FACULTY PERCEPTIONS ON THE USE OF VARIED SHIFT LENGTHS FOR NURSING STUDENT CLINICAL ROTATIONS

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A Thesis

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Master of Science

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by

Jaime A Hannans

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ABSTRACT

FACULTY PERCEPTIONS ON THE USE OF VARIED SHIFT LENGTHS FOR NURSING STUDENT CLINICAL ROTATIONS

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Nursing shortages will greatly impact the United States health care system if solutions are not found to increase the number of new nurses able to enter the profession. Clinical site availability is one limiting factor in the growth of nursing programs. Alternatives to improve access to varied clinical shifts and to improve clinical site availability should be evaluated in order to find ways to increase the number of clinical slots for students. The first step to determine potential new strategies in clinical site utilization is to examine what current nursing programs are doing to facilitate clinical placements for nursing students.

It is identified that nursing programs have challenges in both scheduling and staffing clinical rotations. Using the seven-step change theory developed by Ronald

Lippitt, Jeanne Watson, and Bruce Westley in 1958, this study attempts to further examine and understand the challenges in both scheduling and staffing clinical rotations for nursing programs. Evaluating faculty perceptions of current practice in nursing programs and past experiences as nurse educators assesses the motivation for, capacity for, and need for changes in clinical practices.

This research study surveyed nursing faculty from nursing programs throughout California (n=7). Descriptive statistics and content analysis were used to evaluate the results of an online web survey distributed via convenience sampling to current nursing faculty of these programs. Questions evaluated nursing faculty perceptions about their experiences of varied clinical shift types and durations, and strategies implemented to manage clinical placement difficulties.

The findings from this study indicate faculty perceives 8-hour shifts to be most effective for clinical rotations. Perceived benefits and disadvantages of different clinical shift lengths are varied, but all shift length types (4-hour, 6-hour, 8-hour, and 12-hour) appear to have both benefits and disadvantages. Nursing programs utilize a variety of clinical shift types and durations that maximize the use of clinical facilities and allows faculty flexibility. Further study using a larger sample is suggested to examine the potential benefits from this research. Additional research on clinical rotations from a variety of perspectives is suggested to gain a broader picture of how to combat the limitations on nursing program growth.

CHAPTER I

INTRODUCTION

Currently nursing schools have difficulty expanding their programs due to a number of limitations including unavailable or inadequate clinical sites, faculty shortages, and compensation rates (American Association of Colleges of Nursing [AACN], 2007; California Board of Registered Nurses [BRN], 2008b). Clinical practice in nursing school is an essential component of nursing education and lack of clinical training slots is one of the major barriers to program expansion. In many areas, nursing programs compete for access to clinical training slots. Presumably, more students could be accommodated in clinical placements if more days of the week and more shift options were used. Given the recent growth in California nursing program admissions, it is not clear how or if the use of clinical time has changed to accommodate this growth, or what change is needed to further expand clinical slots. Reviewing the use of alternative shift types and determining what nursing programs are doing to meet clinical hours could provide information to evaluate potential alternatives to expanding available clinical placements.

This research study will look at the concepts related to faculty perceptions of varying shift hours used for clinical instruction and current clinical shift practices in nursing programs. This study will also examine faculty perceptions about what shifts are the most realistic and effective for clinical instruction. Data about current nursing

program practices for clinical courses in relation to available faculty, simulation use, clinical shift hours, and clinical site availability will also be examined.

Background

The nursing shortage is well documented in the media, nursing journals, and is acknowledged by most of the public (AACN, 2007). The U.S. Department of Labor (2008, p. 383) reported "Registered nurses are projected to generate about 587,000 new jobs between 2006-2016, one of the largest numbers among all occupations." American Nurses Association (ANA) State Government Relations (2005) reported that there will continue to be a national shortage of nurses over the next eight to ten years if nothing is done to change the current trends.

Over 118,000 nurses are needed to fill vacant positions in United States' hospitals (American Hospital Association, n.d.). The Health Resources and Services Administration (HRSA) (2004) reported the nation's nursing shortage would grow by 2020 to over one million nurses. The anticipated shortage in California alone by 2012 is reported at 21,122 full time registered nurses (Spetz & Dyer, 2005).

To increase the number of nurses in the nation's workforce, more student admission slots must increase in nursing programs, yet admission slots are limited. For example, for school year 2006-2007 the California Board of Registered Nursing (2008a) reported 55.4% (15,797) qualified applicants could not be admitted to California nursing programs due to a lack of admission space available. The California BRN (2008a) stated that although enrollment in nursing schools has grown it has not kept up with the increased number of eligible students applying for entrance in nursing programs. The top

three reasons reported for limitations in growth of nursing programs were a lack of qualified faculty, a lack of clinical sites, and noncompetitive salaries (BRN, 2008b).

The American Association of Colleges of Nursing's (2008) 2007-2008 annual survey reported 40, 285 qualified applicants were turned away from baccalaureate and graduate programs. Explanations for limiting student enrollment were unavailable qualified faculty, limited clinical sites, clinical preceptors, classroom space, and budget constraints (AACN, 2008). The AACN (2007) reported that seventy-one percent of nursing schools in 2006 stated faculty shortages as the primary reason for not enrolling all eligible students into nursing programs.

A shortage of nursing faculty contributes to the shortage of nurses by limiting student enrollment in nursing programs each year. In 2002, unfilled full time nursing faculty positions in the United States were 1,106 with 682 vacant in baccalaureate programs and higher degree programs and 373 in ADN programs (National Council of State Boards of Nursing [NCSBN], 2010). The BRN (2008b) reported faculty vacancy rates of 5.9% in 2006-2007, with 205 available positions. AACN reported in July 2006, 329 nursing schools had 637 open faculty positions (AACN, 2007). Larsen (2006) stated there was an estimated 7.9% and 5.6% vacancy rate in baccalaureate or higher degree programs and associate degree programs, respectively.

