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Job Satisfaction and Retention: Outcomes Since Implementation of Three Scheduling Options

Katherine Marie Newnam
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JOB SATISFACTION AND RETENTION:
OUTCOMES SINCE IMPLEMENTATION OF
THREE SCHEDULING OPTIONS

by

Katherine Marie Newnam
B.S.N. May, 1983, Old Dominion University

A Thesis Submitted to the Faculty of Old
Dominion University in Partial Fulfillment of
the Requirements for the Degree of

Master of Science
(Nursing)

Old Dominion University
May, 1990

Approved by:

Christine Heine (Director)

Sue W. Young

Elaine R. Dimino
The purpose of this descriptive study was to determine if flexible scheduling options influenced retention and job satisfaction of 109 full time registered staff nurses within a selected hospital setting. The Anticipated Turnover Model, developed by Hinshaw and Atwood (1984) provided the theoretical framework for the study. Perceived job satisfaction was measured by the Nursing Job Satisfaction Scale (Hinshaw & Atwood, 1984). The Anticipated Turnover Scale (Hinshaw & Atwood, 1984) measured the possibility of voluntary termination by sample respondents. The respondents were divided into three groups according to three schedule options: Group 1, 12 hour, weekend only (Baylor); Group 2, 12 hour shifts; and Group 3, 8 hour shifts. Turnover rates for the hospital used in this study were compared before and after implementation of the three scheduling options. Results indicated a statistically significant decrease in actual turnover rates after the implementation of three scheduling options. While there were no significant differences between nurses working one of three scheduling options on perceived job satisfaction or anticipated turnover, overall job satisfaction and decreased anticipated turnover for all respondents of the study were documented.
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Chapter 1

Introduction

Retention is the maintenance of the employee/employer relationship and is often referred to as the opposite of staff turnover. Turnover is defined as the degree of individual movement across the membership of an organization (Price, 1977). This movement is both voluntary and involuntary. Voluntary termination is the individual initiating the termination or quitting of an agency (Seybolt, Pavett, & Walker, 1978). Turnover exist in all professions, yet nursing turnover statistics are among the highest and most frequently studied (Helmer & McKnight, 1988). High nursing turnover affects the quality and quantity of patient care and contributes to increased health care cost (Prestholdt, Lane & Mathews, 1988). Voluntary termination of nurses is the focus of this research. Those factors which appear to have shown a consistent relationship with decreased nursing staff turnover and the increased retention of professional nurses are job satisfaction, scheduling options, pay, opportunity with outside organizations, autonomy, and peer interaction (Prescott, 1987; Price & Mueller, 1981).

A variety of solutions for addressing retention of professional nurses has been proposed and implemented. These include flexible scheduling, increased salaries with hiring
bonuses, and travel plans (Alexander, Weisman, & Chase, 1982). Recent studies revealed important factors for improving retention in the organization which include changes in management practices which respond to the individual needs of the registered nurse (Huey & Hartley, 1988). Wolf (1981) states that job dissatisfaction reported by staff nurses can be resolved without cost or loss of employees if administrators are willing to listen and act upon staff nurses' suggestions. Although some nurses leave jobs for unavoidable reasons, the primary reason cited is dissatisfaction (Wendelt, 1980). Research findings list the causes of nurse dissatisfaction as inflexible scheduling, ineffective administrative leadership, less than adequate salary, decreased staffing for patients with increasing acuity, and decreased professional autonomy (Prescott & Bowen, 1987; Mottaz, 1985; Atwood & Hinshaw, 1984).

Inflexible scheduling was ranked as the second dissatisfier among registered nurses in a study conducted by the National Commission on Nursing (1984). Sherman (1985) reported positive results with a break from traditional scheduling patterns that first occurred in response to a nursing staff crisis in the early 1960's. In 1980, Baylor University Medical Center offered another innovative approach to alternative staffing (Henson, 1984). This plan allowed nurses to work either five, eight hour days with every weekend off or two 12 hour
shifts every weekend. Nurses working either schedule were compensated equally—full time pay and benefits. The Baylor Plan was very successful resulting in increased job satisfaction with corresponding improved retention of professional nurses in the organization.

Purpose

The purpose of the study was to examine three work scheduling options and to determine if there was a difference in perceived job satisfaction and the retention of registered nurses in one hospital. The three scheduling options included the eight hour shift/40 hour week working every third weekend; 12 hour shift/36 hour week working every third weekend; and the 12 hour shift/24 hour week working every weekend. Weekly payment for all three options is the same, 40 hours with full time benefits.

Problem

A nursing shortage is an inadequate number of nurses available to care for patients at a preset level of professional competency (Prescott, 1987). The shortage of professional nurses is influenced by both recruitment and retention issues. Previous approaches by hospital and nurse administrators have been in the area of nurse recruitment without a simultaneous focus on the retention of the existing staff. The recruitment of new staff is vital, however without retaining existing employees the shortage of professional
nurses spirals even higher. As remaining staff are expected to work harder and longer with increased responsibilities, a greater number of staff, both prospective and current employees are added to turnover statistics (Prescott, 1987). Research reveals large numbers of nurses voluntarily resign because of decreased job satisfaction, however almost all stay in the nursing profession, simply moving around among employers (Aiken, 1987; Weisman, 1982). Professional nursing turnover costs an estimated $2,500 to $5,000 per nurse in recruitment and orientation expenditures (Prescott, 1984). In this age of health care cost containment, turnover of dissatisfied nurses should be a priority for nurse administrators.

Strategies implemented by nurse administrators to improve the retention of professional nurses in a hospital setting have included flexible scheduling options, incentive pay, improved benefits, and clinical ladders (Abelson, 1986; Helmer & McKnight, 1988). The effect of these new strategies on the retention of nurses has not been empirically tested. This study explores the effect of implementing flexible scheduling options as a strategy to increase job satisfaction and the retention of nurses. Nurse administrators depend upon an empirically tested knowledge base from which decisions are made. The testing of all retention strategies is necessary to enhance the knowledge base empowering nurse administrators in making sound decisions.
Theoretical Framework

Atwood and Hinshaw's (1984; 1987) Five-Stage Theoretical Model for Anticipated Turnover served as the conceptual model for the study. The model describes the complex multivariate organizational and personal factors which influence job satisfaction. Knowledge of those influencing factors may lead to predictions of anticipated and actual turnover of nursing staff (Figure 1). The five stages of the model build upon one another beginning with stage I, those existing and influencing conditions, and ending in stage V with actual turnover. The purpose and subsequent testing of the causal model was to predict job satisfaction and its relation to anticipated turnover, providing nurse administrators with information vital to support job satisfaction through policy adjustment.

Stage I is comprised of initial expectations of tenure and mobility factors. Initial expectation of tenure is defined as how long the employee planned to stay when initially hired. The mobility factors are such demographic characteristics as age, education, and nursing experience.

Stage II consists of four factors: group cohesion, stress, autonomy, and control over nursing practice. These factors are related to the decentralization of the organization (Atwood & Hinshaw, 1987). Group cohesion was defined as how much a part of the organization the employee felt existed. Job stress, was
Figure 1. Five-Stage Theoretical Model for Anticipated Turnover Among Nursing Staff (Hinshaw & Atwood, 1987)
defined as a nonspecific response of the body placed on oneself from demands of the work environment. Autonomy, or individual decision making, is closely associated with control over practice which is a factor under organizational control. The subscales used to measure control over nursing practice include control over practice, access to ideas, interpersonal influence, evaluation and modification, personal resources and research utilization.

Stage III includes organizational and professional satisfaction, that is the staff members' opinion of the job in terms of reward, management style, and general enjoyment of their position. Anticipated turnover, the degree perceived by the staff nurse that they would voluntary terminate their position within the nursing staff, is Stage IV. Stage V, actual turnover, is the actual voluntary termination of the staff nurse.

