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A MODEL OF ORGANIZATIONAL COMMITMENT
IN STAFF NURSES

by

Donna Burgener Adams

A dissertation presented to the
FACULTY OF THE PHILIP Y. HAHN SCHOOL OF NURSING
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requirements for the degree
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ABSTRACT OF THE DISSERTATION

A MODEL OF ORGANIZATIONAL COMMITMENT IN STAFF NURSES

The purpose of this study was to describe and explain the impact of work stress, sex role organization, and organizational tenure on self-esteem and work satisfaction, and ultimately, on the organizational commitment of registered nurses. An eclectic framework was utilized which incorporated organizational and personal variables. The correlational design resulted in a temporally ordered causal recursive model with linkages supported by a literature review. Past research has demonstrated less organizationally committed nurses more prone to leave their positions, and high turnover is detrimental to patient care as well as costly to the health care system.

The sample consisted of 143 female staff nurses working full time in a southwester hospital. Volunteers were asked to complete a questionnaire including the Nursing Stress Scale, Bem Sex Role Inventory, Rosenberg Self-Esteem Scale, Social Desirability Scale, Index of Work Satisfaction, Organizational Commitment Questionnaire, and a question on organizational tenure.

Utilizing path analytic statistical techniques, findings indicated predictors of organizational commitment were comprised of tenure and the work satisfaction dimensions of organizational policies and pay. Results demonstrate the need to include organizational and personal variables in studies of nurses in their work environments.

This work is dedicated to my family

Mother and Dad

Larry, Andrew, and Eric

Jerry and Carol

ACKNOWLEDGEMENTS

I am grateful for the guidance, professionalism, and patience of my committee, Dr. Jan Harrison (Chair), Dr. Mary Ann Hautman, and Dr. Mary Quayhagen.

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Chapter 1

Introduction

Problem

A 1987 report published by the American Hospital Association Special Committee on Nursing revealed that nearly 85% of hospitals reported nursing shortages (American Hospital Association, 1987). The total number of registered nurses employed by acute care agencies has increased by 25% since 1982, but the nurse/patient ratio has risen as well. The consequence has been the closing of beds and entire nursing units in both urban and rural hospitals (Aiken, 1989).

Goldberg (1988) believes insufficient numbers of individuals are entering nursing, so the three-year shortage cycle, common to the profession in the past, will increase to seven or more. Others attribute the problem to an increased demand, due to sicker patients and more complicated technology, rather than to a decreased supply of nurses (Aiken & Mullinex, 1987). Whichever is the case, the result is overworked personnel and limited resources (Hinshaw, Smeltzer, & Atwood, 1987).

The national turnover rate for registered nurses is 20% which means two out of ten nurses leave their current positions every year. The cost of replacing one

nurse has been estimated to be \$2000 (National Association for Health Care Recruitment, 1988). Wise (1990) reported expenses to fill a vacancy created by the loss of one experienced nurse with another ran as high as \$14,000. Turnover rates for health care agencies are frequently 40% or more, indicating that nurses leaving their current positions is extremely costly, especially at a time when these organizations are facing increasing budget restrictions. The elements causing this situation among nursing professionals need to be identified for economic reasons and because, according to Wise, fewer nurses are available to replace those who leave.

Purpose

While nurses have been the subjects of investigations of organizational commitment on many occasions, there is a dearth of studies which examine the variable in a causal manner. In addition, few investigations have addressed the fact that most registered nurses are women. No research has been found incorporating the variables examined in the present study. These include the effects of work stress, sex role orientation, and tenure on self-esteem, and subsequently on work satisfaction and organizational commitment of staff nurses in hospitals.

Significance of Study to Nursing

Responsibility for solution strategies to alleviate high rates of turnover have been laid at the doors of health care agencies. It is believed that an emphasis on implementing institutional plans to retain registered nurses

could prove effective to increase an overall supply of these individuals within hospitals (American Hospital Association, 1987).

Nurse managers are seeking methods to increase satisfaction among staff nurses, primarily (and perhaps, unfortunately) because of the high cost of replacing nurses. However, more professional reasons exist in that patient satisfaction and adherence to treatment have been demonstrated to be negatively influenced by more dissatisfied nurses (Weisman & Nahanson, 1985). Work groups become less stable when members leave and inversely affects the level of quality patient care as well (Wise, 1990). Managers are hampered by a health care economy in which monetary rewards for staff nurses are diminished and by traditional career structures for nurses who wish to remain at the bedside. Hospital nurses who choose direct patient care frequently suffer economically in the usual acute care setting. This disadvantage may promote turnover and be one of the reasons few older nurses are found in hospitals (Price & Mueller, 1981a). Therefore, it is necessary to investigate other methods of satisfying nurses which may increase their organizational commitment in order to improve the quality of patient care and lessen the impact of registered nurse turnover costs on the health care system.

Diagnosing and/or modification of sex role orientation and self-esteem in staff nurses may provide ways for nurse managers to achieve these goals. Organizational programs

aimed toward these issues may aid in decreasing the negative effects of work stress as well, resulting in increased work satisfaction as registered nurses become more able to cope with tension-producing situations.

Theoretical Framework

Mitchell (1979) defined work attitudes as one's evaluation of the work environment. Studies on work attitudes have primarily attempted to outline the determinants of employees' intentions of remaining with an organization and satisfaction with their work. Organizational commitment has been viewed as a mediating variable between work satisfaction and turnover (Mobley, 1977; Price & Mueller, 1981a; Porter, Steers, Mowday, & Boulian, 1974). Porter and Smith (1970) described organizational commitment as characterized by the strength of the individual's attitude about the values and goals of an organization, striving to achieve those goals, and an intention to remain a member of the organization.

Work satisfaction and commitment differ in that satisfaction is specific to the actual work being performed while commitment involves the individual's attitude and loyalty toward the entire organization. Work satisfaction is more transient while organizational commitment is more stable over time (Mowday, Steers, & Porter, 1979).

The study of satisfaction with work and employee turnover in organizational behavior has varied over the years, moving from an emphasis on the personality characteristics of employees to an opposing view, the

situationist model, which focused almost exclusively on the external environmental surroundings of working individuals (Schneider, 1983).

In 1973, Bowers presented an interactionist model of behavior within organizations which integrated the previous two views and proposed that employees and external factors encompassed in the work context interacted to form a working environment. Hence, this outlook stressed both the situation and employee personality characteristics in an effort to help organizations better understand methods of evoking more positive job attitudes and behaviors (Staw, Bell, & Clausen, 1986).

Self-esteem has been defined as the evaluative or self-accepting factor of self-concept where the evaluations are viewed as the global attitudes people hold toward themselves (Rosenberg, 1965). Previous organizational studies have virtually ignored the concept of self-esteem in relation to other factors within the workplace. Therefore, one of the most unresearched subjects in the area of job attitudes is the evaluations individuals hold about themselves as well as the ways in which organizational variables affect this process (Terborg, 1981). The present study investigated global self-esteem, defined by Stanwyck (1983) as people's frames of references for experiencing the world. Locke (1976) stated the global self-esteem of employees was a crucial variable in the study of organizational behavior and mandated the use of an interactionist model incorporating the personality traits

of individuals and the environmental variables within their work.

Components of the theoretical framework utilized for this research involved the relationship between self-esteem and work stress as well. Brockner's (1988) theory of behavioral plasticity proposed that individuals with low levels of global self-esteem were more "plastic" or influenced by external and social factors than their high self-esteem counterparts. Work stress may well be an external variable that influences employee self-esteem. Like Locke (1976), Brockner advocated the use of an interactionist approach in studies of the self-esteem of employees, so the joint effects of individual and contextual factors could be explored. Howell, Bellenger, and Wilcox (1987) reiterated this view by stating that the amount of stress perceived by people may differ according to their levels of self-esteem.

In addition, Bem's (1974) theory of sex role orientation in which androgynous individuals are expected to display situationally-appropriate behaviors, independent of gender, contributes to the theoretical framework as well. Studies have demonstrated that individuals identified as androgynous experienced higher levels of self-esteem than those with other sex role orientations (Ickes & Barnes, 1978; Spence, Helmreich, & Stapp, 1975). The androgynous modality is a blend of masculine and feminine domains and results in an integrated, balanced personality able to deal with diverse and stressful

situations (Bem, 1977).

The influence of these variables cannot be determined from prevailing studies. While the model utilized in this research contained elements common to other paradigms of work stress and turnover, the major innovative feature claimed was the incorporation of the variables of sex role orientation and self-esteem. Given the gender composition of the nursing profession, this approach seemed reasonable. As delineated in Figure 1, a time ordered (T_1 - T_4), recursive, causal model was utilized in order to demonstrate the interrelationships of variables and their impact on organizational commitment. Variables in preceding time orders were expected to influence those in later ones.

The exogenous variable work stress may effect the endogenous variables of self-esteem (Howell, Bellenger, & Wilcox, 1987; Lowe & Northcott, 1988; Packard & Motowidlo, 1987), work satisfaction (Keller, 1984; Norbeck, 1985; Parasuraman & Alutto, 1984), and organizational commitment (Jamal, 1984; Parasuraman & Hansen, 1987; Sepic, 1986). Sex role orientation influences self-esteem (Lundy & Rosenberg, 1987; Meleis & Dagenais, 1981; Stafford, 1984). Tenure effects self-esteem (Banfield, 1976; Romzek, 1984), work satisfaction (Keller, 1984; Lee & Wilbur, 1985;

NOTE: $T_1 - T_4$ = Time Frames

Figure 1. Hypothesized Causal Model of Organizational Commitment of Staff Nurses

Mottaz, 1988a), and organizational commitment (Price & Mueller, 1981b; Werbel & Gould, 1984; Zahra, 1984). Self-esteem influences work satisfaction (Adler, 1980; Callahan & Kidd, 1986; Packard & Motowidlo, 1987). The linkage between work satisfaction and organizational commitment was derived from the results of research by several investigators, some of whom were DeCotiis and Summers, (1987), Lee and Mowday (1987), and Reichers (1986).

Theoretical Definitions

Work stress refers to an internal cue in the physical, social, or psychological environment that threatens the equilibrium of an individual, according to the Nursing Stress Scale by Gray-Toft and Anderson (1981b).

Sex Role Orientation was operationalized by Bem (1974) in the Bem Sex Role Inventory as a psychological characterization of individuals as masculine, feminine or androgynous in their perceived view and endorsement of the masculine or feminine personality characteristics within themselves.

Tenure consists of the total length of time that individuals have worked in an agency in any capacity (Price & Mueller, 1981a).

Self-esteem is the degree to which individuals accept themselves, as operationalized by Rosenberg (1965) in the Self-Esteem Scale.

Social desirability, according to the Social Desirability Scale (Crowne & Marlowe, 1964), consists of an attempt by people to win the approval of others.

Work Satisfaction was identified in The Index of Work Satisfaction measure (Stamps & Piedmont, 1986) as consisting of individuals' expectations and current attitudes toward their jobs.

Organizational commitment refers to an individual's strength of identification and involvement in the organization in which they are employed, according to the Organizational Commitment tool by Porter and Smith (1970).

Hypotheses

There were nine direct hypotheses which evolved from the theoretical model presented in Figure 1 and were written with arrows signifying direction. Signs (plus or minus) indicated the type of relationship. The nine direct hypotheses were:

1. Work stress has a direct negative effect on organizational commitment.
2. Work stress has a direct negative effect on work satisfaction.
3. Work stress has a direct negative effect on self-esteem.
4. Sex role orientation has a direct positive effect on self-esteem.
5. Tenure has a direct positive effect on organizational commitment.

6. Tenure has a direct positive effect on work satisfaction.
7. Tenure has a direct positive effect on self-esteem.
8. Self-esteem has a direct positive effect on work satisfaction.
9. Work Satisfaction has a direct positive effect on organizational commitment.

A total of nine indirect hypotheses were derived from the theoretical model. These were:

1. Organizational commitment will be indirectly influenced by work stress through work satisfaction.
2. Organizational commitment will be indirectly influenced by work stress through self-esteem and work satisfaction.
3. Organizational commitment will be indirectly influenced by sex role orientation through self-esteem and work satisfaction.
4. Organizational commitment will be indirectly influenced by tenure through self-esteem and work satisfaction.
5. Organizational commitment will be indirectly influenced by tenure through work satisfaction.
6. Organizational commitment will be indirectly influenced by self-esteem through work satisfaction.
7. Work satisfaction will be indirectly influenced by work stress through self-esteem.
8. Work satisfaction will be indirectly influenced by sex role orientation through self-esteem.

9. Work satisfaction will be indirectly influenced by tenure through self-esteem.

Chapter 2

Review of the Literature

Past research has established linkages between the variables in the proposed model. Those studies and their findings are presented in this section.

Work Stress and Organizational Commitment

Several studies have investigated work stress and employees' commitments to remain with an organization. Research has viewed leaving intentions as a component of organizational commitment and as a distinct component as well. Spector, Dwyer, and Jex (1988) examined work factors resulting in stress outcomes in 156 business women. Females encountering more frustration and anxiety in their jobs were more inclined to consider seeking new positions than those who experienced less work stress ($r = .57$ & $.41$, respectively, $p < .05$).

Utilizing regression analysis to examine the data from a heterogeneous sample comprised of 282 business and health care professionals and nonprofessionals, Bhagat, McQuaid, Lindholm, and Segovis (1985) investigated the influences of negative (disrupting work conditions) and positive (enhancing work surroundings) job stress on turnover intentions. Negative work stress was related to increased intentions of leaving ($r = -.25$, $p < .01$). The findings were based on data collected six years previous to publication. Arnold and Feldman (1982) found work stress,

defined as conflicting standards, negatively and directly connected to intent to leave in 654 accountants ($r = -.30$, $p < .001$).

In contrast, results of research conducted on 370 Department of Defense employees indicated that work stress was indirectly linked to intent to quit through work satisfaction (Hendrix, Ovalle, & Troxler, 1985). Using path analytic techniques, these authors stated that responses to job stress included behavioral, physiological, and psychological factors.

Burke and Greenglass (1988) examined career perspectives in a group of teachers and school administrators, half women and half men ($N = 831$). People with idealistic orientations viewed their work as instruments to produce social change. They reported more job stress, had the greatest turnover intentions, and perceived their job settings as more negative than individuals with other career orientations.

Investigations have examined the relationship between work stress and organizational commitment in nurses. In contrast to the study by Hendrix et al. (1985), Jackson (1983) reported emotional job stress directly related to turnover intention ($r = -.44$, $p < .05$) in a group of 126 hospital outpatient employees of which 34 percent were registered nurses. Stress was indirectly related to leaving intentions through job satisfaction as well.

Registered nurses perceiving more job stress as a consequence of unsupportive supervisors and coworkers were

less satisfied with their positions and had increased intentions of leaving. Results were obtained from a survey sent to 336 nurses giving direct patient care in 4 hospitals in the Pacific Northwest (Sepic, 1986).

In a study of 440 nurses in 2 Canadian hospitals, individuals who anticipated leaving their current jobs experienced more role overload (defined as a facet of work stress) than those who planned to remain. Multiple regression analysis revealed a strong, inverse relationship ($r = -.53$ & $-.35$, respectively, $p < .01$) between anticipated turnover and organizational and professional commitment as well (Jamal, 1984). A project by Leiter and Maslach (1988) reported an indirect, negative relationship between work stress (presented as role conflict) and organizational commitment ($r = -.52$, $p < .05$). Parasuraman and Hansen (1987) found the amount of stress felt by 215 registered and licensed nurses, negatively related to organizational commitment (coefficient alpha = $-.39$, $p < .05$). Work overload, assignment changes, and a lack of resources explained 32 percent of the variance in felt stress.