Other additional reasons contributing to the nursing faculty shortage include average faculty age of 55.3, average retirement age of 62.5, non-competitive salaries compared to clinical setting compensation, low numbers of nurses earning advanced degrees, nurses attending school later in life, and the anticipated large number of faculty retiring in the next ten years (AACN, 2008). The BRN (2008b) reported the top two

reasons for faculty shortages were a lack of appropriately qualified faculty and noncompetitive salaries.

Incentives to increase the number of faculty are underway. The American Nurses Association State Government Relations (2005) reported there are hundreds of state and federal bills introduced each year for nursing education to increase the number of nurses who graduate. Currently, a number of federal programs have been implemented in both undergraduate and graduate nursing programs as a solution to improve enrollment rates at both levels of education (AACN, 2008). Examples include state or federally funded loans, grants, or reimbursement programs. One program in California requires graduates to agree to practice in underserved areas for a contracted period of time in return for a repayment of a portion of school loans acquired in pursuing their degree at the end of the contract. Another program in California offers a repayment of a portion of school loans acquired in pursuing a Master's degree if the graduate agrees to teach in a California nursing program full time for three years within a ten-year contract period.

The continued shortage of faculty is a threat to nursing school programs. Strategies reported to improve the faculty shortage include increased use of part-time faculty, nursing faculty working longer past the retirement age, and a larger use of non-doctoral prepared faculty (NCSBN, 2010). The BRN (2008a) reported 58.1% of faculty is part-time which has more than doubled in the last eight years.

The use of more part-time faculty has implications for clinical shift design, as many part-time faculty have dual roles as staff nurses when they are not teaching. Thus, they have limited availability for teaching clinical rotations. The nursing faculty shortage

and the limitations in clinical placements mandate re-examination of how nursing programs design their clinical shifts.

Clinical Shift Changes

One solution to overcome the nursing shortage in hospitals is the increased practice of hospitals staffing nurses for 12-hour shifts, instead of the traditional 8-hour shift. For many years, emergency room nurses and intensive care nurses have worked 12-hour shifts. Since the 1970s, the 12-hour shift has become common in nurse staffing (Heaslip, 1988; McGettrick & O'Neill, 2006; Todd, Reid, & Robinson, 1989). In addition to providing more efficient use of nursing staff, reasons for hospital wide 12-hour shifts include continuity of care and cost-effectiveness (McGettrick & O'Neill, 2006).

In the last seven years, 12-hour shifts have become more commonly used in nursing student clinical rotations (BRN, 2008a). Twelve-hour shifts may be used for clinical rotations when using alternative shifts, such as weekend shifts, or when limited days are available at a clinical site. Often, limitations in clinical site availability are due to multiple schools utilizing the same facility to fulfill clinical hours. Alternative shift durations or shift types may be available, such as night, evening, or weekend shifts when one facility is accommodating multiple nursing programs. Faculty at the University of Windsor, Ontario evaluated student feedback regarding the clinical experience for benefits and disadvantages of the 12-hour shift (Gignac & Walker, 2004). Students worked 12-hour shifts in a full time schedule for two weeks. The students responded to a 28-item questionnaire about their experience. Findings report "it is feasible to use 12-

hour shifts" and encourage further research to examine non-traditional clinical shift hours.

Problem Statement

A nursing shortage and nursing faculty shortage have been identified, as well as limitations in ability of nursing programs to increase enrollments to meet demands. Clinical education is limited by the nursing faculty shortage which stems from the overall nursing shortage and by clinical site limitations or availability. Current nursing program practice is unknown related to use of clinical shift types and durations. Clinical shift types may be restricted based on hospital policies, regional planning, and use of sites by multiple training programs.

The most common approaches reported to expand nursing programs' enrollment are the use of adjunct faculty, simulation learning, and the use of alternative shift types, such as evenings and weekends (BRN, 2008b). The number of available faculty is limited by uncontrollable external variables for each program, such as the population of qualified nurses living in the geographical area and the number of qualified nurses who may be limited available due to other employment. The number of available clinical sites and shift hours available for each program are limited by uncontrollable external variables, such as geographical location, the number of hospitals in the local area, and the number of nursing programs utilizing the same local area hospital. Repeatedly, pressure for finding clinical sites has been reported as one of the primary issues limiting the expansion of nursing programs (AACN, 2008; BRN, 2008b).

Alternative shift types and durations to fulfill clinical hours may lead to new ideas in expanding available shifts in the clinical setting.

Innovative solutions are needed to solve the limitations of clinical site availability in order to minimize the potential threat to the growth of nursing programs. Assessing current nursing program practices for fulfilling clinical hours can be the first step to evaluating how to better manage clinical rotations and minimize limitations in clinical site availability. Faculty perceptions of how nursing programs are best utilizing clinical shift hours may help derive new solutions to the problem. In addition, faculty perceptions of the benefits and disadvantages of varied shift types may lead to discovering alternatives for best meeting clinical hour requirements.

Relevance to Nursing

Shift type and duration is important to evaluate with respect to meeting course objectives in the clinical setting. Nursing programs are required to provide enough clinical time to meet training needs and California BRN requirements. Maintaining an effective and safe clinical teaching environment is important to consider in evaluating clinical shifts. Patient interaction and care, chart review, and learning clinical skills are all experiences that every nursing student needs in any clinical rotation regardless of the shift type. Ensuring effective quality learning experiences are essential if nursing programs implement alternative shift types or durations for clinical rotations.

Faculty support is critical if alternative clinical shift hours are implemented in nursing programs. Transition to alternative clinical shifts may be limited by faculty barriers such as union contracts, state labor laws regarding overtime, or difficulties with

faculty scheduling due to other jobs or other courses they teach. Faculty may or may not be interested in working alternative shifts. Faculty feedback and opinions are pertinent in finding solutions to faculty shortages and alternative clinical rotation plans to improve or, at least, maintain student enrollment numbers. Faculty shortages may be minimized if there are changes in clinical shift types or durations. For example, nursing programs that have 12-hour clinical shifts, weekend shifts, or night shift rotations may allow for the use of part-time faculty who hold other positions as staff nurses working 12-hour shifts. This potential faculty may not be willing to teach clinical rotations that are two days per week, but may be available if the clinical rotation is one day per week. There may also be other potential faculty in positions such as research, education, or administration that are interested in part-time clinical faculty roles. Variations in clinical shift rotations will need to be evaluated related to maintaining safe, effective learning in the clinical setting with available and qualified faculty.