In testing the causal model, Hinshaw and Atwood (1987) sampled 1,597 nursing staff members in 15 urban and rural hospitals using confidential, self-report questionnaires. With an 82% response rate, actual turnover was weakly predicted by anticipated turnover. Results also determined that job satisfaction buffered job stress, thus directly affecting anticipated turnover. The greater enjoyment or satisfaction a nurse perceives about his/her job, the lower the anticipated turnover. Increased job satisfaction was directly influenced
by schedule choice, a variable which should also lead to a decreased anticipated turnover. The relationships of the study variables within the identified stages of the theoretical model were found to be correlated positively or negatively as demonstrated by the (+) or (-) signs within Figure 1.

These results were supported by a study conducted by Norbeck (1985) using the Nursing Job Satisfaction Scale also developed by Hinshaw and Atwood (1982) in a smaller sample using intensive care nurses. Findings supported that higher perceived job stress is related to decreased job satisfaction when work history variables are controlled. Norbeck (1985) reported that the control variables of work experience and shift together explained 11% of the variance in job satisfaction, suggesting a link between job satisfaction and scheduling.

With use of the Anticipated Turnover Scale (ATS) and the Nursing Job Satisfaction Scale (NJS) developed by Hinshaw & Atwood (1982), this study examined the influence of job satisfaction and retention, specifically after implementation of three flexible scheduling options in a selected facility (Figure 2). As demonstrated by the proposed model, the additional factor of scheduling options is thought to positively influence the staff nurses' job satisfaction, thereby reducing the anticipated and actual staff nurse turnover.
Figure 2: Schedule Options As a Variable for the Five-Stage Theoretical Model for Anticipated Turnover Among Nursing Staff
The variable of scheduling options was operationalized as a separate Stage II factor (Figure 2). The stage II factors identified by Atwood & Hinshaw (1987), group cohesion, job stress, control over nursing practice, and autonomy are all influenced by the variable, scheduling option. For example, the staff nurses who work the 12 hour weekend only Baylor plan form a strong team work relationship working with one another week after week, as do the staff nurses working the other scheduling options. This has a strong influence on group cohesion. Job stress is influenced or reduced with the staff nurse's ability to meet multiple career and personal demands through the schedule worked. The selection of a scheduling option allows the staff nurse greater autonomy, decision making ability and control over their own practice.

Definition of Terms
For the purpose of this research study variables are operationalized as follows:

**Job Satisfaction:** A nurse's positive evaluation of competence, environment, staffing, team respect, and time priorities. Job satisfaction will be measured by the five subscales from the Nursing Job Satisfaction Scale (NJS) (Appendix A).

**Job Dissatisfaction:** A nurse's negative evaluation of competence, environment, staffing, team respect, and time priorities. Job dissatisfaction will be measured by the 5
subscales from the Nursing Job Satisfaction Scale (NJS) (Appendix A).

**Scheduling Options:** Three types of schedules which registered nurses work in a selected hospital. These include 12 hour shifts every Saturday and Sunday with Monday through Friday off; 12 hour shifts during the weekdays with a maximum of working one out of every three weekends; and 8 hour shifts during the weekdays with a maximum of working one out of every three weekends. Permanent evening or night positions, or a day/night rotation are available for all scheduling options.

**Registered Nurse:** Person licensed in the State of Virginia to practice as a registered nurse, holding the position title of staff nurse and considered a full time employee by a selected facility.

**Actual Turnover Rate:** Turnover rate statistics calculated on the number of nurses who left employment during the one year before implementation of flexible scheduling compared with the number of nurses who left employment since implementation of three scheduling options, also a one year time frame.

**Anticipated Turnover Rate:** A nurse's intent to leave or remain employed at a selected facility as measured by the Anticipated Turnover Scale (ATS) (Appendix B).

**Assumptions and Limitations**

One assumption of the study was that the self-scored instruments, the NJS, ATS, and demographic form were completed
in response to honest opinion. The assumption was made that
the respondents were full time nurses.

A limitation of the study is the smallness of the sample
size, reflecting the opinion of full time staff nurses working
in one specialty acute care facility in southeastern Virginia
and not generalizable to the general population of full time
registered staff nurses. The study was conducted during a time
of high patient census, increased vacation time, and after two
previous staff surveys, which may have affected the response
rate.

Review of the Literature:

The nursing shortage and issues associated with the
retention and recruitment of professional nurses has been
addressed extensively in nursing and management literature.
Nursing turnover has also been extensively researched by
sociologists and psychologists, some of whom proposed turnover
models. These models include The Professional Autonomy and
Turnover Model (Weisman, Alexander, and Chase, 1981) and the
Professional Turnover Model (Price & Mueller, 1981). Nurses
have also proposed models in response to research findings.
One such model, the Five-Stage Theoretical Model for
Anticipated Turnover (Hinshaw and Atwood 1987), outlines
predictors of turnover. The models and related research assist
in determining factors which continue to lead to high turnover
and decreased job satisfaction in the nursing profession.
In a survey of nurses from five hospitals, researchers reported factors that respondents rated as important issues for nursing recruitment and retention (Neathawk, Dubuque, & Kronk, 1988). The nurse respondents were also asked to assess the degree of current job satisfaction within their own hospital setting. The respondent sample of 416 nurses, 49% of those surveyed, completed the seven-item Nurses' Evaluation of Recruitment/Retention Variables (NERRV). Findings revealed pay/benefits, standards of care, and scheduling options to be ranked highest in order of importance by respondents from all five hospitals. Ranked lowest by the 51.5% respondents was the level of satisfaction derived from their current positions' pay and benefits. Respondents were most satisfied with the physical environment. Over one-fourth of the respondents associated scheduling options as their source of dissatisfaction. Special pay for difficult shifts/rotations was found to be the most effective way to attract nurses to hospital staff positions. This study suggests that a multifaceted approach to improve retention of professional nurses to an organization is needed.

A two-step longitudinal design was used to determine why nurses do not leave their job (Presholdt, Lane, & Mathews, 1988) Questionnaires containing 200 items thought to be potential causes of nurse turnover and demographic data were distributed to 1,835 nurses throughout Louisiana with a
respondent sample of 941 (52%). Approximately six months later, the researchers identified those nurses who had resigned within that six month time period and analyzed the responses of that group separately. Through this analysis, themes were determined in the resigned groups' responses. From identified themes, resignation prediction behavior was determined. Nearly 14% of the nurses resigned over the six month period, 72% of who planned to join the staff of another hospital. Eighty-five percent of the nurses who resigned reported their decisions were based upon four factors. Those factors were 1) decreased self-worth associated with nursing practice, 2) better opportunity for career advancement elsewhere, 3) poor working conditions and non-support from management personnel, and 4) economics which included better pay and more desirable scheduling elsewhere. It was concluded that the decision to resign involves a complex, but rational process (Prestholdt, 1988).

Prescott (1987) used a questionnaire/interview format to find out why nurses leave current employment. Respondents from 90 patient care units within 15 hospitals from six geographically different areas were sorted into 'stayer' and 'leaver' categories. Findings were based upon 1,044 staff nurse questionnaires and 92 interviews from the stayers and 111 telephone interviews and 89 questionnaires from the leavers. Work related reasons for leaving included the hospitals'
unwillingness to change factors such as salary, working conditions, and scheduling options, and the lack of stimulating nursing practice. The stayers reported a sense of closeness with staff and community; a positive working relationship with peers and management, that is group cohesion. Findings revealed the importance of programs shown to improve the satisfaction of the staff nurse. These include, broader salary scales, improved scheduling options, and receptive management to staff input.

In 1986, the Hawaii Nurses Association Collective Bargaining Organization (HNA/CBO) distributed questionnaires to 1,500 registered nurses in all five major hospitals in Hawaii. These nurses were asked, "what three solutions in order of priority would resolve the retention and recruitment issue within our profession?" With a respondent sample of 429, 85% of the sample identified flexible staffing and scheduling options as their top priority (HNA/CBO, 1986).