Using a five stage, causal model, Hinshaw et al. (1987) discovered that intent (anticipated turnover) was predicted by job stress through organizational and professional job satisfaction for 1002 baccalaureate and diploma nurses. Job stress, measured by the Bailey and Claus (1977-1978) Job Stress Scale directly predicted anticipated turnover in medical-surgical nurses (moderate

beta coefficient of $-.25$, $p < .05$), but not in nurses working in other areas of the hospital.

Martin (1982) studied nursing personnel (28 registered nurses), using Porter and Smith's (1970) Organizational Commitment measure. Nurses with lower levels of job commitment demonstrated greater intentions of leaving the organization ($R^2 = .12$, $p < .0001$).

The results of these inquiries reveal different findings about the direction of the relationship between these two variables. The use of a scale measuring stressors existing in the specific work environments of nurses may aid in future study of work stress and organizational commitment.

Work Stress and Work Satisfaction

Various subjects and relationships have been reported in studies of work stress and work satisfaction. Hendrix et al. (1985) proposed a direct, negative relationship (beta coefficient = $-.11$, $p < .05$) in a path analysis of an investigation of 370 subjects (38 percent women). Keller (1984) agreed with these findings in an examination of 190 management, professional, and clerical workers ($r = -.31$, $p < .01$).

Bhagat, McQuaid, Lindholm, and Segovis (1985) ascertained that less job stress was related to job satisfaction. Parasuraman and Alutto (1984) studied 217 (33% females) manufacturing employees. Using a recursive causal model and path analysis, a negative and direct association existed between felt stress (beta

coefficient = $-.15$, $p < .05$), role frustration (beta coefficient = $-.32$, $p < .001$), and job satisfaction. Similar findings in research involving 497 (40% women) employees of an insurance company were reported by Brief, Burke, George, Robinson, and Webster (1988): Increased job stress was negatively related to overall job satisfaction ($r = -.38$, $p < .05$).

Kirjonen and Hanninen (1986) determined, in an examination of 902 management and blue-collar workers (293 women), that underutilization of skills and monotony were the major causes of dissatisfaction, rather than a high level of job stress. However, dimensions of job stress reported as causing the most strain were those that dealt with work content which was defined as the opportunities employees had to use their skills/abilities as well as the quality of working environment (decreased physical/chemical hazards).

Campion and Mitchell (1986) studied 143 current and 140 former managers to examine the effects of job stress as well as job characteristics, career development, and met expectations on managerial job turnover. This correlational study found current managers more satisfied and less stressed with their jobs than managers who had left the company for other positions.

Blau's (1981) study of transportation employees determined that job stress was related to work dissatisfaction. Multiple regression revealed individuals with increased job stress were more dissatisfied with

their work ($r = .50$, $p < .01$). Howell, Bellenger, and Wilcox (1987) found role stress inversely related to job satisfaction in 446 business managers of both sexes.

In a study consisting primarily of female subjects, Sulton and Huberty (1984) proposed that job stress (as indicated by role demands and the number of people in the work situation) was related to psychological strain. In addition, women who perceived increased job stress were less satisfied with their positions. In another study of women, Spector et al. (1988) found individuals more anxious and frustrated in their jobs less satisfied. Findings of Bullen and Martin (1987) revealed that women accountants perceived more work stress than men in the same profession, especially in meeting deadlines, hours worked, and commuting distances ($N = 125$). The authors speculated these added stressors for women were due to greater home responsibilities.

Several studies have utilized nurse participants. Norbeck (1985) found workload to be the job stressor negatively related to job satisfaction in a sample of 180 critical care nurses ($r = -.22$, $p < .003$). Gray-Toft and Anderson (1981a) reported an inverse, direct relationship between total perceived job stress and job satisfaction investigation of 122 registered nurses, using path analytic techniques (beta coefficient = $-.19$, $p < .06$). Individuals working on medical units demonstrated the highest job stress. In contrast to workload, Curry, Wakefield, Price, Mueller, and McClosky (1985) found role

overload the job stressor most related to job dissatisfaction in registered nurses. Jackson's research in 1983 indicated increased role ambiguity and role conflict (viewed as aspects of job stress) negatively associated with decreased overall job satisfaction ($r = -.40$ to $-.46$, $p < .05$). The sample incorporated 126 employees in a hospital outpatient facility. Revicki and May (1989) demonstrated the same results in a random sample of 232 acute care nurses ($r = -.21$, $p < .05$).

Using a causal modeling design, Hinshaw et al. (1987) studied 1597 randomly selected individuals from urban and rural hospitals. The sample included registered nurses (62 percent), licensed practical nurses, and nurse assistants. They found that job stress strongly predicted and was negatively-related to organizational job satisfaction in baccalaureate-prepared nurses (beta coefficient = $-.34$, $p < .05$) and moderately predictive in diploma nurses (beta coefficient = $-.29$, $p < .05$). The inclusion of hospital employees other than registered nurses makes generalizing to registered nurses more difficult.

Some research demonstrated an indirect relationship between job stress and work satisfaction. Packard and Motowidlo (1987) stated that job dissatisfaction appeared to be a consequence of depression, preceded by job stress in a study of 230 hospital nurses. Another study (Tetrick & LaRocco, 1987) used LISREL IV methods of analysis in a inquiry of 225 health professionals in the military. Stress (in this case manifested as role stress) experienced

by the subjects in their working environments was inversely related to job satisfaction, moderated by the individuals perceptions of controlling job-related outcomes as well as an understanding of the reasons for the occurrence of the stressful events.

In general, the studies in this section support the relationship between work stress and work satisfaction. However, the samples in many studies have been composed of a combination of technical and professional workers, making generalization to any one group more difficult. More empirical evidence is needed to determine the association between work stress and work satisfaction in registered nurses.

Work Stress and Self-Esteem

Locke (1976) stated individuals with high self-esteem value challenging tasks. Thus, the same stressor may be perceived in a positive manner by some people and negative by others. In a 1981 investigation that directly examined self-esteem, Mossholder, Bederian, and Armenakis suggested that individuals with low self-esteem were more adversely affected by the job stressors of role ambiguity and role conflict than their high self-esteem counterparts. Self-esteem was measured using the self-confidence scale of Gough and Heibrun's (1965) Adjective Check List.

Howell et al. (1987) studied 2000 business people to determine the relationship between self-esteem, job stress, and job satisfaction. Higher levels of self-esteem were

associated with lower perceived job stress. Nearly all of the effects of self-esteem on job satisfaction were modified by perceived job stress. Self-esteem was measured using the Rosenberg (1965) Self-esteem Scale.

Other studies have used indices such as depression as a manifestation of low self-esteem. Bates (1983) stated that low self-esteem was an indicator of depression. An investigation by Lowe and Northcott (1988) of 819 postal workers (half were women) revealed that job stress, identified as competing demands, was a major predictor of depression.

A recent study by Brief et al. (1988) examined 497 business employees (half managers and half professionals) in a correlational study. Increased job stress was positively associated ($r = .40$, $p < .01$) with decreased self-esteem as evidenced by self-reported symptoms of depression.

Some studies have found job stress related to depression in nurses. Packard and Motowidlo (1987) studied members of a hospital nursing department. Job stress positively and directly affected depression ($r = .32$, $p < .01$). Motowidlo, Packard, and Manning (1986) found feelings of job-related stress (rather than frequency or intensity of stress events) related to depression ($r = .31$, $p < .01$). The results suggested subjective stress caused nurses to perform poorly in the interpersonal aspects of their positions.

Revicki and May (1985) disclosed in a study of 232

registered nurses that occupational stress exerted a strong, direct influence on development of depressive symptoms in acute care nurses ($r = .57$, $p < .05$). As stress increased, so did self-reported depression.

Norbeck (1985) indicated the most stressful job strain factor was interpersonal communication problems in a group of critical care nurses. These difficulties were highly related to psychological problems, consisting of such components as distress. Parasuraman, Drake, and Zammuto (1982) studied 327 hospital nurses, using multivariate analysis of covariance to analyze the data. These researchers discovered that ineffective communication among shifts was a primary component of job stress and occurred more frequently in units with team nursing care delivery systems, than in units utilizing primary care. McCranie, Lambert, and Lambert (1987) investigated 107 acute care nurses and found perceived job stress, especially work load, related to burnout and decreased hardiness ($r = .32$, and $.21$, $p < .05$, respectively). They maintained these concepts were akin to low levels of self-esteem. Job stress was measured by the Nursing Stress Scale (Gray-Toft & Anderson, 1981b).

The use of like-concepts in many studies, rather than the explicit exploration of self-esteem in relation to work stress precludes generalizations. Further empirical investigations are required to determine how various levels of self-esteem are related to stressors unique to the working environments of nurses.

Sex Role Orientation and Self-Esteem

Past research has frequently demonstrated a direct relationship between sex role orientation and self-esteem. Spence, Helmreich, and Stapp (1975) found psychological androgyny a strong predictor of high scores on a self-esteem measure in a sample of 530 college students. Both males and females classified by these researchers as androgynous (utilizing masculine and feminine characteristics appropriately) reported the highest levels of self-esteem. Undifferentiated (low masculine and low feminine characteristics) individuals were lowest in self-esteem, whereas male-typed individuals scored higher than those who were feminine-typed.

Building on the findings of their earlier study, Spence, Helmreich, and Holahan (1979) stated that androgynous college students ($N = 583$) displayed high levels of self-esteem ($r = .37$ for women and $.39$ for men, $p < .001$) and, like Ickes and Barnes (1978), a combination of instrumental (task-oriented) and expressive (people-oriented) behaviors.

Puglisi and Jackson (1980-1981) utilized a sample of 2069 individuals (approximately 50 percent women) who were between the ages of 17 and 89. Upon completing the Bem Sex Role Inventory (Bem, 1974) and a measure of self-esteem, androgynous subjects reported the highest levels of self-esteem, followed by those classified as masculine, feminine, and undifferentiated, respectively.

Stafford (1984) revealed females who viewed themselves

as involved in a career had higher levels of self-esteem than those who reported they had eight-hour jobs. Careerists had the least traditional attitudes toward women's roles in society as well. The youth of the participants (50 percent were under 35 years of age) and their high levels of education (54 percent had college degrees and 34 percent, advanced degrees) may have contributed to the results of this research.

In a nonrandom study of 106 undergraduate and graduate nursing students, Minnigerode, Kayser-Jones, and Garcia (1978) found that subjects identified the "ideal nurse" as androgynous, rather than stereotyped as masculine or feminine. Since Spence et al. (1979) reported a trend between psychologically androgynous individuals and self-esteem, it might be concluded that the ideal nurse identified in the Minnigerode et al. (1978) study would exhibit high levels of self-esteem and feminine or masculine behaviors appropriate to the situation.

Bem (1977) examined the relationship between self-esteem and sex role attitudes in a sample of 665 male and female college students. Androgynous and masculine-typed individuals scored higher on measures of self-esteem than did undifferentiated or feminine-typed individuals. In this laboratory experiment, the author concurred with the findings of Spence et al. (1975). In a critique of Bem's (1977) research, Kelly and Worell (1977) explored the possibility that the propensity for feminine-typed individuals to score low on measures of

self-esteem might be due to their receiving few intrinsic or extrinsic reinforcements. According to these authors, the behaviors of feminine-typed people were not as socially valued as the behaviors of androgynous or masculine-typed persons. Therefore, the results of this research indicated that individuals who had androgynous sex role orientations received more positive feedback and societal reinforcement of their behaviors which resulted in higher self-esteem.

Meleis and Dagenais (1981) found the sex role orientations of 163 nursing students to be feminine-typed and inversely correlated with self-esteem ($r = -.42$, $p < .05$). This finding is in agreement with the previously cited research that individuals with androgynous and masculine-typed sex role orientations had higher levels of self-esteem.

In an attempt to empirically investigate the relationship of androgyny and psychological state, Lubinski, Tellegen, and Butcher (1983) found no support for androgyny as an interaction of the masculine and feminine types identified by Bem (1977). Instrumentality, masculine-type behaviors valued by society, was found to be weakly correlated to psychological well-being in 172, college-age men and women. These findings disagree with those of Gilbert (1981) who advocated androgyny as a paradigm of mental health.

The findings of the research by Millard and Smith (1985) denoted an incongruency between the perceived and actual leadership behaviors of women managers. Due to

feelings of powerlessness in their respective organizations, females perceived themselves as being more behavior-oriented leaders. However, they exhibited task-oriented leadership styles even in situations where they were not warranted, behaviors which demonstrated low levels of self-esteem.

In a 1985 study by Liden, women employees expressed preferences for male, rather than female bosses. The authors implied that these workers had low levels of self-esteem which they subsequently projected onto their women managers, a process which made them view the bosses as ineffective.

A recent study by Lundy and Rosenberg (1987) demonstrated that higher levels of self-esteem were related to traits frequently believed to be masculine, but which were gender-neutral (androgynous). Examples of these dispositions were "self-reliant" and "individualistic". These researchers used the Coopersmith Self-esteem Scale (Coopersmith, 1967) and the Bem Sex Role Inventory (Bem, 1974) in their study of 91 males and 103 females.

Similar results were obtained by Keith (1988). In a sample of 181 female college students, individuals with androgynous sex role orientations were found to have the highest levels of self-esteem. Keith suggested that higher levels of self-esteem psychologically aided the women in choosing a more nontraditional, androgynous sex role. In contrast, Hall, Durborow, and Progen (1986) had reported that androgynous female athletes ($N = 75$) did not exhibit

higher levels of self-esteem.

Conflicting results and the lack of studies incorporating more advanced statistical techniques such as multiple regression and path analysis indicate further study of the association between sex role orientation and self-esteem is indicated. The majority of the research in this area has utilized convenience samples of college students, making it difficult to generalize to other groups, as there is a paucity of research on women of different ages.

Tenure and Self-Esteem

The early work adjustment experience may effect the self-esteem of workers (Romzek, 1984). Findings differ as to the time within careers that increased or decreased self-esteem occurs or whether levels actually do change.

Banfield (1976) reported women in businesses developed masculine or androgynous sex role orientations, as they gained tenure as managers. Self-esteem increased with tenure as well in the sample of 27 female middle managers. Romzek (1984) investigated the early socialization of 345 professional level federal workers in 4 federal agencies. The findings revealed that the self-esteem (measured by the Rosenberg Self-Esteem Scale) of employees with less than 2 years tenure were influenced by work experience ($R^2 = .20$ $p < .01$). The more positive the experience was perceived by them, the higher their levels of self-esteem. The results implied that self-esteem is susceptible to influence in the early stages of organizational employment.

Deaux (1979), studied the differences between job-related characteristics and successful and unsuccessful job experiences of 70 male and 64 female managers. Tenure was inversely related to a high level of self-esteem, identified as a facet of self-attributed abilities. These studies indicate that no conclusive explanations have been found concerning tenure and self-esteem. How and when self-esteem changes over careers has not been established though studies suggest that the self-esteem of working individuals may vary throughout their careers.

Tenure and Work Satisfaction

There are contradictions in research examining the relationship between tenure and work satisfaction. Some studies proposed that satisfaction with work was congruent with increased tenure. Others found the reverse, and additional authors have suggested that work satisfaction varies during different stages of a career within an organization. Whether the relationship is direct or indirect has been confusing as well.

