AN INVESTIGATION OF THE RELATIONSHIP OF NURSES' PERCEPTIONS OF HUMAN RESOURCE PRACTICES AND AUTONOMY IN PRACTICE AND PATIENTS' PERCEPTIONS OF SATISFACTION WITH NURSING CARE AND ORGANIZATIONAL CLIMATE FOR SERVICE TO SERVICE QUALITY IN PATIENTS

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An Investigation of the Relationship of Nurses' Perceptions
of Human Resource Practices and Autonomy in Practice
and Patients' Perceptions of Satisfaction with Nursing Care and
Organizational Climate for Service
to
Service Quality in Patients

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This study developed and tested theory to better understand the marketing construct of service quality, in a hospital setting. Marketing theory proposed that positive relationships exist between patients' perceptions of service quality and the following independent variables (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service.

The sample was comprised of 102 nurse-patient dyads who were recruited at a metropolitan university hospital. The patient sample was primarily made up of white (86.2%), married (80.4%), men (61.8%) whose ages ranged from 24 to 83 years. The nurse sample was comprised of predominantly white (64.7%), staff nurses (94.1%) who were mostly women (93.1%). Hypotheses testing employed correlational and regression statistical techniques.

No statistically significant relationships were found between patients' perceptions of service quality and (a) nurses' perceptions of human resource practices ($r = .11$, $p = .13$), or (b) nurses' perceptions of autonomy in practice ($r = .08$, $p = .22$). Strong positive relationships were found between patients' perceptions of service quality and (a) patient satisfaction with nursing care ($r = .74$, $p < .0001$) and (b) patients' perceptions of organizational climate for service ($r = .71$, $p < .0001$). The multiple regression hypothesis

testing did not support a four-variable model; however, a two-variable model explained 66% of the variance in service quality (F (2,99) = 32.91, $p < .01$).

Two nurse variables, human resource practices and autonomy in practice, although theoretically related to service quality, failed to explain variance in service quality. Based on alternate theoretical and methodological explanations it can be concluded that selected marketing propositions concerning service quality may not be generalizable to acute care hospitals. The patient variables of patient satisfaction with nursing care and patients' perceptions of organizational climate for service both demonstrated considerable power in explaining variance in service quality. Therefore, it can be concluded that patients' perceptions of selected variables are important components of marketing theory that have meaningful application in acute care hospitals because of their strong bearing on service quality.

Preface

This effort has been a remarkable and enlightening journey. Dr. Adela Yarcheski contributed mightily to this richly rewarding experience. Her knowledge of the research process, guidance and creativity have been most important to my success in completing this research. No one could have been more supportive in providing timely and helpful feedback. I owe her a debt of gratitude. I can only aspire to be a nurse researcher as fine as Dr. Yarcheski.

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To my husband Alan, who is the light of my life, I extend my deepest gratitude for his patience, fortitude, belief in me, and love. To my children, Bethanne and Christopher, I owe them both my thanks for their pride in me, and for their forbearance during these years of study when they were both busy with their own education.

To my Mom and Dad, whose undying faith in me provided the courage and confidence to proceed with this endeavor, I owe great thanks.

Dedication

This research is dedicated to my father,

Walter G. James

1924-1995

whose pursuit of knowledge

was a lifetime endeavor.

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Chapter I

The Problem

Service quality is an attitude that customers form and hold about an organization. This organizational construct, when applied to hospitalized patients (Gronroos, 1982; Parasuraman, Zeithaml, & Berry, 1985), might be considered one significant indicator of how patients (that is, healthcare customers) perceive the organization's actual performance of a particular service or group of services. As such, there is a need to develop and test explanatory level theory regarding service quality in order to better understand this aspect of patients' assessment of their hospitalization.

Several variables have emerged from the literature, some involving employees and some involving customers, that might help to explain service quality. Human resource practices, which are the organizational processes surrounding the employee's experience, have been theoretically linked to the customer's experience of service quality (Schneider & Bowen, 1985). Hence, the nurse's perception of human resource practices in the hospital is one variable in this study examined in relation to the patient's perception of service quality. Autonomy in practice, on the part of the nurse, is another variable that has been theoretically linked to service quality as perceived by patients (Bateson, 1985; Tansik, 1990). The examination of this theorized linkage is also of interest in the present study.

Customer variables have been identified in the literature that relate to service quality. Patient satisfaction with nursing care is one component of the broader construct, patient satisfaction. Customer satisfaction has been linked theoretically with service quality (Bitner, 1990; Bolton & Drew, 1991a, 1991b; Oliver, 1981; Patterson & Johnson, 1993; Taylor, 1994) and this linkage is examined in this study using patient satisfaction with nursing care as the representative variable for customer satisfaction. Finally, the organizational climate for service, which is a component of the broader construct of organizational climate, has been theoretically linked to service quality (Schneider, 1986). This proposed relationship is examined in patients in the present study.

In summary, in this study patients' perceptions of service quality are examined in relation to the four independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service. The testing of these theorized relationships can produce much needed knowledge in the area of service quality perceived by patients.

Statement of the Problem

What is the relationship between the dependent variable of patients' perceptions of service quality and the dependent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service?

Sub problems

1. What is the relationship between human resource practices as perceived by nurses and service quality as perceived by patients?

2. What is the relationship between autonomy in practice as perceived by nurses and service quality as perceived by patients?

3. What is the relationship between patient satisfaction with nursing care and service quality as perceived by patients?

4. What is the relationship between organizational climate for service as perceived by patients and service quality in patients?

5. Will a multivariate model including all of the independent variables provide a better explanation for service quality than any subset of independent variables?

Definition of Terms

1. Service quality is an attitude held by patients about a hospital which develops over time; this attitude is based on the patient's perception of the organization's actual performance of a particular service or group of services (Cronin & Taylor, 1992). Service quality was operationalized by the patient's total score on the Modified Health Care

SERVPERF scale which measures the patient's perception of service quality in the hospital (Babakus & Mangold, 1992; Cronin & Taylor, 1992).

2. Human resource practices are the processes by which an organization orients, trains, supervises, provides developmental career mobility and facilitates work for employees (Schneider & Bowen, 1985). Employee perceptions of human resource practices were operationalized as the nurse's total score on the Employee Turnover Diagnostic (Schneider, 1982).

3. Autonomy in practice is a dynamic process that demonstrates varying degrees of independent behaviors, actions and performance which professionals display alone and/or with others (Dempster, 1990). Autonomy in practice was operationalized as the nurse's total score on the Dempster Practice Behaviors Scale (Dempster, 1990).

4. Customer satisfaction is a summary psychological state that results from the surprise inherent when the customer's expectations for a product or service are confirmed or disconfirmed post-consumption of services (Oliver, 1981). Patient satisfaction with nursing care is one component of the broad construct of patient satisfaction. Patient satisfaction with nursing care was used in this study as a representative variable for customer satisfaction and is defined as the patient's opinion of the care received from the nursing staff (Hinshaw & Atwood, 1982). Patient satisfaction with nursing care was operationalized as the patient's total score on the revised La Monica-Oberst Patient Satisfaction Scale (Munro, Jacobsen, & Brooten, 1994).

5. Organizational climate for service is the set of policies, procedures, practices, rewards, supports, and expectations of the organization that enhances the customer's experience (Schneider, 1986). Organizational climate for service was operationalized as the patient's total score on the Organizational Climate for Service Semantic Differential (Niedz, 1995).

6. In this study, employees are defined as registered professional nurses and customers are hospitalized adult patients.

Delimitations

The sample was delimited to hospitalized adult medical or surgical patients with acute or chronic illness and an inpatient length of stay of at least three days. Adults are defined as patients over the age of 21. Eligible in-hospital patients are those who have had some prior exposure to the organization, either through a prior hospitalization or outpatient contacts, as determined by patient interview. Patients completed questionnaires during their hospital stay, approximately 24-36 hours prior to discharge to home. After discussion with nursing managers, only patients who were medically stable (e.g., who were not on vasoactive drugs) and who were mentally and physically able to complete the questionnaires were included in the study. To minimize measurement error, only patients who comprehended the English language were included in the study.

Nurse subjects were delimited to registered professional nurses who work in direct patient care roles, such as the primary nurse, case manager or assistant head nurses who take patient assignments. The nurse sample was delimited to nurses who cared for patients between 7:00 a.m. and 11:00 p.m., since nurses who cared for patients during the night shift (when patients were sleeping most of the time) would not have had the same opportunity for interaction with patients. Nurse subjects were delimited to those who have been employed by the organization for at least three months.

Significance

Service quality is a construct developed by marketing theorists to facilitate empirical study that might provide a better understanding of the customer's experience in industrial and organizational settings (Gronroos, 1982; Parasuraman, Zeithaml, & Berry, 1985). Nurses have observed that marketing concepts when applied to organizational problems, can help nursing as a profession to survive and thrive in a competitive environment (Andreoli, Carollo, & Pottage, 1988; Kunkle; 1990). The construct of service quality holds great promise for application to and knowledge development for the health service industry, and especially hospital settings. With increased theory

development and research, service quality might be considered another key indicator of how patients perceive the service delivered in the health care setting. The knowledge gained from the present study can be used to improve the service rendered in order to maximize the hospitalized patient's perspective of service quality.

Several variables emerge from the literature that are important to study in professional nurses as they relate to service quality reported by patients. Nursing enacts a pivotal role in delivering patient care through the contact that individual nurses have with patients on a repeated basis and through their administrative efforts in directing the work of ancillary staff members, nursing assistants, licensed practical nurses, nurse extenders, and unit receptionists. Professional nurses, in particular, have a significant impact on the experience of patients as customers of the hospital (Carter & Mowad, 1988). The theory proposed in this study provides the perspective that the organization's human resource practices as perceived by professional nurses, enhance the perception of service quality by the patient (Schneider & Bowen, 1985). The human resource practices employed by the organization dictate the nature of work life for nurses. Nurses' attitudes about the organization's human resource practices have bearing on their interactions with patients and, thus, could influence patients' views of service quality. In addition, theory suggests that the extent to which nurses can practice autonomously will contribute to patients' perceptions of service quality (Bateson, 1985; Tansik, 1990). Empirical support for these two aforementioned theorized relationships can provide much needed knowledge for nurses and nurse administrators to use in their quest to deliver quality patient care.

Other variables emerge from the literature that are important to study as they relate to service quality reported by patients. Patient satisfaction with nursing care, a widely used variable in research (Hinshaw & Atwood, 1982; La Monica, Oberst, Madea, & Wolf, 1986; Munro, Jacobsen, & Brooten, 1994; Risser, 1975) and hospital settings, has a theoretical link to service quality (Bolton & Drew, 1991a, 1991b; Oliver, 1981). Knowledge of this relationship demonstrated through research can enhance the utility of

the patient satisfaction with nursing care variable. Organizational climate for service, a marketing construct including policies, procedures and practices, has been adapted to a hospital setting in the present study. Empirical support for the theorized relationship between organizational climate for service and service quality can create new knowledge useful to nurse administrators in shaping a positive organizational climate for delivery of care by professional nurses and ancillary staff.

In summary, the present study attempts to explain service quality as perceived by hospitalized patients using the four independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service. The testing of these four theorized relationships should yield findings that shed light on what factors contribute most to service quality in these patients; these findings also can direct future research in the area of service quality.

Chapter II

Review of the Literature

The review of the literature presents theory linking the dependent variable of service quality in patients to the independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service. Empirical studies providing support for these theoretical linkages are presented. Finally, the theoretical rationale and hypotheses conclude the chapter.

Theories of Service Quality

Service quality is an attitude held by a customer about an organization which develops over time; this attitude is based on the customer's perception of the organization's actual performance of a particular service or group of services (Cronin & Taylor, 1992). Customers form attitudes as a result of an evaluation of how an organization performed a service against how important that service is to them (Cohen, Fishbein, & Ahtola, 1972). Service quality is related to customer satisfaction with service; however, satisfaction is an episodic experience (Patterson & Johnson, 1993). Individual interchanges with an organization result in a degree of satisfaction or dissatisfaction, and collectively these experiences result in an attitude about the organization's service quality (Cronin & Taylor, 1992; Oliver, 1981).

Historically, service quality was first identified as a phenomenon of interest in marketing science by Gronroos in 1982. When developing a service quality model, Gronroos (1982) speculated that the critical issue in service quality is the difference between the customer's expected service and perceived service. He defined this difference as "perceived service quality." Gronroos (1984) postulated that since services are intangible products that require high consumer involvement, customers typically pay attention to the experience of the service encounter, which results in an evaluation process. After the service encounter, the customer compares the experienced service

(perceived service) to the expectations for that service (expected service) and the resulting difference is perceived service quality. According to Gronroos, expected service is created from word-of-mouth communications with others, personal needs, image and market communication; perceived service is based on the experienced service.

In his landmark work, Gronroos (1982) raised questions about the nature and definition of service quality. To answer these questions and to further develop the body of knowledge of this phenomenon, Parasuraman, Zeithaml and Berry (1985) conducted qualitative research from which they derived their conceptual model of service quality. Findings of focus group discussions included systematic summarizing of the commonalties seen by customers about the nature of service quality. Parasuraman, Zeithaml, and Berry (1985) observed that three key factors influence customers' expectations (a) word-of-mouth communications, (b) personal needs, and (c) past experience. Finally, from these interviews, the researchers identified ten dimensions of service quality. These included: tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication, and understanding the customer.

More recently, a number of marketing theorists have questioned the role that expectations play in understanding service quality (Babakus & Mangold, 1992; Boulding, Kalra, Staelin, & Zeithaml, 1993; Cronin & Taylor, 1992; Teas, 1993). Cronin and Taylor (1992, 1994) posited that when service quality is defined as an attitude, the process of disconfirmation (the calculated difference between expectations and perceptions) is less relevant than the outcome. That is, the attitude of the consumer about the organization's actual performance is expressed through the customer's perception of the service quality.

Cronin and Taylor (1992) conceptualized service quality as an attitude using the "adequacy-importance" model. Within this model, an individual's attitudes are formed as a result of a summative process. Tangible products or services have various dimensions and attributes which consumers evaluate. This evaluation is weighted against each dimension's or attribute's importance. Customers view these evaluations in an additive way; the result

is an attitude. This model of attitude formation represents a cognitive process and is useful to predict consumer behavior, as conceptualized by earlier theorists (Cohen, Fishbein, & Ahtola, 1972; Mazis, Ahtola, & Klippel, 1975).

When service quality is defined as an attitude within the adequacy-importance model, as Cronin and Taylor (1992, 1994) have done, a customer's evaluation of an organization's overall performance on dimensions and attributes of importance can provide an accurate understanding of that customer's perception of the organization's overall service quality. From this theoretical perspective, knowledge of the difference between customer's expectations and perceptions of service quality is not needed to adequately evaluate service quality. The definition of service quality used in this study is consistent with Cronin and Taylor's (1992) perspective.

The evolution of the service quality concept in the marketing literature has not been in isolation of the construct of customer satisfaction (Fisk, Bitner, & Brown 1993; Taylor, 1994). While service quality is an attitude that develops over time, satisfaction with service is associated with each discreet episode of contact with the organization. Customer satisfaction is postulated to contribute to the formation of the service quality attitude (Boulding, et al., 1993; Oliver, 1981). To better understand service quality in hospital patients, satisfaction with nursing care, as perceived by patients, is used to help explain service quality.

Since service quality is an organizational construct, that is, an attitude that customer's form about an organization, the experience of service quality needs to be studied within that context. For this reason, the customer's evaluation of the organizational climate for service, which consists of policies, practices, procedures, rewards, supports, and expectations of the organization that enhance the customer's experience, has been postulated to contribute to service quality (Schneider, 1980). Thus, organizational climate for service as perceived by patients also is used to explain service quality.

In addition, Gronroos (1978) characterized services as intangible, inseparable and heterogeneous. Most germane to this research is the characteristic of inseparability. That is, the customer's experience with the service cannot be separated from the producer of the service (Gronroos, 1978). For many industries, including health care, delivering a service occurs through people. The process of evaluating an organization for its service quality does not occur in isolation of the service provider, who is the employee. Rather, the face-to-face interaction between the service provider and the customer may contribute in a significant way to the customer's overall impression of the organization. The service encounter is usually a dyadic interaction (Solomon, Surprenant, Czepiel, & Gutman, 1985). For this reason, two employee variables, nurses' perceptions of human resource practices and autonomy in practice, which play a role in dyadic nurse-patient interactions, also are used to explain service quality.

Service Quality as an Attitude: Empirical Findings

In 1992, Babakus and Mangold tested the theory that service quality is an attitude. They postulated that perceived service quality alone would predict behavioral intentions better than difference scores calculated between expectations for service and perceptions of service. A sample of 443 hospital patients responded to the SERVQUAL instrument, which measures both expectations for service and perceptions of service. Overall service quality was also measured using a single-item measure. Similarly, the variable of behavioral intentions was measured using a single-item measure. Babakus and Mangold found no meaningful difference between perceptions of service alone and difference scores ($\underline{r}$ = .76, perceptions; $\underline{r}$ = .75, difference scores). Similarly, perceptions of service quality, as measured by the 15-item SERVQUAL perceptions scale, correlated with the single-item overall service quality measure about the same as the difference scores ($\underline{r}$ = .829 perceptions; $\underline{r}$ = .827 difference scores). These findings led these authors to question the role of expectations in service quality and to support the alternative theory that service quality is an attitude which can be measured by perceptions of service alone.