This research study will examine the shift types used in nursing clinical courses, and will examine the perceptions of nursing faculty from university baccalaureate and community college registered nurse programs. Nursing faculty opinions regarding clinical shifts may provide insight to options available to help manage faculty shortages or ways to increase available enrollment slots for students. This study may lead to further research about shift duration for clinical rotations and the impact it may have on nursing education or faculty staffing.

Simulation use is another strategy for meeting clinical education requirements set by the BRN. In California, a maximum of twenty-five percent of clinical hours may occur in simulation (BRN, 2008c). With clinical site availability being limited, nursing

programs may often plan on substituting clinical hours in the hospital setting with simulation for the maximum amount of time the BRN allows. Depending upon the amount of simulation different nursing programs utilize, the actual hours they need to fulfill in clinical rotations may vary or may alter the shift durations they choose to use for the clinical rotation. Faculty experiences and perceptions of the use of simulation in clinical courses may provide other alternatives or ideas in relationship to finding the most effective way to utilize clinical hours.

Theoretical Framework

The theoretical framework for this project is based on the theory of change by Lippitt, Watson, and Westley (1958). Lippitt et al. (1958) developed a seven-step change theory initially adapted from Kurt Lewin's theory of change. Kurt Lewin (1948) identified unfreezing, moving, and refreezing to facilitate change (as cited in Miller, 2003). Unfreezing is described as preparing for change by increasing the driving forces to make a change and minimizing the resistance to change. It is the time when one identifies a need for change and has the desire to change the current behavior pattern. Moving is the process of making the actual change. Refreezing is the period of time where one acclimates to the new process or change and integrates that change into one's current processes or behaviors. This occurs after the change has been implemented, stabilizing the new process so it will sustain over time (Kritsonis, 2005).

Lippitt et al. (1958) expanded this three-step change theory into a seven-step process:

> (1) Diagnose the problem, (2) Assess the motivation and capacity for change, (3) Assess the resources and motivation of the change agent. This includes the change

> agent's commitment to change, power, and stamina, (4) Choose progressive change objects, In this step, action plans are developed and strategies are established. (5) The role of the change agents should be selected and clearly understood by all parties so that expectations are clear. Examples of roles are: cheerleader, facilitator, and expert, (6) Maintain the change. Communication, feedback, and group coordination are essential elements in this step of the change process, and (7) Gradually terminate from the helping relationship. The change agent should gradually withdraw from their role over time. This will occur when the change becomes part of the organizational culture. (pp. 58-59)

The research topic addresses nursing faculty perceptions of clinical shift types or durations to facilitate the nursing program needs. This study attempts to gain data to assess the current clinical scheduling practices of nursing programs and evaluate nursing programs' solutions to challenges with clinical rotations. As Lippitt et al. (1958) have acknowledged in their change theory, step one identifies the problem. It is recognized that nursing programs have challenges in both scheduling and staffing clinical rotations. Steps two and three state assessment is the next course of action in the change process. Evaluating faculty perceptions of current practice and past experiences assesses the motivation for change (from faculty responses to the questionnaire), the capacity for change (addressing what has been done and what suggestions faculty has), and assesses the change agent (is the faculty willing or wanting to make changes or do they have the support and/or resources to make any changes to their program related to clinical rotation shift hours).

Purpose of the Study

The purpose of this study is to obtain faculty perceptions of current nursing program clinical practices related to shift type and duration. In addition, the purpose is to obtain the nursing faculty opinions of different shift types and their effectiveness for

student clinical experiences, learning opportunities, student workload, critical thinking performance, communication, faculty workload and shift preference, and role satisfaction.

Research Question

This study is based on the questions: What is current practice in nursing programs related to clinical shift types and duration? What are nursing faculty perceptions about the use of different clinical shift types in preparing undergraduate students for the registered nurse role? How does faculty perceive different shift types related to the success of the instructor role? What are the perceived benefits or disadvantages of different clinical shift lengths?

Definition of Terms

"Clinical experiences" is defined as any activities and interactions that occur, from the faculty member's point of view, during a clinical rotation at the acute care hospital setting.

"Clinical rotation" or "clinical practice" is defined as " the application of nursing knowledge and skills in clinical facilities and participation in planned learning experiences in skills labs, by students, both of which are designed to meet course objectives" (BRN, 2007b, 1420 Definitions(d)).

"Acute care hospital" is the facility in which short-term medical care for acute illness, disease, injury, or surgery is provided (State of Connecticut Office of Health Care Access, 2001).

"Nursing faculty" or "faculty" is described by the BRN (2007b, 1420 Definitions(j)) as "all nurses who teach in a nursing program accredited by the board."

"Shift type" is defined by the time frame in which the shift occurs. For example, an evening shift type occurs with the majority of the hours of the duration of the shift occurring in the evening period of the day such as a shift occurring from 3:00 P.M. until 11:00 P.M. A weekend shift is one occurring on Saturday or Sunday. A night shift is one that occurs over night into the next day.

"Shift duration" is defined as the number of hours the shift includes from start to finish.

"Alternative shifts" or "alternative clinical shifts" are defined as any shifts that occur in the evening, night, or weekend time frame which is significantly different from the more traditional 9:00 A.M. to 5:00 P.M. working hours that apply to non-shift workers.

Qualifications of the Researcher

The researcher is a graduate student at California State University, Chico in the Master's in Nursing Education program. She has more than eight years of patient care experience in the acute care hospital setting. She has worked in multiple departments as a registered nurse including emergency, critical care, recovery, postpartum, nursery, medical-surgical units, oncology, telemetry, gastrointestinal lab, outpatient, and house supervisor. The researcher has been a part-time nursing clinical instructor for two years at a community college associate degree registered nurse program and is a part-time nursing clinical instructor at a university baccalaureate degree nursing program.

