing profession. Examining how these communication processes potentially impact on job satisfaction could increase our understanding of professional role fulfillment. Identifying the strengths and weaknesses of communication processes in the nursing hierarchy can provide information for managerial strategies, implications for further research, and areas for educators to strengthen in nursing programs.

CHAPTER III

METHODOLOGY

Study Design

This exploratory study compared responses from two groups of hospital staff nurses, military and civilian, in terms of perceived communication processes within the nursing hierarchy of their respective organizations. Further, the two groups were compared in terms of reported job satisfaction. Lastly, the relationship between communication variables and job satisfaction was examined.

Setting

Two hospitals, one military (Army) and one civilian, were utilized for data collection. Both hospitals were large tertiary care facilities (military = 400 beds; civilian = 625 beds) located in the southern United States. From the military facility, the following areas were utilized for data collection: in-patient psychiatry, orthopedics, medical-surgical, an in-patient diagnostic unit, and two intensive care units. Areas represented from the civilian facility were: orthopedics, medical-surgical, ophthalmology,

and two intensive care units.

The basic structure of the nursing hierarchy of each organization will be outlined. These outlines serve to provide the reader with a fundamental orientation to the communication channels inherent in the pyramidal hierarchy. The scope of this study prohibits lengthy discussion of the functional nuances within each chain of command. The hierarchy of the civilian hospital follows: staff nurse (LPN to RN), Head Nurse, Clinical Director, Director of Nursing. The Director of Nursing reports to the Hospital Administrator.

The hierarchy of the military hospital follows: staff nurse (LPN, and/or enlisted military equivalent specialty, to RN, holding officer rank), Head Nurse, Section Supervisor, Chief of Clinical Nursing/Assistant Chief Department of Nursing for Administration, Chief Nurse. The Chief Nurse reports to the Deputy Commander for Clinical Services.

Subjects

The study utilized a convenience sample consisting of staff nurses from the designated units. The term "staff nurse" denotes a nurse who takes patient care assignments on a routine basis. Less than 5% of the

respondents had administrative duties and no respondent's primary role was supervisory. A staff nurse was either a Registered Nurse (RN), a Licensed Practical Nurse (LPN) or one who had the equivalent military occupational specialty training of LPN.

In the military facility, 93 staff nurses were invited to participate in the study. One individual declined and three surveys were unusable due to incomplete information or the nurse having less than one month tenure on the unit. This resulted in 89 usable surveys, a response rate of 95.7%.

In the civilian facility, 97 staff nurses were invited to participate in the study. Two persons declined and three surveys were unusable. Hence, 92 surveys were usable resulting in a response rate of 94.8%.

Procedures

The research proposal was approved by the College of Nursing, University of Tennessee at Knoxville, and by the Institutional Review Board. Permission for data collection in the civilian facility was granted through the Clinical Research Committee and the Director of Nursing. Permission for data collection in the military facility was granted through the Nursing

Division, Health Services Command, Ft. Sam Houston, Texas, with concurrence by the Chief, Department of Nursing of the facility utilized for data collection.

After approval was granted by authorities in both facilities, the researcher coordinated all activities directly with the civilian Nursing Director and the Chief Nurse of the army hospital utilized for data collection. The Chief Nurse informed nursing supervisors of the study and times of data collection. The civilian Nursing Director informed the Medical-Surgical Clinical Director of the study and requested that she coordinate the data collection effort in the civilian hospital.

Data were collected at the military facility over a 2 week period in late May and early June 1988. Permission was granted by each area supervisor to meet with staff nurses just prior to beginning their shift. The study was briefly explained. It was pointed out that participation was voluntary. Confidentiality was assured for all participants; questionnaires were coded only to indicate the subject's work unit. The cover letter (see Appendix A) reiterated these points. Subjects were requested to complete the survey during shift change or a break during the shift. The researcher stayed on site and personally collected

completed questionnaires. Data were collected at every shift change for each unit (7AM, 3PM, 7PM, 11PM) until all nurses assigned to the unit (who were not on vacation or extended sick leave) had been given an opportunity to participate. Data collection at the civilian facility was conducted in a similar process, during the fall of 1988.

Instruments

Development of the ICA Communication Audit Survey

Attempting to alleviate some of the difficulties associated with measuring and evaluating organizational communication, the International Communication Association (ICA) initiated the development of a standardized communication audit instrument (Goldhaber et al., 1978). The process entailed the collaboration of over 100 researchers from six countries (Brooks, Calliccoat, & Siegerdt, 1979). The audit instrument was in the developmental stages for 3 years and was pilot-tested over a 2 year period. The initial data base for the instrument norms was collected from 16 audited organizations, three of which were health care organizations and five were governmental organizations. Reliability for subscales of the instrument ranged

from a low of .75 to a high of .90 and overall survey reliability was .84 (Goldhaber et al., 1978).

Follow - Up Studies with the ICA Audit Survey

To assess the effectiveness of the initial audit recommendations which those organizations had received, Brooks, Calliccoat, and Siegerdt (1979) conducted a follow up survey. The study used responses from 13 of the 16 organizations in the original data base. There were three health care organizations and three governmental organizations included in the study. Ten of the 13 organizations reported that specific recommendations relating to communication methods and training changes from the audit had been adopted. Seven of the organizations indicated "some improvement" in at least one communication variable. Five responded with significant improvement; four of these five organizations had also adopted most of the initial audit recommendations. The authors suggested that, ". . . the audit has been beneficial both as a diagnostic and direct intervention technique for functioning organizations" (p. 134).

Use of the ICA Audit Survey in This Study

The ICA Audit Survey Instrument has been in the public domain since 1979 (Goldhaber & Rogers, 1979). The availability and documented reliability made the ICA audit instrument the optimal choice for the purposes of this study. Specifically utilized were (a) the sources of information items, which assess the amount of information presently received from each source (reliability .699, Goldhaber & Rogers, 1979) and (b) items assessing the amount of information needed from that source (reliability .756, Goldhaber & Rogers, 1979) (see Appendix B). Sources of information in the present study include the nursing hierarchy of the organization from staff nurse level and co-workers to top management, an item for the grapevine and an item for individuals in other units or departments of the organization.