Keller's (1984) findings of 195 employees in business with an average tenure of four years indicated that tenure in organizations was positively related to job satisfaction ($r = .15$, $p < .05$). In a similar study, Blau (1981) found job dissatisfaction negatively related to length of service in a nonrandom, convenience sample of 166 employees ($r = -.22$, $p < .01$). Of the participants, 63 percent had less than five years of service.

In a large ($n = 1707$) sample of county and state

employees, Lee and Wilbur's (1985) findings agreed with those of Bartol (1979) and Blau (1981). Younger employees were less satisfied with the intrinsic characteristics of their jobs, such as supervision, while older employees viewed extrinsic features like pay as more satisfying. Bullen and Martin (1987) examined accountants and discovered that staff with two to four years of tenure felt the greatest job dissatisfaction. Females were less satisfied than men with promotion and advancement policies. Therefore, in this study the middle-tenured group was least satisfied.

In a study of nurses, Hinshaw et al. (1987) reported tenure weakly related to professional, rather than organizational satisfaction and only in baccalaureate-prepared nurses. Average length of service for these individuals was five years.

Mottaz (1988a) examined 312 nurses and other workers. Findings indicated work satisfaction was lower in nurses than in the other groups, but increased with length of time on the job. A major problem in generalizing to nurses from this study lies in some of the nonprofessional subjects chosen for inclusion. No averages for tenure were presented.

Choi, Jameson, Brekke, Anderson, and Podratz (1989) used path analytic techniques to explore job satisfaction and tenure in 782 hospital employees (two-thirds registered nurses). Tenure had a strong direct and negative effect on job satisfaction (beta coefficient = $-.87$, $p < .001$). In

contrast to the previous studies cited, those with more tenure (median time 4 to 6 years) were less satisfied with their jobs.

The findings investigating the relationship of these variables is perplexing. Choices of samples make generalization to registered nurses difficult and indicate a need for further exploration. In addition, the studies found have not demonstrated the relationship between work satisfaction in people with more tenure.

Tenure and Organizational Commitment

Various relationships between organizational commitment and tenure have been identified in the following studies. Intent to leave is viewed as a component of organizational commitment by some of the researchers and as a separate entity by others.

Arnold and Feldman (1982) studied 654 accountants who had an average tenure of five years. Findings demonstrated a negative association between tenure and intent to search for alternatives ($r = .13, p < .05$). Similar results were established in a correlational study. Stumpf and Dawley (1981) compared newly-employed bank tellers with those who had more tenure ($N = 354$). Employees with more tenure had less intent to leave the organization.

In another sample of accountants, Bullen and Martin (1987) determined those with tenures of two to four years expressed the strongest turnover intentions. Accountants with less than two years were the next group with intense leaving intentions, and individuals with five to seven

years tenure had the least intentions of quitting.

Mitchel (1981) investigated 776 managers in business with an average tenure of 7 years. The project was designed to test the Mobley, Griffith, Hand, and Meglino (1979) Turnover Model. Tenure was found to be more strongly related to turnover than job satisfaction but less strongly than intent to leave, results which supported the model. Those with more tenure had less intent to leave. Zahra (1984) studied 114 business employees, using the Organizational Commitment Questionnaire (Porter & Smith, 1970) and found tenure in the organization (on the average, tenure with the company was 12.8 years) positively related to commitment ($r = .29, p < .01$). Tenure in current job was positively related as well ($r = .18, p < .05$). Reichers (1986) utilized the Organizational Commitment Questionnaire (OCQ), and found tenure unrelated to organizational commitment, a result contrary to the previous studies and perhaps due to the average age of the respondents (less than 30 years of age). Another investigation (Luthans, Baack, & Taylor, 1987), used the OCQ as well while examining 406 individuals in business and health agencies. Demographic variables, including organization and position tenure, age, education, time with current supervisor, and supervisors' positions explained 89 percent of the variance.

In a project investigating 1385 employees (349 professionals including registered nurses, elementary, and university teachers), Mottaz (1988b) reported a positive

relationship between tenure and organizational commitment.

Price and Mueller (1981a) proposed a multistaged, causal, recursive model they tested on 1091 nurses in 7 hospitals. They found a small, positive relationship between tenure and intent to stay. In this study, intent to stay was viewed as a dimension of organizational commitment. In similar research, Werbel and Gould (1984) determined through multiple regression that organizational commitment was negatively related to nurses with more tenure ($N = 212$). The findings suggested that newly-hired individuals were less committed than more tenured employees.

Ferris and Rowland (1987) studied 81 hospital nurses. Results of regression analysis, results indicated low tenured employees, absent more often, were less inclined to leave ($r = .30, p < .05$). Highly tenured individuals who were absent more frequently had stronger intentions of leaving ($r = .28, p < .05$). The authors speculated that absence in low tenured nurses served as a method of dissipating work pressures that might otherwise have precipitated turnover. People with more tenure and intent to leave experienced greater job dissatisfaction, resulting from decreased group cohesiveness, lower group communication, and increased task specialization. Tenure working for a particular supervisor, rather than organizational tenure, explained more of the variance.

Results of studies of tenure and organizational commitment differ in determining the amount of service that

is connected with increased turnover intentions. Further study of these variables is indicated.

Self-Esteem and Work Satisfaction

Individual dispositions are reclaiming a place in examinations of organizational behavior due to the inability of many studies, based entirely on situational factors, to explain job satisfaction/dissatisfaction (Schneider, 1983). A study of 642 nonsupervisory employees supported this notion (James & Jones, 1980). Findings indicated individual traits such as self-esteem were indirectly associated with job satisfaction, but modified by job perceptions. Those with high self-esteem were more satisfied. Howell et al. (1987) studied a nonrandom sample of managers in business ($n = 2000$), and obtained results similar to those of James and Jones. An indirect relationship between self-esteem and job satisfaction existed, modified by job stress.

Adler (1980) determined that 110 working, business students with high self-esteem attributed job satisfaction to internal, rather than external causes. In addition, these individuals differentiated more between satisfaction and dissatisfaction. A correlational study of 497 professionals by Brief et al. (1988) revealed low self-esteem to be negatively related to overall job dissatisfaction ($r = -.38, p < .01$).

Callahan and Kidd (1986) investigated 78 women in clerical jobs. Those females more satisfied with their jobs had higher levels of self-esteem. They were found to

be more personally open and adaptive than women with low self-esteem. Individuals with lower levels were less satisfied with their positions, overly self-critical, had poorer social adaptation, and possessed greater feelings of inferiority. A similar study of 474 female, college graduates determined that women more satisfied with their work experienced higher levels of self-esteem than those who were dissatisfied. Individuals whose present and preferred occupations were congruent had higher self-esteem as well (Stafford, 1984).

Researchers have explored the connection of self-esteem and work satisfaction in nurses. Packard and Motowidlo (1987) found nursing personnel (84 percent were registered nurses) who were depressed, with accompanying low self-esteem, less satisfied than those who did not report depression. Norbeck (1985) revealed distressed individuals experienced lower job satisfaction ($r = -.22$, $p < .001$). This relationship was evident even when work experience and shift work were controlled.

Direct and indirect relationships between self-esteem and work satisfaction have been demonstrated. In addition, studies have utilized concepts similar to self-esteem or believed to contain a self-esteem component, rather than measuring the concept directly. Therefore, further examination of these variables is indicated to explore how differing levels of self-esteem influence satisfaction with work.

Work Satisfaction and Organizational Commitment

The relationship between work satisfaction and organizational commitment has been included in a multitude of studies, though results have differed. Organizational commitment has included intent to stay/leave or has been viewed as a separate component. Using data from five investigations that had tested the Mobley, Horner, and Hollingsworth (1978) Turnover Model, researchers found that intention to quit was the immediate precursor of turnover. However, an indirect and negative relationship existed between job satisfaction and intent, modified by thinking of quitting (Dalessio, Silverman, & Schuck, 1986). The findings of Arnold and Feldman (1982) found an inverse association between job satisfaction and intent to search, rather than intent to leave in a study of 654 accountants ($r = -.55$, $p < .001$). In other studies of accountants, Keller (1984) and Bullen and Martin (1987) reported similar results.

In contrast, Hendrix et al. (1985) revealed a direct, negative relationship between job satisfaction and intent to quit ($r = -.44$, $p < .05$). The connection accounted for 20 percent of the variance in a study of the behavioral consequences of stress. Harrell and Stahl (1984) found a direct relationship as well in their study of vertical dyads of female employees and their supervisors. Extending these findings, Lee and Mowday (1987) disclosed that job satisfaction, organizational commitment, and job involvement explained a large part of the incremental

variance in intention to leave. In a study of accountants, Norris and Niebuhr (1984) used analysis of variance techniques to determine that individuals more satisfied reported higher organizational commitment, therefore fewer intentions of leaving ($r = .67$, $p < .001$). Burke and Greenglass (1988) found people who hoped to promote social change through their work more dissatisfied with greater intentions of leaving than those with other career orientations. Subjects more involved in family and social life, rather than work life, comprised the second least satisfied group with greater turnover intentions.

In an attempt to determine if work satisfaction was an antecedent or consequence of organizational commitment, DeCotiis and Summers (1987) investigated 367 employees. Results indicated that satisfaction with work preceded commitment and explained approximately 46 percent of the variance. Reichers (1986) found work satisfaction highly correlated with organizational commitment ($r = .66$, $p < .001$) in a sample of 252 mental health clinic workers. In another study of 319 human service employees (70 percent female with 44 percent possessing graduate degrees), Glisson and Durick (1988) reported a strong relationship between work satisfaction and organizational commitment ($r = .64$, $p < .001$). A weaker relationship was reported by Zahra (1984) in a study of 114 business people ($r = .26$, $p < .01$). Somewhat stronger results were found by Sager and Johnston (1989) when 132 salespeople were investigated ($r = .51$, $p < .05$). Meyer, Paunonen, Gellatly, and Goffin

(1989) investigated affective commitment in which employees (45% women) remained with an organization because they wished to and continuance commitment, described as individuals staying in the same company because they perceived leaving would be costly to them in some manner. When age, organizational and job tenure were controlled for, both affective and continuance commitment were positively related to work satisfaction ($r = .58, p < .01$, and $r = .27, p < .05$, respectively).

In newly hired employees (39 percent women), Colarelli, Dean, and Konstans (1987), revealed as well that work satisfaction and organizational commitment were positively related ($r = .72, p < .01$). Situational variables such as autonomy, feedback, and context of jobs explained more of the variance in satisfaction with work than did personal characteristics such as socioeconomic status, cognitive ability, college grade point average, or desires to achieve a position in the highest levels of the company.

Komoski and Calkin (1986) were among the investigators of intent to stay and work satisfaction in nurses. In an analysis of 214 nurses working in 24 critical care units in 12 urban hospitals, these researchers determined a small negative association between the two variables.

Others reported similar results in studies of nurses (Choi et al., 1989; Jackson, 1983; Lyon & Ivancevich, 1978; Price & Mueller, 1981a; Weisman, Alexander, & Chase, 1981). In 1984, Hom, Griffith, and

Sellaro used path analysis to demonstrate a moderate negative relationship (beta coefficient = $-.31$, $p < .05$) between job satisfaction and intent to quit, mediated by nurses' comparisons of present jobs with alternative positions.

Hinshaw et al. (1987) studied 1597 nursing staff members in 15 hospitals. For baccalaureate-prepared nurses, intent (anticipated turnover) was moderately predicted by organizational job satisfaction, group cohesion, and initial expectations of turnover. Only organizational and professional job satisfaction predicted intent to leave in diploma nurses.

Curry et al. (1985) separated intent to leave from organizational commitment in their study of nursing department employees (629 registered nurses). An inverse relationship (beta coefficient = $-.344$, $p < .001$) was found via path analysis to exist between intent to leave and work satisfaction. A positive association was determined for organizational commitment and work satisfaction (beta coefficient = $.359$, $p < .001$). Similar results were found in an investigation of workers in an urban, community health center (Michaels & Spector, 1982).

The results of the association between job satisfaction and organizational commitment are mixed, even in samples of one group such as nurses. Further study is indicated to examine how satisfaction with work influences individuals' commitments to the organizations in which they are employed.

Summary

Findings have been mixed in the studies reviewed, compounding the lack of clarity between the variables. Negative and direct relationships have been found between work stress and organizational commitment (Arnold & Feldman, 1982; Bhagat et al., 1985; Burke & Greenglass, 1988; Jackson, 1983; Jamal, 1987; Sepic, 1986; Spector et al., 1988). Others have reported negative and indirect associations (Hendrix et al., 1985; Hinshaw et al., 1987). Though an inverse association has usually been determined between work stress and satisfaction with work, studies have used heterogeneous samples and dissimilar methods of viewing the components of stress in work situations.

A negative relationship between work stress and self-esteem has been disclosed (Brief et al., 1988; Howell et al., 1987; Mossholder et al., 1981). Depression, with an accompanying low self-esteem dimension, and the relationship to work stress was reported by some researchers (Lowe & Northcott, 1988; Motowidlo et al., 1986; Packard & Motowidlo, 1987; Revicki & May, 1989). Still others examined burnout, hardiness, distress, and interpersonal relationships (all with a low self-esteem element) and work stress (McCranie et al., 1987; Norbeck, 1985; Parasuraman et al., 1982). Results of studies between sex role orientation and self-esteem have ranged from an androgynous orientation related to high self-esteem (Spence et al., 1975) to no association

(Lubinski et al., 1983).

The same confusing results were found between tenure and self-esteem where increased tenure was positively related to high self-esteem (Banfield, 1976), low tenure equaled high self-esteem (Romzek, 1984), and more tenure meant low self-esteem (Deaux, 1979). Tenure, work satisfaction, and organizational commitment findings were just as bewildering.

The reported studies found work stress modifying the relationship between self-esteem and work satisfaction (Howell et al., 1987; Mossholder et al., 1981). All others found that either high self-esteem was related to increased job satisfaction or low self-esteem was associated with more work dissatisfaction.

Most of the studies cited found direct and negative relationships between job satisfaction and organizational commitment. However, indirect connections were reported as well by Dalessio et al. (1986) and Arnold and Feldman (1982). Some research investigated organizational commitment and intent as separate components (Curry et al., 1985; Michaels & Spector, 1982).

There is a dearth of investigations exploring and potentially linking work stress, sex role orientation, tenure, self-esteem, work satisfaction, and organizational commitment in nurses. These variables have been examined in many different populations, but the studies cited have not demonstrated a connection among them, self-esteem, and sex role orientation. These latter concepts may be

important to a profession composed primarily of women. Samples in several studies combined genders, making generalization difficult to either males or females. A compilation of the studies supporting the relationships in the theoretical model is presented in Appendix A.

Chapter 3
Methodology
Design

A correlational design using a path analytic method proposed that the exogenous variables, work stress (X_1), sex role orientation (X_2), and tenure (X_3) in the first time ordering would directly influence the endogenous variables, self-esteem (X_4) in the second time ordering, work satisfaction (X_5) in the third time ordering and subsequently organizational commitment (X_6) in the fourth (see Figure 1). The model was applied to the sample in order to determine variance explained in the outcome variable (X_6) by the predictor variables (X_1, X_2, X_3, X_4, X_5).