In a study involving 660 customers across four industries (banking, pest control, dry cleaning, and fast food), Cronin and Taylor (1992) tested the theory that service quality is an attitude, and, as such, that performance alone will adequately measure the construct. They compared alternative methods of measuring service quality with overall service quality and behavioral intentions. The SERVQUAL instrument, which uses difference scores, was used in this study; the perceptions scale was used separately as a measure of performance and named SERVPERF. A 22-item scale also was developed using the stem of each SERVQUAL item that yielded an importance weighting for each item measuring perceptions. Additional measures employed included two single-item measures to assess overall service quality and behavioral intentions. Cronin and Taylor found that perceptions of service quality alone (R^2s ranged from .39 to .48) explained slightly more of the variance than did difference scores (R^2s ranged from .31 to .47) in overall service quality in all four industries. Cronin and Taylor interpreted these findings as empirical support for the theory that service quality is an attitude, and, as such, can be measured by performance alone.

In summary, studies have supported the theory that service quality is an attitude and can be measured on the basis of performance alone. Babakus and Mangold (1992) and Cronin and Taylor (1992) conducted studies and found support for this premise in their samples as discussed above. These studies provide support for the theoretical conceptualization and definition used in this study: that is, service quality is an attitude.

Theories of Positive Human Resource Practices

Schneider and Bowen (1985) defined human resource practices as processes by which an organization orients and trains employees, supervises, provides developmental career mobility and facilitates work for employees. Human resource practices are established by the organization and have a significant impact on the work experience of employees who interact with customers in service encounters.

Tansuhaj, Randall, and McCullough (1988) postulated that positive human resource practices such as recruitment, training, motivational programs, communication efforts and employee retention efforts are related to service quality, and they proffered the following explanation. In any given organization, positive human resource practices all lead to positive employee attitudes like organizational commitment, job involvement and work motivation. These positive attitudes should result in an increased work effort and job performance on the part of employees. Human resource practices, therefore, should lead to a heightened customer perception of service quality.

Tansik (1990) differentiated between employees in service organizations who have "high contact" with customers and those who have "low contact." In a hospital setting, nurses are examples of high contact employees, whereas laboratory technologists are examples of low contact workers. Tansik focused his theory on those with high contact jobs and posited that "...worker's performance and attitude can strongly influence a customer's perceptions of the organization" (p.155).

Collier (1990) emphasized the importance of human resource practices for front-line staff and described an organizational technique to maximize service quality called the "quality through people" approach. This approach includes such practices as extensive training and retraining programs, economic incentives, bonus and profit sharing programs, employee recognition and motivation programs, and heightened communication strategies to reaffirm the organization's values, goals and objectives as related to service quality.

George (1990) used an internal marketing perspective to describe the importance of positive human resource practices. He postulated that when organizations focus on identifying and meeting the needs and expectations of employees as internal customers of the organization, an environment is created for staff members to meet the needs and expectations of the external customer. Specifically, George posited that this will result in higher perceptions of service quality. In short, George postulated that meeting the needs

of employees as internal customers enables them to meet the needs of the external customers and in so doing will heighten their perceptions of service quality.

Schneider and Bowen (1985) explained the link between organizational attention to staff issues and service quality. These authors posited that employees who perceive the human resource practices of the organization positively (i.e., that performance is facilitated through developmental strategies such as positive supervision and career mobility), are more satisfied with the workplace and are "free to do the organization's main work of serving customers" (Schneider & Bowen, 1985, p.424), which should bear on the customer's assessment of service quality. Thus, if employees perceive positive human resource practices on the part of the organization, customers should perceive higher levels of service quality.

In summary, theory suggests a positive relationship between positive perceptions of human resource practices and service quality. That is, when employees perceive the organization to support them through positive human resources practices, customers will perceive higher levels of service quality.

Empirical Studies of Positive Human Resource Practices

Schneider and Bowen (1985) examined the relationship between employee perceptions of human resource practices and customer perceptions of service quality in a sample of 142 bank employees in 28 branches and 968 bank customers. They postulated that a service organization in which employees perceive positive human resource practices, such as positive supervision, career mobility, and support for high performance, frees employees to focus on the needs and expectations of customers and in doing so will increase customers' positive perceptions of service quality. The researchers used the Mitchell and Schneider Turnover Diagnostic to assess employees' perceptions of human resource practices. A single-item measure employing a six-point Likert scale (from excellent to terrible) was used to measure customers' service quality. Instead of matching subjects for the analysis of the data, Schneider and Bowen used a method that aggregates

data for analysis at the unit and organizational levels. They found a statistically significant positive correlation for each subscale on the Turnover Diagnostic with overall service quality (supervision, $\underline{r}$ = .51; status, $\underline{r}$ = .56; career facilitation, $\underline{r}$ = .35; socialization, $\underline{r}$ = .30; and work facilitation, $\underline{r}$ = .42), providing support for the theory tested.

In a related study, Kelley (1987) examined the relationship between organizational socialization and service quality. He matched each bank employee with his or her customers; the sample included 73 employees and 385 bank customers. Kelley defined organizational socialization as the process by which an individual learns and assimilates the values, norms and social knowledge of the organization, and he posited that this process enables an employee to become knowledgeable about the needs and expectations of customers. Thus, employees are better able to meet those needs and expectations within the service encounter, thereby narrowing the gap between the customers' expectations for service and their perceptions of the actual service. Kelley used a 19-item instrument to measure organizational socialization in employees. Service quality was assessed using two variables, employee technical quality (the actual outcome of the service encounter, the "what" that the customer receives from the employee) and employee functional quality (the experience itself, the process of the service encounter, the "how" the service was delivered). The two variables were evaluated with a 13-item and an 11-item scale, respectively. Kelley found statistically significant but weak positive relationships between organizational socialization and employee technical quality ($\underline{r}$ = .26) and between organizational socialization and employee functional quality ($\underline{r}$ = .29).

Using a two group quasi-experimental design, Luthans (1991) studied the effect of a human resource practice administered through positive supervision used by bank supervisors with bank tellers on perceptions of service quality by bank customers. The intervention, a behavioral modification technique, administered to the subjects in the experimental group included positive, immediate, graphic and specific feedback provided to employees from supervisors in response to desired customer-employee interactions.

In addition, social behaviors, such as positive nonverbal communication, warmth, tone of voice and active listening on the part of the supervisors, provided additional reinforcement. Bank customers responded to an eight-item instrument assessing six dimensions of customer service, including greeting, eye contact, speed of service, degree of help offered, personal recognition of the customer, and appreciation for the customer's business. They also responded to two additional items measuring the overall quality of transactions and the overall service quality of the bank. Using the t-test, the researchers found statistically significant differences on four of the six service dimensions rated by customers, the means of which were higher for the experimental than the control group (greeting, $\underline{t} = 2.62$; speed of service, $\underline{t} = 2.18$; personal recognition, $\underline{t} = 1.97$; and appreciation, $\underline{t} = 2.49$; all significant at $\underline{p} < .05$). The mean for the experimental group was also found to be higher than the mean for the control group for the overall quality of the transaction ($\underline{t} = 2.20$); no differences were found on customer ratings of overall service quality of the bank. There are shortcomings in the reporting of the study as follows (a) threats to internal and external validity of this quasi-experimental design are not adequately explained and controlled for, (b) sample size for each group is not explicit, and (c) there is an inadequate discussion as to the reliability and validity of the measures used in this study.

In summary, Kelley (1987) found a significant relationship between organizational socialization of employees and customers' perception of service quality. Luthans (1991) found that behavioral modification techniques applied organizationally with employees heighten the experience of customers with regard to service quality. The relationship between perceptions of human resource practices in employees and perceptions of service quality in customers has not been tested in the health care industry. This study attempts to address this gap in existing knowledge for the population of hospital nurses and patients.

Theories of Autonomy in Practice

Dempster (1990) defined autonomy in practice as a dynamic process that demonstrates varying amounts of independent behaviors, actions and performance which individuals display alone and/or with others. Dempster explained that there are four dimensions to autonomy in practice called readiness, valuation, empowerment and application. These four dimensions describe the role of the individual in determining autonomy in practice as well as the role of the organization. For example, the readiness dimension addresses the individual's need to grow and develop into an autonomous practice. The empowerment dimension stresses the lack of organizational constraint in determining the environment within which nurses can practice autonomously. The valuation dimension describes the emotive side of autonomy, through which a nurse can derive self worth and satisfaction. Finally, the application dimension of autonomy involves decision-making and the use of judgment in practice.

Batey and Lewis (1982) defined autonomy from a nursing perspective as "the freedom to make discretionary and binding decisions consistent with one's scope of practice and freedom to act on those decisions" (p.15). Batey and Lewis explained that discretionary decisions are based on judgments that are a result of thoughtful analysis. Discretionary decisions are not the result of a protocol or a predictable sequence of events but, rather, are the result of analysis where knowledge is used to understand tremendous variability in delivering service. Nurses are professionals who frequently work in large bureaucratic organizational settings like hospitals, and as such are employees of those organizations who are given some degree of autonomy in their job role.

Autonomy in practice is used in this study as a representative variable for concepts in theoretical propositions posited by marketing theorists which link these concepts to service quality (Bateson, 1985; Mills & Posner, 1982; Tansik, 1990). Marketing theorists (Bateson, 1985; Mills & Posner, 1982; Tansik, 1990) address the need for *perceived control over decisions* made on behalf of the customer by the employee, which is based on

employees' independent actions, behaviors, and judgment. These theorists acknowledged the organizational context of the service encounter and reflected on the need for the structure of the organization to relax constraints on employee decision-making. Various other words are used to express these concerns. For example, in discussing organizational constraints, marketing theorists refered to the need to *empower* employees to act on behalf of customers. Similarly, when marketing theorists advocated that employees must be able to use *discretion*, to "bend the rules" on behalf of a customer, they were calling for the exercise of judgment in making decisions as described by the autonomy theorists. Given Dempster's definition of autonomy in practice, this variable is used in this study to represent the concepts discussed in relation to service quality in the literature.

Bateson (1985) theorized that when use of judgment and control over decision-making is withdrawn from the employee, the consequences include negative outcomes for customers. When employees perceive that control over decision-making in the service encounter is dominated by the organization, the employee has no latitude. In Bateson's words, when "all autonomy has been withdrawn, everything must be done 'by the book'" (p.74). The employee's judgment about the service encounter or the needs of the customer is not seen as useful or relevant, and the employee is unable to make decisions on behalf of the customer in an individualized way. Employees are at a loss for being able to meet the needs of the customers because the rules are overly restrictive and the use of judgment is precluded. Consequently, the customers leave the encounter disgruntled and annoyed and this results in lowered perceived levels of service quality.

Tansik (1990) posited that high contact employees must be empowered to make decisions, within certain constraints, and that the result will be increased attention to customers' needs. Ultimately, the customers' needs are met and their expectations are exceeded. Conversely, Zeithaml, Berry and Parasuraman (1988) postulated that when employees must get the approval of other departments in the organization or from their supervisors before being able to meet the customer's needs in that moment of the service

encounter, service quality is jeopardized. If an employee must get approvals from other levels of authority, an unnecessary time lag may ensue, causing customer distress and ultimately lowering the customer's positive perception of service quality.

Several authors (Bateson, 1985; Mills & Posner, 1982; Tansik, 1990) theorized that front line staff must be empowered to act and use discretion. Bateson (1985) postulated that when employees have more control over decision-making, they deliver better service output to the customers. These theories address the use of independent actions, behaviors and performance on the part of the employee and the use of judgment and decision-making.

Nurses have a key role as professional employees in daily contact with patients in service encounters. The exercise of autonomy in practice, as described by Batey and Lewis (1982), allows the nurse to use judgment and make decisions in the face of tremendous variability in the care of patients. The service quality literature emphasizes that within the service encounter employees must use judgment and have control over decision-making in the interests of the outcome of higher service quality. Thus it follows that nurses who perceive high levels of autonomy in practice will render care to patients in such a way that patients perceive high levels of service quality.

Though theory suggests the propositions outlined in this study, the relationship between these variables has not been examined empirically between nurses and hospitalized patients. Although adequate empirical support exists for the relationship between autonomy in practice and outcome variables found in employees such as job satisfaction (Blegen, 1993; Meiskins & Watkins, 1989), no studies could be found linking autonomy in practice with outcome variables in customers or patients. This study fills a gap in knowledge concerning the relationship between autonomy in practice in nurses and service quality in patients.

Theories of Customer Satisfaction

Oliver (1981) defined customer satisfaction as a summary psychological state that results from the surprise inherent when the customer's expectations for a product or service are confirmed or disconfirmed post consumption. Oliver held that the emotion that results is of short duration and soon results in a more general attitude towards future purchase decisions. Although some marketing theorists argued that service quality leads to customer satisfaction (Woodside, Frey, & Daly, 1989), the vast majority of marketing theorists (Bitner, 1990; Bolton & Drew, 1991a, 1991b; Oliver, 1981; Patterson & Johnson, 1993) posited that customer satisfaction leads to service quality. Churchill and Surprenant (1982) explained that customer satisfaction is of considerable interest and importance to marketing scientists since the construct can link processes that result in purchase and consumption with post-purchase phenomena such as attitude change (like a change in the attitude, service quality), customer loyalty, and repeat purchase. Bolton and Drew (1991a) proposed a theoretical model that explained customer assessments of service quality and value. In this model, customer satisfaction or dissatisfaction is theorized to be an antecedent of service quality.

Patient satisfaction with nursing care is one component of the broad construct of patient satisfaction which is theorized to be related to the quality of health care (Elbeck, 1987, 1992; Nelson, 1990; Nelson, Hays, Larson, & Batalden, 1989). Taylor (1994) distinguished between the patient satisfaction and service quality constructs and theorized that patient satisfaction is a short-term judgment based on the disconfirmation paradigm, whereas service quality is a long-term attitude. The patient's perception of nursing care is one aspect of the hospitalization experience. For the purposes of this study, patient satisfaction with nursing care will be used as a representative variable for the construct of customer satisfaction.

Hinshaw and Atwood (1982) described patient satisfaction with nursing care as an important outcome of the hospitalization experience and defined the construct as the

patient's opinion of the care received from nursing staff. Oberst (1984) posited that patients enter the health care system with a variety of prior experiences and attitudes. Together with information derived from healthcare professionals, they then form expectations of care which include care outcomes, caregivers' behaviors, and system performance. These expectations are measured against patients' actual perceived reality. The resultant comparison between expectations and perceptions forms the basis against which the care experience is judged to be satisfactory or not. Oberst postulated a relationship between level of satisfaction on the part of the patients and their subsequent judgment of the quality of care. Similarly, Munro, Jacobsen, and Brooten (1994) theorized that patient satisfaction with nursing care is related to the quality of care.

In summary, marketing theorists distinguish between customer satisfaction and service quality, and posit a relationship between these two constructs. Patient satisfaction with nursing care is a representative variable of the construct of interest that is postulated to contribute to the patient's view of the quality of their healthcare experience. Thus it follows that the more satisfied patients are with nursing care, the more positive their perceptions of service quality.

Empirical Studies of Customer Satisfaction

Although no empirical support could be found wherein service quality was linked with patient satisfaction with nursing care, several studies from the marketing literature support the theorized linkage with the broader construct, customer satisfaction. In a study of 145 airplane travelers, Bitner (1990) tested a causal model within which customer satisfaction was postulated to lead to service quality. In this study, customer satisfaction was measured by a single seven-point semantic differential item. Perceived service quality was measured using seven bipolar semantic differential items. In the structural equation analysis, a significant path coefficient ($\underline{B} = .47$; $\underline{p} < .05$) was found between satisfaction and service quality.

In testing a multistage model of customer assessments of service quality and value, Bolton and Drew (1991a) used a sample of 1,408 residential telephone subscribers. Within the model, Bolton and Drew postulated that customer satisfaction is antecedent to perceived service quality. Eleven performance variables assessed by single items on the questionnaire made up the estimation of perceived service quality. Customer satisfaction was measured by seven performance variables assessed for both local and long distance services. Using the two-stage least squares estimates method, a significant path (F = 51.91; $p < .005$) accounting for 37% of the variance was found between customer satisfaction and service quality in the theorized direction.

In a longitudinal study employing a quasi-experimental design, Bolton and Drew (1991b) tested the effect of a service change on satisfaction and on attitude change, specifically, service quality. The nature of the service change was a network upgrade program on residential customer telephone service. Two control groups and two test groups (at sites matched for similar physical plants) included 119 participants who completed survey questionnaires at three intervals (a) approximately 6 months prior to the beginning of upgrade activities, (b) one month after the conclusion of upgrade, and (c) six months later. Service quality was measured using a single item to assess each of six different types of services provided by the local telephone company. Satisfaction was measured by current performance (on local calls) and by disconfirmation (two items that elicit comparisons of current to past service). In the second wave of assessments (six months after the network upgrade) satisfaction was found to have an influence on service quality (regression coefficient = .1618; $p < .05$). However, in the third wave, although the coefficient was similar in direction and magnitude, it was not statistically significant (regression coefficient = .1358; $p < .15$). The authors explained that the effect of disconfirmation on satisfaction (and through satisfaction to service quality) may diminish over time. However, this finding (lack of sustained effect of satisfaction on service quality over time) may not be generalizable to the patient population.

In summary, researchers have shown that satisfaction impacts on service quality in non-health care settings. Bitner (1990) found a significant relationship between satisfaction and service quality in airline travelers. Bolton and Drew (1991a, 1991b) found similar relationships between satisfaction and service quality in telephone customers. This study extends knowledge about the relationship between satisfaction and service quality by studying the relationship between patient satisfaction with nursing care and service quality in a sample of hospitalized patients.