Mann and Jefferson (1988) conducted a study in the medical intensive care unit (MICU) of a 255-bed California teaching county hospital. The survey was administered to 47 nurses, 15 nurses who had left the unit and 32 who remained employed in the MICU. In an open ended survey, two-thirds of the respondents associated scheduling issues with increased staff nurse voluntary turnover. Better schedules and improved staffing were the respondents' overwhelming response to changes
they would make on their unit. From these responses it was recommended that the management staff of the MICU take a proactive approach and make swift changes in orientation, flexible staffing, and become more responsive to the individual needs of staff.

Jones and Brown (1986) reported benefits after the implementation of 12-hour shifts. The purpose was to determine if organizational, administrative, and practice factors differentiate among nursing units with varying vacancy and turnover rates. Using an organizational rather than individual approach, data was collected from Directors of Nursing working in twenty-five randomly selected hospitals in North Carolina. Despite the initial expense of implementing flexible scheduling, when compared to the cost of replacing experienced staff nurses, significant savings resulted. Directors reported cost effectiveness, improved retention, and improved staff morale as benefits of flexible scheduling in one-hundred percent of the responding facilities.

The job satisfaction of professional nurses in organizations has been positively associated to decreased anticipated and actual turnover. Job satisfaction, as defined by Mueller (1987), is the extent of positive affective orientation to the job and pertains to the individual's feelings about, not behavior toward, the job. In Mueller's (1987) longitudinal study of 370 nurses from five short-term
acute care hospitals in the Rocky Mountain area, data were collected at separate intervals, eight months apart. Findings revealed that nurses who were the most satisfied were likely to be assigned to nonroutine tasks, perceive opportunities for promotion, be older, perceive that rewards were fairly distributed, and work the day shift. Findings revealed little new information in the second data collection set.

Mottaz (1986) suggested that the greater the perceived congruence between work rewards and work values, the greater the work satisfaction. Mottaz studied how work rewards and values combine to influence work satisfaction among nurses. In a project examining the work attitudes of 1,615 nurses, findings revealed the low level of work satisfaction among nurses correlated with low levels of task autonomy, supervisory assistance, salary, and nursing structure. The decentralization of nursing units would increase autonomy by allowing nurses to manage their own staffing, scheduling, and educational opportunities.

In summary, many factors have been found to influence staff nurses' job satisfaction, including flexible scheduling options. Research findings suggest an inverse relationship exists between job satisfaction perceived by the professional nurse and the turnover rate. Decreased turnover rates or the increased retention of nurses has been positively associated with flexible scheduling options, one factor that has been
positively correlated to improved job satisfaction. Research has shown that recruitment and nurse replacement is expensive for the health care facility. The implementation of flexible scheduling is also expensive, however cost analysis supports flexible scheduling. When considering the increased productivity, decreased turnover and reduced recruitment fees, cost benefits are demonstrated (Fetzer-Fowler, 1984; Elliott, 1989). Nurse administrators must have empirically tested data from which to make decisions regarding implementation of strategies to improve staff retention and satisfaction. Research is needed to focus on the outcomes of retention and job satisfaction of nursing staff after implementation of scheduling options.

Hypotheses

1. There is no significant difference in the actual turnover rate of nurses after the implementation of three scheduling options.

2. There is no significant difference in the perceived job satisfaction of registered nurses working one of three scheduling options in a selected hospital.

3. There is no significant difference in the anticipated turnover of registered nurses working one of three scheduling options in a selected hospital.

The purpose of the study was to determine if flexible scheduling options influenced the retention and job
satisfaction of professional nurses in a selected hospital setting. The Five-Stage Theoretical Model for Anticipated Turnover Among Nursing Staff (Hinshaw & Atwood, 1984) was used to examine whether offering scheduling options can improve job satisfaction. Perceived job satisfaction has been shown to positively influence the anticipated and actual rate of turnover of professional nurses. The literature review supports this framework, however, there is limited empirical data related to scheduling options and its influence on retention and job satisfaction. It is crucial for nurse administrators to base decisions upon tested knowledge.

Chapter two presents the study methodology which includes research design, descriptions of the sample and setting, instruments and the data collection procedure used.
Chapter 2

Methodology

Research Design

A nonexperimental descriptive study design was used to determine if working one of three scheduling options in a selected hospital differentiates registered nurses' perceived job satisfaction and retention patterns. This design allows the investigator to begin with a situation of interest, in this case flexible scheduling, and attempt to find differences before and after implementation of the variable (LaMonica, 1983). A nonexperimental research design is required when the investigator is unable to manipulate the variables studied (Polit & Hungler, 1983).

Sample and Setting

The target population was registered nurses currently employed in a full time staff position where three flexible scheduling options existed. The accessible population was 190 registered nurses employed in a full time staff position at a 148-bed tertiary care pediatric facility in a southeastern state where three scheduling options are used. The sample was 109 full time registered staff nurses, 19% who work the Baylor Plan, 24% who work eight hour shifts, and 57% who work 12 hour shifts.
Instruments

**Nursing Job Satisfaction Scale (NJS):** The NJS, revised by Hinshaw & Atwood (1984) was originally developed by Brayfield & Rothe (1951) for use with industrial personnel. The adaptation is a 29 item self scored questionnaire with four-point Likert scale. The instrument is intended to measure job satisfaction/dissatisfaction as perceived by the nurse participant. By using declarative statements with a selection of four choices from which to select their answer, values are placed upon each response for the purpose of data analysis. The Likert scale gave each respondent the following choice range: 4 = Rarely, 3 = Occasionally, 2 = Frequently, 1 = Almost Always, the answer one being most satisfied and four the least satisfied. The summed scores are used as interval level data, a higher level data allowing more advanced statistical analyses (Burns & Grove, 1987) (Appendix A).

The NJS is represented by five subscales: Competence (6 items); Physical Work Environment (5 items); Staffing (7 items); Team Respect (5 items); and Time Priorities (6 items). Previous testing in 15 rural and urban hospitals with 1,597 nurse participants demonstrated content and construct validity (Atwood & Hinshaw, 1984). Moderate internal consistency was demonstrated for each subscale with coefficient alphas' ranging from 0.63- 0.80, and total instrument alpha of 0.86.
Anticipated Turnover Scale (ATS): The ATS indexes the employee's perception or opinion on the possibility of voluntarily terminating his or her present job. The self-report ATS instrument contains 12 items with a seven-point Likert scale. The Likert scale provides each respondent with a seven choice range (1= strongly agree to 7= strongly disagree). A response of 7 reflects the greatest chance of voluntary termination, with the response of 1 reflecting the least chance of voluntary termination. The instrument, designed by Hinshaw & Atwood (1984), showed internal consistency reliability with coefficient alpha of 0.84 (Appendix B).

Demographic Data Sheet (DDS): The demographic data sheet requests information on the participant's age, marital status, gender, number of children, educational background, work schedule and shift, nursing experience, time employed at the selected facility and miles traveled to work (Appendix C).

Turnover Rate Measurement: The annual turnover rate was calculated for two time frames: January to March 1988, pre-flexible scheduling, and January to March 1989, post-flexible scheduling at the selected facility. Measurement of turnover for the selected facility was computed as:

\[
\frac{\text{number of nurses who resign}}{\text{number of nurses employed}} = \text{Turnover Rate}
\]
Pilot Study

A pilot study was conducted using a convenience sample of eleven graduate nursing students to test study procedures and to validate the reported reliability of the study instruments. These eleven registered nurses represented a variety of clinical settings. These participants were instructed to complete two instruments which investigated job satisfaction and anticipated turnover. Also included for their completion was a demographic form.

Both instruments demonstrated acceptable reliability despite the small sample size (NJS: 0.75; ATS: 0.92). The alpha coefficients for the NJS subscales ranged from 0.04 to 0.80. The low internal consistency of the TIME subscale (0.04) was most influenced by the item, NJS 14.

Procedures

The study was approved by the Old Dominion University School of Nursing Committee for the Protection of Human Subjects. Permission was then obtained from the administrative staff of the selected facility (Appendix E). An informational meeting was held with the unit directors of each nursing unit within the selected facility to discuss distribution of the study questionnaires and explain the purpose of the study. One hundred ninety packets containing the NJS, ATS, DDS, and a cover letter were distributed by placing a packet in
individual staff mailboxes on each of 11 nursing units throughout the selected facility. Reminder notices about the completion of the questionnaires were also posted on the bulletin boards of each nursing unit. Sealed collection boxes were placed in an obvious place in each nursing unit lounge.