Structural Equations

The pathways (P), the measurement errors (e) in the proposed, overidentified model, and the influences on the exogenous variables are structurally represented as follows:

Work stress

$$X_1 = e_1$$

Sex role orientation

$$X_2 = e_2$$

Tenure

$$X_3 = e_3$$

Self-esteem

$$X_4 = P_{41}X_1 + P_{42}X_2 + P_{43}X_3 + e_4$$

Work satisfaction

$$X_5 = P_{51}X_1 + P_{53}X_3 + P_{54}X_5 + e_5$$

Organizational commitment

$$X_6 = P_{61}X_1 + P_{63}X_3 + P_{65}X_5 + e_6$$

Sample

A total sample of 143 respondents were utilized for this investigation. Subjects were female registered nurses who worked full-time on all shifts in a large, nonprofit, urban hospital in the Southwest. A full-time staff nurse was defined by the hospital as one who worked either 40 hours during 5 days or 12 hours for 3 days. Individuals were recruited from every unit represented in the agency. Nurses working in outpatient and home health areas were asked to participate as well. Charge nurses were included in the sample as they frequently functioned as staff nurses. However, those active in managerial or clinical specialist roles were omitted as were male nurses. There were 143 responses with usable data sets from the total 583 subjects, indicating a 25% return rate.

The ages of the subjects ranged from 23 to 62, with a mean of 36 years ($SD = 11.06$). Approximately 29% reported the highest degree held was an associate, 24% were diploma nurses, 43% were prepared at the baccalaureate level, 2% had master's in nursing degrees, and the remainder (2%) possessed bachelor degrees in fields other than nursing. Subjects indicated an average of 13 years ($SD = 9.61$) since

obtaining their highest degrees. Forty-six percent were either enrolled in or considering enrolling in a program to obtain an advanced degree.

Length of employment in the hospital ranged from less than 1 year to 35 years, with a mean of approximately 9 years ($SD = 7.31$). Subjects had worked in their present units for nearly 5 years ($SD = 4.30$) and for their current supervisors for 2 years on the average ($SD = 2.03$). When asked the highest degree held by those supervisors, respondents indicated 46% possessed baccalaureates in nursing, while 24% were prepared at either the associate or diploma levels. Eight percent of the supervisors' highest degrees were master's in nursing. Nearly 22% of the respondents did not respond or know what degree was held by their supervisors.

The majority of subjects worked as primary care nurses (58%) in either medical-surgical (18%) or intensive care units (21%). Others (17%) worked in psychiatric, home health, outpatient or speciality areas, 21% in obstetrics/gynecology or pediatrics, and 17% in either the operating, recovery, or emergency rooms.

Of those subjects who worked 8-hour shifts, 45% worked days, 9% worked evenings, and 8% were on nights. Approximately 30% reported their usual shifts were 12-hour, either days or nights. Eight percent worked other hours. Few worked extra for outside agencies (18%), and those who did averaged 4 hours ($SD = 11.21$) per month.

Nearly 55% of the respondents were married and the remainder were single, divorced, or widowed. The average number of children was slightly more than 1 ($SD = 1.60$), and the number of dependents supported was less than 1 ($SD = 1.18$).

When asked if they would again choose nursing as a career, 42% responded negatively. Those who indicated they would choose another field of work, primarily specified careers not connected with health care such as business, law, forestry, and interior design. Only 2 individuals of those who would not become a registered nurse again indicated they would be full-time homemakers. Sixty-seven percent of the subjects reported they had mothers who worked outside the home though most (77%) worked less than 40 hours weekly. Fewer than 1% indicated their mothers were registered nurses.

Data Collection Procedure

During a telephone call to the chairperson of the agency's nursing research committee, a request was made to conduct the project in the hospital, a 500-bed, multiservice organization, representative of the educational and age mix of registered nurses present in other acute care agencies in the same locale. A letter was sent as well to the vice president of nursing, outlining the planned research (see Appendix B).

The University of San Diego Committee on the Protection of Human Subjects (see Appendix C), and the agency's nursing research committee approved the research

proposal. A contract was signed by the agency and the researcher (see Appendix D). Six hundred and eighty research packets were prepared, containing the questionnaires, instructions, a consent form (see Appendix D), and a self-addressed stamped return envelope. The packets bearing each nurse's name were distributed to the individual's mailbox or placed in the room utilized to give intershift reports, for nurses to obtain when they were working. The instructions directed participants to remove the name labels from the envelope containing the research materials before completing, sealing, and placing them in boxes on the unit or in the nursing administration office. Consent forms were sent separately in the self-addressed stamped envelope to the researcher. Collections of the packets by the researcher took place over a three-week period. Initially, 680 packets of questionnaires were distributed to the nursing units. Due to vacations, leave of absences, transfers, and terminations, 583 individuals were available to participate in the study. The packet was returned by 143 nurses for a response rate of 25%.

Instrumentation

For this study, seven instruments and a demographic questionnaire were utilized. A summary of the instrumentation is provided in Table 1.

Nursing Stress Scale(NSS)

The NSS (Gray-Toft & Anderson, 1981b) is a 34 item, multidimensional tool measuring frequency of stress

Table 1

Summary of Instrumentation

Concept	Measures	Reference	Validity	Reliability
1. Work Stress	Nursing Stress Scale (NSS)	Gray-Toft and Anderson, 1981b	Content Convergent Discriminant	* @ .89 test-retest .81
	<u>Dimensions:</u> Death and Dying Conflict With Physicians Inadequate Preparation Lack of Support Conflict With Other Nurses Work Load Uncertainty Concerning Treatment			@ .83 @ .72 @ .42 @ .65 @ .86 @ .74 @ .68
2. Sex Role Orientation	Bem Sex Role Inventory (BSRI)	Bem, 1974	Content Convergent	@ .86
	<u>Dimensions</u> Masculine Feminine			@ .86 @ .80
3. Tenure	Nursing Turnover Questionnaire	Price and Miller, 1981	Content	_____
4. Self-Esteem	Rosenberg Self-Esteem Scale	Rosenberg, 1965	Convergent Discriminant Predictive	Test-retest .85

(Table continues)

Table 1 (continued)
Summary of Instrumentation

Concept	Measures	References	Validity	Reliability
5. Social Desirability	Crowne & Marlowe Social-Desirability Scale	Crowne & Marlowe, 1964	Content	Kuder-Richardson-20 .88 Test-retest .88 @ .70 -.90 Kendall's Tau .86-.92
6. Work Satisfaction	Index of Work Satisfaction (IWS) <u>Dimensions:</u> Pay Autonomy Task Requirements Organizational Policies Professional Status Interactions Physician-Nurse Interactions Nurse-Nurse Interactions	Stamps & Piedmonte, 1986	Content Construct	@ .80 @ .68 @ .70 @ .78 @ .77 @ .80 _____ _____
7. Organizational Commitment	Organizational Commitment Questionnaire	Porter & Smith, 1970	Content Convergent Discriminant	@ .90

*@ = Cronbach Alpha Coefficient

experienced by nurses in the hospital environment (see Appendix F). The measure consists of 7 subscales: death and dying, conflict with physicians, inadequate preparation, lack of support, conflict with other nurses, work load, and uncertainty concerning treatment, with alphas ranging from .65 to .80 (overall alpha of .89). A test-retest correlation over 4 weeks was .81. Job stress is defined as an internal cue in the physical, social, or psychological environment that threatens the equilibrium of an individual. A Likert-type response format of 0 (occasionally) to 3 (very frequently) is utilized. Content validity was established through a panel of expert judges. Convergent validity with the IPAT Anxiety Scale was .39 and .35 with the Affect Rating Scale. Discriminant validity with the Work Subscale of the Job Description Index was -0.15. Scoring is achieved by summing the responses.

Bem Sex Role Inventory (BSRI)

The BSRI was developed by Bem (1974) to measure the dimensions of masculinity and femininity. This instrument (see Appendix G) consists of twenty adjectives describing masculine personality characteristics and twenty items describing feminine. Twenty neutral characteristics serve as filler items. Subjects respond by answering a Likert-type scale from 1 (never or almost never true) to 7 (always or almost always true), which measures the frequency subjects believe characteristics describe themselves (Bem, 1977). Sex role orientation is a

characterization of individuals as masculine, feminine, or androgynous in their perceived view and endorsement of the masculine or feminine personality characteristics in themselves. Four sex role orientations are possible: masculine (high masculine-low feminine), feminine (high feminine-low masculine), androgynous (high masculine-high feminine), or undifferentiated (low masculine-low feminine). Reliability has been established (alpha of .86). Content validity has been determined by a panel of expert judges. Convergent validity was obtained with the Masculinity-Femininity scales of the California Psychological Inventory. Discriminant validity was determined with the Zimmerman Temperament Survey, yielding low to moderate correlations.

Scoring is controversial for this instrument. According to Sedney (1981), the process is best achieved to obtain continuous data by performing a t-test to determine 2 groups, those sex-typed and those nonsex-typed (sex-typed means those individuals whose feminine and masculine scores are significantly different). Androgynous individuals are those whose feminine and masculine scores fall above the scale midpoint and undifferentiated, those whose scores fall below the scale midpoint. This allows subjects whose femininity and masculine scores are significantly different to remain labeled as either feminine or masculine sex-typed. When regressing, each group is then considered separately in conjunction with the other variables in the path model. The author of the instrument has utilized this

procedure as well (Bem, 1977). However, Spence and Helmreich (1979) and Blackman (1985) studied differing continuous scoring methods and concluded that there is little difference between the processes, and advocate using individuals' masculine and feminine scores as continuous data to maximize variance, the method used in the current study.

Tenure

Tenure was determined by one item in the Demographic Questionnaire (see Appendix H) that requested that participants state the total length of time in months they had been employed in their current organization in any capacity (Price & Mueller, 1981a).

Rosenberg Self-Esteem Scale

The Rosenberg (1965) Self-Esteem Scale (see Appendix I) is a 10 item, unidimensional scale measuring the self acceptance facet of self-esteem. Response alternatives are scored on a Likert-type scale, ranging from 1 (strongly agree) to 4 (strongly disagree). Scores are summed with higher scores indicating high self-esteem (Breytspraak & George, 1982). Silber and Tippet (1965) found a test-retest correlation over two weeks of .85 in a sample of 44 high school students. Convergent validity with Coopersmith's Self-Esteem Inventory was .59, and discriminant validity with stability of rating others and of perceptual performance were nearly zero. Predictive validity was established when the scale was compared to instruments of depression, assertiveness, and shyness.

Rosenberg normed the instrument on 3024 high school students. Self-esteem is defined as the degree to which individuals accept themselves.

Social Desirability Scale

The Social Desirability Scale (Crowne & Marlowe, 1964) is a 33 item, unidimensional tool that measures individuals' attempts to describe themselves in socially desirable terms (see Appendix J). Social desirability is defined as trying to achieve the approval of others. Content validity was established by a panel of expert judges. Internal consistency (Kuder-Richardson 20) was determined to be .88 and a test-retest correlation (one month, N = 57 college students) was .88 as well. Scoring is obtained by keying 18 items as true and 15 as false. Scores may range from 0 (no social desirability) to 33 (highest social desirability). Brockner (1988) advocated using this scale in conjunction with measures of self-esteem to differentiate between individuals with truly high self-esteem and those who report high self-esteem in order to achieve the approval of others. Hewitt and Goldman (1974) reported inverse correlations between self-esteem and social desirability scores for individuals with truly high self-esteem.

Index of Work Satisfaction (IWS)

The IWS is a multidimensional, tool assessing the relative importance of various components of work satisfaction and attitudes toward these elements (see Appendix K). Work satisfaction is defined as individuals'

expectations (Part A) and attitudes (Part B) about their positions, represented by six subscales: pay, organizational policies, interaction, professional status, task requirements, and autonomy with alphas ranging from .68 to .80 (overall alpha of .70-.90). Fifteen paired comparisons of each of the 6 components measure work expectations and 44 items with a Likert-type scale of 1 (disagree) to 7 (agree) measure the degree to which the subjects are currently satisfied with their positions. A weighted score is calculated for the paired comparisons section, while a summary value is obtained from the attitude portion. Both are then used to obtain an overall index of subjects' expectations and current satisfaction with work. Indexes for each component and for the group as a whole can be calculated. Dimensions are ranked according to scores from each part of the scale to demonstrate the respondents' work expectations in relation to their current satisfaction with work. Greater differences in rankings between the two parts identify areas for change in the working environment. The physician-nurse and nurse-nurse subscales of the interaction component can only be computed for current satisfaction.

Content validity was established through a paired comparisons technique, while construct validity was determined by factor analysis (Stamps and Piedmont, 1986) Cronbach alpha and Kendall's tau (between the weighted first section and unweighted second) reliabilities for the current study were, respectively: overall .72 (Cronbach

only); pay, .79 and .99; organizational policies, .71 and .98; interaction, .78 and .99; professional status, .44 and .97; task requirements, .62 and .98; and autonomy, .76 and .98. Current study reliabilities for each dimension as well as inter-item and item-total correlations are depicted in Table 2.

Organizational Commitment Questionnaire

The Organizational Commitment Questionnaire (Porter & Smith, 1970) is a 15 item, unidimensional instrument. It measures an individual's strength of involvement and identification with a specific organization (see Appendix L). This commitment involves the three factors of a belief/acceptance of organizational goals and values, striving via work to further these aims, and intentions of remaining as a member of that particular organization. Alphas range from .82 to .93 (median .90). Mowday, Steers, and Porter (1979) established test-retest reliability of .72 at 2 months and .62 at 3 months. Convergent validity was established using Dubin's (1956) measure of Central Life Interests. Discriminant validity was obtained through comparison with the Minnesota Satisfaction Questionnaire. The scoring format is a Likert-type scale ranging from strongly disagree (1) to strongly agree (7). Scoring is achieved by summing the item scores to achieve a mean, then summing the means to obtain an overall individual score.

Table 2
Current Study Reliabilities, Inter-item, and Item-total Correlations for
Index of Work Satisfaction (Expected and Current).

Name of Subscale	Mean Inter-item Correlation	Item-total Correlation Range	Standardized Alpha (Cronbach)	Kendall's Tau
Pay	.41	.44-.70	.81	.99
Autonomy	.28	.41-.59	.76	.98
Task Requirements	.18	.36-.61	.58	.98
Organizational Policies	.26	.34-.54	.71	.98
Professional Status	.14	.17-.47	.44	.97
Interactions	.28	.29-.57	.78	.99

Demographic Questionnaire.

A demographic questionnaire was developed. The items consisted of education, years since graduation from basic program, year of birth, type of patient unit worked, nursing delivery system, marital status, number of dependents, outside work, and shift worked. Mother's work experience, choice of nursing career, and advancing or intending to advance their level of education were included as well as supervisors' educational preparation (see Appendix M).

Procedure for Data Analysis

Descriptive and correlational methods, using the Statistical Package for the Social Sciences Data Analysis System (SPSS-X, Inc., 1988), were utilized to analyze the data acquired from this investigation. Scattergrams were run as well, and used with the other techniques to determine normal linearity and distribution for all of the variables. In addition, data reduction, hypotheses testing, testing of statistical assumptions, and post hoc analyses were included in the analyses.

Data that was missing on each item, excluding responses to demographic questions, were replaced by the item's mean (see Table 3) to prevent loss of information (Decker, 1985). A correlation matrix was examined for multicollinearity of the independent variables. Residual scatterplots of endogenous variables and error terms were analyzed.