Theories of Organizational Climate for Service

Schneider (1986) defined organizational climate for service as a set of policies, procedures, practices, rewards, supports and expectations of the organization that enhances the customer's experience. Climate is part of the broader construct "culture" which includes the norms and values of the organization. According to Schneider, climate is more specific than culture, and is in fact the values and norms of the organization as they are demonstrated through its policies, procedures and practices. Schneider advised that climate is still quite broad and that a specific focus is necessary when examining organizational climate. Accordingly, organizational climate for service relates to the extent to which policies, procedures, rewards, supports (like the service delivery system) and expectations of the organization enhance the customer's experience.

Schneider (1980) originally described organizational climate for service in terms of the employee. He postulated that in organizations where employees report that management supports customer service and demonstrates this "service enthusiasm" in terms of customer oriented policies, procedures and practices, customers should report higher levels of service quality. Further, Schneider postulated that customers will be more likely to continue to do business with the organization, ensuring repeat encounters and customer loyalty.

Kelley (1987) extended Schneider's definition of organizational climate for service from the perspective of the employee to the perspective of the customer. Kelley theorized

that the organizational climate for service discernible to employees who serve customers is also discernible to customers, and ultimately affects the customer's perception of service quality. Moreover, when the organizational climate for service is customer-oriented, customers will perceive higher levels of service quality.

Gronroos (1990) theorized that in a service context customers and their behaviors cannot be standardized or totally predetermined. That is, the service encounter is unpredictable. A strong organizational climate for service is one in which policies, procedures and practices demonstrate an appreciation for good service and a focus on customers' needs. In Gronroos' view, if the organizational climate for service is strong, it helps the employee to determine how to respond to new, unforeseen, and awkward situations, and, in so doing, enhances service quality in the customer's view.

Schneider, Gunnarson, and Niles-Jolly (1994) explained that organizational climate for service is defined within the organization by senior management. Senior management determines the policies, procedures and practices that create the climate. Among these practices are making available to employees the necessary resources (e.g., equipment, adequate staffing, adequate supplies) in order to serve customers appropriately. When these are present or absent, customers are sensitive to and can assess the organizational climate for service. In the theorists' view: "When the organization has practices and procedures that communicate service as a top priority, then service quality is usually the result" (Schneider, Gunnarson, & Niles-Jolly, 1994, p. 23).

In summary, theory suggests a positive relationship between organizational climate for service as perceived by customers and customers' perception of service quality. That is, when customers perceive an organizational climate for service that focuses on customers needs, they will also perceive high levels of service quality.

Empirical Studies of Organizational Climate for Service

In a study with 263 bank employees in 28 bank branches and 1,657 bank customers, Schneider, Parkington, and Buxton (1980) tested the theory that employee

perceptions of organizational climate for service would be positively correlated with customer perceptions of service quality. The instrument used to measure organizational climate for service with employees was a multi-item instrument in nine subscales which included: enthusiast orientation, bureaucratic orientation, managerial functions, effort rewarded, customer retention, personnel support, processing support, marketing support and equipment/supply support. The exact number of items on the overall survey in each subscale was not reported, indicating a shortcoming of the reporting of this study. Customers completed a 41-item questionnaire used to assess service quality. Statistically significant correlations were found between employee perceptions of organizational climate for service for managerial functions ($r = .54$, $p < .01$), enthusiast orientation ($r = .71$, $p < .01$), customer retention ($r = .63$, $p < .01$), personnel support ($r = .46$, $p < .05$), and equipment/supply support ($r = .50$, $p < .05$).

Schneider and Bowen (1985) studied a sample of 142 employees and 968 customers of a major commercial, full-service, banking system. The researchers tested the proposition that employee perceptions of the organizational climate for service would be positively correlated with customers' perceptions of service quality. A 28-item instrument cast in four dimensions measured employees' perceptions of organizational climate for service. These dimensions included employees' perceptions of the branch management, systems support (i.e., issues like adequate staffing), customer attention and logistics support (i.e., issues like adequate supplies and equipment). A single-item measure on a six-point Likert scale measured customers' perceptions of overall service quality. Schneider and Bowen found statistically significant positive correlations of employee perceptions of organizational climate for service on each subscale with customers' perceptions of service quality (management, $r = .53$; systems support, $r = .58$; customer attention, $r = .37$; logistics support, $r = .36$, all significant at the $p < .05$ level).

In a study with 73 employees and 385 customers in the banking industry, Kelley (1987) tested two hypotheses relating organizational climate for service to service quality.

First, Kelley hypothesized that employees' perceptions of organizational climate for service would be positively related to customers' perceptions of service quality. He measured employee perception of organizational climate for service using a 24-item instrument. A 24-item instrument measured the customer's perception of service quality both technical and functional, as delivered by the organization through the employee. Kelley found weak correlations in the positive direction (employee technical, $\underline{r} = .19$; employee functional, $\underline{r} = .13$), that were not statistically significant.

Second, Kelley (1987) hypothesized that customers' perception of the organizational climate for service would be positively related to service quality. Kelley used the same 24 item instrument with customers that had been used with employees to test the first hypothesis. Kelley's conceptualization of service quality for this hypothesis included a customer contribution (customer technical quality) and an employee contribution (employee functional quality) to the overall outcome of service quality. Customer technical quality was measured using a nine item tool on a 7-point Likert scale. Employee functional quality was measured using the same scale that was used in the first hypothesis discussed above. Kelley found statistically significant ($\underline{p} < .01$) positive correlations in support of his hypothesis; customer perceptions of organizational climate for service correlated with customer technical quality, ($\underline{r} = .52$) and customer perception of organizational climate for service correlated with employee functional quality, ($\underline{r} = .66$).

Thus, in summary, Schneider, et al. (1980) found a significant positive relationship between organizational climate for service as perceived by employees and service quality as perceived by customers which was replicated in a later study (Schneider & Bowen, 1985). Finally, Kelley (1987) did not replicate these aforementioned findings, but he did find a significant relationship between organizational climate for service as perceived by customers with service quality. Thus, there is some empirical support for the postulated relationship between organizational climate for service as perceived by customers and their

perceived service quality. The proposed study will add to existing knowledge by examining the relationship in patients.

Theoretical Rationale

Service quality is an outcome variable defined as an attitude held by a customer about an organization which develops over time; this attitude is based on the customer's perception of the organization's actual performance of a particular service or group of services (Cronin & Taylor, 1992). In the present study, service quality will be assessed in hospital patients.

Factors that influence the work life of the employee are postulated to affect not only the employee, but also outcomes to the customer, such as service quality. While there are many variables that affect the work life of employees, the two organizational variables of autonomy in practice and positive human resource practices as perceived by nurses have been selected to help to explain the perception of service quality in patients.

Positive human resource practices, like work facilitation, supervisor support, developmental career mobility opportunities, and sound formal and informal on-the-job educational programs that facilitate orientation of new employees, all serve to communicate a sense of caring on the part of the organization and improve the overall satisfaction of employees in the workplace (Schneider & Bowen, 1985). Schneider and Bowen posited that employee perceptions of their organizations' human resource practices are related to customers' perceptions of service quality. Several studies have supported the proposition that human resource practices are related to customers' perceived service quality (Kelley, 1987; Luthans, 1991; Schneider & Bowen, 1985). Based on theory and research, it is postulated that there is a positive relationship between perceptions of positive human resource practices on the part of nurses and service quality as perceived by patients.

Dempster (1990) defined autonomy in practice as a dynamic process that demonstrates varying amounts of independent behaviors, actions and performance which

individuals display alone and/or with others. Dempster's four dimensions of autonomy in practice (empowerment, readiness, application and valuation) describe the individual and the organizational sides of autonomy in practice. A professional's autonomy is affected by the organization which provides that context and structure of autonomy (empowerment and valuation) and the individual's belief that he/she is free to act (readiness, application and valuation). Nurses are professionals who frequently work in large bureaucratic organizational settings, like hospitals, and who exercise some degree of autonomy in practice through their job role.

Bateson (1985) postulated that when the use of judgment and control over decision-making is withdrawn from the employee, the result includes negative outcomes for the customer. Employees have no latitude in individualizing service to the needs of the customer and perceptions of service quality are impaired as a result. Tansik (1990) posited that high contact employees must be empowered to make decisions, within certain constraints, and that the result will be an increased attention to customers' needs, thereby increasing their perceptions of service quality. Bateson (1985) theorized that giving employees more autonomy in decision-making for actions in service encounters is necessary for enhancing customers' perceptions of service quality. Therefore, it is postulated that professional autonomy on the part of nurses will be positively related to patients' service quality.

While service quality is described as a global construct, an attitude which is formed after repeated exposure to an organization (Cronin & Taylor, 1992, 1994), customer satisfaction is described as the summary psychological state that results from confirmation or disconfirmation of expectations when compared to perceptions of a discreet episode of contact with an organization. Satisfaction is of short duration and contributes to the formation of a broader attitude over time (Oliver, 1981). Bolton and Drew (1991a, 1991b) posited that satisfaction is antecedent to service quality.

Patient satisfaction with nursing care is one component of the broader construct of patient satisfaction, which is theorized to contribute to patients' perception of the quality of healthcare. Oberst (1984) posited that a positive relationship exists between patients' level of satisfaction with the hospitalization experience and their subsequent judgment of the quality of care. Munro, Jacobsen, and Brooten (1994) theorized that patient satisfaction with nursing care is related to the quality of care. Empirical studies provide support for the theorized relationship between customer satisfaction and service quality (Bitner, 1990; Bolton & Drew, 1991a, 1991b). Therefore, based on theory and research, it is postulated that patient satisfaction with nursing care, the variable representing customer satisfaction, is positively related to the perception of service quality.

Organizational climate for service is defined as a set of policies, procedures, practices, rewards, supports and expectations of the organization that enhances the customer's experience (Schneider, 1986). Organizational climate for service is discernible both to the employee (Schneider & Bowen, 1985) and to the customer of the organization (Kelley, 1987). Schneider (1986) posited that the organizational climate as perceived by the employee will affect the customer's experience, specifically leading to better service quality. Kelley (1987) extended this proposition by theorizing that the organizational climate for service is also discernible to the customer as well as the employee. Gronroos (1990) posited that the organizational climate for service helps service employees to better deal with unpredictable circumstances in a way consistent with providing better service quality. Research findings support the relationship of organizational climate for service as perceived by customers (Kelley, 1987), and as perceived by employees (Schneider & Bowen, 1985; Schneider, et al. 1980) to service quality in customers. Therefore, based on theory and empirical findings, it is postulated that patients' perceptions of organizational climate for service are positively related to patients' perceptions of service quality.

Finally, since there are many factors in the environment that affect the customer's experience, a multivariate model made up of all the independent variables is proposed to

provide a better explanation for the dependent variable than any subset of independent variables. Therefore, it is reasoned that no subset of the independent variables will explain patients' perceptions of service quality better than a multivariate model comprised of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service.

Hypotheses

1. There is a positive relationship between human resource practices as perceived by nurses and service quality as perceived by patients.

2. There is a positive relationship between autonomy in practice as perceived by nurses and service quality as perceived by patients.

3. There is a positive relationship between patient satisfaction with nursing care and service quality as perceived by patients.

4. There is a positive relationship between organizational climate for service and service quality as perceived by patients.

5. No subset of the independent variables will explain patients' perceptions of service quality better than a multivariate model comprised of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service.

Chapter III

Methods

This chapter presents the research design of this correlational study that examined relationships between the dependent variable of patients' perceptions of service quality and each of the independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service. The presentation includes discussion of (a) the research setting, (b) the samples, (c) the instruments, and (d) the data collection method.

Research Setting

The study was conducted in a university medical center located in a metropolitan area in central New Jersey. The medical center has an inpatient capacity of over 400 beds. Nine general medical-surgical patient care units, each with an average daily census of between 20 to 44 patients, provided the pool of potential patient subjects. Eight of the nine medical-surgical units were used in the study. The ninth unit failed to provide patients that met the study delimitations. An adequate pool of nurses existed on the eight patient care units.

The medical center serves the immediate community surrounding it as well as suburban areas and, for some specialty services, provides tertiary services to greater central New Jersey. In 1994, the medical center had over 22,000 admissions and over 34,000 emergency room visits.

Samples

Paired nurse-patient dyads comprised the samples needed for the study. Two samples--a convenience sample of registered nurses matched with a convenience sample of adult patients in their care--were obtained from the pool of nurses and patients from eight general medical-surgical patient care units at the above mentioned medical center who met

the delimitations of the proposed study. Each nurse was paired with only one patient, assuring that the assumption of independent observations for statistical analyses was met (Pedhazur, 1982); in other words, each nurse who voluntarily agreed to be in the study responded to the study instruments only once and his or her responses was paired with only one patient that the nurse had cared for.

In determining sample size, a small to medium effect size was chosen. The rationale for this effect size is that two theorized relationships to be examined in the study had not been tested in previous research. Unless a study can potentially result in damaging consequences to the human person, a 5% chance of making a Type I error and a 20% chance of making a Type II error represents acceptable risk (Cohen, 1988; Polit & Hungler, 1991). Therefore, a sample size of at least 101 dyads was needed for multiple regression analysis based on an effect size of f^2=.12, an alpha of .05, and a power of .80 (beta = .20) (Cohen, 1988; Cohen & Cohen, 1983).

Of the 327 patients initially approached to participate in the study, 107 patients met the delimitations of the study, and agreed to participate. The responses of three patients were excluded from the analysis because nurses caring for the patient had already participated in the study. Missing data from two patient subjects resulted in unusable surveys. Of the 110 nurses approached to participate in the study, four refused, and two did not meet the delimitations of the study. Two nurses completed surveys, but when matched to patient surveys, missing patient data resulted in a loss of these nurse data to the study. The final samples consisted of 102 patients paired with 102 nurses.

Of the 102 patients, 61.8% were men and 38.2% were women. Their ages ranged from 24 to 83 (M = 56.90; SD = 13.38). Most of the patients were white (86.2%), while 6.9% were African-American, 3.9% were Latino, and 2% were Asian. One percent did not respond to the question. The majority of the patients were married (80.4%), while the remaining were widowed (3.9%), separated (2.9%), divorced (5.9%), single (5.9%), or did not respond (1%). About 5.9% of the patient sample had a grade school education,

35.3% had a high school diploma and 23.5% described "some college". The patients with associate degrees (5.9%), baccalaureate degrees (18.6%), masters degrees (6.9%) and professional degrees (2.9%) comprised 34.3% of the patient sample. One percent did not respond to this item. The number of past inpatient experiences for patients ranged from 0 to 20 (M = 2.49; SD = 3.17). Patients' outpatient experiences ranged from 0 to 50 (M = 3.70; SD = 7.51). Patients with both inpatient and outpatient experiences comprised 66% of the sample. However, all patients had either at least one past outpatient or inpatient experience. The demographic characteristics of the patient sample are summarized in Tables 1 and 2.

Table 1

Means, Standard Deviations and Ranges of Patient Sample Characteristics

Characteristic	n	M	SD	Range
Patients' age	100	56.90	13.38	24-83
Prior inpatient experiences	102	2.49	3.17	0-20
Prior outpatient experiences	102	3.70	7.51	0-50
Both inpatient and outpatient experiences	67	8.43	10.35	2-61

Table 2

Frequency Distribution of Selected Demographic Variables: Patient Sample

Characteristic	n	Percentage
Gender		
Men	63	61.8
Women	39	38.2
Race		
White	88	86.2
African-American	7	6.9
Asian	2	2.0
Latino	4	3.9
Missing data	1	1.0
Marital Status		
Married	82	80.4
Widowed	4	3.9
Separated	3	2.9
Divorced	6	5.9
Single	6	5.9
Missing data	1	1.0

(table continues)

Table 2

Frequency Distribution of Selected Demographic Variables: Patient Sample

Characteristic	n	Percentage
Educational level		
Grade school diploma	6	5.9
High school diploma	36	35.3
Some college	24	23.5
Associate degree	6	5.9
Baccalaureate degree	19	18.6
Masters degree	7	6.9
Professional degree	3	2.9
Missing data	1	1.0

Of the nurses participating in the study, 6.9% were men and 93.1% were women. Their ages ranged from 22 to 60 (M = 34.78; SD = 9.12). Nurse subjects were predominantly white (64.7%), while 13.7% were African-American, 2% were Caribbean-American, 2.9% were Latino, 13.7% were Asian, and 2% described other racial backgrounds. One percent did not respond to this question. According to level of nursing education, 5.9% of the nurses had a diploma, 32.4% had an associate degree, 39.2% had a nursing baccalaureate, 17.6% had a baccalaureate degree in another field, 3.9% had a masters in nursing and 1% had a masters in another field. Consistent with the delimitations of the study, most of the nurses were staff nurses (94.1%) with assistant head nurses (5.9%) making up the remainder. Daytime nurses made up the majority of the sample (65.7%). There were 25 nurses (24.5%) from the evening shift, (3 p.m. to 11 p.m.) and there were 10 nurses who cared for patients in the sample during the daytime but completed the survey while working the night shift (12 hour nights, 6.9%; 8 hour nights, 2.9%). Most of the nurses were full time (87.3%), while 12.7% worked at the hospital on a part time basis. Nurses had been licensed for an average of 6.91 (SD = 6.22) years with a range between 0 and 26 years. Nurses' experience at the hospital ranged from 3 months to 14 years (M = 3.5; SD = 3.66). Summaries of nurse sample demographic characteristics are found in Tables 3 and 4.