Summary

Nursing shortages will greatly impact the United States health care system if solutions are not found to improve the number of new nurses able to enter the profession. Alternatives to improve clinical site availability should be evaluated to address the limitations in the growth of nursing programs. Evaluating what current nursing programs are doing to facilitate students in the clinical setting is one way that may bring new and innovative strategies to improve the availability of clinical sites in nursing programs.

Faculty experiences and modifications used in different programs may provide ideas related to how nursing faculty can utilize shift hours for meeting the clinical hour requirements set by the California BRN. This study may lead to further research related to clinical practices, simulation lab use, and comparing alternative shift types. The next chapter will review the past research related to students, faculty, and shift length. Previous research will demonstrate the need for information about faculty opinions related to varying clinical shift types to gain more information and evaluate how nursing programs are managing clinical site needs. The lack of information on this research topic supports the necessity of this study.

CHAPTER II

REVIEW OF LITERATURE

Introduction

This chapter will review the past research relevant to students, faculty, and shift work. Key terms were used to search the literature including: *shift work, clinical rotations, student clinical, student nurses, nursing faculty, 8-hour* and *12-hour shifts.* Extensive research was conducted in the 1970s and 1980s regarding nurses working 8-hour and 12-hour shifts and the impact of shift work on nurses, but limited studies dealt with the impact or evaluation of these shifts on nursing students or faculty in clinical rotations (Heaslip, 1988; McGettrick & O'Neill, 2006; Todd et al., 1989; Woodward, 1994).

Shift Length

Shift length has been evaluated repeatedly in nursing in areas related to nurses' perceptions, fatigue, or shift performance for many years. Most research evaluating shift length addresses health or job performance related topics, but often focuses on the role of the primary nurse, not the student nurse. Research about shift length relates to the current study when evaluating the use of alternative shifts for clinical rotations, specifically concerning fatigue or role satisfaction (Blachowicz & Letizia, 2006; Fields & Loveridge, 1988; Fitzpatrick, While, & Roberts, 1999; Josten, Ng-A-

Tham, & Theirry, 2003; McGettrick & O'Neill, 2006; Skipper, Jung, & Coffey, 1990; Todd, Reid, & Robinson, 1989; Todd, Robinson, & Reid, 1993).

Research on shift duration in nursing related to fatigue, health performance, critical thinking, and satisfaction in nursing was reviewed. Fields and Loveridge (1988) researched 8-hour and 12-hour shifts related to critical thinking and fatigue in a quasi-experimental study. The two experimental groups (n=102) consisted of critical care nurses working either 8-hour or 12-hour shifts at an urban 415-bed hospital. The nurses were tested with the Three Minute Reasoning Test and the Subjective Symptoms of Fatigue. The two instruments were administered during the first three hours and last three hours of their shift, evaluating critical thinking and fatigue at the beginning and end of the shift. Findings indicated fatigue increased over the duration of the shift and it increased in both the 8-hour and 12-hour shifts. Nurses working 12-hour shifts did not perceive significantly higher levels of fatigue than the 8-hour nurses. No significant difference between groups was found on scores for the Three Minute Reasoning test. The researchers did, however, find that critical thinking improved in the last three hours of the shift as compared to the first three hours of the shift for both 8-hour and 12- hour shift workers. Researchers found that although nurses were more fatigued by the end of both shift types, critical thinking was greater at the end of the shift. Therefore, the conclusion was 12-hour shifts do not appear to decrease critical thinking or increase fatigue any more than 8-hour shifts (Fields & Loveridge, 1988).

Skipper et al. (1990) evaluated the relationship between physical health and mental depression related to critical thinking and fatigue in female nurses (n=482) related to shift work. Five hospitals were included in this study including one community

hospital, two public hospitals, one small psychiatric hospital, and one large veterans' hospital. A self-report questionnaire was distributed which evaluated physical health, job performance, job-related stress, depression, family relations, and social activities and participation. The researchers concluded no direct relationship was identified between shift work and physical health or mental depression. They reported there were methodological weaknesses in the study due to the different tasks or work that occurs in nursing from one shift to the next making it difficult to make direct comparisons between shift work and physical health or mental depression. They did report finding a significant correlation between shift work and decreased sleep quality and quantity. For example, results indicated that night shift workers had both the most trouble sleeping and least amount of sleep. Skipper et al. (1990) noted most research assumes shift work outside of the usual 9 to 5 shift produces negative effects for everyone, which may not always be the case.

Palmer (1991) compared nursing performance and behaviors with job satisfaction during 8-hour and 12-hour shifts. She reviewed several recent studies that indicated 12-hour shifts would be more effective due to improved job satisfaction, which would lead to improved nursing performance and behaviors. Palmer obtained a 40% random sample of eligible staff from a 132-bed California hospital with both 8-hour and 12-hour shifts. She evaluated personnel files for documented performance evaluations, attendance records, and continuing education over a period of one year. Self-report questionnaires were then sent out to the random sample of staff that evaluated communication, job satisfaction, managing personal business when off duty, and shift preference. Statistical significance was found for the topic of job satisfaction with 12-

hour shift workers being more satisfied than 8-hour shift workers. Twelve-hour shifts were significantly correlated with increased absenteeism by staff (Palmer, 1991).

Concerns regarding the quantity of nursing care in the hospital setting related to shift type prompted a quantitative study observing nurses (Todd et al., 1989). The nurses evaluated were from two hospitals and ten different departments. Eight-hour and 12-hour shifts were compared by observing nursing activities and behaviors once every fifteen minutes over the length of their shift. Nurses in multiple units were observed over a one-month period during 8-hour shifts and then again six months after 12-hour shifts were introduced. Each nurse from each department was observed over a period of three days in fifteen-minute increments, totaling over 16,000 observations. Observations were done by five registered nurses who were specifically trained. Observations were coded as one of four different activities including patient care activities, indirect care activities, routine care activities, or non-care activities. The researchers found the mean amount of direct nursing care dropped by 6.3% during a 12-hour shift as compared to an 8-hour shift ($p = 0.0125$). The non-care activities also rose 5.2% in the 12-hour shift ($p = 0.0051$) (Todd et al., 1989).