Potential participants in the study were informed in the letter (Appendix D) accompanying the questionnaire that their responses would be kept confidential and would remain anonymous. Only the researcher would have access to the questionnaires. Participants were requested not to place their name anywhere on the questionnaire and to place the completed questionnaire in the sealed collection box in the nursing lounge on their unit. They were also informed that the research findings would be presented only in aggregate format. The cover letter explained that participation was voluntary and that respondents could withdraw from the study at any time without consequence to them. The letter also explained that completion of the questionnaire was their consent to participate in the research project in addition to the associated study benefits and risks. The results were posted in aggregate form for all interested participants to view on the bulletin board in each nursing unit lounge. The researchers' phone number was included on the results sheet for
individual questions or comments.

In chapter two descriptions are given of the sample and setting, the instruments used in the research, the pilot study, and the procedure for the research study. Results of the study including statistical analysis, demographic data findings, and participant responses to open ended questions are presented in Chapter three.
Chapter 3

Results

The purpose of this research study was to examine three work scheduling options and to determine if there was a difference in perceived job satisfaction and the anticipated turnover of registered staff nurses. Actual turnover rates before and after implementation of scheduling options were also compared. A sample of 109 full time registered staff nurses, 19% who work the Baylor Plan, 24% who work eight hour shifts, and 57% who work 12 hour shifts were surveyed to compare perceived job satisfaction levels and their anticipated turnover rate. The sample was taken from a single hospital in a southeastern state, utilizing all areas of clinical practice within the facility. The research instruments used were the Nursing Satisfaction Scale (NJS), and the Anticipated Turnover Scale (ATS), and a researcher designed Demographic Sheet. The NJS, a 29-item, four choice questionnaire measured five subscales related to job satisfaction. The ATS, a 12-item, seven choice questionnaire measured the likelihood of voluntary resignation of individual staff nurses. Demographic data were obtained to look for trends which may have influenced the outcome of the study. Participants were also given the opportunity to describe, in three open ended questions, the most and least satisfying aspect of their current work schedule, and suggestions to nurse administrators.
Analysis

Frequency statistics were used to calculate mean scores for the Anticipated Turnover Scale (ATS), the Nursing Job Satisfaction Scale (NJS), NJS subscales, and each question. Frequency statistics were also calculated for the demographic data.

The Nursing Job Satisfaction (NJS) is scored on a 1-4 interval for each of the 29 items. A score of 1, almost always, reflects the most satisfied response. A score of 4, rarely, is the least satisfied response. For the total sample a mean score was calculated for each question, and for each of the five subscales. A mean score was also calculated for each of the five subscales by scheduling option groups. The Anticipated Turnover Scale (ATS) is scored on a 1-7 interval scale for each of the 12 items. A score of 1, strongly agree, reflects a decision to remain employed at the facility, while the score of 7, disagree strongly, indicates an impending resignation.

The reliability of both study instruments was determined through determination of internal consistency for this study. Alpha coefficients (Table 1) were calculated for five subscales of the Nursing Job Satisfaction Questionnaire. Both instruments demonstrated acceptable reliability coefficients (NJS = 0.90; ATS = 0.88). The coefficient alpha scores for the 5 NJS subscales ranged from 0.63 for the TEAM subscale to 0.88 for
Table 1

Descriptive Characteristics of the Study Instruments Which Measure Nursing Job Satisfaction and Anticipated Turnover

<table>
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<th>Instrument</th>
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<th>Actual Score Range</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Alpha</th>
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<td>16.9</td>
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<td>Nursing Job Satisfaction Scale (NJS)</td>
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<td>46-80</td>
<td>57.9</td>
<td>12.2</td>
<td>0.90</td>
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NJS Subscales:

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<th>Actual Score Range</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Alpha</th>
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<td>6-13</td>
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<td>Staffing</td>
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</tr>
<tr>
<td>Team</td>
<td>5-20</td>
<td>7-15</td>
<td>8.4</td>
<td>2.3</td>
<td>0.63</td>
</tr>
<tr>
<td>Time</td>
<td>6-24</td>
<td>8-18</td>
<td>13.0</td>
<td>3.1</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Note: n = 89 because of missing data from a sample of n = 109

the COMPETENCE subscale.

To determine differences in actual turnover before and after implementation of three scheduling options. Student's T-test were calculated on the turnover rates for three months.
before and three months after scheduling options were implemented. Scheduling option groups ATS and NJS scores were analyzed using an analysis of variance (ANOVA) for statistical significance at the 0.05 level of significance to determine differences in perceived job satisfaction and anticipated turnover. Summations of responses to the open ended questions were completed.

Findings

One hundred ninety questionnaires were distributed and after three weeks, 105 completed surveys were collected in the sealed boxes. One week later five additional surveys were forwarded by interoffice mail to the researcher for a total response rate of 58%. One questionnaire was discarded because of an omitted response to question #11 on the demographic data sheet, which asked the respondent to list their current work schedule.

Demographic data were analyzed using frequency statistics. The total respondent sample (109) was divided into three groups according to the type of schedule the respondent worked. Group I (19%) were the 20 respondents working the Baylor Plan; Group II (57%) were the 62 respondents working 12 hour shifts, and Group III (24%) were the 27 respondents working eight hour shifts. Responses for each instrument item and demographic information were determined for the total respondent sample and each group. One of the participants in this study held a master's degree, 48% held a bachelor's degree,
24% held an associate's degree, and 27% held a diploma in nursing. Previous nursing experience ranged from one to 24 years with a mean of 5.9 years. A frequency distribution of educational level, previous and current nursing experience for the total sample and each schedule option group is shown in Table 2.

To insure homogeneity of the respondent groups, differences were examined. Group I, the Baylor group, had a larger percentage (38%) of diploma graduates and the smallest percentage (14%) of associate degree graduates. Group III, the eight hour shift, had the greatest percentage (54%) of bachelor degree graduates, although all groups had similar representation of bachelor prepared graduates. The range of nursing experience varied slightly among the groups with the Baylor group, Group I reporting a shorter range (1-11 years) than the other two groups. The number of years in their current employment setting was consistent for all three groups.

The mean age was 29 years for all participants. The respondent sample was 99% female, with one male respondent in the 12 hour group, Group II. Marital status was categorized into single, married, divorced, and separated. Sixty-six percent of the sample were married, 25% single, 2% separated, and 7% divorced. About two-thirds of the participants (68%) were childless, while 26% had one or two children and 6% had three or four. There were no reports of greater than four
Table 2

**Education and Work Experience of Respondents**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
<th>Group 1 (Baylor)</th>
<th>Group 2 (12-hour)</th>
<th>Group 3 (8-hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=109</td>
<td>n=20</td>
<td>n=62</td>
<td>n=27</td>
</tr>
<tr>
<td><strong>Highest Education Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters Degree</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>53</td>
<td>10</td>
<td>27</td>
<td>13</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>26</td>
<td>3</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Diploma</td>
<td>30</td>
<td>8</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td><strong>Years of Nursing Experience</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1-24</td>
<td>1-11</td>
<td>1-21</td>
<td>1-24</td>
</tr>
<tr>
<td>Mean</td>
<td>5.9</td>
<td>6.5</td>
<td>4.8</td>
<td>8.7</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>4.6</td>
<td>3.5</td>
<td>4.0</td>
<td>5.8</td>
</tr>
<tr>
<td><strong>Years of Current Employment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1-15</td>
<td>1-13</td>
<td>1-15</td>
<td>1-10</td>
</tr>
<tr>
<td>Mean</td>
<td>4.5</td>
<td>3.5</td>
<td>4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>5.7</td>
<td>2.9</td>
<td>3.1</td>
<td>4.1</td>
</tr>
</tbody>
</table>
### Table 3

**Demographic Characteristics of Respondents**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total Group 1 (Baylor)</th>
<th>Group 2 (12-hour)</th>
<th>Group 3 (8-hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=109</td>
<td>n=20</td>
<td>n=62</td>
</tr>
<tr>
<td><strong>Age in Years</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>21-49</td>
<td>23-39</td>
<td>21-45</td>
</tr>
<tr>
<td>Mean</td>
<td>29.30</td>
<td>29.6</td>
<td>27.9</td>
</tr>
<tr>
<td>Std Deviation</td>
<td>6.03</td>
<td>4.7</td>
<td>5.7</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>108</td>
<td>21</td>
<td>57</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>73</td>
<td>15</td>
<td>36</td>
</tr>
<tr>
<td>Single</td>
<td>27</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Separated</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Divorced</td>
<td>8</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><strong>Number of Children</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>75</td>
<td>12</td>
<td>43</td>
</tr>
<tr>
<td>One</td>
<td>17</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Two</td>
<td>12</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Three</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Four</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
children. A frequency distribution of age, gender, marital status, and children for the total group and the three scheduling option groups are listed in Table 3.