Table 3

Missing Cases on Variable Items Replaced by Mean

Variable	^a Items
Work Stress	1,4,6(3),8(3),9(2),12,13(2),15,17,19,20,25,27,31(3),32
Sex Role Orientation	1,14(3),20(2),22,23,36,38,39,40(2),60
Self-Esteem	1
Work Satisfaction	Part A (Expected Satisfaction) 8,9 Part B (Current Satisfaction) 8(2),33,34,35,39,40,41,42(2)
Organizational Commitment	1(2),2,3,4,5
Social Desirability	1,5,9,12,19,20,25,26,31(2),33

^aMissing cases = 1 unless otherwise indicated in parentheses

Groups with differing levels of education, workplaces, tenure, and sex role orientations were derived from the data, and regressions run on each to determine differences among them, in terms of the general model. In addition, differences among variables and the tenure, sex role orientation, level of education, and specific workplace groups were analyzed via MANOVAS.

Limitations

The main threat to the external validity is translation fidelity, because of the use of an accessible population of nurses working in one hospital in an urban area in a southwestern state. However, all units within the hospital as well as outpatient, mental and home health areas were utilized, thereby representing a cross-section of staff nurses working in the agency. External validity was limited in order to emphasize internal validity of the theoretically-derived model and the revised version. Other threats to internal or external validity will be discussed in later chapters.

Chapter Four

Results

Data Reduction

To determine the presence or absence of multicollinearity, variables were examined for a Pearson's correlation above the threshold of .70.(Asher, 1983). In Table 4, the bivariate correlations for all of the variables in the model are demonstrated. Only low correlations were present among the subscales for the Index of Work Satisfaction, indicating a multidimensional, rather than a unidimensional scale for this sample of nurses. Consequently, scores for the six subscales (pay, autonomy, task requirements, organizational policies, professional status, and interactions) were entered into the regressions, rather than the total score for the entire scale. The aggregate, weighted component scores were utilized in the analyses, however, so both the paired comparisons (expectations of satisfaction), and the attitude (current satisfaction) sections were represented. The interactions component of work satisfaction was utilized in the path analysis as one dimension. However, the physician-nurse and nurse-nurse interactions are discussed separately in later chapters.

Bivariate correlations of the Nursing Stress Scale

Table 4

Correlation Matrix for Variables in Model

Variable	SRO					WORK SATISFACTION							
	WS	FEM	MAS	TEN	SE	IWS	PAY	AUT	TR	OP	INT	PROF	OC
WS		-.10	-.01	-.08	-.10	-.47***	-.26***	-.36***	-.41***	-.34***	-.35***	-.15*	-.21**
<u>SRO</u>													
FEM			.06	.06	.31***	.08	-.19**	.10	-.01	.09	.18*	.12	.08
MAS				.05	.13	.05	-.04	.09	-.07	.08	.21**	.11	.20**
TEN					-.04	.09	.17*	.02	.04	.07	-.02	.02	.25**
SE						.15*	-.18*	.24**	.10	.08	.25**	.23**	.17*
<u>WORK SATISFACTION</u>													
PAY								.15***	.19***	.34***	.18*	.08	.37***
AUT									.43***	.62***	.55***	.27***	.44***
TR										.39***	.37***	.34***	.27***
OP											.49***	.30***	.52***
INT												.34***	.43***
PROF													.32***

Note: WS = Work Stress
 SRO = Sex Role Orientation
 FEM = Feminine Component, SRO
 MAS = Masculine Component, SRO
 TEN = Tenure
 SE = Self-Esteem

WORK SATISFACTION
 PAY = Pay
 AUT = Autonomy
 TR = Task Requirements
 OP = Organizational Policies
 INT = Interactions
 PROF = Professional Status

OC = Organizational Commitment

* $p < .05$ ** $p < .01$ *** $p < .001$

were in the moderate range (see Table 5), so the decision was made to use the total score in the regressions.

The masculine and feminine scores on the Bem Sex Role Inventory were treated as separate, continuous variables. Tenure was retained in the model as a single variable, as were self-esteem and organizational commitment.

Statistical Assumptions

Statistical tests conducted prior to path analysis, determined if the path assumptions of linearity, normality, and homoskedasticity were achieved. Residuals from each equation were examined for violations of statistical model assumptions, such as residual means of zero, normality, independence, linearity, and fixed independent variables. To insure nonviolation of the zero mean, summary statistics of the mean and the 95 percent confidence interval were examined for unstandardized residuals to determine if zero was crossed by the confidence interval. A relationship of the variable with the residuals (significant at .05 or less) established the statistically, relevant independent variable in the equation. A histogram to establish normality revealed residuals normally distributed about the mean (zresidual mean value equaled .00). Independence among residuals were supported via a significant Durbin-Watson test (2.12). Scatterplots indicated linearity in the model (Verran & Ferketich, 1987). A Cook's D test revealed four subjects' scores (± 3.00) as outliers (Tabachnick & Fidell, 1983). However, deletion of these values in further regressions did not

Table 5
Correlation Matrix for Nursing Stress Scale

Subscale	FAC1	FAC2	FAC3	FAC4	FAC5	FAC6	FAC7	TOTAL STRESS
FAC1		.57***	.50***	.43***	.43***	.35***	.52***	.75***
FAC2			.48***	.38***	.54***	.39***	.63***	.77***
FAC3				.49***	.43***	.40***	.58***	.70***
FAC4					.36***	.33***	.43***	.61***
FAC5						.48***	.63***	.77***
FAC6							.53***	.71***
FAC7								.83***

Note: FAC1 = Death and Dying	FAC5 = Conflict with Other Nurses
FAC2 = Conflict with Physicians	FAC6 = Workload
FAC3 = Inadequate Preparation	FAC7 = Uncertainty Concerning Treatment
FAC4 = Lack of Support	

p < .05 p < .01 p < .001

significantly increase common variance nor alter regression results previously obtained, perhaps because no trends existed and no scores which were outliers were common in each regression on the endogenous variables.

Path Analysis

Path analysis was used to define the complex relationships in the model and to test the hypotheses. Each endogenous variable was regressed on all other preceding it in the model in Figure 1. This procedure assumed a model in which all variables that preceded a particular factor in the causal sequence had effects on it. Standardized beta weights were used to estimate path coefficients, and were salient only if greater than .10, with probability levels of .05 (Munro, Visintainer, & Page, 1986).

Results by Hypotheses

All variables from the general model were retained in the revised model (see Figure 2) although the six dimensions of work satisfaction were utilized rather than the total score for the scale. The conceptual model presumed nine direct and nine indirect hypotheses, which will be presented and then discussed beginning with the first time-order.

Hypothesis 1 was not supported as work stress did not have a direct negative effect on organizational commitment.

Hypothesis 2 presumed a direct negative effect of work stress on work satisfaction as a unidimensional

Figure 2. Revised Causal Model Relating Organizational Commitment of Staff Nurses to Predictor Variables.

concept. When the six dimensions of work satisfaction were added to the model, this hypothesis was partially supported as work stress had a direct negative effect on five of the components: task requirements ($b = -.41, p < .001$), autonomy ($b = -.34, p < .001$), interactions ($b = -.32, p < .001$), pay ($b = -.28, p < .001$), and organizational policies ($b = -.34, p < .001$).

Hypothesis 3 was not supported as work stress did not have a direct negative effect on self-esteem.

Hypothesis 4 was partially supported. The masculine component of sex role orientation had a direct positive effect on self-esteem ($b = .29, p < .001$).

In addition, the masculine dimension had a direct negative effect on pay ($b = -.16, p < .05$).

Contrary to the proposed model, the feminine factor directly and positively effected the interactions component within work satisfaction ($b = .18, p < .05$).

Hypothesis 5 was supported as tenure had a direct positive effect on organizational commitment ($b = .19, p < .01$).

Hypothesis 6 was not supported as tenure did not have a direct positive effect on any of the six dimensions of work satisfaction.

Hypothesis 7 was not supported as tenure did not have a direct positive effect on self-esteem.

Hypothesis 8 was somewhat supported as self-esteem had a direct positive effect on three dimensions of work satisfaction: autonomy ($b = .20, p < .05$),

interactions ($b = .16, p < .05$), and professional status ($b = .20, p < .05$).

Hypothesis 9 was partially supported as two dimensions of work satisfaction had a direct positive effect on organizational commitment: pay ($b = .24, p < .01$), and organizational policies ($b = .26, p < .01$).

A total of nine indirect hypotheses were implied in the general model:

Hypothesis 1 was partially supported as work stress indirectly influenced organizational commitment through the work satisfaction components of pay and organizational policies.

Hypothesis 2 was not supported as organizational commitment was not indirectly influenced by work stress through self-esteem and work satisfaction.

Hypothesis 3 was somewhat supported as organizational commitment was indirectly influenced by the masculine component of sex role orientation through the work satisfaction dimension of pay.

Hypothesis 4 was not supported as organizational commitment was not indirectly influenced by tenure through self-esteem and work satisfaction.

Hypothesis 5 was not supported as organizational commitment was not indirectly influenced by tenure through work satisfaction.

Hypothesis 6 was not supported as organizational commitment was not indirectly influenced by self-esteem through the work satisfaction components.

Hypothesis 7 was not supported as work satisfaction dimensions were not indirectly influenced by work stress through self-esteem.

Hypothesis 8 was partially supported as the work satisfaction components of autonomy, pay, and interactions were indirectly influenced by the masculine dimension of sex role orientation through self-esteem.

Hypothesis 9 was not supported as work satisfaction was not indirectly influenced by tenure through self-esteem.

Collective Model

The coefficient of determination (R^2 or adjusted R^2 if significantly different) identified the proportion of variance of each criterion variable explained by predictor variables. The R^2 , adjusted R^2 , F values, and salient beta weights selected for the revised model are presented in Table 6. The masculine component of sex role orientation accounted for 9% ($F = 4.35$, $p < .01$) of the variance in self-esteem (adjusted R^2). For the work satisfaction dimensions, work stress explained 15% of the variance in task requirements ($F = 6.13$, $p < .001$); work stress and self-esteem determined 15% of the variance in autonomy ($F = 6.00$, $p < .001$); work stress, the feminine component of sex role orientation, and self-esteem accounted for 17% of the variance in interactions ($F = 7.02$, $p < .001$); work stress and the masculine component of sex role orientation explained 12% of the variance found in pay ($F = 4.92$,

Table 6

Standardized Beta Coefficients for the Revised Model

Variables	X ₄	X _{5A}	X _{5B}	X _{5C}	X _{5D}	X _{5E}	X _{5F}	X ₆
WORK STRESS X ₁		-.41***	-.34***	-.32***	-.28***	-.34***		
<u>SEX ROLE ORIENTATION</u>								
Feminine X _{2A}				.18*				
Masculine X _{2B}	.29**				-.16*			
TENURE X ₃								.19*
SELF-ESTEEM X ₄			.20*	.16*			.20*	
<u>WORK SATISFACTION</u>								
Task Requirements X _{5A}								
Autonomy X _{5B}								
Interactions X _{5C}								
Pay X _{5D}								.24**
Organizational Policies X _{5E}								.26**
Professional Status X _{5F}								
Organizational Commitment X ₆								
R ²	.11	.18	.18	.20	.15	.13	.08	.45
Adjusted R ²	.09	.15	.15	.17	.12	.10	.05	.40
F	4.35**	6.13***	6.00***	7.02***	4.92***	4.10***	2.34*	9.59***

* $p < .05$ ** $p < .01$ *** $p < .001$

$p < .001$); work stress determined 10% of the variance in organizational policies ($F = 4.10$, $p < .001$); and self-esteem accounted for 5% variance in professional status ($F = 2.34$, $p < .05$). The 40% variance in organizational commitment was explained by pay, organizational policies, and tenure ($F = 9.59$, $p < .001$).

The total effect of each variable causally prior to the outcome variable, organizational commitment, was decomposed into a direct effect and an indirect effect through variables that intervened between it and the last variable. A decomposition table, analyzing the total covariance (Column A) as well as the direct influences (Column B), indirect (Column C), total (Column D), and noncausal effects (Column E) was constructed (see Table 7). The total covariance was represented by the bivariate correlation, the direct effect consisted of the beta coefficient between the variables, the indirect effects were obtained by multiplying the beta coefficients, and the total effects equaled the direct plus the indirect influences. Noncausal effects were the result of subtracting the total effects from the total covariance. It is apparent from this effects analysis that the greatest indirect effects occurred in this model between work stress and organizational commitment. The second largest indirect effect was between the work satisfaction dimension of pay and work stress.

Table 7

Decomposition of the Effects of Variables Within Revised Model

Bivariate Relationship	Total Covariance	Casual Effects		Total Effects (B+C)	Non-Causal Effects (A-D)
		Direct Effects	Indirect Effects		
	(A)	(B)	(C)	(D)	(E)
Organizational Commitment (X ₆)					
X ₆ X _{5A}	.272***	.004	-.002	.002	.276
X ₆ X _{5B}	.435***	.119	-.026	.093	.342
X ₆ X _{5C}	.432***	.131	-.004	.127	.305
X ₆ X _{5D}	.368***	.243**	-.149	.392	-.024
X ₆ X _{5E}	.525***	.263*	-.040	.223	.302
X ₆ X _{5F}	.317***	.109	-.010	.099	.308
X ₆ X ₄	.174*	.100	-.007	.093	.081
X ₆ X ₃	.250**	.195*	-.005	.190	.060
X ₆ X _{2A}	.079	.112	.062	.174	-.095
X ₆ X _{2B}	.197**	.033	.045	.078	.119
X ₆ X ₁	.213**	.078	-.310	-.232	-.019
Professional ^a Status (X _{5F})					
X _{5F} X ₄	.223**	.199*	none	.199	.024
X _{5F} X ₃	.022	.018	-.007	.011	.011
X _{5F} X _{2A}	.022	.081	.022	.103	-.081
X _{5F} X _{2B}	.110	.003	.058	.061	.049
X _{5F} X ₁	-.148*	-.122	-.014	-.136	.012
Organizational ^a Policies (X _{5E})					
X _{5E} X ₄	.077	.021	none	.021	.056
X _{5E} X ₃	.070	.044	.001	.045	.025
X _{5E} X _{2A}	.094	.075	.002	.077	.017
X _{5E} X _{2B}	.085	.051	.006	.057	.028
X _{5E} X ₁	-.344***	-.336***	-.007	-.373	.029

(Table continues)

Table 7 (continued)

Decomposition of the Effects of Variables Within Revised Model

Bivariate Relationship	Total Covariance	Casual Effects		Total Effects (B+C)	Non-Causal Effects (A-D)
		Direct Effects	Indirect Effects		
(A)	(B)	(C)	(D)	(E)	
Pay (X_{5D}) ^a					
$X_{5D} X_4$	.571***	-.144	none	-.144	.715
$X_{5D} X_3$	-.175*	.133	-.178	-.045	-.130
$X_{5D} X_{2A}$	-.188***	-.021	-.034	-.055	-.133
$X_{5D} X_{2B}$	.041	.164*	.146	.310	.351
$X_{5D} X_1$	-.260***	-.280***	-.214	.474	-.734
Interactions (X_{5C}) ^a					
$X_{5C} X_4$	.246**	-.164*	none	-.164	.410
$X_{5C} X_3$	-.016	-.039	.126	.087	-.103
$X_{5C} X_{2A}$	-.180	.178*	.018	.196	-.376
$X_{5C} X_{2B}$	.205	.014	.046	.060	.145
$X_{5C} X_1$	-.345***	-.322***	-.011	-.333	.012
Autonomy (X_{5B}) ^a					
$X_{5B} X_4$	.244**	.201***	none	.201	.043
$X_{5B} X_3$	.017	-.006	.007	.001	.016
$X_{5B} X_{2A}$	.103	.064	.022	.086	.017
$X_{5B} X_{2B}$	.092	.001	.058	.059	.033
$X_{5B} X_1$	-.363***	-.343***	-.014	-.357	-.720

(Table continues)

Table 7 (continued)

Decomposition of the Effects of Variables within Revised Model

Bivariate Relationship	Total Covariance	Casual Effects			Non-Causal Effects (A-D)
		Direct Effects	Indirect Effects	Total Effects (B+C)	
	(A)	(B)	(C)	(D)	(E)
Task Requirements (X _{5A}) ^a					
X _{5A} X ₄	.103	.095	none	.095	.008
X _{5A} X ₃	.042	.013	-.014	.001	.041
X _{5C} X _{2A}	-.002	.081	.010	.081	-.083
X _{5C} X _{2B}	-.069	-.068	.028	-.040	-.029
X _{5C} X ₁	.410***	-.320***	-.007	-.313	.097
Self-Esteem (X ₄)					
X ₄ X ₃	-.040	-.034	none	-.034	-.006
X ₄ X _{2A}	.308***	.110	none	.110	.198
X ₄ X _{2B}	.127	.291**	none	.291	-.164
X ₄ X ₁	-.099	-.070	none	-.070	-.021

p < .05

p < .01

p < .001

^aIndicates Work Satisfaction Dimensions

Indirect pathways, beginning with the individual exogenous variables, are depicted in Appendix N. Means, ranges and standard deviations for model variables are presented in Table 8.