Job satisfaction was conceptualized as the staff nurse's personal satisfaction with his/her work as an outcome of the organizational setting in which professional duties are performed. A subscale of 10 items from the 13 organizational outcome variables was utilized to measure the degree of personal satisfaction. Responses to the 10 item Likert scale were summated; the lowest possible score was 10 and the

highest possible score was 50 (see Appendix C). The reliability for the subscale is .88 (Goldhaber & Rogers, 1979).

Two demographic data sheets were developed by the researcher. One sheet included questions on gender, nursing degree, clinical experience, and other items pertinent to the study (see Appendix D). The other sheet requesting race, marital status and religious affiliation was given to participants unattached to the communication instrument (see Appendix E).

Data Analysis

Frequency distributions were generated for the demographic categorical variables, with subjects grouped by place of employment.

Thirty percent (n=27) of the nurse group in the military hospital (n=89) were civilians. To rule out the possibility that the responses from this subgroup might skew the results, t-tests were conducted to compare the mean responses of this subgroup to the responses of the active duty personnel in the military setting (n=62). No evidence was found to suggest that the two subgroups were different in their responses. Therefore, the appropriateness of considering these subgroups to be homogeneous with respect to their

perceptions of the study variables was established. Further data analysis to address the research questions has been presented in terms of two groups, nurses in the military hospital and nurses in the civilian hospital.

To answer the two parts of the first research question, "Does a difference exist between civilian and military nurse groups in their perceptions of: (a) the amount of information received from various sources in the nursing hierarchy? (b) the amount of information needed from various sources in the nursing hierarchy?", a t-test was conducted to compare the means of both variables for these two groups.

Question two, "Does a difference exist between civilian and military nurse groups in their reported job satisfaction?" was also answered by conducting a t-test. The four parts of question three (which source provided the most and the least information and which source demonstrated the greatest and least discrepancy between amount of information needed and received) were answered for each nurse group by examination of means for each variable.

To determine if a relationship existed between the total amount of information received and reported job satisfaction for either group (question 4a), a

Pearson's Product Moment Correlation Coefficient was calculated. Also, the amount of variance in job satisfaction (dependent variable) accounted for by the independent variable (total amount of information received from the various sources in the nursing hierarchy) was determined by linear regression analysis.

The information source most salient to reported job satisfaction (question 4b) was determined by examining a Pearson's Correlation Coefficient matrix with job satisfaction and the individual sources of information in the nursing hierarchy for each nurse group. Additionally, a backward elimination procedure was performed to determine the information sources which would be best predictive job satisfaction, i.e., accounting for most of the variance. The predictive model for each group was substantiated by general linear model regression. The level of significance for the study was $p \leq .05$.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

Introduction

The subject groups will be described in terms of demographic variables. The second section of the chapter will address analysis of data applicable to the research questions. Implications of the study are presented in the following chapter.

Demographic Characteristics of the Sample

Of particular interest were the variables of race and gender. A greater percentage of minorities and males were represented in the work force of the military hospital than in the civilian hospital. For both groups, nurses were more often married, 55.1% for the military and 47.8% for the civilian group. Also, both groups more often reported "Protestant" for their religious affiliation, 46.6% for the military and 75.8% for the civilian group. Interestingly, the military group had a combined response rate for "no preference" and "other" of 29.6% while the civilian response rate for these two categories was 15.4%.

In the civilian hospital setting, RN educational

preparation was predominantly diploma or associate degree, whereas in the military setting BSN and LPN preparation was most common. Additionally, graduate level preparation was seen more often in the military setting.

Responses for "Shift Most Often Worked" indicated that 78.4% of the military nurse group worked one of the typical 8 hour shift schedules. For the civilian nurse group, 65.6% indicated that they worked one of the 12 hour shift schedules. Demographic data are presented in Table 1.

The age distributions for the groups appear similar. The group mean for total clinical experience in nursing was lower for the military group. This pattern was also reflected in the length of time in present work setting. It is not surprising that active duty personnel had the lowest mean for time in their present work setting. Turnover is inherent in the military system. However, for the civilian group the mean was only 0.86 years longer in the present setting than that of the military. These data are compared in Table 2.

TABLE 1

A COMPARISON OF DEMOGRAPHIC VARIABLES FOR NURSES IN A
MILITARY HOSPITAL AND NURSES IN A CIVILIAN HOSPITAL

	Military n=89		Civilian n=92	
	Number	Percent	Number	Percent
<u>Race</u>				
Black	36	40.4	1	1.1
Caucasian	46	51.7	90	97.8
Oriental	1	1.1	0	0.0
Hispanic	3	3.4	0	0.0
American Indian	0	0.0	1	1.1
Other	3	3.4	0	0.0
<u>Marital Status</u>				
Single	23	25.8	22	23.9
Married	49	55.1	44	47.8
Widowed	3	3.4	3	3.3
Divorced/Separated	14	15.7	23	25.0
<u>Religious Affiliation</u>				
Protestant	41	46.6	69	75.8
Jewish	0	0.0	0	0.0
Catholic	21	23.9	8	8.8
No Preference	13	14.8	5	5.5
Other	13	14.8	9	9.9
<u>Gender</u>				
Male	26	29.5	4	4.3
Female	62	70.5	88	95.7
<u>Nursing Education</u>				
Associate Degree	7	7.9	35	38.5
BSN	38	42.7	18	19.8
LPN	35	39.3	9	9.9
Diploma	2	2.2	28	30.8
Masters Degree	7	7.9	1	1.1
<u>Shift Most Often Worked</u>				
7am-3pm	26	29.5	15	16.7
3pm-11pm	24	27.3	10	11.1
11pm-7am	19	21.6	5	5.6
7am-7pm	2	2.3	33	36.7
7pm-7am	3	3.4	26	28.9
Rotating	10	11.4	0	0.0
7am-5pm	1	1.1	1	1.1
7am-11pm	2	2.3	0	0.0
Other	1	1.1	0	0.0