The work characteristics included the type of shift worked, if the current work schedule was their preferred schedule, and the number of round trip miles to work. Approximately half of the total study population rotated shifts. The respondents traveled from one to 98 miles round trip to work, and 21 respondents reported dissatisfaction with their current work schedule (Table 4).

Group II, the 12 hour group had twice as many of its respondents working straight (non-rotating) shifts than Group I or III. The eight hour group, Group III, reported the highest level of respondents not currently working their preferred schedule. The frequency distribution of these work characteristics is given in Table 4.

**Hypothesis One**

There is no significant difference in the actual turnover rate of nurses after the implementation of three scheduling options. Actual turnover was computed by dividing the number of nurses who resigned by the number of nurses employed (Hanson, 1983; Curran & Minnick, 1989).

\[
\text{number of nurses who resign} = \text{Turnover Rate} \times \text{number of nurses employed}
\]
Table 4

**Work Characteristics of Respondents**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total (Baylor)</th>
<th>Group 1 (12-hour)</th>
<th>Group 2 (8-hour)</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of shift worked</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straight Shift</td>
<td>51</td>
<td>3</td>
<td>36</td>
<td>9</td>
</tr>
<tr>
<td>Rotating Shift</td>
<td>59</td>
<td>17</td>
<td>23</td>
<td>16</td>
</tr>
<tr>
<td>Current Work Schedule</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the Preferred Schedule</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>88</td>
<td>17</td>
<td>51</td>
<td>13</td>
</tr>
<tr>
<td>No*</td>
<td>21</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Round Trip Miles to Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1-98</td>
<td>2-80</td>
<td>1-98</td>
<td>1-70</td>
</tr>
<tr>
<td>Mean</td>
<td>23.5</td>
<td>21.0</td>
<td>25.2</td>
<td>21.7</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>17.2</td>
<td>16.9</td>
<td>16.4</td>
<td>18.0</td>
</tr>
</tbody>
</table>

*10 of the 21 respondents who answered no to this question are currently on a waiting list to begin working their desired schedule.

Findings revealed an overall decrease in the staff nurse vacancy rate and turnover rate after implementing scheduling options (Table 5).
Table 5

**Turnover and Staff Nurse Vacancy Rates Before and After Implementation of Three Scheduling Options**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>#Staff RN</th>
<th>#FTE's</th>
<th>% Turnover</th>
<th>Staff RN % Vacancy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FTE's</td>
<td>Resigned</td>
<td></td>
<td></td>
</tr>
<tr>
<td>January to March 1988 (Before)</td>
<td>227.3</td>
<td>14.1</td>
<td>6.2</td>
<td>7.0</td>
</tr>
<tr>
<td>January to March 1989 (After)</td>
<td>247.4</td>
<td>10.2</td>
<td>4.2</td>
<td>1.3</td>
</tr>
</tbody>
</table>

From the three month period, January to March 1988, the staff nurse turnover rate was 6.2% with an overall staff nurse vacancy rate of 7%. One year later, after the implementation of three scheduling options, the number of staff nurses increased, however, there was a corresponding decrease in both turnover and vacancy rates. When turnover rates were compared using the Student's t-test, the turnover rates for the two time periods demonstrated statistical significance at the 0.05 level (t-value 2.04; p-value 0.038). The hypothesis was rejected.
Hypothesis Two

There is no significant difference in the perceived job satisfaction of registered nurses working one of three scheduling options in a selected hospital. Frequency statistics were computed using the data from the Nursing Job Satisfaction Scale. Analysis of variance (ANOVA) was used to determine differences between the three scheduling option groups. Group means and standard deviations for the NJS and NJS subscales are listed in Table 6. The possible range for the NJS was 29-116. The lower the score, the more satisfied the respondent. The mean score for Group I, Baylor was 63.7, Group II, 12 hour shifts was 63.8, and Group III, eight hour shifts was 60.5. Using ANOVA to determine if the participants in the three scheduling option groups differed on perceived job satisfaction, no two groups significantly differed at the 0.050 level (f-value 1.27, p-value 0.262), thus the second hypothesis was not rejected.

Hypothesis Three

There is no significant difference in the anticipated turnover of registered nurses working one of three scheduling options in a selected hospital. The possible range for the ATS was 12-84. The mean and standard deviations for ATS responses for each of the three groups, Baylor (Group I), 12 hour (Group II), and 8 hour (Group III) are listed in Table 6. The lower the ATS score given, the less anticipated turnover expected.
The 8 hour group (Group III) had the greatest anticipated turnover with the highest mean score of 43.2. ANOVA was used to determine if the three scheduling option groups differed on their responses to the Anticipated Turnover Scale. No two groups significantly differed at the 0.05 level (f-value 0.88; p-value 0.45), thus the third hypothesis was not rejected.

Table 6

Mean Scores of NJS and ATS for Three Schedule Groups

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Group 1 (Baylor)</th>
<th></th>
<th>Group 2 (12-Hour)</th>
<th></th>
<th>Group 3 (8-Hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=20</td>
<td>n=62</td>
<td>n=27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>63.8</td>
<td>65.5</td>
<td>63.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>7.0</td>
<td>7.5</td>
<td>7.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscales:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence</td>
<td>11.2</td>
<td>11.0</td>
<td>9.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phy. Work Env.</td>
<td>12.5</td>
<td>12.3</td>
<td>12.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staffing</td>
<td>16.9</td>
<td>17.6</td>
<td>16.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team</td>
<td>8.1</td>
<td>8.8</td>
<td>7.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>15.2</td>
<td>15.7</td>
<td>16.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATS</td>
<td>39.6</td>
<td>37.9</td>
<td>41.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Additional Findings

Respondents were also given the opportunity to respond to three open ended questions. A summary of responses for question one, what do you like about the schedule you work, revealed most participants enjoyed the extra time away from work that the scheduling options allowed. Examples of responses include:

"I like having 4 days a week off most."

"The 12 hour option gives you more days off"

"Schedule allows more free time to go to school. Allows greater flexibility in switching shifts with coworkers"

"Full time pay for only 2 days of work a week"

The second question asked participants what they disliked about the schedule that they worked. The majority of the respondents indicated that they disliked working night shifts, with two-thirds reporting difficulty working three 12 hour shifts consecutively or rotating between days and nights. Examples of responses include:

"I dislike working weekends"

"When scheduled for three 12-hour shifts in a row, I suffer fatigue"

"I dislike rotating to night shifts, even though it's only one or two a month"

"I dislike working three 12-hour shifts in a row, especially over the weekend"

"12 hours is a long shift, physically and emotionally draining"
Only one-fourth of the participants responded to the third question asking them to suggest other scheduling options for nursing administration to consider. Most of the respondents suggested ten hour shifts in addition to the already offered schedules, or offering more Baylor positions to allow other nurses even less scheduled weekends of work. Examples of those responses include:

"More weekend Baylor positions to allow for less weekend coverage by regular staff"

"10 hour shifts, four days a week"

"Rotate less often, for example one month of days and one month of nights"

"Shared full time positions between 2 RN's each working half the hours, receiving half benefits and pay"

In summary, there was no significant difference in the anticipated turnover rate and the job satisfaction for nurses working one of three scheduling options. Statistical significance at the 0.05 level was found through t-test analysis of actual turnover rates before and after implementing scheduling options within the study facility. Participants' comments to open ended questions supported these findings.