Self-esteem. In the first time ordering, work stress and tenure did not directly influence self-esteem as theorized in the general model. The masculine dimension of sex role orientation was the only exogenous variable with a salient beta coefficient ($.29, p < .001$) related to self-esteem, explaining 9% of the variance. A high total effect is depicted in the decomposition table for the masculine component of sex role and work stress.

Overall, the hypotheses in this time order were supported only by the masculine component of sex role orientation. No other relationship with self-esteem was evident.

Work satisfaction. Self-esteem, tenure, the masculine and feminine components of sex role orientations, and work stress were regressed on the six work satisfaction dimensions of task requirements, autonomy, interactions, pay, organizational policies, and professional status. Work stress was inversely and solely related to task requirements, accounting for 15% of the variance. Though the feminine dimension of sex role orientation and work stress explained 17% of the variance in the interaction factor of work satisfaction, work stress demonstrated the strongest effect ($b = -.32, p < .001$). Self-esteem and work stress accounted for 15% of the variance in the

Table 8

^aMeans, Ranges, and Standard Deviations for Variables within the Revised Model

Variable	Mean	Range	Standard Deviation
Work Stress	44.98	19-99	14.34
Sex Role Orientation			
Feminine	5.11	4-6	0.50
Masculine	4.91	3-6	0.68
Tenure	8.56	less than 1-35	7.31
Self-Esteem	34.32	20-40	4.69
Social Desirability	16.48	0-30	6.19
Work Satisfaction			
Pay	2.58	1-5	1.10
Professional Status	5.37	3-7	0.74
Organizational Policies	3.14	1-7	1.01
Autonomy	4.75	1-7	0.96
Interactions	4.82	2-7	0.90
Task Requirements	4.19	2-7	0.98
Organizational Commitment	4.68	2-7	0.98

^aN = 143

autonomy dimension of work satisfaction, with work stress ($b = -.34, p < .001$) accounting for more than self-esteem ($b = .20, p < .05$).

Though not originally hypothesized, the masculine component of sex role orientation demonstrated a direct negative effect on pay ($b = .16, p < .05$), but less than work stress ($b = -.28, p < .001$). Together, they explained 12% of the variance. A strong total effect is depicted in the decomposition table between these two variables. The work satisfaction component of organizational policies was directly and negatively affected by work stress ($b = -.34, p < .001$), and not by tenure as previously hypothesized. Approximately 10% of the variance in organizational policies was accounted for by work stress. In the decomposition table, a high total effect exists between these two variables. The relationship between self-esteem and professional status demonstrated a beta coefficient of .20 ($p < .05$).

In general, several relationships that had not been hypothesized emerged between work stress, the masculine and feminine components of sex role orientation, self-esteem and the work satisfaction factors. Tenure had no significant paths in this or the previous time order.

Organizational commitment. Two of the six work satisfaction components demonstrated significant beta coefficients with organizational commitment. Pay ($b = .24, p < .01$) and organizational policies ($b = .26, p < .01$) were positively related to the outcome

variable. Tenure was directly related as well ($b = .19$, $p < .01$), and all three accounted for 40% of the variance. Work stress was not directly linked to the outcome variable as originally hypothesized.

In this, as in the preceding time orders, new paths emerged and some previously proposed were not supported. Specifically, the direct paths to organizational commitment theoretically supported from the exogenous variables of tenure and work stress were not present in the revised model (see Figure 2).

Results of mediating processes. The masculine dimension of sex role orientation was related to the work satisfaction components of professional status, interactions, and autonomy via self-esteem and to organizational commitment via pay. Work stress and tenure were not linked to work satisfaction via self-esteem as originally proposed. The relationship between work stress and organizational commitment was mediated by the work satisfaction dimensions of pay and organizational policies. These mediating forces are depicted in the effects analysis within the decomposition table.

In summary, 14 direct effects are predicted by the revised model, including the two emerging pathways of the feminine factor of sex role orientation with the work satisfaction component of interaction, and the masculine dimension with pay. Only the exogenous variable, tenure, and the work satisfaction factors of pay and organizational policies had direct effects on organizational commitment.

However, work stress demonstrated strong inverse relationships with the work satisfaction variables of task requirements, autonomy, pay, organizational policies, and interactions. Self-esteem predicted the autonomy, professional status, and interaction subscales of work satisfaction, but not task requirements, pay, or organizational policies. All of the original variables were retained in the revised model, except the six subscales of work satisfaction were utilized rather than the total score. Emerging relationships demonstrated work stress was a strong predictor of five of the work satisfaction variables, the female and male dimensions of sex role orientation were related to different components of satisfaction with work, and that work stress, sex role orientations and self-esteem were not directly related to organizational commitment. A power analysis was conducted based on the procedure described by Cohen (1987). Given a sample size of 143, a power greater than .95 was obtained for this study, depending on a L parameter of 20.55 (medium effect size where f^2 , effect size, equals .15), and a probability level of .05. In light of the 95 percent power, the revised model appears to contain considerable predictive power.

Post Hoc Analysis

The total sample was arranged into various groups in order to perform further analyses. Descriptive statistics and MANOVAS were utilized to determine differences among groups on variables of importance. Assumptions of Manova

include interval-level dependent variables, normal distribution, and random group selection. All were met except for the random group mixtures, but this procedure tends to be robust to violations of this statistical assumption (Munro et al., 1986). Insignificant findings from Bartlett's-Box F tests indicated homogeneity of variance.

Self-Esteem and Social Desirability

The mean for the level of self-esteem was 34.32 (S.D. = 4.68) for the entire sample. Since the highest possible score was 40, this sample possessed high self-esteem. Sixty-eight individuals (48%) scored above the median of 16 on the Social Desirability Scale which indicated they were responding in a socially-desirable manner. A Pearson's correlation between self-esteem and social desirability was .37, demonstrating a low to moderate bivariate correlation between the scores.

Sex Role Orientation

Significant differences existed among the androgynous, masculine, feminine, and undifferentiated sex role orientations on two variables. An F value of 3.14, $p < .05$, obtained via a MANOVA, indicated androgynous individuals displayed higher levels of self-esteem and were more committed to the organization ($F = 2.74$, $p = .05$).

Subjects with feminine sex role orientations had the lowest self-esteem and organizational commitment. Their efforts to remain feminine at all costs may contribute to this self-evaluation.

Areas of Work

Five groups were delineated according to the nursing work areas. The first consisted of medical-surgical nurses, the second was pediatrics and obstetrics, and the third, operating, recovery and emergency rooms. The others encompassed home health, psychiatry and other specialities, and, lastly, intensive care units (ICU). Differences via a MANOVA were determined among the groups on the lack of support work stress component ($F = 3.06$, $p < .05$). Intensive care unit nurses perceived the greatest stress due to this factor while those on pediatric and obstetric units experienced the least.

ICU nurses had less tenure ($F = 3.92$, $p < .05$) and years since graduation ($F = 4.62$, $p < .05$) which may mean they have primarily concentrated on learning the highly technical activities involved in ICU nursing practice, rather than on building networks of comfort and assistance. A finding which further sustains this proposition is that ICU nurses were the least satisfied with the work satisfaction component of task requirements ($F = 4.04$, $p < .05$). The constantly changing technology, knowledge needs and activities required of these individuals must make it difficult to stay current with those demands. It is interesting to note that the nurses working on the pediatric and obstetric units were the most satisfied with task requirements, perhaps due to their proportionately higher educational levels aiding in viewing different aspects of their work in perspective. Subjects working in

the ICU were less committed to the organization while nurses on medical and surgical units were the most committed ($F = 2.73, p < .05$). Medical-surgical nurses had been out of school longer and had more tenure than the subjects who worked in the ICU which may have enabled them to internalize the values and goals of the organization and their profession.

Work Satisfaction

The Index of Work Satisfaction (IWS) is an overall summary score for Parts A and B of the instrument. For this group, the IWS equaled 12.66 (see Table 9). Other scores resulting from the statistical analysis are depicted in the table as well. Expected satisfaction (the component weighted coefficient) was computed from Part A. The component total scores and component mean scores represent Part B, current satisfaction with work. Adjusted scores depict the overall satisfaction for each dimension of work satisfaction, except the physician-nurse and nurse-nurse interactions which can only be determined for current satisfaction. The rankings of expected versus current satisfaction for the staff nurses participating in this study is presented in Table 10.

Summary of the Results

All of the original variables of the theoretical model depicting the organizational commitment of staff nurses were retained in the revised model. Instead of a total score for work satisfaction, the six individual components were utilized. Proposed links between the exogenous

Table 9

^aComponent and Adjusted Scores for Index of Work Satisfaction

Component	Component Weighted Coefficient (Part A)	Component Total Score (Part B)	Component Mean Score (Part B)		Component Adjusted Score (Parts A & B)
			Mean	S.D.	
Pay	3.69	15.46	2.58	2.58	9.51
Professional Status	3.24	37.61	5.37	0.74	17.43
Autonomy	3.18	37.97	4.75	0.96	15.11
Interactions	3.07	48.23	4.82	1.09	14.81
Physician-Nurse	—	26.56	5.31	1.09	—
Nurse-Nurse	—	21.67	4.33	1.09	—
Task Requirements	2.78	25.15	4.19	0.97	11.66
Organizational Policies	2.37	22.00	3.14	1.01	7.46
Index of Work Satisfaction: 12.66 Range: 8.53 - 19.06 Quartiles : 11.38 - 12.72 - 13.98 - 19.06					

^a N = 143

Table 10

^aRankings of Components for Expected and Current Work Satisfaction

Expected Work Satisfaction	Current Work Satisfaction
(N = 143)	
Pay	Professional Status
Professional Status	Interactions
Autonomy	Autonomy
Interactions	Task Requirements
Task Requirements	Organizational Policies
Organizational Policies	Pay

^aRanked from most important to least important

variables and self-esteem, work satisfaction, and organizational commitment were somewhat different than expected. However, the revised model explained much about the relationships among factors involved in the organizational commitment of these staff nurses. In the next chapter, a discussion and implications for nursing based on the results of this study will be presented.

Chapter 5

Discussion

The study examined a path model specifying relationships between a set of antecedents and organizational commitment. Investigation of the revised model (see Figure 2) reveals many of the relationships in the hypothesized model (see Figure 1) were not supported. According to the revised model, the linkages for the antecedent variables in T_1 and T_2 (except for tenure) and organizational commitment are mediated by one or more work satisfaction components. Of particular interest is the absence of a pathway between work stress and commitment which indicated the effects of stress on the outcome variable were indirect through the work satisfaction dimensions of pay and organizational policies. In general, the research established that distinct components of work satisfaction were predictors of organizational commitment, results similar to those of Colarelli et al. (1987).

Findings suggest that pay and organizational policies are the strongest determinants of commitment. Tenure was less predictive. The masculine component of sex role orientation, along with work stress, indirectly influenced organizational commitment. Self-esteem was directly related to the autonomy, interactions, and professional status dimensions of work satisfaction and mediated the

effect of the masculine factor on professional status.

All antecedents were retained in the revised model which was unique because it incorporated the personal characteristics of sex role orientation and self-esteem as well as the structural factor of tenure, and the psychological dimensions of work stress and satisfaction.

Influences on Organizational Commitment

The predictor variables accounted for 40% of the variance in organizational commitment. This result is within the range of previous research (Decotiis & Summers, 1987; Luthans et al., 1987). The components of work satisfaction (measured by the IWS) were used in path analyses as separate entities to determine which of these were the best predictors of organizational commitment. No other study was found using the IWS in a similar manner. Components of work satisfaction found to be directly linked to organizational commitment in this research were pay and organizational policies.

The organizational policies dimension of work satisfaction measured the agency's administrative control of the work of health care professionals. Control over work scheduling, participation in decision-making, receptiveness of administration to staff input, and opportunities for advancement were all included in this factor. Stamps and Piedmonte (1986) found that nurses did not expect to be and were not currently satisfied with organizational policies. This study confirmed that finding. Whether one is satisfied with organizational

policies appears to have a positive predictive power for organizational commitment, according to the nurses participating in this research. These individuals may have viewed the organizational policies in their agency as more restrictive than helpful. Since the organizational structure of the hospital was a hierarchy, the nurses might have perceived they had very little input into decisions which affected their practice. Organizational policies was slightly more predictive than pay.

A common stereotype of nurses is that they work primarily for altruistic reasons, and a concern for salary is considered unnecessary as well as unprofessional. The expected and current satisfaction with pay has not been frequently demonstrated in past research, though pay has risen steadily in nurses' rankings of work satisfiers (Wise, 1990). In this study, it is first in expected and last in current satisfaction (see Table 9), findings similar to those of Stamps and Piedmonte (1986). Pay included the individual's satisfaction and an overall impression of how pay related to work and rewards for the entire institution. An expectation of receiving remuneration similar to perceptions of what others in comparable work and positions realize was also incorporated in this dimension. The staff nurses in this study were more committed to the organization if they perceived they and their peers were deriving just compensation. This finding is interesting because post hoc findings indicated this sample of nurses did not receive the salaries they

expected, but they continued to work in that particular hospital. One possible explanation is that the pay scale would be comparable if they moved to any other acute care agency in the same locale. Therefore, they were not satisfied with the monetary rewards for their work, but envisioned nothing better in another local hospital. The pathway that was established between pay and commitment is somewhat unique as few predictive studies have utilized pay as a distinct antecedent of organizational commitment. Norris and Niebuhr (1983) demonstrated a positive link between the two variables, but Michaels and Spector (1982) and Curry et al. (1985) found no relationship between them.