TABLE 2

A COMPARISON OF AGE, TOTAL CLINICAL EXPERIENCE IN NURSING, AND TIME IN PRESENT WORK SETTING OF NURSES IN THE MILITARY HOSPITAL AND NURSES IN THE CIVILIAN HOSPITAL, GIVEN IN YEARS

	Total Responses	Means	SD	Range	
				Low	High
<u>Age</u>					
<u>Distributions</u>					
Military	87	33.82	7.6	22	58
Civilian	92	36.98	8.8	21	60
<u>Total Clinical Experience</u>					
Military	88	8.8	7.2	.58	32
Civilian	92	10.0	7.6	.33	34
<u>Time in Work Setting</u>					
Military	89	1.86	2.8	.08	19
Civilian	92	2.72	3.0	.17	19

*SD=Standard Deviation

Research Questions

Total Amount of Information Received

Does a difference exist between civilian and military nurse groups in their perceptions of the total amount of information received from various sources in the nursing hierarchy?

No statistically significant differences were found in the perceptions of these two nurse groups with regard to the total amount of information presently being received from the various sources surveyed in their nursing hierarchies. T-test results, $t(166) = .06$, $p < .95$, offer no indication that the perceptions of these nurse groups differ with regard to the total amount of information they presently receive from sources in the nursing hierarchy of their respective organizations.

Total Amount of Information Needed

Does a difference exist between civilian and military nurse groups in their perceptions of the total amount of information needed from various sources in the nursing hierarchy?

No statistically significant differences were found in the perceptions of these two nurse groups

regarding the amount of information they need to receive from various sources in their nursing hierarchy. T-test results, $t(166) = .64$, $p < .52$, provide no indication that these two nurse groups differ in their perceptions on this variable.

Job Satisfaction

Does a difference exist between civilian and military nurse groups in their reported job satisfaction?

No statistically significant difference was found in the reported job satisfaction of these two groups. T-test results, $t(176) = .22$, $p < .83$, offer no evidence that the groups differ in their reported job satisfaction (see Table 3).

Source Providing Most and Least Amount of Information

For each of the nurse groups, which information source provided the most and which source provided the least amount of information?

For the military group, "co-workers" was the source providing the greatest amount of information ($\bar{M} = 3.44$) and "top management" was the source providing the least amount of information ($\bar{M} = 1.92$).

The civilian group also reported "co-workers" as the

TABLE 3

T-TESTS RESULTS COMPARING MEAN RESPONSES OF AMOUNT OF INFORMATION RECEIVED FROM VARIOUS SOURCES IN THE NURSING HIERARCHY, AMOUNT OF INFORMATION NEEDED FROM VARIOUS SOURCES IN THE NURSING HIERARCHY, AND REPORTED JOB SATISFACTION FOR NURSES IN THE MILITARY HOSPITAL AND NURSES IN THE CIVILIAN HOSPITAL

Variable	Means Military	Means Civilian	t	df	p
INFONOW ^a	24.34	24.39	.06	166	.95
INFONEED ^b	29.69	30.27	.64	166	.52
JOBSAT ^c	29.76	29.99	.22	176	.83

a INFONOW = a summated index of total amount of information presently being received from the nine sources in the nursing hierarchy. Military, $\underline{n}=85$; Civilian, $\underline{n}=83$.

b INFONEED = a summated index of total amount of information needed from the nine sources in the nursing hierarchy. Military, $\underline{n}=85$; Civilian, $\underline{n}=83$.

c JOBSAT = a summated index of job satisfaction. Military, $\underline{n}=88$; Civilian, $\underline{n}=90$.

source providing the greatest amount of information ($\bar{M} = 3.70$) and "top management" as the source providing the least amount of information ($\bar{M} = 1.95$).

A comparison of the two groups for responses of all sources of information in the nursing hierarchy is given in Table 4.

Greatest and Least Discrepancy Scores

For each of the nurse groups, which information source demonstrated the greatest and which information source demonstrated the least discrepancy between the amount of information needed from a particular source and the amount of information presently being received from that source?

Responses from the military group indicated that "top management" had the greatest discrepancy score ($\bar{M} = 1.12$) and "subordinates" had the lowest discrepancy score ($\bar{M} = .38$). Also having a low discrepancy score was "co-workers" ($\bar{M} = .39$). For the civilian group, "top management" had the greatest discrepancy score also ($\bar{M} = 1.42$), and "co-workers" had the lowest discrepancy score ($\bar{M} = .03$). Discrepancy scores for all the surveyed sources of information in the nursing hierarchy are given in Table 5.

TABLE 4

A COMPARISON OF RESPONSE MEANS FOR AMOUNT OF
INFORMATION PRESENTLY RECEIVED FROM VARIOUS SOURCES IN
THE NURSING HIERARCHY FOR NURSES IN THE MILITARY
HOSPITAL AND NURSES IN THE CIVILIAN HOSPITAL

Source of Information	Means Military ^a	SD	Means Civilian ^b	SD
Subordinates	3.14	0.9	3.14	0.9
Co-workers	3.44	0.8	3.70	0.7
Individuals in other units/depts.	2.40	0.9	2.43	0.9
Supervisor	3.18	1.0	3.35	1.1
Department meetings	2.51	1.2	2.43	1.1
Middle management	2.49	1.0	2.43	1.0
Formal management	2.06	1.0	2.02	0.9
Top management	1.92	1.1	1.95	1.0
The grapevine	3.24	1.1	3.12	1.1

*SD=Standard Deviation

a Military $\bar{n}$ =89

b Civilian $\bar{n}$ =91

TABLE 5

A COMPARISON OF MEAN DISCREPANCY* SCORES FOR NURSES IN
THE MILITARY HOSPITAL AND NURSES IN THE CIVILIAN
HOSPITAL

Source of Information	Military ^a		Civilian ^b	
	Means	SD	Means	SD
Subordinates	.38	0.95	.36	0.95
Co-workers	.39	0.98	.03	0.98
Individuals in other units or departments	.72	1.11	.87	1.11
Supervisor	.64	1.03	.51	1.03
Department meeting	1.03	1.28	1.10	1.28
Middle management	.78	1.18	.99	1.18
Formal management	.84	1.16	1.27	1.16
Top management	1.12	1.39	1.42	1.39
The grapevine	-.90	1.35	-1.02	1.35
Infodisc ^c	5.35	5.44	5.88	5.44

* Discrepancy = the difference between the amount of information needed from a particular source in the nursing hierarchy and the amount of information presently received from that source.

a Military sample: $n = 85$ to 89 subject responses were used for each calculation

b Civilian sample: $n = 83$ to 92 subject responses were used for each calculation

c Infodisc = an index of summated scores reflecting the discrepancy between the amount of information needed from a particular source of information and the amount of information presently received from that source.