Table 3

Means, Standard Deviations and Ranges of Nurse Sample Characteristics

Characteristic	n	M	SD	Range
Nurses' age	96	34.78	9.12	22-60
Years since licensure	102	6.91	6.22	.25-26
Years at present hospital	102	3.50	3.66	.25-14

Table 4

Frequency Distribution of Selected Demographic Variables: Nurse Sample

Characteristic	n	Percentage
Gender		
Men	7	6.9
Women	95	93.1
Race		
White	66	64.7
African-American	14	13.7
Caribbean-American	2	2.0
Latino	3	2.9
Asian	14	13.7
Other	2	2.0
Missing data	1	1.0
Education		
Diploma	6	5.9
Associate degree	33	32.4
Baccalaureate degree (nursing)	40	39.2
Baccalaureate degree (other)	18	17.6
Masters degree (nursing)	4	3.9
Masters degree (other field)	1	1.0
Position		
Staff nurse	96	94.1
Assistant head nurse	6	5.9

(table continues)

Table 4

Frequency Distribution of Selected Demographic Variables: Nurse Sample

Characteristic	n	Percentage
Shift		
8 hour days	41	40.2
8 hour evenings	25	24.5
8 hour nights	3	2.9
12 hour days	26	25.5
12 hour nights	7	6.9
Practice status		
Full time	89	87.3
Part time	13	12.7

Instruments

The Modified Health Care Service Performance (SERVPERF) instrument

The SERVPERF instrument (see Appendix A) is a 15-item tool which measures the patient's perceptions of service quality (Babakus & Mangold, 1992; Cronin & Taylor, 1992). The instrument measures service quality on a five-point Likert scale with anchors of "strongly disagree" (1) to "strongly agree" (5). Scores can range from 15 to 75. Higher scores reflect higher service quality.

The SERVPERF instrument is a modification of the 22-item SERVQUAL instrument originally developed by Parasuraman, Zeithaml, and Berry (1988). Scale modification was based on viewing service quality as an attitude that was measured by perceptions alone rather than difference scores derived from subjects' perceptions and expectations of service quality (Cronin & Taylor 1992). The use of difference scores to measure constructs in general, and service quality in particular, has been criticized (Peter, Churchill, & Brown, 1993) because of restriction of range of scores, problems with discriminant validity, the potential for spurious correlations, and problems with reliability. Cronin and Taylor named this perceptions only version of SERVQUAL as SERVPERF.

Babakus and Mangold (1992) used a 15-item modified SERVQUAL instrument in a sample of 443 discharged patients from a mid-sized hospital located in the southern United States. They reported internal consistency reliabilities, using coefficient alphas, of .90 and .96 for the expectations and the perceptions scales, respectively. In a sample of 660 customers of four different service industries (banking, $\underline{n}$ = 118; pest control, $\underline{n}$ = 175; dry cleaning, $\underline{n}$ = 178; and fast food, $\underline{n}$ = 189) in eight settings, Cronin and Taylor (1992) used both the 22-item SERVQUAL with difference scores and the 22-item SERVPERF. Coefficient alphas for each instrument in each industry ranged from .88 (SERVPERF in the fast food industry) to .96 (SERVPERF in the pest control industry).

Relative to content validity, Parasuraman et al. (1988) used a conceptual model to derive a pool of 97 items for the development of the original SERVQUAL instrument

(from which the modified, health care SERVPERF version was derived). This model was generated from qualitative research on service quality. Parasuraman et al. provided evidence of construct validity by using principal axis factor analysis with oblique rotation. A five-factor structure emerged from data obtained from a study sample of 800 individuals in the repair and maintenance, banking, credit card and long distance telephone industries. However, the five-factor structure has not been replicated across other samples (Carman, 1990; Cronin & Taylor, 1992). Babakus and Mangold (1992) were also unable to replicate the five-factor structure in a sample of 443 hospitalized patients. Using maximum-likelihood exploratory factor analysis, Babakus and Mangold found that two factors with eigenvalues greater than 1.0 emerged and accounted for 70.2% of the variation; the two factor solution failed to rotate. According to Polit and Hungler (1991), to identify and extract the factors, or underlying sources of variance in factor analysis, the sum of the weighted coefficients (or the "eigenvalues") are calculated. Eigenvalues of less than one are too weak to be considered useful (Polit & Hungler, 1991). In the Babakus and Mangold study, the initial solution suggested that a single factor adequately summarized the data in that all 15 items loaded greater than .50 on the first factor. Factor loadings on the second factor (eigenvalue, 1.055), which accounted for 7% of the variance, were all less than .44. These results led the researchers to conclude that a single factor adequately summarized the data and that service quality is a unidimensional construct when examined in hospitalized patients.

Babakus and Mangold (1992) also correlated responses to overall service quality (perceptions only) with responses to a single-item measure of overall perceived quality. They reported the resulting correlation ($r = .83$, $p < .05$) as evidence of convergent validity. To provide evidence of SERVQUAL's construct validity, Babakus and Mangold reasoned that, based on attitude theory, service quality should predict behavioral intentions (for repeat use of hospital services, should they be needed). The correlation between service quality as measured by perceptions alone with behavioral intentions,

measured by a single-item, provided evidence of construct validity for the SERVQUAL (r = .76, p < .05).

Employee Turnover Diagnostic

The Employee Turnover Diagnostic (see Appendix B) is a 24-item instrument which measures the employee's perceptions of human resource practices within an organization along five dimensions which include (a) work inhibition, (b) supervision, (c) organizational career facilitation, (d) organizational status and, (e) new employee socialization (Schneider, 1982). The items are measured on a five-point scale. Employees are asked to respond to the items in a way that describes actual behaviors rather than their feelings; consequently, the anchors for each item range from "very frequently" (5), through "sometimes" (3), to "very infrequently" (1). The five negatively phrased items are reverse-scored. The range of possible scores for the entire instrument is 24 to 120. Higher scores indicate positive human resource practices, while lower scores indicate a less positive view of the organization's human resource practices. The wording of one item on the survey has been changed slightly to be relevant to the population of registered professional nurses with permission of the author (B. Schneider, personal communication, March 8, 1995). In item number seven, "Work groups (units, departments) in this organization have conflicting goals and objectives" the word "nursing" was inserted just before units, for clarity. However, it is believed that the intended meaning of this item has not changed with this modification.

In a study with 911 MBA students from 14 different organizations, Mitchell and Schneider (1984) used a 31-item modified version of the Turnover Diagnostic. The coefficient alpha for the entire instrument was not reported; however, reliabilities from the subscales ranged from .57 (Skill) to .83 (Supervision).

Mitchell and Schneider (1984) used a 33-item modified version of the Turnover Diagnostic in a study with 417 employees of a major optical services retailer. Coefficient

alphas for the subscales ranged from .55 to .81. The internal consistency for "skill" in this study was .62. The reliability for the entire instrument was not reported.

Schneider and Bowen (1985) used the instrument with additional items that were industry specific (for a total of 44 items) in a sample of 142 bank employees. Coefficient alpha reliabilities among the subscales ranged from .54 (new employee socialization) to .71 (organizational career facilitation and work inhibition). The coefficient alpha for the entire instrument was .91.

Relative to content validity, Mitchell and Schneider (1984) generated items for the Turnover Diagnostic from the literature focusing on the important facets of employee turnover. Construct validity was established for the instrument using a principal components factor analysis with varimax rotation, in a sample of 911 employees across 14 industries (Mitchell & Schneider, 1984). A five-factor solution emerged from the data.

Since an important purpose of the instrument was to predict turnover intentions, Mitchell and Schneider (1984) established predictive validity for the tool, using turnover intentions as the criterion variable. Turnover intentions was measured by a single-item with a five-point Likert scale with anchors ranging from "strongly inclined to stay" (1) to "strongly inclined to leave" (5). Each subscale on the Employee Turnover Diagnostic tool had a moderate to moderately strong correlation with turnover intentions (correlations ranged from $\underline{r} = -.35$ to $\underline{r} = -.45$). Using a multiple regression model, Mitchell and Schneider found that the five subscales had a fairly strong power in predicting turnover intentions ($\underline{R}^2 = .545$; $\underline{F} = 37.5$, $\underline{p} < .001$), indicating some degree of predictive validity for the instrument.

Reliability Study of the Employee Turnover Diagnostic. In order to assess reliability for the 24-item Turnover Diagnostic for nurses, a pilot study of registered professional nurses was conducted at a large, tertiary care, urban, teaching medical center in Northern New Jersey, after gaining approval from the Institutional Review Board for research. The medical center used for this pilot was a different setting than that used for

the actual study. However, both organizations had similar characteristics. Subsequent to being informed of the rights of human subjects and voluntarily agreeing to participate in the pilot study, 52 registered professional nurses completed the 24-item Turnover Diagnostic. Of the 52 respondents, 8% were men and 92% were women. Their ages ranged from 26 to 60 (M = 40; SD = 7.97). Most of the nurses were white (76.5%), while 3.9% were African-American, 3.9% were Hispanic, and 15.7% were Asian. Years in practice of the participating nurses ranged from 1 year to 35 years (M = 16.86; SD = 8.86). Their employment at the hospital ranged from less than 1 year to 35 years (M = 12; SD = 8.2). Of the nurses, 11.8 % held associate degrees, 17.6 % held a diploma, 41.2% held a nursing baccalaureate, 14.8% held a masters in nursing, 10.7% held a masters in another field, and 3.9% held a non-nursing baccalaureate degree. The majority were staff nurses (54.5%), while 5.4% were case managers, 2.6% were nurse managers and 37.5% filled other roles, such as nurse educators. The majority of the sample (82%) were full-time employees, while 18% were part-time. Nurses from all shifts responded to the survey. In this pilot study, the coefficient alpha reliability for the 24-item scale was .87.

Dempster Practice Behaviors Scale (DPBS)

The Dempster Practice Behaviors scale (see Appendix C) is a 30-item instrument which measures autonomous behaviors in nursing practice (Dempster, 1990), and as such will be used to measure professional autonomy perceived by registered professional nurses in this study. The items are measured on a five-point summated rating scale, ranging from "not at all true" (1) to "extremely true" (5). Five items on the instrument are reverse scored. Scores on the DPBS can range from 30 to 150. Higher scores reflect greater autonomy in practice, and, therefore, greater professional autonomy (Dempster, 1990).

A coefficient alpha of .95 was found for the 30-item DPBS instrument, in a sample of 569 registered nurses from across the country. Coefficient alphas for the subscales ranged from .80 to .91 (Dempster, 1990).

Dempster (1990) conducted extensive qualitative research using retroduction,

triangulation and a grounded theory approach which resulted in a conceptual schema of four dimensions of autonomous practice including readiness, empowerment, application and valuation. Using the conceptual schema, she generated a pool of 40 items through content analysis of qualitative data obtained from interviews with 28 practicing registered professional nurses. Seven content experts reviewed the items; a content validity index of 1.00 was calculated from their ratings of the items establishing content validity for the DPBS.

Using a sample of 569 nurses, Dempster (1990) performed a principal components factor analysis with varimax orthogonal rotation, which resulted in the final 30-item DPBS instrument. Using the criteria of factor loadings of at least .45 on each item, scree plot analysis and eigenvalues of greater than one, a four-factor structure provided the best interpretation of the factor matrix. However, confirmatory factor analysis using oblique rotation resulted in all items loading on the first factor, accounting for 40.8% of the variance. Dempster viewed this as evidence of the unidimensionality of the instrument.

Construct validity also was established for the DPBS using the multitrait-multimethod matrix method (MTMM) (Dempster, 1990). Convergent validity was shown by the moderately strong correlation of the DPBS with an alternative measure of autonomy ($\underline{r}$ = .48). To provide evidence of discriminant validity, Dempster theorized that the inverse correlation between social anxiety and autonomous behaviors would not be as strong as the one found for convergent validity. In the MTMM matrix, the DPBS was not correlated as highly with social anxiety as measured by two different instruments, the Brief Fear of Negative Evaluation scale ($\underline{r}$ = -.36) and the Social Anxiety and Distress scale ($\underline{r}$ = -.24), supporting discriminant validity.

La Monica-Oberst Patient Satisfaction Scale (LOPSS)

The Revised La Monica-Oberst Patient Satisfaction Scale (see Appendix D) is a 28-item instrument designed to measure patient satisfaction with nursing care (Munro, Jacobsen, & Brooten, 1994). Each item is scaled on a five-point Likert scale rated from "strongly agree" (5) to "strongly disagree" (1). Scores can range from 28 to 140. After reverse scoring 14 items, higher scores indicate higher patient satisfaction with nursing care. The wording of one item has been amended slightly for use in this study. For item number 28: "The nurse does not answer my phone call promptly enough", the phrase "phone call" was replaced with the phrase "call light" to make the item relevant to an inpatient population. However, it is believed that the meaning of this item has not changed with this modification.

The patient satisfaction instrument was originally developed by Risser (1975), subsequently revised by Hinshaw and Atwood (1982) and later revised by La Monica, Oberst, Madea, and Wolf (1986) who labeled the tool the La Monica-Oberst Patient Satisfaction Scale (LOPSS). Relative to content validity, La Monica et al. used the conceptual model developed by Risser (1975) to expand the pool of items to 50. La Monica et al. subjected items to review by a panel of content experts, including nurse experts in education, practice and psychometrics. In a study with 75 adult patients hospitalized for cancer treatment, eight items were dropped that did not meet the a priori criterion of importance. Thus, the La Monica et al. version of the LOPSS was a 42-item instrument. A three-factor structure (interpersonal support, good impression and dissatisfaction) was established using factor analysis for 41 of the 42 remaining items, providing evidence of construct validity. However, high correlations between two of the subscales (interpersonal support and good impression) led La Monica et al. to question possible redundancy between items in these two subscales; they suggested the need for further scale development, which was done by Munro et al. (1994).

La Monica et al. (1986) reported a coefficient alpha reliability of .92 for the total survey and coefficient alphas of .81, .80, and .84 on the three subscales, entitled technical-professional, education, and trust, respectively, in a sample of 100 hospitalized cancer patients (55 women and 45 men).

In further tool revision, Munro et al. (1994) used three samples of women who were hospitalized for unplanned cesarean birth ($n = 100$), gestational diabetes ($n = 120$), and non-oncologic hysterectomy ($n = 109$) for the revision of the LOPSS. Munro et al. (1994) provided evidence of construct validity for the LOPSS using principle components factor analysis with varimax rotation. A two-factor structure emerged, accounting for 60.2% of the total variance. Munro et al. reported a coefficient alpha of .97 for the resultant 28-item scale with these combined study groups. Coefficient alpha reliabilities for the subscales were .96, for interpersonal support/good impression, and .94 for dissatisfaction. The correlation between the two subscales was $r = -.69$, $p < .001$.

In the Munro et al. (1994) study, the correlation between a single-item measure of patient satisfaction with nursing care and scores on the LOPSS was statistically significant ($r = .46$, $p < .001$), providing evidence of convergent validity for the tool. Evidence of discriminant validity was provided by comparing patients in the three study groups (gestational diabetes, unplanned cesarean section, and non-oncologic hysterectomy) by two levels (early discharge vs. routine discharge). The researchers hypothesized that the early discharge group would have more intensive nursing attention in anticipation of an early discharge than patients who were discharged in the usual way. They found that the early discharge group had a statistically significantly higher satisfaction with nursing care than did the patients who were discharged normally ($F = 44.34$, $p<.001$). As expected, no differences in the mean scores of patient satisfaction with nursing care were found among the three types of diagnoses.

Organizational Climate for Service Semantic Differential

The Organizational Climate for Service Semantic Differential (OCSSD) (see Appendix E) is an 8-item instrument designed to measure patients' perception of the organizational climate for service in hospitals (Niedz, 1995). The semantic differential format employs direct ratings of the concept under study with seven-point scales anchored on the extremes by bipolar adjectives (Nunnally, 1978).

Osgood (1952) developed the semantic differential as a method of measuring the meaning of concepts. The semantic differential technique involves the selection and use of bipolar adjectives pairs to measure relevant research concepts. The method has been used in psychosocial and behavioral research (Brod, Kernoff, & Terwilliger, 1964; Friedman & Gladden, 1964) and in nursing (Yarcheski & Mahon, 1985, 1991). The semantic differential method has extensive evidence of reliability and validity (Nunnally, 1978; Snider & Osgood, 1969).

The 15 bipolar adjectives for the OCSSD were generated from a pool of adjectives produced by the three factors assumed to underlie the semantic differential: evaluation, activity and potency (Tanaka, Oyama, & Osgood, 1963). Content validity for the OCSSD was established by review of experts in the field. The bipolar adjectives were reviewed for appropriateness and relevance to the concept under study by three experts in organizational theory and research, instrument development and/or use of the semantic differential. To familiarize patients with the meaning of the construct, a definition of organizational climate for service follows the instructions for responding to the semantic differential format. An instrument consisting of 15 bipolar adjectives was constructed; all experts agreed that the 15 adjective pairs were relevant to organizational climate for service, as perceived by patients.

After gaining approval from the medical center's Institutional Review Board and Rutgers, the State University of New Jersey's Institutional Review Board, a pilot study was conducted to produce evidence of reliability and validity of the instrument. Since

Nunnally (1978) recommended at least ten subjects per item for factor analysis, a sample of 153 inpatients was obtained. The patients were hospitalized at a large, urban, teaching medical center. The pilot study was conducted at a different organization than the medical center to be used in the actual study; however, both have similar characteristics.

Patients in the pilot study were medically stable and able to read and write English. They were informed of the nature and purpose of the study, risks and benefits, the right to withdraw at any time, and had the opportunity to have their questions answered. Patients completed the survey anonymously, and placed it in a sealed envelope, which was returned to the investigator.

Of the 153 patients, 71 were men and 79 were women. Three patients did not answer this question. Their ages ranged from 17 to 90 years ($\underline{M}$ = 54.37; $\underline{SD}$ = 17.24). All patients were high school graduates; a large minority (40.5%) had some college experience. Most of the patients were white (66%). Of the remaining, 21.6% were African American (21.6%), 9.8% were Latino, .7% were Asian, .7% described other racial backgrounds, and 1.2% did not respond to this item.