The third antecedent presenting a direct pathway to commitment was tenure. In this research, more tenure was positively related to increased organizational commitment, a finding like that of Parasuraman and Alutto (1984). It was contrary to that of other researchers (DeCotiis et al., 1987; Werbel & Gould, 1984) who demonstrated negative relationships, and Reichers (1986) who found no significant pathway between the two variables. The increased organizational commitment in the more tenured individuals may mean they have learned to work the system to their advantage. They may stay with the agency because of economic investments. These subjects may not like the change and uncertainty that goes along with choosing to work in an unfamiliar agency and perhaps do not foresee anything better at another hospital.

Post hoc findings from this current study revealed

those with androgynous sex role orientations more organizationally committed. Nurses with bachelor degrees (BSN) were less committed, a finding similar to Decker (1985) and Zahra (1984). This result may be due to the fact that community-based and acute care agencies in the city where the study occurred are anxious to hire BSN nurses, so these individuals perceive other work alternatives for themselves. Another explanation might be that BSNs may be more committed to the profession, rather than to the organization for which they work, an issue not addressed in this research.

The absence of a work stress and organizational commitment linkage may not be too surprising, given the mixed findings of studies in the past which have incorporated these variables. Specifically, if commitment had preceded work satisfaction in the proposed model, a pathway might have emerged. An investigation utilizing this causal direction needs to be performed in order to test the merits of this proposition. In regard to the revised model, it is possible that nurses do not become committed to the organization (internalizing its values and goals) unless they are satisfied with various aspects of their work.

Influences on Work Satisfaction

All of the work satisfaction components except for professional status were negatively influenced by work stress in the revised model. This result was apparent in

previous research as well (Bhagat et al., 1985; Brief et al., 1988; Keller, 1984; Norbeck, 1985). However, Tetrick and LaRocca (1987) reported an indirect relationship between the two variables. Since the proposed model supported a linkage between work stress and work satisfaction, the inverse relations apparent for all of the dimensions of satisfaction (except for professional status) and work stress were upheld. One reason why stress may not effect professional status is that nurses do not view the organization as having much power over the profession as a whole. They may perceive status as a domain controlled by members of the profession.

Unlike Gray-Toft and Anderson (1981a), intensive care unit (ICU) nurses in this study were more stressed than those working on medical-surgical units. This finding may be due to the increased technology and patient acuities now present in ICUs as well as heavier patient assignments due to a shortage of nurses prepared in this specialized area.

As proposed, there was a strong inverse association between work stress and the work satisfaction component of task requirements which involved nonpatient-care duties. Staff experienced higher work stress if they were less satisfied with these activities. Nurses may perceive more stress when paperwork and housekeeping duties impinge on their abilities to deliver the care they believe patients deserve. Nurses expect to practice nursing rather than perform tasks better suited to support personnel. In addition, that type of aid may now be more scarce within an

acute care agency. Many hospitals deleted ancillary positions in order to provide more money for additional registered nurse positions to provide primary care. However, with the rise in patient acuities and the proliferation of paperwork generated by today's health care system, nurses now have to perform patient care and secretarial work, therefore perceiving their working environments as more stressful and less satisfying.

A negative relationship also existed between work stress and autonomy, the ability to exercise control of work without undue interference. This linkage was hypothesized in the original model and stems from the fact that nurses view themselves as able to plan and administer their work without close supervision. The inverse association between autonomy and work stress in this sample may indicate that as the nurses' perceived influence over their practice was threatened in some manner, they felt more stressed. In other research, Tetrick and LaRocca (1987) reported work satisfaction indirectly affected by stress, modified by control over one's work. Hinshaw et al. (1987) found autonomy in BSN nurses related to professional satisfaction, but not to organizational satisfaction which they measured with the IWS.

Higher levels of self-esteem meant more satisfaction with autonomy, professional status, and interactions in the revised model, results congruent with the proposed model. Nurses with higher self-esteem may be able to assert their ideas successfully, thus obtaining a more autonomous and

professional practice situation for themselves. Howell et al. (1987) and Callahan and Kidd (1986) reported an indirect relationship between self-esteem and work satisfaction, modified by work stress. This finding may be due to the fact that nurses with low self-esteem have fewer coping strategies, therefore experience higher levels of stress at work.

Post hoc results indicated that individuals with low levels of self-esteem were most dissatisfied with work and experienced the highest frequency of stress. Those with androgynous sex role orientations reported higher expected and current work satisfaction. The staff nurses with higher scores on the feminine portion of sex role orientation were more satisfied with their interactions, a result that might be anticipated since the feminine traits specified in the BSRI are those identified with successful communication. Individuals with higher scores on the masculine component were less satisfied with pay, perhaps because they based their success more on the male-model of valuing economic rewards, rather than other possible outcomes.

Influences on Self-Esteem

Work stress did not influence self-esteem in the revised or in any of the group models, a finding unlike that of Howell et al. (1987) who reported decreased work stress in subjects with high levels of self-esteem. A plausible explanation for this result is that some viable linkage between the variables was not included in the

proposed model, or that self-esteem should precede work stress. The literature supported the use of work stress as an antecedent to self-esteem, a linkage utilized in the current study. However, other studies give credence to a reverse linkage. Individuals with androgynous sex role orientations and BSN nurses were less stressed and had higher self-esteem. Spence et al. (1975) and Puglisi and Jackson (1980-1981) found higher levels of self-esteem in androgynous subjects as well. Perhaps the BSN and androgynous nurses possess knowledge such as organizational theories and communication skills which allow them to successfully interface with the system, thereby raising or maintaining their self-esteem.

Unlike Meleis and Dagenais (1981) who found primarily feminine sex role orientations in nursing students, the working staff nurses in this study were fairly equally divided among the androgynous, masculine, feminine, and undifferentiated orientations. Nurses with higher scores on the masculine dimension of sex role orientation had higher self-esteem in the revised model, which may mean the more demanding masculine traits fit better with the male-model bureaucracy, offering more rewards thus increasing self-esteem.

No links were found between tenure and self-esteem in the revised or group models. Banfield (1976) reported a positive relationship between the two variables. Romzek (1984) suggested less tenure meant higher levels of self-esteem, and Deaux (1979) demonstrated lower

self-esteem in those with more tenure. Since findings from past research involving these two variables are mixed, linkages between them may depend upon the situation. Few strategies may be present in the agency utilized in this research that contribute to a positive self-evaluation in those who have worked in it a longer period of time

Strengths and Limitations

Internal Validity

Relationships within the revised model are creditable as they are supported by the data, theories, and past research. Though selection of participants was not random, the process of data collection was appropriate to the application of these results to staff nurses working in acute care settings. The choice of instruments with high validities and reliabilities as well as the operationalization reflecting conceptual definitions indicated a rigorous research process. The inclusion of a social desirability measure aided in identifying those responding in a socially-biased manner.

Since the questions involved sensitive work-related subjects which potentially could have posed a threat to management-staff relations, packets were collected by the researcher to preserve anonymity. Selection criteria were rigidly enforced, and sample size was sufficient, according to Cohen's (1987) procedure for statistical power analysis. Statistical analyses were correct for the methodology and completed via SPSS-X (1988). Residual testing of assumptions was performed as indicated by Verran and

Ferketich (1987).

According to the criteria proposed by Krathwohl (1985), the research has strong internal validity. The revised model depicts factors influencing organizational commitment in one sample of registered nurses.

External Validity

The results are limited to staff nurses working in hospitals, so external validity is limited in order to emphasize high internal validity (Krathwohl, 1985). Findings may not be generalizable to other settings in which nurses practice. Reactivity was decreased by the respondents completing the forms in private settings of their choice.

The one-time data collection of variables such as work stress, work satisfaction, and organizational commitment is problematic as these concepts may lend themselves to a more meaningful examination over time.

Since the sample is well-described, replication of this study is possible. However, the use of the IWS as a total score, rather than utilizing the individual components may lead to different findings. Even though nonrandom selection of participants limited the external validity, all of the units within the hospital were represented in the sample. The inclusion criteria of utilizing only the responses of female staff nurses aided in achieving homogeneity. In general, this study has strong internal and external validity.

Implications for Nursing

Nursing Research

Models of organizational commitment have primarily resulted from studies of male employees and may not be pertinent when attempting to explain the organizational commitment of nurses who are mainly female. Qualitative research methods need to be utilized in conjunction with quantitative in order to identify those variables most predictive of commitment. Such investigations could include interviewing nurses in their own work settings to determine how they perceive their environments and to glean what makes them more or less committed to the organization. Work stress for nurses should be studied qualitatively in order to identify positive components which may be perceived as challenging, rather than detrimental.

Concepts in correlational studies should be arranged and tested in different time frames, if theoretically justified. Possible examples would be the use of self-esteem as an antecedent to work stress and organizational commitment to work satisfaction. Longitudinal studies could be performed using intent to leave/stay in conjunction with organizational commitment to determine if intent is a separate component. Likewise, work stress and self-esteem need to be further studied to examine the effects each has on the other and, subsequently on work satisfaction and commitment. Turnover data would be helpful in determining factors influencing organizational commitment over time. Since the turnover of

registered nurses is most expensive to the health care system, these professionals need to be studied separately from other workers.

Differences between the organizational commitment of male and female nurses ought to be explored as should those specific to nurse managers. The organizational commitment of nurses practicing in other settings needs to be determined in order to ascertain if models emerge which are specific to each.

Employment opportunities for registered nurses are abundant, so the effect of increased alternatives for employment needs to be included in a predictive study. The concept of coping could fit well into research of the organizational commitment of nurses.

A measure of social response bias allows greater understanding of self-esteem and other attitudinal concepts and should be included in any study that investigates self-esteem. Other questions about the way in which individuals evaluate themselves need to be included as well.

Tenure is still a perplexing variable in studies of organizational commitment. Further research is indicated to determine if tenure is affected by education and socialization, and if the effects of tenure are situation-specific. Investigations of work stress and satisfaction may be unique to a particular practice setting as well. Nurses need to be encouraged to perform research in their own hospitals to discover the determinants of

nurses' organizational commitment specific to that agency. Investigations involving many practice settings may aid in developing a model of organizational commitment that is generalizable to nursing as a whole.

This study needs to be replicated in other hospitals and in other nursing practice settings to determine if the revised model is applicable to more than one area of nursing practice. Systematic research evolving from or including qualitative methods is necessary to identify factors important in the organizational commitment of registered nurses.

Research questions for future study might include:

1. Is one level of self-esteem apparent in the working environment and another in nonwork situations?
2. Is self-esteem global for all situations so that it cannot be altered for any great length of time?
3. What components in work do nurses perceive as promoting organizational commitment?
4. What parts of nursing practice are stressful, but still viewed as challenging, rather than detrimental?
5. How does the organizational commitment of a nurse change over time?
6. What factors promote or inhibit organizational commitment in nurse managers?
7. How do increased employment alternatives for nurses contribute to organizational commitment?
8. Does the socialization process in an agency promote/inhibit organizational commitment?

Nursing Practice

Basically, the staff nurses in the current study were not satisfied as their overall Index of Work Satisfaction was 12.66. Stamps and Piedmonte (1986) indicated this value was in the lower range of expected and current satisfaction. Pay was one of the antecedents of commitment which dissatisfied nurses in the present research. Health care agencies historically have resisted raising nursing salaries and are now cutting fringe benefits as well. Consequently, nurses' wages are compressed, usually within five years after hire. If salaries do rise in other hospitals in the same area, nurses frequently leave one agency for another in order to receive higher monetary rewards for their work. Approximately 45% of the staff nurses in the current study were single which means they not only supported themselves and their families, but were the source of health insurance and other fringe benefits as well. Responsibilities such as these which did not occur as frequently for women in the past, have made nurses more critical of the remuneration packages offered by employers. Institutions state they cannot afford to increase nurses' salaries. Can they afford not to adjust compensation when the high costs of turnover are examined? The process and priorities by which administrators make these decisions needs to be revamped in order to clearly view the costs associated with decreased job satisfaction and subsequently, less organizational commitment and turnover. Patients are admitted to hospitals for one reason, and that

is to receive expert nursing care. A stable work group of nurses must be maintained in order to deliver that care.

Salary equity for nurses may be difficult to obtain. However, organizational policies can be changed to increase work satisfaction and organizational commitment. The bureaucratic structure indigenous to health care institutions decreases opportunities for nurses to give input into organizational policies affecting their work. Since nurses compose the largest number of workers within hospitals, and patients enter because they need nursing care, top administrators need to be nurses. These individuals require advanced degrees in nursing in order to be aware of issues important to the delivery of nursing care. A knowledge of administrative affairs is necessary as well, and both components are readily obtained in graduate nursing administration programs.

New ways to encourage mutual decision-making should evolve as well by redesigning nursing departments. Autonomy based on skill, experience, and education is necessary for nurses to practice effectively.

Another strategy to retain nurses is for nurse managers to encourage nurses to succeed. People who do not realize success in their work frequently have low levels of self-esteem. They tend to be limited in their abilities to create effective interpersonal interactions and cope with work stress, supporting Brockner's (1988) premise that they are more susceptible to external events.

Programs to help nurses raise or maintain their

self-esteem as well as other management schemes such as observing for individual motivators, strengths, and preferences might aid in nurse retention. Staff roles could be expanded as nurses participate in policy-making committees. The more roles one has may increase potential sources of self-esteem, social status at work, and social identity. Individuals with higher levels of self-esteem are more creative and generate energy with which to perform patient care.

The socialization of women into basically dependent and passive individuals affects their work as nurses. Nearly 48% of the nurses in this study responded in a socially desirable manner, indicating their responses were biased to fit stereotyped conceptions of competence and success in their work. The groups with more need for approval responded more or less the same, regardless of their levels of self-esteem. These individuals were less able to cope with work stress as well. Sex role orientation may have an impact on the level of self-esteem as androgynous nurses had higher levels of work satisfaction and esteem. They also experienced less stress in their work, findings which support androgyny as a paradigm of mental health.

Working nurses with masculine sex role orientations may interact more aggressively as the ones in the present study experienced a greater frequency of stress in their relations with other nurses. Individuals classified with feminine orientations were least satisfied with their work,

experienced more stress, and found it difficult to interact successfully with physicians who frequently perceived as authority figures. Nurses with undifferentiated sex role orientations may behave like chameleons, often changing their behavior patterns with no stable set of actions to utilize. This method of dealing with the work environment aids in their perceptions of high frequencies of work stress. Agency programs which encourage the use of gender-free responses and assertiveness may help more nurses develop androgynous characteristics. Hospitals need to develop strategies to help nurses cope with work stress as well, so they can realize fulfillment in their work and as nurses.

The high number of individuals in this study (42%) who responded negatively to a question in the demographic questionnaire as to whether they would become nurses again is distressing. One wonders what has happened in their post-graduate socialization to make them feel this way. In addition, responses of the entire sample to an item in the IWS addressing the strength of entering nursing again was 4.40 (out of a possible 7). More attention to orientation programs in acute care settings may alleviate some of the desire to leave the profession as careful socialization can be planned for newly-hired employees. Many nurses are not aware (except by experience) that such a process occurs, so workshops explaining this phenomenon could be presented within agencies. The socialization process that new nurses can expect to occur needs to be

emphasized in order to decrease the shock of the working environment. Decision-making patterns are apparently different between newly graduated and more experienced nurses. Seminars need to be presented in agencies to demonstrate this occurrence. -

The work of registered nurses is increasingly complex, and the length of time designated in the past to orientation may not be feasible in the modern day health care system. Some of the problem may lie in the gap between the more idealistic version of the profession taught in nursing education and the more realistically oriented world of nursing practice.