Relationship Between Amount of Information and Job Satisfaction

Is there a relationship between the total amount of information received and reported job satisfaction for either nurse group?

For both nurse groups there was a modest, positive correlation between total amount of information received from all the sources in the nursing hierarchy and reported job satisfaction. Pearson's Product Moment Correlation for the military group was $r = .34$, $p < .0017$, $df(84)$. For the civilian group, Pearson's correlation was $r = .38$, $p < .0004$, $df(81)$. These data are given in Table 6.

A linear regression analysis was conducted for both nurse groups, also, with job satisfaction as the dependent variable and total amount of information received as the predictor variable. For the military nurse group, the total amount of information received accounted for 11% of the variance of job satisfaction [$F(1) = 10.56$, $p < .0017$, $R^2 = .11$]. For the civilian nurse group, the total amount of information received accounted for 15% of the variance of job satisfaction [$F(1) = 13.63$, $p < .0004$, $R^2 = .15$]. These data appear in Table 7.

TABLE 6

PEARSON'S PRODUCT MOMENT CORRELATIONS FOR TOTAL AMOUNT OF INFORMATION RECEIVED AND JOB SATISFACTION FOR TOTAL SAMPLE, NURSES IN THE MILITARY HOSPITAL, AND NURSES IN THE CIVILIAN HOSPITAL

	r	df	p
Total sample	.36	165	.0001
Military hospital	.34	84	.0017
Civilian hospital	.38	81	.0004

TABLE 7

LINEAR REGRESSION RESULTS OF TOTAL AMOUNT OF INFORMATION RECEIVED AND JOB SATISFACTION AS THE DEPENDENT VARIABLE FOR THE TOTAL SAMPLE, NURSES IN THE MILITARY HOSPITAL AND NURSES IN THE CIVILIAN HOSPITAL

	F	df	p	R ²
Total Sample	23.85	1	.0001	.13
Military hospital	10.56	1	.0017	.11
Civilian hospital	13.63	1	.0004	.15

Information Source Most Salient to Job Satisfaction

If a relationship is demonstrated, which information source is most salient to reported job satisfaction?

For the military nurse group, the information presently received from three sources of information (immediate supervisor, the grapevine, and individuals from other units or departments of the organization) accounted for 25% of the variance in job satisfaction. The immediate supervisor demonstrated the greatest level of statistical significance, $p < .0007$. For the civilian nurse group, the information presently received from four sources of information (middle management, department meetings, co-workers, and the grapevine) accounted for 25% of the variance in job satisfaction. Middle management demonstrated the greatest level of statistical significance for this group, $p < .0114$. Several statistical procedures were involved in answering this question.

Initially, Pearson's Product Moment Correlations were conducted for each source of information with job satisfaction, separately for each nurse group. For both groups, the only source of information negatively correlated, $p < .03$, with job satisfaction was the "grapevine". For the military, the "immediate

supervisor" demonstrated the strongest correlation with job satisfaction, $\underline{r} = .41$, $p < .0001$. For the civilian group, "department meetings" demonstrated the strongest correlation, $\underline{r} = .397$, $p < .0001$.

"Supervisor" was the source of information with the next strongest correlation, $\underline{r} = .382$, $p < .0002$.

These findings are presented in Table 8.

Also, a correlation matrix was derived to determine which sources of information were intercorrelated. Ten significant ($p < .05$) intercorrelations were common to both groups (see Table 9). An additional eight intercorrelations were found for the civilian nurse group. These are listed in decreasing levels of significance: Co-workers and Individuals in other units or departments, $\underline{r} = .35$, $p < .0007$; Middle management and Individuals in other units or departments, $\underline{r} = .35$, $p < .0008$; Supervisor and Co-workers, $\underline{r} = .34$, $p < .0009$; Grapevine and Department meetings, $\underline{r} = -.29$, $p < .005$; Formal management and Supervisor, $\underline{r} = .28$, $p < .006$; Supervisor and Individuals in other units or departments, $\underline{r} = .28$, $p < .007$; Top management and Individuals in other units or departments, $\underline{r} = .24$, $p < .02$; Subordinates and Individuals in other units or departments, $\underline{r} = .25$, $p < .02$.

TABLE 8

PEARSON'S PRODUCT MOMENT CORRELATIONS FOR EACH SOURCE
OF INFORMATION IN THE NURSING HIERARCHY AND JOB
SATISFACTION FOR NURSES IN THE MILITARY HOSPITAL AND
NURSES IN THE CIVILIAN HOSPITAL

Source of Information	Job Sat. Military ^a		Job Sat. Civilian ^b	
	r	p	r	p
Subordinates	.155	.158	.082	.463
Co-workers	.131	.223	.210	.048
Individuals in other units or departments	.258	.015	.111	.299
Supervisor	.410	.0001	.382	.0002
Department meetings	.241	.024	.397	.0001
Middle management	.251	.018	.352	.0007
Formal management	.153	.155	.312	.0028
Top management	.206	.054	.256	.015
The grapevine	-.254	.018	-.233	.027

a Number of subjects varied for the calculations due to missing data. Military $\underline{n}$ =85-87.

b Civilian $\underline{n}$ =82-90.