To identify the factors underlying the OCSSD, a principal components factor analysis was performed on the data from patients. A priori criteria for retention of items on rotated factors were (a) factor-loadings of at least .40 on the primary factor and, (b) a difference of at least .20 between the factor-loading on the primary factor and any other factor. A three factor structure emerged: (a) the first factor had an eigenvalue of 7.20, accounting for 48% of the variance; (b) the second factor had an eigenvalue of 1.12, accounting for 7.4% of the variance; and (c) the third factor had an eigenvalue of 1.00, accounting for 6.7% of the variance. When the factors were rotated for independence, using varimax orthogonal rotation, eight items loaded on Factor 1 (see Table 1). Factor 1, which consists of evaluative items and is of interest to the actual study, was labeled OCSSD. Factor 1 was used in the analysis. Based on summary scores, the possible range of scores on the OCSSD is 8 to 56. Higher scores indicate a more positive evaluation of

the organizational climate for service by patients. Summary scores of the eight items on the OCSSD in the pilot study yielded a coefficient alpha reliability of .90.

Based on interviews with four patients, minor modifications were made in the instructions that resulted in more concise and simpler directions regarding responding to the OCSSD. With these changes, the Microsoft Word v. 6.0 grammatical editor revealed a Flesch-Kincaid reading level of 8.0.

Procedure for Data Collection

After access from appropriate hospital authorities had been obtained, data were collected by this investigator at the previously described university medical center until the necessary sample size was achieved. Permission to proceed with the study from both the University Institutional Review Board and from the Medical Center's Institutional Review Board was obtained (see Appendices F and G, respectively).

Patient subjects were secured first. Nurse managers or assistant nurse managers on the nine medical-surgical units that were used for the study were approached for assistance in identifying potential patient subjects who might meet the delimitations of the study (see Chapter 1, pp. 5-6). Potential patient subjects were approached individually by this investigator. During this initial interview, the researcher determined that the patient met the delimitations of the study. When patients met the delimitations of the study and agreed to hear about the study, the investigator reviewed the rights of human subjects, the nature of the study, risks and benefits, time requirements, and confidentiality, and, when patients agreed to participate in the study, obtained voluntary, written, witnessed, informed consent (see Appendix H). A copy of the signed consent was given to the patient. After obtaining consent, patient subjects were given verbal instructions about completion of the survey packet and approximately 30 minutes to complete the survey packet. Patients responded to a brief demographic data sheet (see Appendix I) and the packet of three instruments. The investigator returned to pick up the completed survey after the 30 minute period had elapsed.

Table 5

Rotated Factor Loadings of 15 Adjective Pairs on the OCSSD Scale (N = 153)

Adjective Pairs[a]	Factor 1	Factor 2	Factor 3
good-bad[c]	.76	.20	.21
valuable-worthless[c]	.65	.25	.35
inflexible-flexible[b]	.19	.76	-.13
fair-unfair[c]	.60	.29	.33
mild-harsh	.11	.13	.82
stable-unstable	.55	.28	.56
weak-strong[b]	.24	.66	.19
helpful-unhelpful[c]	.76	.22	.08
useful-useless[c]	.75	.23	.27
important-unimportant[c]	.64	.13	.08
foolish-wise[b]	.24	.62	.50
necessary-unnecessary[c]	.76	.27	.17
effective-ineffective[c]	.73	.25	.29
negative-positive[b]	.30	.66	.34
active-passive	.41	.01	.59

[a]The adjective pairs are presented in the order and direction they were presented to the subjects.
[b]For factor analysis purposes, scoring was reversed for these items for consistency.
[c]These items meet the a priori criteria for retained items on Factor 1.

After obtaining consent from patients, their medical record was reviewed by the investigator to identify the names of nurses who provided the most care for the patient. The names of four nurses who provided the most care for the patient were extracted from the chart and rank ordered in terms of amount of care delivered. In addition, a list was created to identify previously linked nurse and patient dyads. By referring to this master list, the investigator knew whether the nurse ranked number one has already participated in the study through matching with another patient. If the nurse selected had already been matched to another patient, the nurse ranked second was sought. In the event that all four nurses had already responded to the survey and had been matched to other patients, the potential patient subjects' surveys were not used in the study. This occurred three times in the study.

Nurses were approached by the investigator during working hours. For those agreeing to participate in the study, the investigator explained the nature of the study and the rights of human subjects; written, witnessed, informed consent was obtained (see Appendix J). A copy of the signed consent form was given to the nurse. The nurse survey took between 10 and 20 minutes to complete, and was completed on the nurse's coffee break, meal break or after work hours. Nurses responded to a brief demographic data sheet (see Appendix K) and to the packet of two instruments. Nurses returned the survey to the investigator if the survey had been completed right away, or through the interoffice mail to a member of the nursing staff who had agreed to accept mail on behalf of the investigator.

The matching procedure proceeded until completed questionnaires packets from the sample of 102 nurse-patient dyads were obtained, exceeding the requisite sample size of 101 dyads. Once the match was made and questionnaires were completed, coded questionnaires were separated from the consent form and secured in locked filing cabinets in order to ensure confidentiality of subjects' responses. Data on all five variables from both patient and nurse subjects were linked with the same code number and were entered

into the database in the same record, ensuring that the data analysis to evaluate the hypothesized relationships between the independent and the dependent variables could proceed.

Chapter IV

Analysis of the Data

The purpose of the study was to examine the relationship between the dependent variable of service quality as perceived by patients and each of the following independent variables (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care and (d) patients' perceptions of organizational climate for service. Data were collected from 102 patients using the Modified Health Care Service Performance instrument (SERVPERF), the Revised LaMonica-Oberst Patient Satisfaction Scale (LOPSS), and the Organizational Climate for Service Semantic Differential (OCSSD). Data were collected from 102 nurses using the Employee Turnover Diagnostic and the Dempster Practice Behaviors scale (DPBS). This chapter presents findings resulting from the analysis of the data.

Statistical Description of the Variables

On the modified healthcare SERVPERF, which measured service quality, scores ranged from 33 to 75 ($M = 61.74$; $SD = 8.38$). On one of the nurse measured variables, human resource practices, which was measured by the Employee Turnover Diagnostic, the scores ranged from 55 to 114 with a mean score of 86.90 ($SD = 11.5$). On the other nurse measured variable, autonomy in practice, measured by the DPBS, scores ranged from 84 to 140 ($M = 118.15$; $SD = 11.29$). Patient scores on the LOPSS, which measured patient satisfaction with nursing care, ranged from 44 to 140 ($M = 117.91$; $SD = 18.33$). Scores on the OCSSD, which measured patients' perceptions of organizational climate for service, ranged from 22 to 75 ($M = 43.89$; $SD = 10.76$). These findings are summarized in Table 6.

Psychometric Properties of the Instruments

All of the instruments used in the study demonstrated coefficient alphas for internal consistency reliability higher than .70, which Nunnally (1978) states is the acceptable level

for instrument reliability for basic research. The modified health care SERVPERF had a coefficient alpha of .92, which is similar to the one reported in the study conducted by Babakus and Mangold (1992). The Employee Turnover Diagnostic had a coefficient alpha of .85, which is similar to the one reported in the pilot study (Niedz, 1995). DPBS had a coefficient alpha of .88, which is similar to the value found by Dempster (1990). The LOPSS had a coefficient alpha of .96, which is similar to the ones found by LaMonica et al. (1986) and Munro et al. (1994). Finally, the OCSSD had a coefficient alpha of .92 in this study, which was similar to the one obtained in the pilot (Niedz, 1995). Table 7 summarizes these findings.

Table 6

Descriptive Statistics of Study Variables

Variable	Range	Subjects	n	M	SD
Service quality	33 - 75	patients	102	61.74	8.38
Human resource practices	55 - 114	nurses	102	86.90	11.50
Autonomy in practice	84 - 140	nurses	102	118.15	11.29
Patient satisfaction with nursing care	44 - 140	patients	102	117.91	18.33
Organizational climate for service	22 - 75	patients	102	43.89	10.76

Table 7

Alpha Reliability Coefficients for Study Variables

Instruments	Subjects	n	α
Modified Health Care SERVPERF	patients	102	.92
Employee Turnover Diagnostic	nurses	102	.85
DPBS	nurses	102	.88
LOPSS	patients	102	.96
OCSSD	patients	102	.92

Hypotheses

Hypotheses 1, 2, 3, and 4 were tested using the Pearson Product-Moment correlation coefficient. One-tailed tests of significance were used to test these directional hypotheses. Hypotheses 5 was tested using stepwise multiple regression. SPSS-PC version 6.0 for Windows was used for the statistical analyses.

Hypothesis 1

Hypothesis 1 states that there is a positive relationship between human resource practices as perceived by nurses and service quality as perceived by patients. The Pearson Product-Moment correlation testing this relationship was $r = .11$, $p = .13$. On the basis of this finding, which did not show a statistically significant relationship, Hypothesis 1 was not supported.

Hypothesis 2

Hypothesis 2 states that there is a positive relationship between autonomy in practice as perceived by nurses and service quality as perceived by patients. The Pearson Product-Moment correlation for this relationship was $r = .08$, $p = .22$. On the basis of this

finding, which did not show a statistically significant relationship, Hypothesis 2 was not supported.

Hypothesis 3

There is a positive relationship between patient satisfaction with nursing care and service quality as perceived by patients. The Pearson Product-Moment correlation for this relationship was $r = .74$, $p < .0001$. Based on this finding, Hypothesis 3 was supported.

Hypothesis 4

There is a positive relationship between organizational climate for service and service quality as perceived by patients. The Pearson Product-Moment correlation for this relationship was $r = .71$, $p < .0001$. Based on this finding, Hypothesis 4 was supported.

Hypothesis 5

Hypothesis 5 states that no subset of the independent variables will explain the dependent variable of patients' perceptions of service quality better than a multivariate model comprised of the independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service. The results of a stepwise multiple regression procedure (Tables 8 and 9) show that two of the independent variables, patient satisfaction with nursing care and organizational climate for service, account for 66% of the variance in service quality and better explain service quality than either variable taken alone, $F(2,99) = 97.29$, $p < .0001$. The test of the change in R^2 demonstrates that the second variable to enter the model (organizational climate for service) accounts for 11% of the variance in service quality, $F(2,99) = 32.91$, $p < .01$. Neither the variables of nurses' perceptions of human resource practices, nor nurses' perceptions of autonomy in practice made a statistically significant contribution to the model. Thus, Hypothesis 5 was not supported.

Steps were taken to determine the degree to which the assumptions underlying the use of the multiple regression statistical technique were met when testing Hypothesis 5. In

Table 8

Intercorrelation Matrix among Independent Study Variables[a] (N = 102 dyads)

Variable	Patient satisfaction with nursing care	Human resource practices	Autonomy in practice
Organizational climate for service	.60 ($p < .0001$)	.18 ($p = .07$)	.06 ($p = .57$)
Patient satisfaction with nursing care	--	.00 ($p = .97$)	.05 ($p = .58$)
Human resource practices		--	.23 ($p < .02$)

[a]two-tailed tests of significance

Table 9

Summary of the Two-Variable Model using Stepwise Multiple Regression to explain Service Quality (N = 102 dyads)

Step		R^2	Adjusted R^2	Change in R^2	F	p
Step 1; one variable model		.55	.55	.55	122.55[a]	<.0001
Patient satisfaction with nursing care	β =.74					
Step 2; two-variable model		.66	.66	.11	97.29[b]	<.0001
Patient satisfaction with nursing care	β =.49					
Organizational climate for service	β =.42					

[a] df 1,100. [b] df 2,99.

addition to the absence of specification error, measurement error, and multicollinearity, the following assumptions regarding the error term should be met (a) zero mean, (b) homoscedascity, (c) no autocorrelation, (d) the independent variables are uncorrelated with the error term, and (e) normality (Berry & Feldman, 1985; Lewis-Beck, 1980; Pedhazur, 1982). Each of the assumptions will be addressed here.

With regard to specification error, Berry and Feldman (1985) describe two types (a) the functional form of the relationship between the independent variables and the dependent is assumed to be linear and in fact it is not, and (b) the wrong variables are specified in the model. Since nurses' perceptions of human resource practices and nurses perceptions of autonomy in practice did not correlate with patients' perceptions of service quality and did not enter the resultant two-variable model (which did include patient satisfaction with nursing care and patients' perceptions of organizational climate for service), no specification error occurred.

Although the variables in this study were not measured completely free of error, evidence in support of minimal measurement error can be seen in the relatively high coefficient alpha reliability statistics cited in Chapter 3. Pedhazur (1982) explains that the consequences of measurement error of the independent variables are underestimation of β, which can be as much as 30%. He further states that measurement error is a common occurrence in nonexperimental research.

Schroeder (1990) states that multiple regression results may be complicated by multicollinearity, which may be apparent if the independent variables are correlated at a level of .85 or greater. Collinearity diagnostics, including visual inspection, tolerance and variance inflation factors, can be used to identify whether or not the degree of multicollinearity observed compromises the integrity of the model. Visual inspection shows that the correlation between the variables that remained in the model ($\underline{r} = .60$, $\underline{p} < .0001$) was not high enough to demonstrate a problematic degree of multicollinearity. In addition, Schroeder indicates that independent variables with a tolerance of less than or

equal to .01 must be discarded; tolerances for the independent variables in the model were .64. Furthermore, Schroeder states that the variance inflation factor in the absence of multicollinearity is 1.0, and adds that as the variance inflation factor rises, the greater the degree of multicollinearity. In this case, the variance inflation factor for both of the independent variables that remained in the model was 1.55, indicating that the degree of multicollinearity influencing the model is not problematic. To evaluate the degree of multicollinearity, Lewis-Beck (1980) suggests that each independent variable should be regressed on the others; if any $\underline{R}^2$ approaches 1.00, a high degree of multicollinearity exists. In this study, all independent variables were regressed on the remaining three. The highest $\underline{R}^2$ found was .39 when patients' perceptions of organizational climate for service was regressed on patient satisfaction with nursing, nurses' perceptions of human resource practices, and nurses' perceptions of autonomy in practice.

Examination of the residuals showed that the model meets the above mentioned assumptions regarding the residuals. The residual mean equaled zero ($\underline{M} = 0$; $\underline{SD} = .99$). There was evidence of homoscedasticity (see Figure 1). Since the variables were not time-ordered, there was no reason to suspect autocorrelation; therefore, this assumption was not evaluated (Lewis-Beck, 1980). The independent variables in the model and the residuals were not correlated ($\underline{r} = .0000$, $\underline{p} < 1.00$) (Verran & Ferketich 1984). The residuals were normally distributed (see Figures 2 and 3).

Additional Findings

The demographic patient variables of age, education and gender were examined in relation to patients' perceptions of service quality and patient satisfaction with nursing. Gender was coded accordingly: men equaled one, women equaled minus one. Statistically significant correlations were not found between the relationships examined. Between service quality and patients' age, the relationship was $\underline{r} = .04$, $\underline{p} = .72$; between service quality and patients' education, the relationship was $\underline{r} = .10$, $\underline{p} = .30$; and, between service quality and patients' gender, the relationship was $\underline{r} = -.02$, $\underline{p} = .86$. The relationship

between patients' age and patient satisfaction with nursing care was $r = -.01$, $p = .89$; the relationship between patients' education and patient satisfaction with nursing care was $r = .09$, $p = .33$; and, the relationship between patients' gender and patient satisfaction with nursing care was $r = .04$, $p = .72$.

Evaluation of selected patient variables with relation to the dependent and independent variables yielded additional findings. A t-test showed significant differences in service quality between patients who were newly diagnosed on this admission and patients who were readmitted for a previously diagnosed problem (t (88) = 2.37, $p = .02$), indicating that patients who were admitted with a new diagnosis ($M = 64.19$, $SD = 5.9$) had more positive perception of service quality than did patients who were readmitted for a previously diagnosed problem ($M = 60.6$, $SD = 9.1$). There was a negative correlation approaching significance between repeated prior inpatient hospitalizations and service quality as perceived by patients ($r = -.18$, $p = .07$). Although the correlation between prior inpatient hospitalizations and patient satisfaction with nursing care was in the same direction, it was very weak, and not statistically significant ($r = -.02$, $p = .80$).

Selected nurse variables were examined for additional findings. There was a positive correlation, approaching significance, between the number of years in practice and nurse perceptions of autonomy in practice ($r = .18$, $p = .06$). There was a negative correlation approaching significance between the level of education and the nurses' perception of autonomy in practice ($r = -.18$, $p = .07$), indicating that more educated nurses perceive less autonomy in practice.

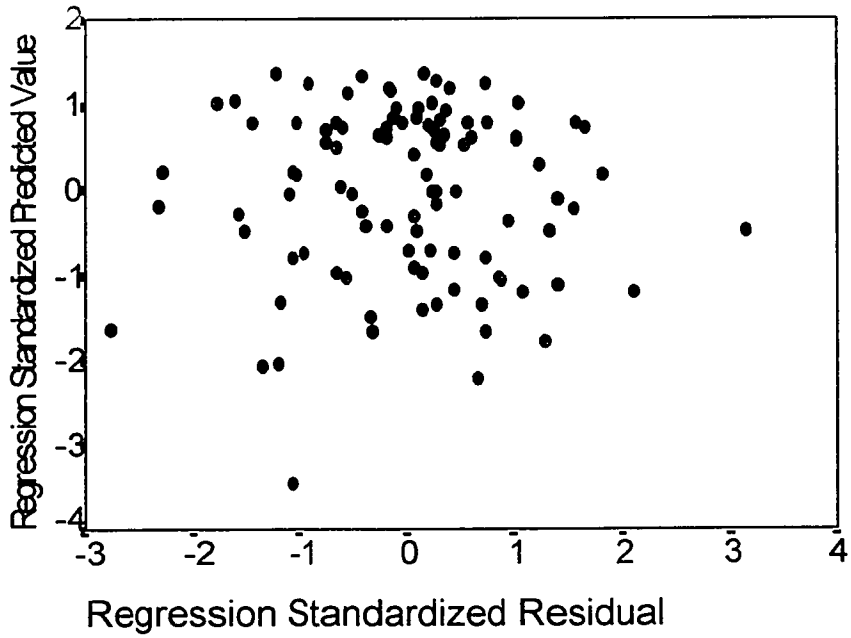

Figure 1. Scatter plot of standardized residuals against standardized predicted values of service quality shows a random, scattered pattern around the zero value demonstrating evidence of homoscedasticity.