Josten et al. (2003) evaluated 9-hour shifts as an alternative to the 8-hour or 12-hour shift. They wanted to see if an alternative shift between the two lengths of shifts would combine the benefits of the 8-hour shift with the benefits of the 12-hour shift. The researchers examined the 9-hour shifts due to the potential benefits of minimizing the fatigue of a 12-hour shift, having improved satisfaction with more full days off. The subjects studied were nurses from three different nursing homes divided into two groups. One group (n=54) worked 8-hour shifts and one group (n=80) worked 9-hour shifts. The

group working 8-hour shifts were used as a comparison group. Their responses for fatigue and recovery were compared with the national sample of health care workers to ensure representativeness of 8-hour shift workers due to a low number of respondents. Both groups completed self-reported questionnaires about their fatigue, performance, effort, and satisfaction with the shift type. They found that after nine hours of shift work fatigue increased and satisfaction generally decreased. They concluded 9-hour shifts actually appeared to combine the negative aspects of 8-hour and 12-hour shifts (Josten et al.).

McGettrick and O'Neill (2006) examined nurses' perceptions of 12-hour shifts in the critical care area in a two-phase study. In this study, the researchers evaluated the relationship between nurses in the critical care setting and shift work. Response categories included fatigue, performance, safety, and work efficiency. A convenience sample of eighty nurses from four different critical care areas in a large teaching hospital was examined. A semi-structured questionnaire developed by the researchers was distributed and collected over a four-week period with fifty-eight respondents. The questionnaire included a Likert scale measuring opinions of how a 12-hour shift contributes to topics such as fatigue, job satisfaction, personal time, and performance. Researchers used the questionnaire initially in phase one. In phase two, an open group discussion with six volunteer respondents was conducted. The respondents reported a positive correlation between 12-hour shifts and the topics of *patient care, job satisfaction, off duty,* and *family life*. A negative correlation was reported with 12-hour shifts and the topics *communication, fatigue,* and *education* (McGettrick & O'Neill, 2006).

Innovations in Clinical Education

Reid, Robinson, and Todd (1994) conducted a study in which they evaluated the effects of 12-hour shifts on nursing education. The researchers examined the attitudes of both students and nursing faculty regarding the implementation of 12-hour shifts and the impact on nursing education. The students (*n*=47) involved in the study were undergraduate nursing students in the United Kingdom. The students and educators responded to a Likert scale type questionnaire before and after the implementation of the 12-hour shift in the hospital setting. All educators (*n*=16) for the college of nursing were also given a questionnaire obtaining their attitudes and opinions of the 12-hour shift. The researchers found that students who had worked 12-hour shifts had mixed views about the shift with just over half being in favor of the shift, and just under half opposed. Most students (77%) reported feeling too tired to study after the 12-hour shift. The majority of learners (73%) perceived that there was improved or at least unchanged quality of care for patients, when adjusting to the 12-hour shift. Educators' views generally were that 12-hour shifts decreased the amount of student learning, opportunity to teach, and examination results (Reid et al., 1994). The researchers felt it was significant to note that the majority of learners were already working 12-hour shifts, while educators were still working 8-hour shifts, which could impact their perceptions (Reid et al., 1994).

Gignac and Walker (1994) examined BSN students' perceptions of working six 12-hour shifts in a two-week period to evaluate their responses to the variation in shift length for clinical rotations. The students (*n*=36) were given a 28-item self-report questionnaire to complete after the two week period, addressing various topics about their experience related to learning, self-confidence, nursing skills, study time, and social life.

Overall, the students were positive about their experiences. Eighty-six percent felt the experience had improved their knowledge about medication administration, offered opportunities for technical nursing skills, and increased their self esteem. Sixty percent of students reported no change in their study habits. The researchers summarized that further "research should be carried out to identify the impact of 12-hour shifts on nursing education, student placement, and patient care" (Gignac & Walker, 1994, p. 7).

Halse and Hage (2006) addressed difficulties with available clinical sites for nursing students in Norway. The researchers aimed to develop "a new model of clinical studies during the students' third-year clinical study period in an acute hospital setting and to explore the experiences of both staff and students using this model" (Halse & Hage, 2006, p. 134). In this model, the students were divided into teams with the nursing staff to be involved in all aspects of direct patient care and including opportunities of team leading on one unit (Halse & Hage, 2006). There were twelve to fifteen students in one unit divided into four teams with four students per team. Each team was responsible for five to seven patients (Halse & Hage, 2006). The students and the staff, overall, rated the experience as "good" on a Likert scale questionnaire (Halse & Hage, 2006). Students were asked to rate the degree they had experienced the different items on the questionnaire from a small degree to a high degree (Halse & Hage, 2006). The researchers concluded that the students seemed to take advantage of the opportunity to learn from each other as well as from the staff in a positive way (Halse & Hage, 2006). Shift length was not addressed in this study, but this study did evaluate an alternative approach to standard clinical practices.

Tobar, Walsh, Parsh, and Sampson (2007) examined faculty, staff, and student reactions to the implementation of the 12-hour shift for clinical rotations (Tobar et al., 2007). They indicated that 12-hour clinical shifts seemed a reasonable alternative to faculty staffing and clinical site issues they experienced in the nursing program. These researchers, in their literature review, also found limited research on 12-hour clinical rotations (Tobar et al., 2007).

Researchers evaluated students, staff, and faculty after having nursing students spend one semester in 12-hour clinical rotations. There were no other options for clinical rotations except for the 12-hour shift. Likert scale surveys and interviews were conducted at the end of the semester with the students. Interviews were conducted with staff and faculty.