TABLE 9

A COMPARISON BETWEEN NURSES IN A MILITARY HOSPITAL AND
NURSES IN A CIVILIAN HOSPITAL OF INTERCORRELATED
INFORMATION SOURCES

	Military ^a		Civilian ^b	
	r	p	r	p
Co-workers & Subordinates	.24	.029	.31	.004
Supervisor & Department meetings	.27	.012	.42	.0001
Supervisor & Middle management	.50	.0001	.52	.0001
Supervisor & Top management	.21	.043	.37	.0003
Department meetings & Middle management	.59	.0001	.30	.0033
Department meetings & Formal management	.23	.029	.48	.0001
Department meetings & Top management	.37	.0004	.29	.0044
Middle management & Formal management	.39	.0002	.46	.0001
Middle management & Top management	.50	.0001	.50	.0001
Formal management & Top management	.52	.0001	.63	.0001

a Military n=89

b Civilian n=92

Next, a backward elimination procedure was conducted to determine the fewest number of variables which would be most predictive of job satisfaction, accounting for most of the variance. Finally, a general linear model procedure substantiated the best predictive model for each nurse group for job satisfaction as the dependent variable.

For the military nurse group, the best predictive model included the Immediate Supervisor, the Grapevine, and Individuals from other units or departments in the organization. The source of information having the greatest level of significance in the model was the Immediate Supervisor. For the civilian nurse group, the best predictive model included Middle management, Department meetings, Co-workers, and the Grapevine. The source of information having the greatest level of significance in the model was Middle management. Both predictive models are presented in Table 10.

TABLE 10

A COMPARISON OF GENERAL LINEAR MODELS FOR INFORMATION SOURCES BEST PREDICTIVE OF JOB SATISFACTION FOR THE NURSES IN THE MILITARY HOSPITAL AND THE NURSES IN THE CIVILIAN HOSPITAL

	F	p	R ²
<u>MILITARY</u>			
Overall Model	8.99	.0001	.245
<u>Sources</u>			
Supervisor	12.35	.0007	*
Grapevine	4.23	.0428	*
Individuals from other units/depts.	4.03	.0479	*
<u>CIVILIAN</u>			
Overall Model	7.14	.0001	.254
<u>Sources</u>			
Middle management	6.69	.0114	*
Department meetings	5.21	.0250	*
Co-workers	3.50	.0647	*
Grapevine	3.14	.0801	*

* R² values are not applicable to the individual sources within the overall model, only to the overall predictive model.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

Introduction

This chapter discusses the study results, including the limitations and possible rationale for the findings. The discussion also includes conclusions and implications for nursing management, educators, and suggestions for further research in this area.

Discussion

Study Limitations

Though the response rate for the nurse groups was high, the study employed a convenience sample assessed at one point in time. It is not possible to ascertain whether a response bias exists, that is, whether responses from these subjects differed from the responses of other subjects in the same organization. Additionally, responses from only one civilian and one military health care organization were compared, limiting the generalizability of the findings.

Another limitation of the study involved a lack of control for other variables which have also been shown

to influence communication and job satisfaction, i.e. communication style (Camden & Kennedy, 1986; Richmond et al., 1982), leadership behaviors (Pepper, 1988), and trust in the superior-subordinate relationship (Jablin, 1979; Jablin 1980; Read, 1962). Additionally, the focus of the study was limited to self-perceptions of the nurse groups, and the design included no method of validating that perceptions of information were congruent with the amount of information the nurse actually received from a particular source.

Demographic Differences

The most readily apparent difference for the two nurse groups was found in the demographic variable of RN (Registered Nurse) educational preparation. For the military group, 17% of the RN's did not have baccalaureate preparation. However, for the civilian group, 77% of the RN's did not have baccalaureate level preparation. In October, 1976, a bachelor's of science degree with a major in nursing became a requirement for serving as an officer in the Army Nurse Corps (Piemonte & Gurney, 1987). This mandate, as well as the fact that 30% of the military nurse group were civilians, explains this marked difference in level of educational preparation for the groups.

The scope and limitations of the study restrict speculation for other differences among the demographic variables, i.e. shift schedules being predominantly 8 hours for the military group and 12 hours for the civilian group. Any rationale posited would be tentative at best.

Comparison of Group Means

T-tests comparing the means of the two groups on total amount of information presently received, total amount of information needed, discrepancy scores between amount of information needed and amount presently received, and reported job satisfaction provide no indication that the groups differ in their perceptions of any of these variables. This finding might suggest an effect resulting from a combination of similarities in both professional training and organizational goals.

The primary goal of any health care organization is to provide optimum health care. It seems reasonable to infer that nurses, having similar professional training, would develop similar communication patterns in order to fulfill patient care goals regardless of variations in organizational settings. Alternatively, perhaps sharing a common professional background serves

to provide a perceptual bias for interpretation of nuances in the organizational milieu.

Comparison of Univariate Means of Individual Sources

Similar patterns were also noted for means of responses regarding the amount of information nurses received from individual sources. For both groups, co-workers provided the greatest amount of information from the nursing hierarchy, and top management provided the least amount of information. Additionally, for both groups, this trend was consistent upward through the hierarchy; at each communication link a decrease was noted from the previous source. This finding is consistent with those of Goldhaber et al. (1978) in the report of the preliminary results from the first 16 organizations audited using the ICA instrument.

The greater the distance between communication sources and receivers in organizations, the less the information received, the less the opportunity to request more information, the less the follow-up, the poorer the information quality, the greater the use of the grapevine, and the poorer the interpersonal relations. In contrast, when distance is decreased, employees receive and

want more information, want to send less, receive more [sic] follow-up, receive higher quality information, use the grapevine less, and have better interpersonal relations (p. 83).

Also congruent with this pattern were the mean discrepancy scores (difference between amount of information needed from a particular source and the amount of information presently received from that source). The source of information having the greatest discrepancy for both nurse groups was top management. These findings are consistent with those of Baird and Baird (1985), who found that staff nurses were dissatisfied with the amount of communication from the upper echelons of the organization. Further, staff nurses studied by Baird and Baird (1985) indicated a need for more information about administrative concerns, staffing, career development, and desiring more participation in the decision making processes of the organization.