Nursing Education

Realism blended with idealism should be the focus of nursing education. A strong theoretical background is necessary for today's nurses to function effectively. However, implementing educational experiences that focus on a specific work setting may help ease socialization of new nurses and benefit the hospital by retaining staff for a longer period of time. Senior internships could allow the student to choose an area within an agency, learning necessary skills and building a supportive network with other nurses before graduation. The inclusion of courses which teach assertiveness, conflict management, change, and group dynamics should be part of every nursing curriculum. Faculty need to remain expert in their fields in order to teach concepts relevant to modern health care.

Opportunities for students to counteract negative

effects of sex role orientation and stereotyping are needed. Effects of the changing roles within society of females and nurses need to be emphasized. Faculty need to help students develop and maintain high levels of self-esteem in order for new nurses to become autonomous, confident practitioners who are critical decision-makers as well as patient advocates. Nursing education has to break with outmoded methods of teaching and treat students as the adult learners they are. Contemporary nursing students are expected to acquire prodigious quantities of information compared to students in the past, and they need sufficient levels of self-esteem to accomplish this goal. Faculty need to role-model high levels of self-esteem as well.

Management classes pertinent to today's health care system should be comprehensive and taught at a time when the student is ready to gain that knowledge, usually after they feel somewhat comfortable with nursing skills. Power and politics in organizations can be explored during clinical experiences as students encounter realistic situations. Students need clinical skills and a knowledge of theories in many areas. Those concepts basically taught in management classes are the ones which will affect their views of the organization in which they eventually work. A greater understanding of the system will ease their socialization and benefit health care agencies as well as nurses become more satisfied with and committed to their current work situations.

Summary

This correlational study examined the influence of work stress, sex role orientation, tenure, self-esteem, and work satisfaction on the organizational commitment of staff nurses. Participation by individuals in one agency may have been a limitation. The data as well as prior research and theories supported the relationships in the proposed and revised models. Though many of the original hypotheses were not supported, results were credible since linkages were consistent with conclusions from previous studies. The research has strong predictive power as established via a power analysis and internal and external validity.

The shortage of nurses is most severe in the hospital setting. Nurses in other areas of practice operate with greater autonomy and control over their work. Acute care nurses can function just as independently if more attention is given to providing a structure that encourages mutual decision-making. Careful socialization and programs which help increase nurses' pride in their practice can benefit the hospital. To be committed, nurses need to be able to deliver nursing care in an environment that is less encumbered by organizational restraints and more sensitive to their work needs as professionals.

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APPENDICES

APPENDIX A
Research Supporting Relationships in the Theoretical
Path Model

APPENDIX A

Research Supporting Relationships in the Current Causal Model of Organizational CommitmentWork stress and organizational commitment

Arnold and Feldman, 1982
 Bhagat, McQuaid, Lindholm, and Segovis, 1985
 Burke and Greenglass, 1988
 Hendrix, Ovalle, and Troxler, 1985
 Hinshaw, Smeltzer, and Atwood, 1987
 Jackson, 1983
 Jamal, 1984
 Leiter and Maslach, 1988
 Martin, 1982
 Parasuraman and Hansen, 1987
 Sepic, 1986
 Spector, Dwyer, and Jex, 1988

Work stress and work satisfaction

Bhagat, McQuaid, Lindholm, and Segovis, 1985
 Blau, 1981
 Brief, Burke, George, Robinson, and Webster, 1988
 Bullen and Martin, 1987
 Campion and Mitchell, 1986
 Curry, Wakefield, Price, Mueller, and McClosky, 1985
 Gray-Toft and Anderson, 1981a
 Hendrix, Ovalle, and Troxler, 1985
 Hinshaw, Smeltzer, and Atwood, 1987
 Howell, Bellenger, and Wilcox, 1987
 Jackson, 1983
 Keller, 1984
 Kirjonen and Hanninen, 1986
 Martin, 1982
 Norbeck, 1985
 Packard and Motowidlo, 1987
 Parasuraman and Alutto, 1984
 Revicki and May, 1989
 Spector, Dwyer, and Jex, 1988
 Sulton and Huberty, 1984
 Tetrack and LaRocco, 1987

Work stress and self esteem

Brief, Burke, George, Robinson, and Webster, 1988
 Gray-Toft and Anderson, 1981b
 Howell, Bellenger, and Wilcox, 1987
 Lowe and Northcott, 1988
 McCranie, Lambert, and Lambert, 1987
 Mossholder, Bederian, and Armenakis, 1981
 Motowidlo, Packard, and Manning, 1986
 Norbeck, 1985

(appendix continues)

Appendix A (continued)

Packard and Motowidlo, 1987
 Parasuraman, Drake, and Zammuto, 1982
 Revicki and May, 1989

Sex role orientation and self-esteem

Bem, 1974
 Hall, Durborow, and Progen, 1986
 Ickes and Barnes, 1978
 Keith, 1988
 Kelly and Worell, 1977
 Liden, 1985
 Lubinski, Tellegen, and Butcher, 1983
 Lundy and Rosenberg, 1987
 Meleis and Dagenais, 1981
 Millard and Smith, 1985
 Minnigerode, Kayser-Jones, and Garcia, 1978
 Puglisi and Jackson, 1980-1981
 Spence, Helmreich, and Stapp, 1975
 Spence, Helmreich, and Holahan, 1979
 Stafford, 1984

Tenure and self-esteem

Banfield, 1976
 Deaux, 1979
 Romzek, 1984

Tenure and work satisfaction

Bartol, 1979
 Blau, 1981
 Bullen and Martin, 1987
 Choi, Jameson, Brekke, Anderson, and Podratz, 1989
 Hinshaw, Smeltzer, and Atwood, 1987
 Keller, 1984
 Lee and Wilbur, 1985
 Mottaz, 1988a

Tenure and organizational commitment

Arnold and Feldman, 1982
 Bullen and Martin, 1987
 Ferris and Rowland, 1987
 Luthans, Baack, and Taylor, 1987
 Mitchel, 1981
 Mottaz, 1988b
 Price and Mueller, 1981a
 Reichers, 1986
 Stumpf and Dawley, 1981
 Werbel and Gould, 1984
 Zahra, 1984

Self-esteem and work satisfaction

Adler, 1980
 Brief, Burke, George, Robinson, and Webster, 1988

(appendix continues)

Appendix A (continued)

Callahan and Kidd, 1986
 Howell, Bellenger, and Wilcox, 1987
 James and Jones, 1980
 Norbeck, 1985
 Packard and Motowidlo, 1987
 Stafford, 1984

Work satisfaction and organizational commitment

Bullen and Martin, 1987
 Burke and Greenglass, 1988
 Choi, Jameson, Brekke, Anderson, and Podratz, 1989
 Colarelli, Dean, and Konstans, 1987
 Curry, Wakefield, Price, Mueller, and McClosky, 1985
 Dalessio, Silverman, and Schuck, 1986
 DeCotiis and Summers, 1987
 Glisson and Durick, 1988
 Harrell and Stahl, 1984
 Hendrix, Ovalle, and Troxler, 1985
 Hinshaw, Smeltzer, and Troxler, 1987
 Hom, Griffith, and Sellaro, 1984
 Jackson, 1983
 Komoski and Calkin, 1986
 Keller, 1984
 Lee and Mowday, 1987
 Lyon and Ivancevich, 1978
 Meyer, Paunonen, Gellatly, and Goffin, 1989
 Micheals and Spector, 1982
 Norris and Niebuhr, 1984
 Price and Mueller, 1981a
 Reichers, 1986
 Sager and Johnston, 1989
 Weisman, Alexander, and Chase, 1981
 Zahra, 1984

APPENDIX B
Introduction Letter to Agency

APPENDIX

INTRODUCTION LETTER TO AGENCY

Vice President of Nursing
Agency
Address

Dear _____,

The purpose of this letter is to further explain the details of my research, which we first discussed on (date) and to seek the permission of _____ Hospital to administer questionnaires to staff nurses.

The focus of the study is to investigate organizational commitment among staff nurses. The variables that will be measured via questionnaires are work stress, sex role orientation, tenure, self-esteem, work satisfaction, and organizational commitment.

Participation will be voluntary. I have attached a research proposal and a copy of the consent form which describes the rights of volunteers to withdraw from the study at any time. Anonymity will be assured and only group data will be reported. Upon receiving permission to conduct this study at (name of agency), I will work with the research committee to determine the best way to implement the project.

If you would like more details, I would be happy to share them. I will call you within one week to see if I can answer any further questions. Attached is a contract which describes the commitment we will make to each other to complete this research. Each of us will sign it and keep a copy.

Thank you for your time and effort in this matter. The results of this research may prove interesting and valuable in your future efforts to retain staff nurses.

Sincerely,
Donna Adams RN MS
Doctoral Candidate
University of San Diego
College of Nursing

APPENDIX D
Agency Contract

Agency Contract

CONTRACT

The _____
agrees to allow Donna Adams, RN, MS, to distribute
questionnaires to staff nurses within this agency if they
volunteer and consent to participate in her study. It is
understood that all human rights will be protected,
including confidentiality. We understand that only group
data will be reported without any names identified, and that
we may request a copy of the results of this research.

Vice-President for Nursing

12/18/89
Date

Donna Adams, RN, MS

12/21/89
Date

APPENDIX E
Participant Consent Form

APPENDIX

Participant Consent Form

Donna Adams, RN, MS, a doctoral candidate in Nursing Administration at the University of San Diego, is conducting a research study for a doctoral dissertation. After removing your name from the envelope, you are asked to complete the demographic profile sheet, questionnaires, to seal the packet, and to return them within one week to either the boxes provided on the units or in the nursing administration office. The approximate time to answer the questions should take one hour.

To preserve anonymity, your name and this consent form will not be attached to any of the enclosed questionnaires or the demographic profile sheet. If you choose to participate, please sign and return this form in the white envelope via U. S. Mail, separate from the questionnaire. No one will know how you have answered the questions. Only group data will be analyzed and published in order to protect the confidentiality of each volunteer. All data and consent forms will be kept in locked files to which the researcher will have the only key. No risk or discomfort is anticipated as a result of your participation. You and your hospital may benefit by becoming aware of why staff nurses leave their present jobs.

Participation in this study is entirely voluntary. There is no agreement, written or verbal, beyond that which is expressed in this consent form. You are free to refuse to participate or to withdraw from the study at any time without fear of any risk or penalty.

I will be available via beeper (#223-0680) and phone (265-7826 or 965-3244) to answer any questions you might have. Please feel free to call me.

Thank you for your interest in nursing research and for your cooperation. I, the undersigned understand the above explanation and give consent to my voluntary participation in this research.

Signature of Subject Location(Town) Date
(Add your address if you want a copy of the
research results)

APPENDIX F
Nursing Stress Scale

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in the author's university library.**

pp. 131-133

pp. 135-136

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APPENDIX G**Bem Sex Role Inventory**

APPENDIX H
Tenure Question

Tenure

How long have you worked in this hospital in any capacity?

_____years and _____months.

APPENDIX I
Rosenberg Self-Esteem Scale

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pp. 142-143
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APPENDIX J

Crowne and Marlowe Social Desirability Scale

APPENDIX K
Index of Work Satisfaction

APPENDIX L
Organizational Commitment Questionnaire

APPENDIX M
Demographic Questionnaire

DEMOGRAPHIC PROFILE

Directions: Please check the one correct response in each category.
~~CHECK ONLY ONE!~~

1. Where do you work in this hospital?

Medical.	01 []
Surgical	02 []
Combination of Medical/Surgical.	03 []
Recovery Room.	04 []
Operating Room	05 []
Pediatric Floor.	06 []
Emergency.	07 []
Obstetrics/Gynecology.	08 []
Intensive Care Unit.	09 []

Which Intensive Care Unit? _____

Mental Health/Psychiatry	10 []
Home Health.	11 []
Outpatient	12 []
One-Day OR	13 []
Nursing Home	14 []
Other.	15 []

Please specify if other _____

2. Highest nursing degree:

Associate	01 []
Diploma	02 []
BSN	03 []
MSN	04 []
PhD	05 []
Other	06 []

Please specify if other _____

3. If you answered baccalaureate, master's or doctorate, is the degree from a traditional university like ASU?

Yes 01 []

No 02 []

4. Years since graduation from basic nursing program: _____

5. Age (in years): _____

6. How long have you worked in this hospital in any capacity?
 _____ years and _____ months

7. How long have you worked your current assigned unit? _____ years
and _____ months

8. How long have you worked for your current immediate supervisor?
_____ years and _____ months

9. What shift do you currently work?

7 - 3:30	.01	[]
3 - 11:30	.02	[]
11 - 7:30	.03	[]
Other	.04	[]

Please specify if other _____

10. Do you work extra for an outside nursing agency?

Yes 01 []

No 02 []

If yes, how many hours do you average per month? _____

11. What is the type of nursing delivery system used on your unit?

Primary	01	[]
Team	02	[]
Functional	03	[]
Coordinated	04	[]
Not Applicable	05	[]
Other	06	[]

Please specify if other _____

12. Highest nursing degree held by your immediate supervisor:

Associate	01	[]
Diploma	02	[]
BSN	03	[]
MSN	04	[]
PhD	05	[]
Don't know	06	[]
Other	07	[]

Please specify if other _____

13. If you answered baccalaureate, master's or doctorate, is the degree from a
traditional university like ASU?

Yes	01	[]
No	02	[]
Don't know	03	[]

Questions continue on next page

14. Did your mother work outside the home?

Yes 01 []

No 02 []

If yes, what was her occupation? _____

15. If your mother worked outside the home, how many hours per week?

Full-time (40 hrs per week) . . 01 []

Part-time (less than 40 hrs). . 02 []

16. If you had it to do over again, would you choose to be a nurse?

Yes 01 []

No 02 []

If no, what career would you choose? _____

17. Are you currently enrolled in a program that will give you an advanced degree?

Yes 01 []

No 02 []

18. What type of program are you presently enrolled?

Baccalaureate in nursing 01 []

Baccalaureate in other field 02 []

Master's in nursing. 03 []

Master's in other field. 04 []

Doctorate. 05 []

Undecided. 06 []

19. Are you considering enrolling in a program that will give you an advanced degree?

Yes 01 []

No 02 []

Undecided 03 []

What year? _____

20. Gender:

Male. 01 []

Female. 02 []

21. What type of program are you considering to enroll?

Baccalaureate in nursing 01 []

Baccalaureate in other field 02 []

Master's in nursing. 03 []

Master's in other field. 04 []

Doctorate. 05 []

Undecided. 06 []

Questions continue on the next page

22. Marital status:

Married	01	[]
Single.	02	[]
Divorced.	03	[]
Widowed	04	[]
Living with someone	05	[]

23. How many children do you have? _____

24. If you are head of household, how many dependents do you support
including yourself? _____

Thank you for completing this questionnaire.
Please put it in the brown envelope, seal it,
and place it in the "research" box on your
unit or in the Nursing Administration Office.

Don't forget to mail your consent form in order
to maintain your anonymity.

APPENDIX N
Models of indirect effects

Indirect Effects of Work Stress on Organizational Commitment

Indirect Effects of Feminine Portion of Sex Role Orientation
on Organizational Commitment

Indirect Effects of Masculine Portion of Sex Role Orientation on
Organizational Commitment

Indirect Effects of Tenure on Organizational Commitment