Tobar et al. (2007) concluded that students responded positively about 12-hour clinical shifts. They reported feeling they had more time for patient care and better time management outside of clinical hours. Response was split on fatigue being a concern related to the shift hours. Staff had a positive reaction to 12-hour clinical shifts reflecting that it was easier to include students in their daily care plan for the patient. Faculty experience was documented as a positive experience also. They reported overall that 12-hour shifts had equal or better learning opportunities for students (Tobar et al., 2007). The faculty felt they had more individual time to discuss priorities with students and "critical thinking and organization may be improved by participation in longer shifts" (Tobar et al., 2007). Faculty did report fatigue after 12-hour clinical shifts, claiming shorter clinical days added with other responsibilities often led to 12-hour work days anyway. All faculty responding to the study, claimed recruitment for part-time faculty

positions would be improved with 12-hour clinical shifts. Researchers concluded that their "experience suggests that 12-hour shifts are a viable option for clinical preparation of nurses at the undergraduate level" and "It is imperative that educators engage liberally in exploration of alternative solutions to challenges in education" (Tobar et al., 2007, p. 191).

Simulation As a Strategy to Increase Clinical Sites

Simulation as a part of clinical learning is a growing field in nursing. "These interactive, focused, energetic laboratory experiences proved to be valuable experiences for learning psychomotor skills and developing critical thinking" (Childs & Sepples, 2006, p. 158). Difficulties with finding clinical sites or nursing faculty contribute to the potential for increased use of simulation in nursing programs to meet clinical hour requirements. Simulation labs or skills labs are usually provided to students as a learning resource center to learn and practice techniques and patient situations prior to entering the clinical area (Childs & Sepples, 2006). Simulation was reviewed because it may be used in conjunction with clinical time to fulfill any gaps in clinical hours when considering 12-hour shifts. The California BRN (2008) recently began collecting data from nursing schools on the use of simulation labs and skills labs, reporting the majority of California nursing schools using them in the 2006-2007 school year.

Childs and Sepples (2006) collected data from students who participated in four different stations in the skills lab or learning resource center (LRC) at University of Southern Maine. The goals of the research were to evaluate the use of simulation and to improve the educational experience for their students. Three of the four stations available

were directed towards different clinical exercises with faculty guidance regarding variations of learning cardiac rhythms. Students worked in stations individually or in small groups depending on the exercise at each station. The fourth station was a mock code scenario with the Laerdal SimMan human-patient simulator. Three different instruments were used in data collection. The first two instruments were the Educational Practice Scale for Simulation (EPSS) and Simulation Design Scale (SDS). The third instrument was a thirteen-item questionnaire that questioned students' opinions and feelings about the simulation experience. Students overall had positive feedback about the experience, indicating a better understanding of a code situation and feeling they would be less anxious in the clinical setting (Childs & Sepples, 2006). Clinical rotations often include some portion of time spent on simulation experiences. Clinical shift type and duration may impact scheduled times for available simulation education. Student learning for the clinical rotations includes simulation time as well as time spent at the acute care facility.

Centralized Clinical Placement Systems

Centralized Clinical Placement Systems (CCPS) is a resource that facilitates maximizing the use of clinical facilities for student clinical rotations. This resource is an online tool that connects hospitals with nursing programs to coordinate clinical rotations. Another resource was created along with CCPS called the Centralized Faculty Resource Center (CFRC) in an effort to connect potential faculty members with nursing programs looking to fill faculty positions. The most prominent barriers reported for the lack of program expansion in the five-county Bay Area region in 2008 were lack of clinical

placement sites and qualified faculty, which prompted the purpose of CCPS and CFRC. Statewide data reviewed indicating clinical sites as a barrier in 2008 (77.3%) has not significantly improved since 2005 (77.5%) (Waneka, Spetz, & Kaiser, 2009).

A five-year longitudinal study was conducted at University of California, San Francisco to evaluate the effectiveness of the programs (CCPS and CFRC) in the Bay Area. The research primarily focused on CCPS with a smaller focus on CFRC. Researchers evaluated multiple data resources to look for any increases in the number of students placed in clinical settings related to CCPS. Researchers compared CCPS clinical placement data (2006 to 2009) to nursing student placement data by clinical area from the Chief Nursing Officers (CNO) survey in 2004. Data was also included and evaluated by the researchers from the BRN Annual School Report from 2004 to 2008 for student enrollment and faculty employment data.

The researchers collected both qualitative and quantitative data for the study to evaluate the percentage of hospitals with students in each clinical department. Interviews were conducted with representatives from nursing programs (*n*=15) and clinical sites (*n*=12) in the five-county Bay Area. Interviews were conducted with nursing faculty applicants (*n*=5) for CFRC who updated or posted resumes between May and October of 2008 to evaluate the CFRC program. Four open-ended questions were asked about the subjects' views on the CCPS and CFRC systems and the role of CCPS and CFRC in nursing program expansion (Waneka et al., 2009).

In a comparison of the 2003-2004 school year to the 2007-2008 school year there was a 47.1% (*n*=673) increase in new nursing enrollments in a five-county region in the Bay Area. The research identified that some of the increase in new enrollments was

related to program expansion grants, but analysis of interview data suggests CCPS may have helped increase enrollment from between 15.3% (*n*=218) and 20.6% (*n*=294). Data results show there are increased numbers of hospitals that accept students during non-traditional times (36%) from 2004 to 2009. Researchers concluded CCPS has shown increased willingness of hospitals to accept students during weekends and weekday non-traditional shifts and a small increase during weekday traditional shifts. Results related to CFRC indicated the program had a limited impact on any increase in filling faculty positions. Researchers concluded program directors and deans often depend on individual referrals or recommendations to obtain qualified faculty members for their programs (Waneka et al., 2009).

Faculty Perceptions

The National League for Nursing (NLN) completed a survey in 2009 addressing faculty opinions regarding barriers to effective clinical education. The NLN surveyed 2,386 nurse educators in the U.S. from multiple types of RN programs. The survey focused on faculty perceptions and experiences in teaching and supervising students in clinical settings. They concluded that lack of quality sites, lack of qualified faculty, and restrictions of the number of students or limitations set by the clinical agencies were the primary barriers to effective clinical education. They also reported that faculty perceptions of varied strategies to address these barriers were thought to be limitedly effective. Faculty expressed frustrations with long periods of time spent supervising or evaluating skill performance in the clinical setting. Faculty reported utilizing hospital staff nurses, teaching aides, or other students to minimize that time and

have increased time to spend with students developing critical thinking and decision making skills. Further research was suggested to gain evidence-based knowledge about clinical education and to maintain effective educational practices within the clinical settings in which students learn (National League for Nursing [NLN], 2009).