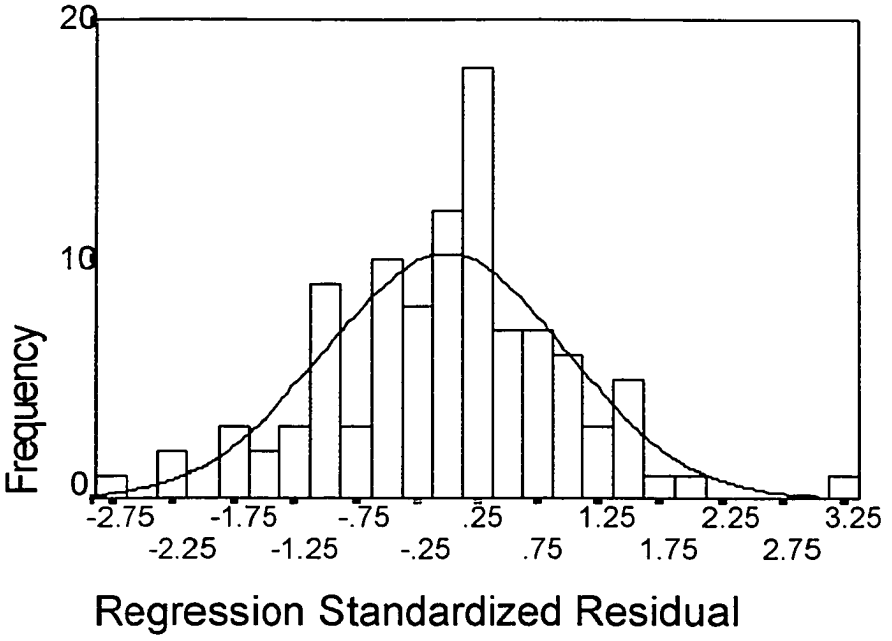

Figure 2. Histogram of standardized residuals with superimposed normal distribution curve shows normality

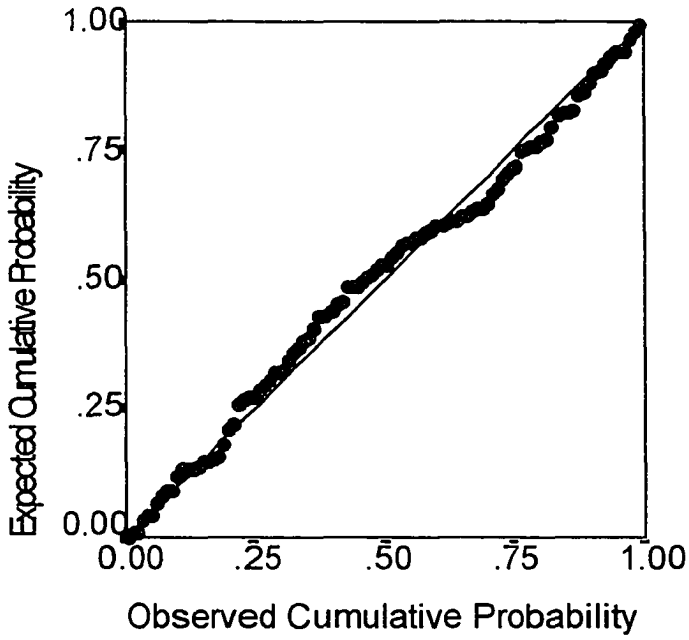

Figure 3. Normal probability plot of residuals shows evidence of normality.

Chapter V

Discussion of the Findings

The purpose of this study was to examine the theoretical relationships between the dependent variable of service quality in patients and each of the independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service. This chapter interprets the findings of the hypotheses tested in light of theories from which the hypotheses were derived.

Nurses' Perceptions of Human Resource Practices and Patients' Perceptions of Service Quality

Hypothesis 1 stated that nurses' perceptions of human resource practices are positively related to service quality as perceived by patients. The hypothesis was derived from marketing theory which states that organizations providing a supportive environment for workers will have employees who meet the needs and expectations of customers, thereby improving service quality (Collier, 1990; George, 1990; Schneider & Bowen, 1985; Tansik, 1990). Tansuhaj, Randall, and McCullough (1988) explained that positive human resource practices like recruitment, training, motivational programs, employee retention efforts, and rewards are related to service quality because these practices lead to positive employee attitudes like organizational commitment, job involvement and motivation. These positive attitudes should contribute to an increased work effort and job performance on the part of employees, which results in heightened service quality as perceived by customers. Previous studies have examined the relationship between employees' perceptions of human resource practices and customers' perceptions of service quality (Kelley, 1987; Schneider & Bowen, 1985) and empirical findings linking bank teller and customer responses supported the theory in the banking industry (Kelley, 1987; Schneider & Bowen, 1985). The hypothesis in the present study, however, was not supported by the data linking nurse and patient responses.

Theoretically, an alternate explanation for the lack of empirical support for the hypothesis might lie in the distinction that Collier (1990) made between different types of organizations and employees' needs therein. Collier explained that the human resource practices employed by organizations, such as a fast food chain, that are primarily made up of routine service workers differ markedly from those used by organizations, such as management consultant firms, that are primarily composed of professional service workers. Similarly, the human resource practices employed by organizations with primarily "low-contact" workers with the customer, such as shipping clerks at an overnight mail delivery service, differ from those that employ "high-contact" workers, like salespersons. Collier (1990) theorized about the relationship between human resource practices and service quality within the context of relatively homogenous industries, whereby primarily one type of worker is employed. The human resource practices rated by bank tellers were positively related to service quality rated by bank customers (Kelley, 1987; Schneider & Bowen, 1985). Bank tellers tend to represent mostly one category of the four types of workers in the typology, consisting of low contact routine service workers, high contact routine service workers, low contact professional service workers, and high contact professional service workers.

The present study took place in an acute care hospital. Hospitals are fairly unique settings in that the wide variety of employees represent one or another category in the typology of all four types of workers. For example, nursing assistants are considered routine service workers with high patient contact. Conversely, professional registered nurses are considered professional service workers, also with high patient contact. Unit secretaries are routine service workers who have low contact with patients. These different types of workers likely function under different human resource practices, which contribute to a wide variety of employee attitudes and behaviors regarding job motivation and performance. Because these different types of workers interact daily with hospitalized patients, isolating the theoretical relationship between nurses' perceptions of human

resource practices and service quality perceived by patients may not be possible empirically.

A possible methodological problem that might explain the lack of support for Hypothesis 1 may be the use of nurse-patient dyads. Czepiel (1990a) explained that the evaluation of service quality by customers occurs within the service encounter. Czepiel (1990a, 1990b) suggested that repeated service encounters with the same two individuals develop into a service relationship that provides the best exposure for the evaluation of service quality by customers. Within the delivery system of nursing care used at the data collection site, patient care on units is coordinated by a case manager and daily care to individual patients is provided by a primary nurse caregiver. The assumption of this investigator was that the same nurse provided daily care for each patient with this approach to nursing care, resulting in a service relationship built from many service encounters. Although in the present study the nurse who rendered the "most care" to the patient was most often matched with the patient, in reality this often turned out to be only one eight hour shift. During the patient's hospitalization, daily nursing care was often rendered by several nurses, the paired nurse only one among many. The opportunity for service encounters to develop into a service relationship as suggested by Czepiel (1990a, 1990b) and to maximize the context for the evaluation of service quality was limited. Thus, linking one nurse's perception of human resource practices with one patient's view of service quality in a setting where many nurses cared for the patient did not provide an adequate test of the theoretical relationship between the two variables.

An alternate approach to testing the relationship between human resource practices and service quality might be to choose a setting in which there is more continuity of care whereby the same nurse renders care to the patient over time. For example, a patient cared for in a clinic or rehabilitation facility might evaluate service quality within the context of a continuing service relationship that is built up of many service encounters with one prominent and consistent nurse caregiver. This setting might better capture the

service relationship between nurse and patient, suggested in the theorizing by Czepiel (1990a, 1990b) and, thereby, provide empirical support for the theoretical proposition linking human resource practices to service quality.

Nurses' Perceptions of Autonomy in Practice and Patients' Perceptions of Service Quality

Hypothesis 2 stated that nurses' perceptions of autonomy in practice are positively related to patients' perceptions of service quality. This hypothesis was based on the theoretical proposition that when employees have the autonomy to make decisions and judgments on behalf of customers, the customers perceive service quality more positively (Bateson, 1985; Mills & Posner, 1982; Tansik, 1990). Bateson (1985) emphasized the need for employee autonomy and explained that when an organization views the employee's judgment about a service encounter as irrelevant or not useful, the employee does not act on behalf of the customer in an individualized way. This lack of autonomous decision-making leaves both employee and customer frustrated and, as a result, the customer perceives service quality less positively. No previous empirical studies were found that examined the relationship between employee autonomy and service quality, and in this study, the hypothesis was not supported.

One theoretical problem that may have led to the lack of support for Hypothesis 2 is that autonomy in practice as conceptualized by Dempster (1990) was chosen as a variable to represent the concepts discussed in the marketing literature such as "perceived control over decisions," "empowerment," and "discretion" which were linked to service quality (Bateson, 1985; Mills & Posner, 1982; Tansik, 1990). Although her discussion of the construct of autonomy in practice includes the concepts of perceived control over decisions, empowerment and discretion, Dempster also includes concepts relevant only to professional nursing, as will be discussed below.

In her conceptualization, Dempster (1990) describes four dimensions of autonomy in practice. The empowerment dimension stresses the lack of organizational constraint in determining the environment within which nurses can practice autonomously. The

application dimension of autonomy involves independent decision-making and the use of judgment in practice. These two dimensions are consistent with the need for employees to be able to make decisions and independent judgments on behalf of customers in order to better meet customers' needs as discussed in the service quality literature (Bateson, 1985; Mills & Posner, 1982; Tansik, 1990). However, the two remaining dimensions are not especially important to customer-employee dynamics. The readiness dimension includes the individual's need to grow and develop into an autonomous practice. The valuation dimension of autonomy describes the emotive side of autonomy, through which a nurse can derive self-worth and satisfaction. Neither of these dimensions precisely address the themes evoked in the marketing literature concerning service quality. Thus, Dempster's four dimensions of autonomy include aspects of autonomy that are not directly related to the dynamics implicit in the service encounter within which service quality is evaluated. Consequently, by operationalizing the construct of autonomy in practice, others facets of autonomy were measured that were not theoretically linked to service quality, which may have resulted in the lack of support for Hypothesis 2.

The theoretical issue discussed above for lack of support for Hypothesis 2 may be secondary to the methodological problems encountered with dyad research, as expressed earlier for Hypothesis 1. In particular, since a number of nurses cared for each patient in this study during the course of his or her hospitalization, and since these nurses may have had varying levels of autonomy in practice, isolating the dyadic relationship between autonomy in practice perceived by one selected nurse and patient service quality may not be possible empirically.

Patient Satisfaction with Nursing Care and Patients' Perceptions of Service Quality

Hypothesis 3 stated that there would be a positive relationship between patient satisfaction with nursing care and service quality. This hypothesis was derived from marketing theory which posits that customer satisfaction is episodic, of short duration, and influences service quality, which is an attitude formed by customers about an organization

over time (Bitner, 1990; Bolton & Drew, 1991b; Oliver, 1981; Patterson & Johnson, 1993; Taylor, 1994). Patient satisfaction with nursing care is a component of the broader construct of patient satisfaction and was used in this study as a representative variable for the construct of customer satisfaction. This hypothesis and underlying theory were supported in this study.

Hypothesis testing demonstrated a very strong relationship between patient satisfaction with nursing care and service quality. This study extends the marketing theory regarding the relationship between customer satisfaction and service quality to the patient-nurse relationship, using patient satisfaction with nursing as a representative variable for customer satisfaction. In addition, the finding regarding the relationship between patient satisfaction with nursing care and service quality is consistent with findings of previous studies examining the relationship between customer satisfaction and service quality (Bitner, 1990; Bolton & Drew, 1991a, 1991b)

A number of methodological studies have focused on the variable of patient satisfaction with nursing care (Hinshaw & Atwood, 1982; LaMonica, et al., 1986; Munro, et al., 1994). The present study is one of few which has examined a relationship between patient satisfaction with nursing care and another variable. Therefore, this study extends knowledge regarding the important variable of patient satisfaction with nursing care.

Patients' Perceptions of Organizational Climate for Service and Patients' Perceptions of Service Quality

Hypothesis 4 stated that there is a positive relationship between organizational climate for service and service quality as perceived by patients. This hypothesis was based on marketing theory suggesting that organizational climate for service, that is, the policies, practices and procedures that enhance the customer's experience, is discernible to customers and affects their overall, long-term attitude about the organization, that is, their perception of service quality (Schneider, 1986). This hypothesis and the underlying theory were supported.

The results of hypothesis testing indicated that the magnitude of the correlation between organizational climate for service and service quality was very strong. Previous studies examining the same relationship used instruments to measure organizational climate for service (Kelley, 1987; Schneider & Bowen, 1985; Schneider, Parkington, & Buxton, 1980) which suggested some overlap in items between the organizational climate for service and the service quality instruments. Therefore, the development of the Organizational Climate for Service Semantic Differential (OCSSD) used in the present study (Niedz, 1995) represented a new measurement approach that avoids redundancy in measurement between the constructs of organizational climate and service quality, resulting in a clearer picture of the relationship between the two variables. The OCSSD was easy to use in a sample of hospitalized adults. The tool can be used in further research concerning service quality and other theoretically-related variables, and it can be adapted for use in other healthcare settings.

A Multivariate Model Explaining Patients' Perceptions of Service Quality

Hypothesis 5 stated that no subset of the independent variables would explain the dependent variable of patients' perceptions of service quality better than a multivariate model comprised of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service. Since nurses' perceptions of human resource practices and nurses' perceptions of autonomy in practice did not correlate with patients' perceptions of service quality, neither variable entered the regression equation. The remaining two independent variables, patient satisfaction with nursing care and patients' perceptions of organizational climate for service, both contributed to the explanation of the variance in service quality, resulting in a two-variable model. Therefore, Hypothesis 5 was not supported.

The resultant two-variable model accounted for a large portion of the variance in service quality in hospitalized patients. Thus, both patient satisfaction with nursing care

and patients' perceptions of organizational climate for service can be considered as important explanatory variables of service quality.

Additional Findings

The available literature suggests that relationships between patient demographic variables of age, education and gender have not been examined in relation to service quality. Similarly, the available literature suggests that relationships of patient age, education, and gender to the patient satisfaction with nursing care construct have not been examined previously. In the present study, none of the patient demographic variables of age, education, or gender was related to either service quality or to patient satisfaction with nursing care. Continued reporting of these relationships is needed to determine the extent to which demographic variables are discriminating variables in relation to both patient satisfaction with nursing care and service quality.

The negative correlation between the number of inpatient hospitalizations and service quality was not statistically significant. Continued work in this area is needed.

The absence of an appreciable correlation between the number of inpatient hospitalizations and patient satisfaction with nursing is an interesting finding. Satisfaction is defined as an episodic experience, the summary psychological state inherent in a service encounter wherein the customer's expectations are either confirmed or disconfirmed by their perceptions (Bolton & Drew, 1991a; Oliver, 1981). The absence of an appreciable correlation between the number of past experiences and satisfaction is consistent with the theoretical definition of satisfaction.

Newly-diagnosed patients had a more positive perception of service quality than did patients who returned for the same diagnosis. There are several potential explanations for this finding, but they are speculative. First, repeatedly admitted patients may be subject to increased acuity, and/or increased pathology, or may be farther along their illness trajectory. These factors may adversely influence patients' view of service quality as it develops over repeated exposures to the organization. Second, nursing staff

members, recognizing the trauma of a new diagnosis, may be more attentive to the needs of patients at the early stage in their disease. More experienced patients, hospitalized for "more of the same" may not get the same attention. This finding indicates the need for further study.

With respect to the nurse autonomy variable, there were two interesting findings to note. No statistically significant relationship was found between years of practice and autonomy. However, Perry (1985) and Cofer, Coleman, McGrail, and Sweeney (1989) found a negative correlation between years of practice and autonomy. Schutzenhofer and Musser (1994) attributed the varied results seen in studies about autonomy to wide theoretical differences in the nature of the construct, and the concomitant differences in various instrumentation used to measure the construct. Neither Cofer et al. nor Perry used the Dempster Practice Behaviors Scale (DPBS).

The direction of the negative correlation between level of education and nurses' perception of autonomy in practice tends to be consistent with Van Ort's (1985) view that, although nursing as a profession is maturing towards increased autonomy through more education, incorporating a concomitant increased level of autonomy into the job role does not always occur in practice settings; the relationship was not statistically significant. In the setting used for this study, more educated nurses did not perceive more autonomous practice. However, this finding is contrary to the findings of Pankratz and Pankratz (1974) and Perry (1985), who found a positive relationship between nurses' level of education and autonomy. Neither Pankratz and Pankratz nor Perry used the DPBS.