For both nurse groups, subordinates and co-workers had the lowest discrepancy scores. The military nurse group had very similar scores for these two sources. For the civilian group, however, a marked difference was noted for these two sources. The civilian group

score for co-workers was the lowest discrepancy rating for the study, indicating that this group of nurses feels they are receiving the information they need from their peers. This is understandable considering the physical proximity of subordinates and peers to the nurse.

For both groups, the grapevine had negative discrepancy scores, suggesting that nurses need less information from this source than they are presently receiving. Goldhaber et al. (1978) posited that employees obtain more information than they want from the grapevine and perceived this source as a fast but inaccurate channel for information. Thiry (1977) posited that nurses did not consider the grapevine as a relevant means of communication.

Relationship between Amount of Information and Job Satisfaction

Examining the relationship between total amount of information received and reported job satisfaction revealed similar results for both nurse groups. A modest, positive, statistically significant correlation resulted for both nurse groups. The variance of job satisfaction accounted for by the total amount of information received was 11% and 15% for the military

and civilian nurse groups respectively. Again, results of both groups are quite similar.

Information Source Most Salient to Job Satisfaction

Pearson's correlations were calculated for each individual source of information and job satisfaction. The grapevine was the only source negatively correlated with job satisfaction for both groups. This is in keeping with the suggestion of Goldhaber and associates (1978) that the more individuals use the grapevine, for lack of a more official and dependable channel of communication, the poorer the interpersonal relations will be and the less satisfied the employee will be.

The strongest and most statistically significant correlate for the military group was the immediate supervisor. The correlation for supervisor in the civilian group was ranked as the second highest for that group. This is not unexpected. The importance of the superior-subordinate communication dyad to job satisfaction has been reviewed. The results of Goldhaber et al. (1978) indicated that the most important contributor to job satisfaction was organizational communication relationships, accounting for 50.4% of the variance. One of the two factors in the model accounting for most of the 50.4% was the

superior-subordinate communication relationship.

Pincus (1986b) also found similar results in his organizational communication study of nurses. The highest correlate in the communication-job satisfaction relationship was communication with supervisor. Pincus (1986b) further states that his findings were comparable to those of Thiry (1977). Thiry's (1977) study of communication correlates with job satisfaction for nurses revealed that personal feedback and communication with supervisor were ranked as the second and third highest correlates, respectively.

For the civilian group, department meetings had the highest correlation to job satisfaction. This source of information demonstrated a much lower correlation for the military group. Additional data about department meetings was not collected at the hospitals, i.e. content, who attends, etc., therefore positing rationale for this difference is not appropriate.

The correlate ranking third for both groups was Middle Management. It seems that for both nurse groups increasing the amount of information presently received from their middle managers would enhance job satisfaction. Though Baird and Baird's (1985) study did not survey middle managers, a significant

communication gap was pointed out in the results from top management to the staff nurse. It is conceivable that the middle manager represents a key link in the hierarchy for downward communication processes. Baird and Baird (1985) asserted that when supervisors take credit for positive information they convey to subordinates (blaming upper administrative echelons for negative information that must be passed on) a we-they atmosphere is created in the hierarchy. Middle managers might offer potential for a buffer zone from this sort of nonproductive communication climate.

Top management was positively correlated with job satisfaction for both groups, but more strongly and statistically significant for the civilian group than for the military group. These findings are generally congruent with those of Pincus (1986a, 1986b) though not as conclusive. Pincus' (1986a) results indicated a correlation of perceived communication with top-level management to job satisfaction, which explained 17% of the job satisfaction variance. Additionally, write-in comments from the nurses on areas of communication in need of improvement, clearly indicated the discontent which they felt. The following comments reflect the tone of several that were given:

"Communication is lacking between top

management and the nursing staff. Quite often, the grapevine is our only real communication. . . . We need more meetings. We have to have more direct communication between nurses and upper management. We don't think management is honest with us most of the time" (Pincus, 1986b, p. 24).

Baird and Baird's (1985) results are in keeping with these comments. Dissatisfaction was reported by the staff nurses for upward and downward communication processes, while top administrators were satisfied with these processes. It was posited that top nursing administrators, being close to the decision making processes of the organization, tended to be unaware of the needs of the staff nurses in this area. This serves to create a cycle. Resources and efforts will not be devoted to an unidentified problem, thus increasing staff nurses' perception that upper management generally ignores their concerns for these issues.

Results for both co-workers and individuals in other units or departments were different for the two nurse groups in the present investigation. Co-workers demonstrated a positive and statistically significant but low correlation for the civilian group. For the

military group, surprisingly, there was no significant correlation for this source of information. These findings differ from those of Pincus (1986a). In his study, horizontal communication and satisfaction with co-workers were positively and significantly correlated with job satisfaction, explaining 13% of the variance. Thiry's (1977) results also pointed out that interpersonal relationships with co-workers were positively related to their reported job satisfaction.

A marked difference was observed in the correlations derived for individuals in other units or departments between the military and civilian groups. This information source was the second highest correlate with job satisfaction for the military group, but was not correlated for the civilian group. The means for the total amount of information presently received from this source and the discrepancy scores were similar for both nurse groups, thus this marked difference in correlations was unexpected. The explanation might lie in a difference of interpretation of specifically to whom the source refers. There might also be some difference in the procedures for coordination with other departments between the two facilities. Additional data on this source from both facilities would be needed to address this issue more

completely.

The total amount of information received from subordinates demonstrated no correlation with job satisfaction for either nurse group. The studies by Pincus (1986a, 1986b) and Thiry (1977) collected data only in reference to communication with subordinates from nurse supervisors, therefore it would be inappropriate to draw inferences for the present study from those results. Some differences of interpretation might have existed between staff nurses of the two facilities on this source also. However, results of the analysis were similar regardless of the differences in organizational setting.