Summary

Studies on shift length related to fatigue and performance of nursing staff did not address nursing students in the clinical setting (Fields & Loveridge, 1988; Josten et al., 2003; McGettrick and O'Neill, 2006; Palmer, 1991; Reid, Robinson, & Todd, 1993; Skipper et al., 1990). Available research about nursing student shift length has focused on student perceptions of their experiences with 12-hour shifts. No available research is found on faculty perceptions of shift length in the clinical setting (Gignac & Walker, 1994; Reid et al., 1994).

A variety of studies refer to student clinical rotations, but many of those review student opinions or learning experiences without addressing shift type or duration (Childs & Sepples, 2006; Gignac & Walker, 1994; Halse & Hage, 2006; Josten et al., 2003; Reid et al., 1994). The most relevant study found, from Tobar et al. (2007), found a lack of information on 12-hour shifts and clinical rotations, but they did find positive feedback from students, faculty, and staff regarding the implementation of 12-hour clinical shifts. Faculty in this study also perceived part-time faculty recruitment would be easier with 12-hour clinical shifts. Research about CCPS confirmed both the barriers to clinical site availability for nursing students and the continued need to progress towards facilitating nursing program expansion. CCPS research also reports a trend toward

increased use of alternative shifts associated with increased enrollment. This study reinforces the need for further research about alternative options to increase clinical site availability and address challenges with the growth of nursing programs.

Overall, there is a lack of research regarding the decisions faculty make to implement different shift types for student clinical rotations, as well as their perceptions about the benefits and risks to the student's learning experience in different shift types. There is a need to examine the use of alternative shift types for clinical rotations as the growing nursing shortage continues. Scheduling problems between and among schools of nursing could be limiting and focused attention to smaller group activities might be possible. This research can also evaluate faculty perceptions of the use of varied shift types or alternative shifts that may still offer effective learning experiences for students in the clinical setting.

Conclusion

The literature review for faculty opinions regarding alternative clinical shifts is limited. The study proposed for this thesis examines nursing faculty perceptions about the differences of clinical experiences for varied shift types. Chapter III will describe the methodology used for gathering data and the method of analysis to determine nursing faculty perceptions on varied shift lengths.

CHAPTER III

RESEARCH DESIGN

This study used a quantitative descriptive study design to answer questions about clinical shift types and duration, specific to current trends in nursing programs and nursing faculty perceptions of these trends. This study is based on the questions: What is current practice in nursing programs related to clinical shift types and duration? What are nursing faculty perceptions about the use of different clinical shift types in preparing undergraduate students for the registered nurse role? How do faculty perceive different shift types relate to their role? What are the perceived benefits or disadvantages of different clinical shift lengths?

These questions will be addressed with a quantitative descriptive study design. Descriptive study designs “may be used for the purpose of developing theory, identifying problems with current practice, justifying current practice, making judgments, or determining what others in similar situations are doing” (Burns & Grove, 2005, p. 232). Limited research was found on faculty perceptions of clinical shift type and duration. The descriptive study design was used to determine what nursing programs are doing for clinical rotation shifts and may provide information about nursing faculty perceptions on clinical shifts that can lead to future research in this area of study.

Sample

Nursing program directors were initially contacted for interest in the study. The program directors (*n*=7) were selected by convenience sampling and network sampling. An original email was sent to interested program directors inviting inclusion of their program's faculty to participate in the study. Program directors were instructed they would be sent an online survey link to forward to all current faculty members. A second email with the deadline date for the survey, informed consent, and the survey link was sent to the program directors to forward to faculty within the program via email. The sample size was primarily based upon the number of faculty who was available and found via networking or convenience sampling. Second, it was based on the number of nursing faculty who responded to the questionnaire.

Non-probability sampling was used since the research topic is directed towards a specific population (e.g., nursing faculty). Convenience sampling was used to select the nursing schools. Convenience sampling can be effective when attempting to obtain information in areas that limited research is found (Burns & Grove, 2005). Directors of the nursing schools selected were contacted via email for distribution of the questionnaire to all current faculty on staff for each school. Complications arose with the sampling process related to the loss of control by the researcher by sending the surveys through email, forwarded through the nursing directors. This process did not allow the researcher control of when and to which faculty the survey was sent, however subject anonymity was maintained. The difficulties in sending the survey were either delays in faculty receiving the email or the email not sent to all current faculty.

All subjects included in the study were residing in California at the time of the data collection process. In the original research design, all subjects included in the study would have taught clinical in a nursing program within California within the last three years prior to data collection. It was realized after data collection that some respondents may hold positions in which they have not taught clinical within the last three years, but are very involved with decision making related to clinical placement and clinical placement issues. It was felt that those respondents have valuable input in the context of this study and their responses were included in the findings. All subjects have a baccalaureate degree at the minimum. The researcher was able to obtain faculty from different levels of educational programs (LVN, ADN, BSN, MSN) and from a variety of locations throughout the state of California in an attempt to improve diversity of subjects' backgrounds and experiences, including years of teaching, types of clinical rotations, and diversity in clinical sites.

A sample size of 30 was desired, representing both associate and baccalaureate programs and different regions in the state in order to increase the potential diversity of experiences and program practices. The sample size (n=48) included a broad spectrum of different level nursing program instructors including experience teaching in LVN, ADN, BSN, and MSN programs. A minimum of 60 faculty were planned to be contacted. Approximately 209 potential participants were contacted from seven different nursing programs. The exact number of participants contacted was unattainable because the participants were contacted through the nursing program directors and three program directors supplied an estimated number of faculty contacted instead of an exact number.

The respondents' demographic data was consistent with typical demographics of nursing faculty. Of the 48 respondents that completed the questionnaire, sixty-eight percent were from Northern California, as defined as north of Bakersfield. The majority of respondents are female (90%) of age 46 to 60 years old (62%). The majority of respondents were married (68%), had children (84%), and were Caucasian (80%). Respondents mostly hold Masters Degrees (62%), with over half of faculty working full-time (54%).