Chapter VI

Summary, Conclusions, Implications and Recommendations

Summary

This study developed and tested theory in order to better understand the marketing construct of service quality, applied to a hospital setting. The study empirically tested theoretical relationships posited between the dependent variable, patients' perceptions of service quality and each of the four independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, and (d) patients' perceptions of organizational climate for service.

Service quality is an outcome variable defined as an attitude held by a customer about an organization which develops over time. This attitude is based on the customer's perception of the organization's actual performance of a particular service or group of services (Cronin & Taylor, 1992).

Positive human resource practices like work facilitation, supervisor support, developmental career mobility opportunities and sound formal and informal on-the-job educational programs that facilitate orientation of new employees all serve to communicate a sense of caring on the part of the organization and improve the overall satisfaction of employees in the workplace (Schneider & Bowen, 1985). When employee perceptions of their organizations' human resource practices are positive, employees are more likely to have improved job performance and better meet the needs of customers, thereby enhancing customers' perceptions of service quality (Collier, 1990; George, 1990; Schneider & Bowen, 1985; Tansuhaj et al., 1988). Therefore, this study tested theory that nurses' perceptions of human resource practices would be positively related to patients' perceptions of service quality.

Dempster (1990) defined autonomy in practice as a dynamic process that demonstrates varying amounts of independent behaviors, actions and performance which

individuals display alone and/or with others. Professional nurses often work in large bureaucratic organizational settings, like hospitals, and they exercise some degree of autonomy in practice through their job role. Bateson (1985) postulated that when the use of judgment and control over decision-making is withdrawn from the employee, the result brings a less positive perception of service quality on the part of the customer. Employees have no latitude in individualizing service to the needs of the customer and perceptions of service quality by customers are less positive as a result. Thus, this study tested theory that nurses' perceptions of autonomy in practice would be positively related to patients' perceptions of service quality.

Customer satisfaction is a summary psychological state that results from confirmation or disconfirmation of expectations when compared to perceptions of a discreet episode of contact with an organization. Satisfaction is of short duration and contributes to the formation of a broader attitude over time (Oliver, 1981). Patient satisfaction with nursing care is one component of the broader construct of patient satisfaction. Oberst (1984) posited that a positive relationship exists between patients' level of satisfaction with the hospitalization experience and their subsequent judgment of the quality of care. Therefore, this study tested theory that patient satisfaction with nursing care would be positively related to patients' perceptions of service quality.

Organizational climate for service is defined as a set of policies, procedures, practices, rewards, supports and expectations of the organization that enhances the customer's experience (Schneider, 1986). Gronroos (1990) postulated that organizational climate for service helps service employees to better deal with unpredictable circumstances in a way consistent with providing better service quality. Thus, this study tested theory that patients' perceptions of organizational climate for service would be positively related to patients' perceptions of service quality.

The following hypotheses were formulated from the above mentioned theory and tested in this study:

1. There is a positive relationship between human resource practices as perceived by nurses and service quality as perceived by patients.
2. There is a positive relationship between autonomy in practice as perceived by nurses and service quality as perceived by patients.
3. There is a positive relationship between patient satisfaction with nursing care and service quality as perceived by patients.
4. These is a positive relationship between organizational climate for service and service quality as perceived by patients.
5. No subset of the independent variables will explain the dependent variable of patients' perceptions of service quality better than a multivariate model comprised of all four independent variables of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction in nursing, and (d) patients' perceptions of organizational climate for service.

The sample was comprised of 102 nurse-patient dyads and were recruited for the study at a university medical center located in a metropolitan area. The patient sample was primarily made up of white (86.2%), married (80.4%), men (61.8%) whose ages ranged from 24 to 83 years. Patients were hospitalized for at least three days, were close to discharge, were medically stable and physically able to complete the questionnaire. The nurse sample was comprised of predominantly white (64.7%), staff nurses (94.1%) who were mostly women (93.1%). Nurses were employed at the hospital for at least three months and rendered direct care to the patient with whom their responses were matched. Nurses' responses were matched to only one patient.

All patient subjects completed the Modified Health Care Service Performance (SERVPERF) instrument, the Revised LaMonica-Oberst Patient Satisfaction Scale (LOPSS), the Organizational Climate for Service Semantic Differential (OCSSD), and a personal data inventory. All nurse subjects completed the Employee Turnover Diagnostic, the Dempster Practice Behaviors Scale (DPBS), and a personal data inventory. All

patient instruments demonstrated good reliability for internal consistency in this sample with coefficient alphas ranging from .92 to .96. The instruments used in the nurse sample demonstrated good reliability for internal consistency with coefficient alphas of .85 for the Employee Turnover Diagnostic and .88 for the DPBS.

The correlational hypotheses were tested using the Pearson Product-Moment correlation coefficient. The multivariate hypothesis was tested using Stepwise Multiple Regression. Hypothesis 1, which stated that there would be a positive relationship between nurses' perceptions of human resource practices and patients' perceptions of service quality, was not supported ($r = .11$, $p = .13$). Hypothesis 2, which stated that there would be a positive relationship between nurses' perceptions of autonomy in practice and patients' perceptions of service quality, was not supported ($r = .08$, $p = .22$). Hypothesis 3, which stated that there would be a positive relationship between patient satisfaction and patients' perceptions of service quality, was supported ($r = .74$, $p < .0001$). Hypothesis 4, which stated that there would be a positive relationship between patients' perceptions of organizational climate for service and patients' perceptions of service quality, was supported ($r = .71$, $p < .0001$). Hypothesis 5 stated that no subset of the independent variables will explain the dependent variable of patients' perceptions of service quality better than a multivariate model comprised of (a) nurses' perceptions of human resource practices, (b) nurses' perceptions of autonomy in practice, (c) patient satisfaction with nursing care, (d) patients' perceptions of organizational climate for service. This final hypothesis was not supported.

In summary, the patient variables of patient satisfaction with nursing care and patients' perceptions of organizational climate for service both demonstrated considerable power in explaining the variance in service quality. Two nurse variables, human resource practices and autonomy in practice, although theorized to be related to service quality, failed to explain variance in service quality.

Conclusions

Neither of the two hypotheses linking nurses' responses with patients' responses was supported. These hypotheses tested theory that patients' perceptions of service quality would be related to (a) nurses' perceptions of human resource practices and (b) autonomy in practice. The dyadic method, that is, measuring variables in nurses and relating them to variables in patients in an acute care hospital raised theoretical issues and methodological problems. Therefore, based on alternate theoretical and methodological explanations for Hypotheses 1 and 2, it can be concluded that selected propositions from marketing theory concerning service quality may not be generalizable to acute care hospital settings.

The two patient-related hypotheses, relating patient satisfaction with nursing care and patients' perceptions of organizational climate for service to service quality were strongly supported empirically. Therefore, based on the empirical support found for Hypotheses 3 and 4, it can be concluded that patients' perceptions of selected variables are important components of marketing theory that have meaningful application in acute care hospitals because of their strong bearing on service quality.

Implications for Nursing

In the present study, two variables measured in nurses were not related to patients' perceptions of service quality. In today's managed care environment, with shortened length of stay in acute care hospitals (Balasco, 1995; Himali, 1995) it may be difficult to demonstrate empirical relationships linking nurse-patient variables. However, it would be premature to abandon this line of inquiry. There may be other ways to evaluate the nature of the patient-nurse interaction. A qualitative approach interviewing both nurses and patients may be valuable to elicit theory along these lines. In addition, it may be useful to design other quantitative studies to examine linkages between variables in nurses and patients in settings with more continuity of nursing care, such as clinics and rehabilitation facilities.

Two key variables, patient satisfaction with nursing care and patients' perceptions of organizational climate for service both contributed significantly to the patient's perception of service quality. This study provided theoretical basis and empirical support for linking these variables to the construct of service quality.

Patient satisfaction with nursing care is a component of the broader construct, patient satisfaction. Satisfaction is described as the summary psychological state that results from confirmation or disconfirmation of expectations when compared to perceptions of a discreet episode of contact with an organization (Oliver, 1981). Since patient satisfaction with nursing care is positively related to service quality, it follows that nurses ought to take measures to maximize patient satisfaction with nursing. Harper-Petersen (1989), Kanar (1988), and Kunkle (1990) stated that nurses in hospital settings need to evaluate patient satisfaction with nursing care on an ongoing basis in order to establish baseline data and to evaluate the effectiveness of improvement strategies. Nurse managers can have frequent and periodic conferences with staff nurses to brainstorm new and creative ways of improving patient satisfaction with nursing care within the framework of cost effectiveness (Arikian, 1991). Finally, nurses can obtain feedback from patients about their specific expectations during hospitalization, to better understand how to satisfy patients' needs and exceed their expectations for nursing care (Harper-Petersen, 1989; Spitzer, 1988).

Organizational climate for service is defined as the policies, practices, procedures, supports, and expectations that the organization outlines to enhance the customer's experience. Nurses, since the time of Nightingale, have been concerned with providing an optimum environment for care and patient outcomes (Donaldson & Crowley, 1978; Meleis, 1991; Schlotfeldt, 1988). Clearly, in order to maximize service quality perceived by patients, nurses need to create a positive organizational climate for service. For example, nurses may be able to enhance patients' perceptions of the organizational climate for service by providing clear explanations of the rationale for policies, practices and

procedures (Kunkle, 1990). Nurses may also be able to enhance the organizational climate for service by obtaining feedback from patients about their feelings with regard to policies, practices and procedures. Spicer, Craft, and Ross (1988) stated that policies and systems that affect both nurse and patient need to be evaluated. They stated that policies and systems must be "user friendly" to the patient as well as "provider supportive" to the nurse. Nurses can use patient feedback to consider whether or not selected policies, practices and procedures could be restructured in light of patients' needs and expectations.

Recommendations

The theoretical basis and empirical findings of this study point the direction for future research. The recommendations for future study are as follows:

1. Design a study using a delivery system of care that ensures continuity of nurse caregiver across inpatient and outpatient settings to test the theoretical linkages between patients' perceptions of service quality and nurses' perceptions of (a) human resource practices and (b) autonomy in practice.

2. In the interest of theory building, other nurse variables need to be identified in the literature that are theoretically linked to patients' perceptions of service quality. Correlational studies should be designed to test these linkages empirically.

3. Organizational climate for service demonstrated a strong relationship to service quality. Therefore, other environmental variables need to be identified that are theoretically linked to service quality. Correlational studies should then be designed to empirically test the theoretical linkages between these environmental variables and service quality.

4. Most marketing theorists described customer satisfaction as antecedent to service quality (Bitner, 1990; Bolton & Drew, 1991a, 1991b; Oliver, 1981; Patterson & Johnson, 1993). However, some theorists argue that service quality leads to customer satisfaction (Woodside, Frey, & Daly, 1989). Longitudinal studies need to be designed to determine the true temporal order of the variables in the customer satisfaction and service quality relationship.

5. Validation of an instrument is a never-ending process (Polit & Hungler, 1991). Methodological studies should be designed to provide additional validity evidence for the Modified Health Care Service Performance (SERVPERF) instrument.

6. Patient satisfaction with nursing care is a variable that is theoretically and empirically linked to patients' perception of service quality. However, there may be other caregivers who contribute positively to the patients' perception of service quality. Therefore, a study should be designed to examine the relationship between patient satisfaction with medical care and patient perception of service quality.

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Appendix A

The Modified Health Care SERVPERF Instrument

Directions to patients. The following set of statements relate to your experience with the hospital's service. As you read each statement, think of the hospital in an overall way, for all the times in the past that you have come here for service. Please show the extent to which you believe the statement describes the hospital. For example, circling a "1" means that you strongly disagree with the statement. Circling a "5" means that you strongly agree with the statement. There are no right or wrong answers.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. The hospital has modern looking equipment.	5	4	3	2	1
2. The hospital's physical facilities are visually appealing.	5	4	3	2	1
3. The hospital's employees appear neat.	5	4	3	2	1
4. The hospital provides its services at the time it promises to do so.	5	4	3	2	1
5. When patients have problems, the hospital's employees are sympathetic and reassuring.	5	4	3	2	1
6. The hospital is accurate in its billing.	5	4	3	2	1
7. The hospital employees tell patients exactly when services will be performed.	5	4	3	2	1

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
8. Patients receive prompt service from the hospital's employees.	5	4	3	2	1
9. The hospital's employees are always willing to help patients.	5	4	3	2	1
10. Patients feel safe in their interactions with the hospital's employees.	5	4	3	2	1
11. The hospital's employees are knowledgeable.	5	4	3	2	1
12. The hospital's employees are polite.	5	4	3	2	1
13. Employees get adequate support from the hospital to do their jobs well.	5	4	3	2	1
14. The hospital's employees give patients personal attention.	5	4	3	2	1
15. The hospital has patients' best interests at heart.	5	4	3	2	1

Appendix B

Employee Turnover Diagnostic

Directions to nurses. The following statements relate to your work experience at the hospital. Please show the extent to which you believe the statement describes your experience at the hospital by circling the response most appropriate for you. There are no right or wrong answers.

	Very Frequently	Frequently	Sometimes	Infrequently	Very Infrequently
1. This organization is considered by others in the field to be a leader.	5	4	3	2	1
2. People in the organization get ahead on who they know not what they know.	5	4	3	2	1
3. This organization encourages supervisors to communicate the organization's goals to employees.	5	4	3	2	1
4. There are opportunities for me to pursue my career interests in this organization.	5	4	3	2	1
5. The general public considers this organization to be a high status organization.	5	4	3	2	1

	Very Frequently	Frequently	Sometimes	Infrequently	Very Infrequently
6. People coming on the job get special training that helps them get started.	5	4	3	2	1
7. Work groups (nursing units and various departments) in this organization have conflicting goals and objectives.	5	4	3	2	1
8. Supervisors I have contact with help people get their work done; supervisors facilitate, rather than hinder work accomplishment.	5	4	3	2	1
9. This organization provides information about how different jobs fit into different career programs.	5	4	3	2	1
10. People outside the organization think that the people who work here are high caliber people.	5	4	3	2	1

	Very Frequently	Frequently	Sometimes	Infrequently	Very Infrequently
11. New employees on the job are assigned to a specific person who helps them get used to the job.	5	4	3	2	1
12. Conditions on my job do not permit people to reach their work goals.	5	4	3	2	1
13. Supervisors I work with use the rewards they have (praise, performance appraisals) to let people know when they've done a fine job.	5	4	3	2	1
14. This organization provides information and counseling about my career.	5	4	3	2	1
15. People outside the organization have respect for the kind of job I have.	5	4	3	2	1
17. There exists definite "IN" and "OUT" groups on the job.	5	4	3	2	1

	Very Frequently	Frequently	Sometimes	Infrequently	Very Infrequently
18. Supervisors I have contact with discuss employee job behaviors with them.	5	4	3	2	1
19. This organization helps me achieve my personal career goals.	5	4	3	2	1
20. People here take into account what their coworkers want them to do.	5	4	3	2	1
21. Employees are not given the opportunities to get special training to help them do their job.	5	4	3	2	1
22. In supervising people, bosses I work with take into account how people feel from day to day.	5	4	3	2	1
23. This organization exposes people to jobs that fit various career patterns.	5	4	3	2	1

	Very Frequently	Frequently	Sometimes	Infrequently	Very Infrequently
24. Supervisors I work with share with subordinates information about what is happening in the organization.	5	4	3	2	1

Appendix C

Dempster Practice Behaviors Scale (DPBS)

Directions to Nurses. Carefully read each statement. Mark the response that best indicates TO WHAT EXTENT, that is, how much each of the following statement is TRUE for your in YOUR PRACTICE.

In my practice I...