Intercorrelations Among Information Sources

For both groups, three information source dyads demonstrated positive, moderate and statistically significant intercorrelations. These dyads were: supervisor and middle management; middle management and top management; formal management and top management. It seems reasonable to think that some communication overlap would occur in these links of the hierarchy. It is interesting that these dyads demonstrate intercorrelations for both facilities, indicating marked similarities in the communication processes for

both groups regardless of organizational structural differences.

Department meetings and formal management demonstrated a positive, moderate and significant intercorrelation for the civilians, but were not correlated for the military group. Department meetings and middle management demonstrated a positive, moderate and significant intercorrelation for the military, but were not correlated for the civilian group. Again, the difference in department meetings becomes evident. Without further data to give insight into the content of information covered within these meetings for the two facilities and who attends, etc., meaningful rationale can not be offered.

Information Models and Job Satisfaction

A backward elimination procedure was utilized to determine the best predictive model for job satisfaction. A general linear regression analysis substantiated the models for each group.

The predictive model for the military included individuals in other units or departments, the grapevine, and supervisor. The variance in job satisfaction accounted for by this model was 24.5%. The importance of communication with the supervisor was

once again demonstrated. For the military nurse group, the supervisor was the most salient source of information in the model.

The predictive model for the civilian group included the grapevine, co-workers, department meetings, and middle management. The model accounted for 25.4% of the variance of job satisfaction. Middle management appears to be the most salient source of information in this model. A point pertinent to this finding was the hierarchial changes in the civilian facility which occurred immediately prior to data collection.

An additional middle manager position was created and filled. The new manager was given responsibility for the five clinical areas which participated in the study. These five areas had been previously divided between two other middle managers. Perhaps staff nurses anticipated improved communication processes with the recent change and that perception influenced their responses. The new manager was well known in the community and had previously been active as a nursing educator, which might have had further impact on anticipating positive changes in the nursing hierarchy.

In light of previous research findings that consistently point out the importance of the

supervisor-subordinate communication dyad, it would seem reasonable to anticipate similar results for this group. Since this was not the case, one might posit that anticipating positive changes influenced these nurses' perceptions of the present communication efforts of their nursing hierarchy.

Conclusions

With consideration of the limitations of the study design and foregoing discussion it can be concluded that for the samples utilized in this study:

1. The military and civilian nurse groups have similar perceptions regarding:

- a. the total amount of information they receive from various sources of the nursing hierarchies in their respective organizations.

- b. the amount of information they need to receive from these sources.

- c. their reported job satisfaction.

2. For both nurse groups, there was a modest positive correlation between total amount of information received from all sources in the nursing hierarchy and reported job satisfaction.

3. For the military nurse group, the supervisor was the source of information most salient to job

satisfaction.

4. For the civilian nurse group, middle management was the source of information most salient to job satisfaction.

Implications

Nursing Management

Military nurses comprise a small percentage of the profession and perform their roles in an organizational setting differing from their civilian counterparts. However, in light of the results from this study, military nurse managers can have more confidence that nursing research in the managerial arena is applicable to their work force as well. Similarities in both professional training and organizational goals provide a framework for performing professional roles. This common framework serves as a greater influence, on perceptions of organizational communication, than the differences of the two organizational settings.

The importance of the supervisor-subordinate communication relationship on the reported job satisfaction of staff nurses has been demonstrated in previous studies and further borne out by the results of this study. McCloskey and McCain (1987) studied the

job satisfaction of newly employed nurses over a period of their first year. The results suggested that large drops in job satisfaction were due to a lack of recognition of work from superiors and insufficient positive feedback and encouragement. Clearly, both of these areas are supervisory functions. Perhaps some of these issues could be better addressed by nursing administrators requiring nursing supervisors to become more involved in the initial orientation process of new nurses.

Nursing administrators might do well to place greater emphasis on communication techniques for supervisory personnel by incorporating this aspect into job descriptions and offering continuing education credits for communication related training (Pincus, 1986b). One method of ensuring adequate feedback is through an effective evaluation system.

Managers and administrators need to be aware of the communication gap between top management and the staff nurse. The results of this study indicate that a more effective use of middle management to increase upward and downward communication flow might serve as a buffer to decrease dissatisfaction in this area.

The Chief Nurse in the military facility suggested another mechanism to increase vertical information

flow, reducing the gap between top administrators and staff nurses. An informal, non-threatening means of input from the 2nd and 1st Lieutenants to the Chief Nurse had recently been established in the military facility. Representatives from each unit were selected jointly by the staff and supervisor, to attend off post meetings to discuss work-associated problems. The Chief Nurse did not know the representatives, and minutes of the meetings were related by a spokesperson in such a manner that individuals raising concerns or making recommendations could not be identified.

Nursing Researchers

The paucity of nursing research in the organizational communication field leaves a gap to be filled. One area to be explored would be comparative studies of facilities which have ongoing communication training programs with those which do not.

Longitudinal communication studies of facilities that undergo structural changes in the nursing hierarchy would be beneficial. Evaluating staff nurse perceptions prior to the change, during the change, and afterwards could yield insight into long term managerial strategies. This method of study could also provide information about how best to introduce and

effect changes in the nursing administration.

Comparative studies of units in which the supervisor performs only administrative functions with units in which the supervisor also functions in a staff role would provide insight into the possible effect that unit structure might have on the supervisor-subordinate communication relationship. Definitive findings in this area would have significant implications for organizations of unit structure and lower level management.

Nursing Educators

The results of this study hold the most significant implications for nursing educators. Educators should be aware that communication within collegial and supervisory relationships in the work setting significantly impact on the job satisfaction of staff nurses.

Imogene King's (1981) systems theory of nursing includes interpersonal systems and a characterization of the hospital as a social system. She also points out the importance to the nursing profession of understanding communication channels in the health care organization. Educators, however, have generally applied the interpersonal systems theory to the nurse-

client relationship. Additionally, most theory application is taught at the graduate level.

Educators would reap greater benefits for the nursing profession by introducing this theory application at earlier levels, i.e., during baccalaureate and diploma preparation, thereby reaching greater numbers of the profession. Also, the scope of theory application should be broadened to include collegial relationships and communication strategies for nurse managers.