The discussion of the findings is presented in Chapter 4. Conclusions of the study and indication of future research will also be discussed.
Chapter 4

Discussion

The purpose of this research study was to examine three work scheduling options and to determine if there were differences in perceived job satisfaction and the anticipated turnover of registered staff nurses. Actual turnover rates before and after implementation of scheduling options were also compared. Atwood and Hinshaw's (1987) Five-Stage Theoretical Model for Anticipated Turnover provided the conceptual framework for this nonexperimental descriptive research study.

Three hypotheses were developed to determine if flexible scheduling options influenced the job satisfaction, anticipated or actual turnover in a sample population of 109 registered nurses. The tool used to measure job satisfaction, the Nursing Satisfaction Scale (NJS), a 29-item questionnaire with five subscales, and using a four choice likert scale. The instrument used to measure anticipated turnover, the Anticipated Turnover Scale (ATS), a 12 item questionnaire with a seven choice Likert scale. Demographic information was collected on each respondent using the Demographic Data Sheet. Respondents were also given the opportunity to describe, in three open ended questions, the most and least satisfying aspect of their current work schedule, and offer suggestions to nurse administrators regarding other scheduling options for
consideration.

The participants' responses were divided and analyzed according to the schedule they currently worked. These three groups were Group I, Baylor Weekend only schedule, Group II, 12 hour shifts, and Group III, eight hour shifts. The three groups were similar on all demographic variables. A typical respondent was a 29 year old married female. About two-thirds of the participants were childless.

Analysis of variance was used to test significant differences of job satisfaction and anticipated turnover of the three schedule groups. Major findings of this study were that no two groups differed at the 0.05 level of significance on the Nursing Job Satisfaction scale and corresponding subscales, or the Anticipated Turnover Scale.

Hypothesis testing using the Student's t-test measured statistical significance between the actual turnover rates before and after implementation of three scheduling options. There was a statistically significant difference between the actual turnover rates, three months before and three months after the implementation of three scheduling options, at the 0.05 level of significance.

Conclusions

The study contained several limitations that must be considered in its evaluation. First, the smallness of the
sample size may not represent the target population from which this registered nurse sample was drawn, limiting the importance of findings. A respondent sample of 58% also may not be representative of the sample facility. Because anonymity was guaranteed, it could not be determined if one nursing unit within the facility was more represented than another. The scheduling option program was operationalized from the Human Resources Department, using the same criteria on each nursing unit. Because the scheduling process is decentralized to the unit level, some scheduling variance occurs. Considering these limitations, care must be taken not to generalize these findings beyond the setting from which the results were obtained.

Theoretical Framework

Atwood and Hinshaw's Five-Stage Theoretical Model for Anticipated Turnover Among Nursing Staff provided the theoretical framework for exploring job satisfaction, anticipated and actual turnover of professional registered nurses within one acute health care facility. The model identifies the complex multivariate organizational and personal factors which influence job satisfaction. In the model, job satisfaction is a predictor of anticipated and actual turnover of professional nursing staff.

The five stages of the model are interlocking and build upon one another (Figure 1). Stage I, initial expectation of
tenure, is related to how long the employee expects to remain employed within the organization. Tenure expectation in this study was not measured. The other influencing factor in Stage I is mobility factors, such as age, education, and nursing experience. Atwood & Hinshaw (1984) found that mobility factors were positively or negatively correlated with variables in Stage II and Stage III. For example, there was a positive correlation between mobility factors and job satisfaction. Mobility factors in this research study were operationalized by determining the participants' age, years of nursing experience, marital status, education, and number of children.

Stage II is identified as four factors related to the decentralization of the nursing organization. These factors are group cohesion, stress, autonomy, and control over nursing practice. Examination of these factors were not within the scope of this research study. For this study scheduling options were operationalized as a dimension of the decentralization of the nursing organization. Providing nurses with options for work schedules provides nurses with more freedom to balance their work and personal lives. This can reduce job stress and positively impact job satisfaction.

Most nurses within the study facility indicated the scheduling option they were currently working was a personal choice. Twenty-one of the total respondents (n = 109)
indicated dissatisfaction with their current work schedule with ten of the 21 on waiting lists within the facility to move to the scheduling option of their choice. Data were not analyzed to determine if having a choice in selecting a work schedule influenced job satisfaction or anticipated turnover. Rather, data were analyzed to determine if working one of three work schedules influenced the nursing job satisfaction or intent to leave. Because the majority of the respondents did choose their work schedule, this choice may have influenced their level of job satisfaction or their intent to leave.

The third stage in the Five Stage Theoretical Model for Anticipated Turnover Among Nursing Staff focuses on job satisfaction. Two dimensions of job satisfaction include organizational work satisfaction and professional/occupational job satisfaction. Organizational work satisfaction analyzes seven factors related to job satisfaction within the health care setting. These are pay, autonomy, task requirements, administration, doctor-nurse relationship, interaction, and professional status. This dimension of job satisfaction was not explored in this study. The second dimension of job satisfaction, Professional/Occupational Job Satisfaction, analyzed five factors related to the job satisfaction of the professional nurse. These include competence, physical work environment, staffing, team respect, and time priorities. In
this study Professional/Occupational Job Satisfaction was measured using the NJS. The findings from this study indicated that there was no significant difference between the three scheduling option respondents' level of job satisfaction. Job satisfaction, as measured by the NJS, was moderately high for all three scheduling option groups. Given that there was no significant difference between the three scheduling option groups on job satisfaction, it is suggested that scheduling options may have influenced the moderately high level of job satisfaction.

Anticipated turnover is the variable in Stage IV of the Anticipated Turnover Model. Anticipated turnover is the perception by the staff nurse to voluntarily terminate that staff nurse position within the organization. Actual turnover was predicted to be influenced by anticipated turnover. In this study and in Atwood and Hinshaw's study, anticipated turnover was measured by the Anticipated Turnover Scale (ATS). Results of this study using ANOVA testing showed no significant difference in the anticipated turnover of registered nurses working one of three scheduling options in a selected facility. The possible range for the ATS was 12-84, with the lower score representing the least expected anticipated turnover. Mean scores from group I and II were 38 with group III slightly higher at 43. The mean scores indicate a moderately low anticipated turnover for all schedule groups. These findings
may provide support to the addition of scheduling options as a variable to the theoretical model in that Anticipated Turnover was not significantly different for any of the groups and overall, anticipated turnover was moderately low for each group indicating that scheduling options may be an influencing variable that positively impacts anticipated turnover.

The last stage, Stage V, is the actual voluntary termination of the staff nurse. In the previous research Atwood & Hinshaw (1984) found that actual voluntary termination could be predicted by variables in stages one through four of the model. This research analyzed actual turnover rates for two three month time periods before and after implementation of scheduling options. There was a statistically significant difference in actual turnover before and after the implementation of three scheduling options. This significant finding may provide support to the modified model, Schedule Options as a Variable for the Five-Stage Theoretical Model for Anticipated Turnover Model Among Nursing Staff. Actual turnover may have improved due to the availability of work schedule options. These work scheduling options may have positively influenced job satisfaction and anticipated turnover as the three groups did not differ on either variable and demonstrated moderately high job satisfaction and a low rate of anticipated turnover.

It is important to consider that job satisfaction and
anticipated turnover were measured using 109 full time registered staff nurses that were employed in a selected hospital at one point in time. Actual turnover was measured using a time span of three months before and three months after implementation of the scheduling options. The sample population used to measure actual turnover may have included some, but not all, of the 109 respondents completing the Nursing Job Satisfaction and Anticipated Turnover Scales.