	Not true at all	Slightly true	Moderately true	Very true	Extremely true
1... take responsibility and am accountable for my actions.	1	2	3	4	5
2... have developed the image of myself as an independent professional.	1	2	3	4	5
3... base my actions on the full scope of my knowledge and ability.	1	2	3	4	5
4...self determine my role and activities.	1	2	3	4	5
5...derive satisfaction from what I do.	1	2	3	4	5
6...take control over my environment and situations I confront.	1	2	3	4	5

	Not true at all	Slightly true	Moderately true	Very true	Extremely true
7...am valued for my independent actions.	1	2	3	4	5
8...am constrained by bureaucratic limitations.	1	2	3	4	5
9...provide quality services through my actions.	1	2	3	4	5
10...am confident in my abilities to perform my role independently.	1	2	3	4	5
11...have been professionally socialized to take independent action.	1	2	3	4	5
12...function with the authority to do what I know should be done.	1	2	3	4	5
13...have too many routine tasks to exercise independent action.	1	2	3	4	5
14...have a sense of professionalism.	1	2	3	4	5
15...have the rights and privileges I deserve.	1	2	3	4	5

	Not true at all	Slightly true	Moderately true	Very true	Extremely true
16...have the professional experience needed for independent action.	1	2	3	4	5
17...am restrained in what I can do because I am powerless.	1	2	3	4	5
18...collaborate with others outside my field when I feel there is a need.	1	2	3	4	5
19...derive feelings of self-respect and esteem from what I do.	1	2	3	4	5
20...make my own decisions related to what I do.	1	2	3	4	5
21...possess ownership of my practice; that is, my role belongs to me.	1	2	3	4	5
22...have the power to influence decisions and actions of others.	1	2	3	4	5
23...have a sense of self achievement.	1	2	3	4	5

	Not true at all	Slightly true	Moderately true	Very true	Extremely true
24...am provided with a legal basis for independent functioning.	1	2	3	4	5
25...demonstrate mastery of skills essential for freedom of action.	1	2	3	4	5
26...have my activities and actions programmed by others.	1	2	3	4	5
27...have the respect of those in other disciplines.	1	2	3	4	5
28...cannot optimally function because I do not have legal status.	1	2	3	4	5
29...establish the parameters and limits of my practice activities.	1	2	3	4	5
30...accept the consequences for the choices I make.	1	2	3	4	5

Appendix D

La Monica-Oberst Patient Satisfaction Scale (LOPSS)

Directions to patients. The following statements relate to nursing care at the hospital. Think of the nurse that took care of you most of the time as you read each sentence. Please show the extent to which you believe the statement describes the nursing care that you received. For example, circling a (1) means that you strongly disagree with the statement. Circling a (5) means that you strongly agree with the statement. Your individual answers will not be shared in any way with the hospital administration, with the nurses or any other staff members that have cared for you.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. The nurse is gentle in caring for me.	1	2	3	4	5
2. The nurse helps me to understand my illness.	1	2	3	4	5
3. The nurse understands me when I share my problems.	1	2	3	4	5
4. The nurse is available when I need support.	1	2	3	4	5
5. The nurse gives the impression that my care is top priority.	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
6. The nurse makes me feel secure when giving care.	1	2	3	4	5
7. The nurse gives complete explanations.	1	2	3	4	5
8. The nurse gives directions at just the right speed.	1	2	3	4	5
9. The nurse appears to enjoy caring for me.	1	2	3	4	5
10. The nurse sees that I get physical assistance when I need it.	1	2	3	4	5
11. The nurse makes me feel like I can share my feelings when I need to talk.	1	2	3	4	5
12. The nurse does things to make me more comfortable.	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
13. Just talking to the nurse makes me feel better.	1	2	3	4	5
14. If I needed nursing care again, I would come back to this hospital.	1	2	3	4	5
15. The nurse makes me feel like a "case" not an individual.	1	2	3	4	5
16. The nurse does not follow through quickly enough.	1	2	3	4	5
17. The nurse should be more thorough.	1	2	3	4	5
18. The nurse is not as friendly as she/he could be.	1	2	3	4	5
19. The nurse seems more interested in completing tasks than listening to concerns.	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
20. The nurse neglects to be sure I understand the importance of my treatments.	1	2	3	4	5
21. The nurse is impatient.	1	2	3	4	5
22. The nurse acts like I cannot understand the medical explanation of my illness.	1	2	3	4	5
23. The nurse is not as attentive as she/he should be.	1	2	3	4	5
24. The nurse does nothing with the information I give.	1	2	3	4	5
25. The nurse fails to consider my opinions and preferences regarding plans for my care.	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
26. The nurse does not keep promises to return to do things for me.	1	2	3	4	5
27. The nurse talks down to me.	1	2	3	4	5
28. The nurse does not answer my call light promptly enough.	1	2	3	4	5

Appendix E

The Organizational Climate for Service Semantic Differential

Below you will find 15 opposite words and an idea, **organizational climate for service**. Place an "X" in one of the spaces for each word pair. The closer your "X" is to one word in the pair, the more you feel it describes the organizational climate for service at this hospital better than the opposite. Place the "X" in the middle space if you are unsure, or feel that neither word in the pair describes better how you feel about the idea. Do not spend a lot of time on each pair; let your first reaction guide your answers.

Please describe your feelings toward the **organizational climate for service** of the hospital. The hospital's policies, procedures and practices make up the organizational climate for service. Policies are the rules, like visiting hours. Procedures are the methods used, like how a patient gets admitted or moved to a different unit. Practices are the care given by nurses, physicians, and other workers. All of these things taken together create the

organizational climate for service.

good _____:_____:_____:_____:_____:_____:_____ bad

valuable _____:_____:_____:_____:_____:_____:_____ worthless

inflexible _____:_____:_____:_____:_____:_____:_____ flexible

fair _____:_____:_____:_____:_____:_____:_____ unfair

mild _____:_____:_____:_____:_____:_____:_____ harsh

stable _____:_____:_____:_____:_____:_____:_____ unstable

weak _____:_____:_____:_____:_____:_____:_____ strong

helpful _____:_____:_____:_____:_____:_____:_____ unhelpful

useful _____:_____:_____:_____:_____:_____:_____ useless

important _____:_____:_____:_____:_____:_____:_____ unimportant

foolish _____:_____:_____:_____:_____:_____:_____ wise

necessary _____:_____:_____:_____:_____:_____:_____ unnecessary

effective _____:_____:_____:_____:_____:_____:_____ ineffective

negative _____:_____:_____:_____:_____:_____:_____ positive

active _____:_____:_____:_____:_____:_____:_____ passive

Appendix F

RUTGERS UNIVERSITY
Office of Research and Sponsored Programs
ASB, Annex II - Busch Campus (P.O. Box 1179)
Piscataway, NJ 08855-1179

Last Name: Nieds
Access No.: 96-035

NOTICE OF IRB REVIEW AND APPROVAL (Initial/Revised/Continuation)

The project identified below, for which you requested review and approval by the Rutgers Institutional Review Board for the Protection of Human Subjects in Research, has now been reviewed and approved. This approval is based on the assumption that the materials you submitted to the Office of Research and Sponsored Programs (ORSP) contain a complete and accurate description of all the ways in which human subjects are involved in your research.

This approval is given with the following conditions:

1. that you will conduct the research according to the plans and protocol you submitted.
2. that you will immediately inform the ORSP of any injuries to subjects that occur in the course of your research.
3. that you immediately inform the ORSP of any problems that arise in the course of your research.
4. that you will immediately inform the ORSP of any changes that you make in the protocol of the research.
5. that you will give each person who signs the consent document a copy of that document, if you are using such documents in your research.
6. that you will retain all signed consent documents for at least three years after the termination of the research.

Failure to comply with these conditions will result in the withdrawal of this approval.

Name of Chief Investigator: Barbara Nieds

Address: [redacted]
Verona, NJ 07044

Title of Project: CORRELATES OF SERVICE QUALITY

Period of Approval: 10/03/95 to 10/03/96

Additional Conditions: None

One month before the end of the period of approval, you will be reminded to file with the ORSP a copy of the form "Request for Continuing Review." The form will be sent to you.

Date: 10/6/95

Signed: [redacted]
E. M. Woodward, Secretary of the IRB
732/445-2789

cc: Adela Yarcheski

Appendix G

University of Medicine and Dentistry of New Jersey
Robert Wood Johnson Medical School

October 13, 1995

Barbara A Niedt
Nursing
Rutgers, College Of Nurs.
[redacted]
Verona, NJ 07044

RE:Protocol Title: 9510-X611: An Investigation Of The Relationship Between Human Resource Practices And Autonomy In Practice As Perceived By Nurses, Satisfaction With Nursing And Organizational Climate For Service To Service Quality As Perceived By Patients

Dear Ms. Niedt:

The above-referenced protocol was reviewed and given full approval by RWJMS/RWJUH Institutional Review Board (or IRB) the Committee on Studies Involving Human Subjects on October 13, 1995. Both the study and the consent form stand approved and work may be initiated at any time.

Please take note of the following additional information:

Adverse Reactions: If any untoward incidents or adverse reactions should develop as a result of this study, you are required to notify in writing the Research Coordinator immediately. If the problem is serious, approval may be withdrawn pending further review by the IRB.

Amendments: If you wish to change any aspect of this study, such as procedures, the consent forms, or the investigators, please communicate your requested changes in writing to the IRB Coordinator. The new procedures cannot be initiated until IRB approval has been given.

Completion of Study: Please notify in writing the IRB Research Coordinator, as soon as the research has been completed.

Thank you for your cooperation with the RWJMS/RWJUH IRB.

Sincerely,

[redacted]
Chair, IRB

Samuel Pasquale, M.D.
Vice Chair, IRB

Appendix H

Informed consent form for Patients

Correlates of Service Quality
Barbara A. Niedz, MS, RN, Doctoral Candidate, Rutgers College of Nursing

Introduction

Before agreeing to participate in this research study, it is important to read and understand the following explanation and study procedures. It is important to have any questions about the study or rights as a study participant answered before agreeing to participate.

Background

I understand that the investigator is conducting research on the nature of the patient's experience during hospitalization. Using a sample of 101 matched nurse-patient dyads, the study explores the relationship between human resource practices and autonomy in practice as perceived by nurses, and patient satisfaction with nursing, organizational climate for service to service quality as perceived by patients.

Purpose

The purpose of the research is to better understand service quality and to identify variables that may improve service quality. The research concerns the impressions of the patient about the hospitalization experience. The knowledge gained in the study will help to improve the quality of services in hospitals.

Procedures

I understand that if I agree to be in the study, my medical record at Robert Wood Johnson University Hospital will be reviewed to identify a nurse who has cared for me, in order to match my responses. I will complete a questionnaire relating to my experience in the hospital and several questions regarding my background (for example, marital status and gender). Completing the survey involves mostly check marks. There is very little writing involved, and it takes approximately 25 minutes to complete the entire form. I will return the survey directly to the investigator or to a designee.

I understand that my responses to the survey and data from my hospital record will be held confidential by the investigator. I understand that no staff member caring for me now or in the future will have access to my answers or will in any way have knowledge of my responses. I understand that my name will not appear on the survey itself or in any publication that may result from this study.

Benefits

I understand that the study may benefit patients in the future by enhancing knowledge about the patient's hospitalization experience.

Risks

I understand that there are no known risks to me by participating in this study.

Initials_____

Alternatives

I understand that I may refuse without prejudice, to participate in this investigation.

Ability to withdraw

I understand that I may withdraw my consent at any time and discontinue participation without any penalty or risk to present or future healthcare.

Contact

If I have any further questions related to my rights of participation in the research study, or if I have other questions about the study I can call Barbara Niedz at any time at 201[redacted] (M-F, 9-5) or 201-[redacted], evenings and weekends.

I understand that if I have any questions about my rights as a research subject, I may contact Ms. Ann Vaughan, Institutional Review Board Coordinator at (908)[redacted].

Consent

I have read and understand the preceding information. I have had the opportunity to discuss fully this investigation and procedures with the investigator and my questions have been answered to my satisfaction. I am signing this form voluntarily indicating my agreement to participate in this study, until I decide otherwise.

I have read and received a copy of this consent form.

DATE:

_____ _____

Patient name (Printed)

_____

Signature of patient

DATE:

_____ _____

Signature of Principal Investigator

DATE:

_____ _____

Signature of Witness

_____

Questionnaire code number

Appendix I

Patient Personal Data Inventory

Instructions: Please check the appropriate box or fill in the blanks as requested.

Today's date _____

1.1 Age at present time: _____

1.2 Birthdate: month _____ day _____ year _____

Gender (check one):

2.1 ____ male

2.2 ____ female

What is your marital status?

3.1 ____ married

3.2 ____ widowed

3.3 ____ separated

3.4 ____ divorced

3.5 ____ single

What race do you consider yourself (check one):

4.1 ____ White

4.2 ____ African American

4.3 ____ Caribbean American

4.4 ____ Asian

4.5 ____ Latino

4.6 ____ Other (please specify): _____

Past Experiences (fill in the number)

5.1 ____ How many times (approximately) were you a patient at this hospital prior to this time?

5.2 ____ How many times (approximately) have you come to this hospital for outpatient services of any kind?

What was the reason for your admission to the hospital?

_____

_____

_____

Education (check one)
6.0 ____ Grade school diploma
6.1 ____ High school diploma
6.2 ____ Some College
6.3 ____ Associate degree
6.4 ____ Baccalaureate degree
6.5 ____ Master's degree
6.6 ____ Professional degree (MD, JD, DDS)
6.7 ____ Doctorate

Overall, how satisfied were you with the care of the nurse at the hospital?

7.1 ____Very dissatisfied
7.2 ____Dissatisfied
7.3 ____Neutral
7.4 ____Satisfied
7.5 ____Very Satisfied

What is your overall view of the quality of the service rendered by the staff at the hospital?

8.1 ____Very Good
8.2 ____Good
8.3 ____Fair
8.4 ____Poor
8.5 ____Very Poor

Appendix J

Informed consent form for Nurses

Correlates of Service Quality
Barbara A. Niedz, MS, RN, Doctoral Candidate, Rutgers College of Nursing

Introduction

Before agreeing to participate in this research study, it is important to read and understand the following explanations and study procedures. It is important to have questions about the study answered fully before agreeing to participate.

Background

I understand that the investigator is conducting research on the nature of patients' experiences during hospitalization and of the relationship to nurses' experiences as employees of the hospital. Using a sample of 101 matched nurse-patient dyads, the study explores the relationship between human resource practices and autonomy in practice as perceived by nurses, and patient satisfaction with nursing, organizational climate for service to service quality as perceived by patients.

Purpose

The purpose of the study is to explore the relationship between key variables and service quality. The research involves variables of interest to nurses (like autonomy in practice and human resource practices) and variables of interest to patients (like satisfaction with nursing care and organizational climate for service) as they relate to the dependent variable: service quality.

Procedures

I understand that if I agree to be in the study, I would be asked to complete a questionnaire relating to my work experience at the hospital and several questions regarding my background. Completing the survey involves mostly check marks. There is very little writing involved, and it takes approximately 15 minutes to complete the entire form. I understand that I will place the completed instrument in an envelope and seal it, and return it directly to the investigator.

I understand that my questionnaire will be coded so that my responses can be matched with responses of a patient that I have cared for at Robert Wood Johnson University Hospital. I understand that my responses to the survey will be held confidential and that my consent form will be separated from the questionnaire and all material will be placed in a locked file. Furthermore, I understand that my answers will not be shared with any member of the Robert Wood Johnson University Hospital staff.

Risks

I understand that there are no known risks to me by participating in this study.

Benefits

I understand that the study may benefit patients and nurses in the future by providing knowledge about the nature of the patient's experience and the nurse's impact on that experience.

Initials _____

Alternatives

I understand that I may refuse without prejudice, to participate in this investigation.

Ability to withdraw

I understand that I may withdraw my consent at any time and discontinue participation without any penalty or risk to present or future employment in a healthcare facility.

Contact

If I have any further questions related to my rights of participation in the research study, or if I have other questions about the study I can call Barbara Niedz at any time at 201-[redacted] M-F, 9-5 or 201-[redacted] evenings and weekends.

I understand that if I have any questions about my rights as a research subject, I may contact Ms. Ann Vaughan, Institutional Review Board Coordinator at (908) [redacted].

Consent

I have read and understand the preceding information. I have had the opportunity to discuss fully this investigation and procedures with the investigator and my questions have been answered to my satisfaction. I am signing this form voluntarily indicating my agreement to participate in this study, until I decide otherwise.

I have read and received a copy of this consent form.

DATE:

_____ _____

Nurse's name (Printed)

_____

Signature of Nurse

DATE:

_____ _____

Signature of Principal Investigator

DATE:

_____ _____

Signature of witness

_____

Questionnaire code number

Appendix K

Nurse Personal Data Inventory

Today's date _____

Instructions: Please check the appropriate box or fill in the blanks as requested.

1.1 Age at present time: _____
1.2 Birthdate: month ____ day ____ year ____

Gender (check one):
2.1 ____ male
2.2 ____ female

Practice status (check one):
3.1 ____ full time
3.2 ____ part time

Race (check one):
4.1 ____ White
4.2 ____ African American
4.3 ____ Caribbean American
4.4 ____ Latino
4.5 ____ Asian
4.6 ____ Other (specify) _____

Shift working today (circle one):
5.1 ____ days, 8 hour
5.2 ____ evenings, 8 hour
5.3 ____ nights, 8 hour
5.4 ____ days, 12 hour
5.5 ____ nights, 12 hour

Years in practice (fill in the blanks):
6.1 ____ Number of years in practice (since RN licensure)
6.2 ____ Number of years at this practice setting

Position (check one):
7.1 ____ staff nurse
7.2 ____ case manager
7.3 ____ nurse manager
7.4 ____ other (specify) _____

Highest level education completed (check one):

8.1 ____ RN diploma
8.2 ____ Associate degree in nursing
8.3 ____ Baccalaureate in nursing
8.4 ____ Baccalaureate in other field
8.5 ____ Master's in nursing
8.6 ____ Master's in other field
8.7 ____ Doctorate in nursing
8.8 ____ Doctorate in other field

Vita

Barbara A. Niedz

1949	Born November 22 in Kearny, New Jersey.
1967	Graduated from Queen of Peace High School, North Arlington, New Jersey.
1971	BSN, Rutgers, The State University of New Jersey, College of Nursing.
1971	Admitted to membership, Sigma Theta Tau, Alpha Tau Chapter
1971-73	Registered Nurse, John F. Kennedy Memorial Hospital, Stratford, New Jersey.
1974-75	Registered Nurse, Mountainside Hospital, Glen Ridge, New Jersey.
1975-76	Registered Nurse, Hackensack Hospital Community Nursing Service, Hackensack, New Jersey.
1977-1981	Registered Nurse, Wallkill Valley Hospital, Sussex, New Jersey.
1981-1983	Director, Staff Development, Wallkill Valley Hospital, Sussex, New Jersey.
1983-1986	Continuing Education Instructor, St. Joseph's Hospital and Medical Center, Paterson, New Jersey.
1987	MS, Rutgers, The State University of New Jersey, Graduate School Newark.
1986-1991	Guest Relations Coordinator, St. Joseph's Hospital and Medical Center, Paterson, New Jersey.
1991-1996	Director, Quality Management, St. Joseph's Hospital and Medical Center, Paterson, New Jersey.
1992-1994	President, Sigma Theta Tau, Alpha Tau Chapter
1996	Awarded the Rutgers, College of Nursing Alumni Association Dean Dorothy DeMaio Nursing Research Award
1996	Ph.D. in Nursing, Rutgers, The State University of New Jersey.