Imogene King (1981) also states that, If nurses are expected to continue in the role of coordinator in health care systems such as hospitals, then they should have some formal education to prepare them for this role. Knowledge of organizations can assist nurses in the way they influence change in health care systems (p. 121).

Professionalism begins with educational training, and does not stop with degree attainment. The educational process must be continued in the work setting also, via researchers and administrators alike.

Understanding the strengths and weaknesses of communication among nurses in the organizational setting can enhance professional cohesiveness. This

endeavor becomes the responsibility of every nurse and merits coordinated efforts from all.

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APPENDICES

APPENDIX A

Cover Letter for Questionnaire

Dear Staff Nurse:

You are invited to participate in a research study designed to describe perceived communication patterns among military and civilian staff nurses. Your participation will involve the completion of the attached questionnaire which will require approximately 8-12 minutes to complete.

Each questionnaire will be coded to identify only that your particular responses are from the unit on which you work. Only the researcher and thesis committee members (four faculty members) will work with individual respondent questionnaires. All data will be kept confidential and stored in a secure manner in the researcher's home. Any presentations or publications resulting from the study will present data in a summarized format so that individual responses cannot be identified.

Participation is voluntary and your consent may be withdrawn at any time prior to completion of data analysis by giving written notice to the researcher listed below. Non-participation or withdrawal of consent will not incur any penalty.

Filling out the questionnaire constitutes consent for participation. Your participation may provide information that would increase the understanding of communication among staff nurses. It follows that improved communication among co-workers and between workers and formal organizational channels would have favorable impact on patient care.

Any questions about your participation or other aspects of the study should be directed to the researcher. Please feel free to do so at the present time, or later by letter or phone.

Thank you,

LaVerne Puckett
2611 Edgewood Avenue
Knoxville, TN 37917
615-522-4063

APPENDIX B

Sources of Information

Instructions for Questions 1 through 18

You not only receive various kinds of information, but can receive such information from various sources within the organization. For each source listed below, circle your response on this answer sheet that best indicates: (1) the amount of information you are receiving from that source and (2) the amount of information you need to receive from that source in order to do your job.

	This is the amount of information I receive <u>now</u>					This is the amount of information I <u>need</u> to receive				
	Very Little	Little	Some	Great	Very Great	Very Little	Little	Some	Great	Very Great
Sources of Information										
Subordinates (if applicable)	1. 1	2	3	4	5	2. 1	2	3	4	5
Co-workers in my own unit or department	3. 1	2	3	4	5	4. 1	2	3	4	5
Individuals in other units, department in my organization	5. 1	2	3	4	5	6. 1	2	3	4	5
Immediate supervisor	7. 1	2	3	4	5	8. 1	2	3	4	5
Department meetings	9. 1	2	3	4	5	10. 1	2	3	4	5
Middle Management	11. 1	2	3	4	5	12. 1	2	3	4	5
Formal management presentations	13. 1	2	3	4	5	14. 1	2	3	4	5
Top management	15. 1	2	3	4	5	16. 1	2	3	4	5
The "grapevine"	17. 1	2	3	4	5	18. 1	2	3	4	5

APPENDIX C

Organizational Outcomes

Instructions for Questions 19 through 31

One of the most important "outcomes" of working in an organization is the satisfaction one receives or fails to receive through working there. Such "satisfaction" can relate to the job, one's co-workers, supervisor, or the organization as a whole. Please circle your response on this answer sheet which best indicates the extent to which you are satisfied with:

Outcome:		Very Little	Little	Some	Great	Very Great
My job	19.	1	2	3	4	5
My pay	20.	1	2	3	4	5
My progress in my organization up to this point in time	21.	1	2	3	4	5
My chances for getting ahead in my organization	22.	1	2	3	4	5
My opportunity to "make a difference"--to contribute to the overall success of my organization	23.	1	2	3	4	5
My organization's system for recognizing and rewarding outstanding performance	24.	1	2	3	4	5
My organization's concern for its members' welfare	25.	1	2	3	4	5
My organization's overall communicative efforts	26.	1	2	3	4	5
Working in my organization	27.	1	2	3	4	5
My organization, as compared to other such organizations	28.	1	2	3	4	5
My organization's overall efficiency of operation	29.	1	2	3	4	5
The overall quality of my organization's produce or service	30.	1	2	3	4	5
My organization's achievement of its goals and objectives	31.	1	2	3	4	5

APPENDIX D

Demographic Data

1. Year of Birth: 19____
2. Sex: ____Female ____Male
3. Highest Nursing Degree Obtained:
____Associate Degree ____Baccalaureate ____LPN
____Diploma ____Master's
4. Year degree obtained: 19____
5. Total Clinical Experience in Nursing: ____Months ____Years
6. Time in present work setting (unit/floor/ward): ____Months ____Years
7. The shift you most often work, specify time (ex. 7am-7pm):_____

FOR MILITARY PARTICIPANTS ONLY:

8. Time on active duty: ____Months ____Years
9. Present grade: ____ Rank: ____
10. Time in grade: ____Months ____Years
11. Primary MOS: ____

GOVERNMENT SERVICE PERSONNEL:

12. GS Rating: ____
13. Length of time in government service: ____Months ____Years

CONTRACT AGENCY NURSE PERSONNEL:

14. Length of time with the Agency: ____Months ____Years
15. Length of time with military facility: ____Months ____Years

APPENDIX E

Demographic Data

1. Race: ☐ Black ☐ White ☐ Oriental
☐ Hispanic ☐ American Indian
☐ Other

2. Marital Status: ☐ Single ☐ Married
☐ Widowed ☐ Divorced or Separated

3. Religious Affiliation: ☐ Protestant ☐ Jewish
☐ Catholic ☐ No Preference ☐ Other

VITA

LaVerne Puckett received a Bachelor's of Science Degree with a major in Biology and a minor in Chemistry from North Georgia College in Dahlonega, GA. She has served in the Armed Forces in an overseas assignment. Completion of this study met the requirements for her Master's of Science Degree in Nursing.