Results demonstrated no differences between three schedule groups on job satisfaction or anticipated turnover with all three groups reporting a moderate to high level of job satisfaction and moderately low level of anticipated turnover. Because this study explored differences between three schedule option groups and did not explore relationships between the variables of job satisfaction, anticipated turnover, and actual turnover, correlations could not be calculated to determine if schedule option groups were positively or negatively correlated with job satisfaction, anticipated turnover, or actual turnover. However, the findings from this study provide support to the modified model in that groups were not different on their level of job satisfaction and anticipated turnover suggesting that scheduling options may have a positive influence on the study variables. A decrease in actual turnover rates when t-test comparisons are made on data before and after the implementation of three scheduling options also
suggests that scheduling options are an important factor that should be identified in a model that predicts actual turnover.

**Review of Literature**

It was postulated that offering flexible scheduling options would increase registered nurse job satisfaction with a corresponding decrease in the anticipated and actual turnover. The current nursing literature provides support of improved job satisfaction associated with offering scheduling options to professional registered nurses (Neathawk, Dubuque, & Kronk, 1988; Presholdt, Lane, & Mathews, 1988; Prescott, 1987; Jones & Brown, 1986; Elliott, 1989; Helmer & McKnight, 1988). This study did not show job satisfaction differences in registered nurses working one of three scheduling options. Because this study did not measure job satisfaction before and after implementation of work scheduling options, it could not be determined if job satisfaction had improved. However, because there was no significant difference in job satisfaction between the three groups of nurses working one of three scheduling options, these nurses may have had satisfaction with their jobs because of the scheduling options available to them. The possible range for the NJS was 29-116; the lower score indicating the more satisfied the respondent. Overall NJS mean score was 62.3 indicating a moderately high satisfaction level. When divided into schedule groups, the mean for Group I was 63.7, Group II 63.8, and Group III, 60.5. Although current
research studies supported the use of scheduling options to improve job satisfaction (Neathawk, Dubuque, & Kronk, 1988; Presholdt, Lane, & Mathews, 1988; Prescott, 1987; Jones & Brown, 1986; Elliott, 1989; Helmer & McKnight, 1988), no previous research explored job satisfaction between nurses working different scheduling options.

All three schedule groups demonstrated comparably moderate to high levels of satisfaction with their job according to the NJS scores and a low to moderate likelihood to voluntarily terminate their positions as measured by the ATS. Although there are a number of factors which may have contributed to these findings, one possibility was that all but 21 of the 109 participants were able to work their preferred schedule option.

No studies were found to examine schedule choice and its direct relationship to job satisfaction. Several research studies reported respondents listing scheduling options as a priority for them, differentiating one employment opportunity from another (Blegen & Mueller, 1987; Parasuraman, 1989; Neathawk, Dubuque, & Kronk, 1988; Minnick, Roberts, Ginzberg, & Curran, 1989).

In this study, it is possible that turnover may have decreased because not only were scheduling options introduced and available, but most nurses could choose their work schedule option. While choice is one possible explanation in an overall decrease in the actual turnover of registered nurses, the
number of full time equivalents (FTE) was also noted to increase. Some of the increase was the implementation of the Baylor weekend only plan, which nurses work 24 hours a week, a 0.6 FTE but are reimbursed at a full time 1.0 FTE. Studies have shown decreased turnover linked to satisfactory staffing levels thus, reducing the overall workload of each registered nurse (Elliott, 1989; Prescott & Bowen, 1987). This increase of positions in this study could have affected the actual turnover rates within this health care facility as well as influenced job satisfaction and anticipated turnover.

The three scheduling option groups were very similar on demographic variables such as age, education, work experience, and marital status. It has been suggested that marital status, number of children, or even the distance to work may be factors that affect a scheduling option chosen by registered nurses. Current nursing literature has shown relationships between respondents' demographic variables and the importance of offered schedule options (Fetzer-Fowler, 1984; Metcalf, 1982; Elliott, 1989). Specific demographic variables strongly associated with alternate scheduling options, primarily the Baylor weekend only option, were number of children, continuing education, and traveling time/distance. The relationship between demographic variables and schedule groups was not demonstrated in this study. Study participants did indicate through qualitative responses that working one of three
scheduling options allowed free time in which to accomplished personal goals.

**Implications for Nurse Administrators**

This study has implications for nurse administrators who are interested in implementing strategies to improve registered nurse job satisfaction and retention. In this cost-conscious, high productivity health care environment, effective strategies need to be based on sound empirically tested interventions.

This study explored registered nurse job satisfaction and retention from a new perspective, comparing groups of nurses according to the schedule worked. This study suggests that retention of registered nurses could be improved by offering work scheduling options for registered nurses. Nurse administrators should examine scheduling options as one suggested effective method to attain registered nurse job satisfaction, low levels of anticipated turnover and ultimately decreased turnover of registered nurses.

**Recommendations**

Several recommendations can be made as a result of completing this research study. The study should be replicated using the same design and methodology with a larger population, more representative of the registered nurse population. The larger sample would provide less threat to the external validity of the research making findings more generalizable.

Other research designs and methods should be used to
determine if work schedule options influence registered nurse job satisfaction and retention. Comparing these variables from two homogenous health care facilities, one that has implemented flexible work schedule options and one that has not, would further identify the influence work schedule options has on registered nurse job satisfaction, anticipated turnover, and actual turnover.

This study explored differences between groups working various scheduling options. Data analysis through multiple regression would determine relationships between variables and whether schedule options were predictive of improved job satisfaction, anticipated turnover, and actual turnover. Future replication of the Atwood & Hinshaw (1984) research, using the instruments designed to test each variable in the model would indicate predictive relationships rather than group differences.

Future research should continue to examine the relationship between scheduling options and job satisfaction and retention of registered staff nurses. The relationship between the registered nurses' ability to choose a scheduling option and job satisfaction should be examined. Previous research has determined that scheduling options are linked to improved job satisfaction and reduced turnover (Prescott & Bowen, 1987).
Summary

In conclusion, this study revealed that there were no significant statistical differences between job satisfaction, and anticipated turnover of full time registered nurses working one of three scheduling options. A statistically significant difference was found between the actual turnover rates for two three month time periods before and after implementation of the three scheduling options. The influence scheduling options had on the job satisfaction and anticipated turnover was demonstrated through the moderately high level of job satisfaction and moderately low level of anticipated turnover across the three schedule groups.

Nurse administrators are challenged to succeed within a myriad of complex patient care, personnel, financial, and ethical issues. In today's competitive health care arena there is a need for empirically tested data from which to base complex management decisions. The responsibility to provide the health care organization with professional registered nurses, and retaining those nurses through strategies necessary to maintain job satisfaction should be a primary concern of all nurse administrators.
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Appendix A

Nursing Job Satisfaction Scale (NJS)

Instructions

1. Please answer the questions in order. Do not skip around.
2. All of the questions can be answered by a (/). If you do not find the exact answer that fits your case, check the one that comes closest to it. Please answer all questions.
3. Feel free to write comments on the back of the questionnaire.
4. Remember all answers will be completely confidential. Please be honest in your answers.
5. Please return the completed questionnaire and Demographic Data Sheet in the sealed envelope marked #1, and place it in the box marked research questionnaires in your nursing unit lounge. Do not write your name on the questionnaire.

For each numbered item below, mark the appropriate response.
(A) Almost always    (B) Frequently
(C) Occasionally     (D) Rarely

1. The immediate supervisor respects my judgement.
   (A) _____ (B) _____ (C) _____ (D) _____

2. My knowledge is respected by co-workers.
   (A) _____ (B) _____ (C) _____ (D) _____

3. I feel as if I am used to fill an empty slot.
   (A) _____ (B) _____ (C) _____ (D) _____

4. My unit does not have the equipment needed for the patients.
   (A) _____ (B) _____ (C) _____ (D) _____

5. My unit is noisy.
   (A) _____ (B) _____ (C) _____ (D) _____

6. I have time to give quality patient care.
   (A) _____ (B) _____ (C) _____ (D) _____

7. I feel comfortable making patient care decisions.
   (A) _____ (B) _____ (C) _____ (D) _____

8. Time prevents me from giving emotional support to the families of patients.
   (A) _____ (B) _____ (C) _____ (D) _____

9. A feeling of team spirit exists on my shift.
   (A) _____ (B) _____ (C) _____ (D) _____

10. Patients' equipment is maintained for my ready use.
    (A) _____ (B) _____ (C) _____ (D) _____

11. Organizing my daily work requires too much time.
    (A) _____ (B) _____ (C) _____ (D) _____

12. Adequate relief is regularly provided for lunch and coffee breaks.
    (A) _____ (B) _____ (C) _____ (D) _____
Nursing Job Satisfaction Scale (NJS)

For each numbered item below, mark the appropriate response.

(A) Almost always
(B) Frequently
(C) Occasionally
(D) Rarely

13. My judgements are respected by physicians.
   (A) ___ (B) ___ (C) ___ (D) ___

14. The work won't get done if I don't do it personally.
   (A) ___ (B) ___ (C) ___ (D) ___

15. Physicians consider my judgment during emergencies.
   (A) ___ (B) ___ (C) ___ (D) ___

16. I feel that my knowledge is current.
   (A) ___ (B) ___ (C) ___ (D) ___

17. My patient care is interrupted by paperwork.
   (A) ___ (B) ___ (C) ___ (D) ___

18. Time prevents me from giving emotional support to patients.
   (A) ___ (B) ___ (C) ___ (D) ___

19. There is adequate staffing on the unit.
   (A) ___ (B) ___ (C) ___ (D) ___

20. My knowledge is respected by the immediate supervisor.
    (A) ___ (B) ___ (C) ___ (D) ___

21. Nursing care supplies are available when needed.
    (A) ___ (B) ___ (C) ___ (D) ___

22. I am able to cope with job distress.
    (A) ___ (B) ___ (C) ___ (D) ___

23. Physicians respect my knowledge.
    (A) ___ (B) ___ (C) ___ (D) ___

24. A lack of work space distresses me.
    (A) ___ (B) ___ (C) ___ (D) ___

25. Staffing permits me to work a satisfying schedule.
    (A) ___ (B) ___ (C) ___ (D) ___

26. I have sufficient preparation to operate the specialized equipment used on the unit where I work.
    (A) ___ (B) ___ (C) ___ (D) ___

27. I am able to provide the nursing care that I want to during the length of time on my work shift.
    (A) ___ (B) ___ (C) ___ (D) ___

28. My work schedule is stressful.
    (A) ___ (B) ___ (C) ___ (D) ___

29. Staffing allows me to attend continuing education events.
    (A) ___ (B) ___ (C) ___ (D) ___
Appendix B

Anticipated Turnover Among Nursing Staff (ATS)

Response Options:

AS = Agree Strongly
MA = Moderately Agree
SA = Slightly Agree
U = Uncertain
SD = Slightly Disagree
MD = Moderately Disagree
DS = Disagree Strongly

Directions:
For each item below, circle the appropriate response. Be sure to use the full range of responses (Agree Strongly to Disagree Strongly).

1. AS MA SA U SD MD DS I plan to stay in my position awhile.
2. AS MA SA U SD MD DS I am quite sure I will leave my position is the foreseeable future
3. AS MA SA U SD MD DS Deciding to stay or leave my position is not a critical issue for me at this point in time.
4. AS MA SA U SD MD DS I know whether or not I'll be leaving this agency within a short time.
5. AS MD SA U SD MD DS If I got another job offer tomorrow I would give it serious consideration.
6. AS MD SA U SD MD DS I have no intentions of leaving my present position.
7. AS MD SA U SD MD DS I've been in my position about as long as I want to.
8. AS MD SA U SD MD DS I am certain I will be staying here awhile.
9. AS MD SA U SD MD DS I don't have any specific idea how much longer I will stay.
10. AS MD SA U SD MD DS I plan to hang on to this job awhile.
11. AS MD SA U SD MD DS There are big doubts in my mind as to whether or not I will really stay in this agency.
12. AS MD SA U SD MD DS I plan to leave this position shortly.
Appendix C

DEMOGRAPHIC DATA SHEET

Please answer the following questions by checking the appropriate blanks.

Personal:
1. Age in years and months  
   years _____ months _____
2. Marital Status  
   Married _____  Separated _____  
   Single _____  Divorced _____
3. Gender  
   Male _____  Female _____
4. Number of children living with you _____  
   The children's ages ___________________________
5. Educational Background (Check all that apply)  
   Associate Degree in Nursing _____  
   Diploma in Nursing _____  
   Baccalaureate Degree in Nursing _____  
   Master's Degree in Nursing _____  
   Non-Nursing Degree _____  Type of Degree _____
6. Experience in Nursing in years and months  
   years _____ months _____

Employment:
7. Length of current employment in years and months  
   years _____ months _____
8. How many miles round trip is it to work and home?  
   miles _____
9. Do you work a rotating or a straight shift?  
   Rotating _____  Straight shift _____
10. If you work a straight shift, what shift is it?  
    Days _____  Evenings _____  Nights _____  
    12 hour Days _____  12 hour Nights _____
11. Schedule you work (Check all that apply)  
    Baylor Option _____  
    8 hour shifts _____  
    8 hour shifts _____
12. Who decided your current work schedule?  
    You _____  Supervisor _____
13. Is this the job schedule you prefer to work?  
    Yes _____  No _____
14. If you answered no to #13, which schedule would you prefer?  
    Baylor Option _____  
    12 hour shift _____  
    8 hour shift _____
15. Are you currently on a waiting list for your preferred work schedule?  
    Yes _____  No _____
DEMOGRAPHIC DATA SHEET

Opinion:

16. What do you like about the schedule you work?

17. What do you dislike about the schedule you work?

18. What other (if any) flexible scheduling options would you suggest to nurse administrators?
Dear Colleague:

I am a graduate student at Old Dominion University in the School of Nursing. I am conducting a research study in partial fulfillment of my masters degree. The purpose of the study is to examine factors associated with flexible scheduling options.

Your participation in this study involves completing a three part questionnaire which takes approximately 15 minutes to complete. Participation in this study is voluntary.

Your return of completed questionnaires will be considered your consent to participate in the study. Although each item is important to the research feel free to omit any item that you feel uncomfortable in answering. I urge your participation but your choice to withdraw or not participate will be respected with no negative consequence to you.

The questionnaire should be completed in a quiet, private place, outside the nursing unit. After completion, please staple the questionnaires and the demographic data in half lengthwise and place it into the sealed box in your nursing units lounge marked Research Questionnaires. Please write no names or identifying marks on the envelopes or questionnaires. All individual responses will be held in the strictest confidence. Only the researcher will have access to your questionnaire.

It is my hope to further nurse administrators' knowledge of staff needs and views in the area of job satisfaction and scheduling options. Although no individual benefit can be offered by your participation your views will also be shared.

Research results will be posted in each nursing lounge at the conclusion of data analysis.

I can be reached at __________ for any questions relating to the study.

________________________
Katherine M. Newnam, RN, BSN
Graduate Nursing Student
LETTER TO HOSPITAL ADMINISTRATION

Dear Nurse Administrator,

I am a graduate student studying nursing administration at Old Dominion University, School of Nursing. I am conducting a research study in partial fulfillment of that degree. The study will examine three work scheduling options to determine if there is a difference in job satisfaction/dissatisfaction, and retention of registered nurses. It is anticipated that the study results will provide nurse administrators information regarding staff needs and views in the area of job satisfaction with regard to flexible scheduling options.

Your facility has been selected as a potential site for the research study. Permission is sought to contact all full time registered staff nurses through unit staff meetings, or unit managers. The nurses will be asked to complete two questionnaires and a demographic data sheet, taking approximately 30 minutes to complete. A sample packet has been provided for your review with this letter.

I can be reached at [contact information] to answer further questions regarding the research study and for notification of your decision regarding permission of facility use.

Katherine M. Newnam, RN, BSN
ODU Graduate Nursing Student