Most faculty (60%) reported teaching between 12-24 hours of clinical per week at the time of the survey. Greater than 95% of faculty respondents reported they have taught 8-hour and/or 12-hour clinical rotations. Some faculty (23%) have taught other shift types (4-hour, 5-hour, 6-hour, or 7-hour) in addition to 8-hour or 12-hour clinical rotations in the past. About half of faculty (52%) respondents have taught six years or less in nursing education. The other faculty respondents (16%) have taught seven to twenty years, while a smaller percentage (12%) have taught greater than twenty years. Sixty percent of faculty hold a staff nursing position in addition to teaching, with the majority (46%) working 12-hour shifts. Most faculty (84%) have taught clinical students in an acute care setting within the last three years. As stated previously, those who have not taught in the acute care setting within the last three years were included in the study results due to the potential importance of their insight when in positions, such as the director of the nursing program, that still impact clinical setting decisions, clinical course curriculum, clinical shift types, and clinical shift durations. Most faculty respondents (72%) have taught medical-surgical clinical rotations solely or along with other clinical content areas.

The faculty respondents reported most recently teaching nursing students for the following programs: ADN only (50%), BSN only (27%), ADN and BSN (6%), BSN and other program (12%), or ADN and other program (4%). The other programs included LVN, RN-BSN, MSN, and accelerated second degree student programs.

Protection of Human Subjects

This study was designed to protect human subjects' rights. These rights include the right to self-determination, the right to privacy, the right to anonymity and confidentiality, the right to fair treatment, and the right to protection from discomfort and harm (Burns & Grove, 2005). The right to self-determination allows subjects to voluntarily decide to participate in a study or not, and allows them to withdraw at any time without penalty (Burns & Grove, 2005). The right to privacy gives an individual the right to decide what personal information will be shared and with whom (Burns & Grove, 2005). The right to anonymity and confidentiality is based on the right to privacy (Burns & Grove, 2005). Confidentiality is the protection and management of the data collected from the subject (Burns & Grove, 2005). The right to fair treatment requires that subjects be treated equally. Protection from discomfort and harm in research requires the researcher to "conduct their studies to protect subjects from discomfort and harm and try to bring about the greatest possible balance of benefits in comparison with harm" (Burns & Grove, 2005, p. 190). See Appendix A.

Prior to the start of data collection, approval from California State University, Chico Institutional Review Board was obtained for human subject research. A copy of the approval was then submitted to California State University, Channel Islands prior to

obtaining support with the creation of and access to the questionnaire via web link. Data collection did not begin until this process was complete.

For this study, all potential subjects were informed about the proposed study. The researcher was available with contact information for the subjects to ask any questions about the study. The subjects made the decision to consent to be part of the study or not by choosing to link to the web based questionnaire and completing it. They were advised that their responses remained anonymous, even to the researcher. They were informed that their decision about the study would not in any way reflect upon their position or past positions as an instructor. They were instructed that they had the right to withdraw at anytime during the completion of the questionnaire. They were informed that there are no penalties if they choose not to participate in the study.

The potential subjects were all contacted via email. The consent form (Appendix A) was included in the email that asked for participation in the study. If they chose to be in the study, they consented by clicking the web link for the questionnaire. They responded to the questionnaire (Appendix B) without identifying themselves to protect privacy and anonymity. This protected confidentiality for each subject during and after the research process. The demographics information was included in the questionnaire, was only accessible to the researcher and web link creator, and was not linked by individual name. Privacy, anonymity, and confidentiality of the subject's information were maintained by the design of the study and by the researcher.

The subjects were treated equally during the research process. The subjects were given the same information via a forwarded email about the proposed study. The subjects received a reminder email nine days after the initial email was sent whether they

had already completed the questionnaire or not, since there is no way to know who had already responded. The subjects were offered to view a final summary of the research study findings, sent by email, if they requested.

Survey Tool

This study attempted to create a picture of what is occurring in clinical rotations related to shift type and duration. The semi-structured questionnaire including demographic information was developed to make response to the study simple for participants and to gain information on an unstudied area. The development of the questionnaire was loosely guided by a questionnaire about 12-hour shifts and critical care nurses, developed by McGettrick and O'Neill (2006). McGettrick and O'Neill (2006) developed the tool for their study after having difficulties finding a reliable and valid tool that could be used to obtain information on critical care nurses' perceptions of 12-hour shift work.

The survey consisted of forty-five questions or statements. The first eighteen questions asked demographic information including work history and teaching experience. These questions were developed in an effort to evaluate the respondents' representativeness of nursing faculty for the State of California. The rest of the questionnaire (twenty-seven questions) was focused towards faculty preferences of shifts or current nursing program practices. The questionnaire by McGettrick and O'Neill (2006) contained one section that asked critical care nurses to evaluate a topic and choose whether 8-hour shifts or 12-hour shifts best meets that topic. This idea was carried into the developed survey tool, but the topics and shift lengths were adjusted to address

selected characteristics of clinical teaching/learning. The final few questions were developed to assess current practices in nursing programs related to the use of variable shifts, simulation time, and planning for clinical rotations.

Efforts were made to use clear, non-ambiguous terminology. Recommendations from the literature and peer evaluation were used to assess the questionnaire prior to creation of the questionnaire via web link. The questionnaire was reviewed by an expert panel for content validity and appropriateness prior to use.

The subjects (nursing faculty) used their experiences teaching clinical rotations to express their opinions about shift type and duration. The faculty indicated which shift duration during clinical they feel best meets varied outcomes including role satisfaction, student performance, student opportunities, fatigue, and continuity of care for patients. Faculty was asked their shift preference based on experience in their past teaching clinical rotations. Faculty was asked to identify the shift types and durations for clinical currently utilized within their nursing programs.

Data Collection

The research study was offered to the possible participants (nursing faculty) through an email sent to the director of each school of nursing. The purpose and objectives of the study was explained in the email. Contact information for the researcher by multiple routes was included in the email and within the survey for any participant questions or concerns. The email included informed consent and a web link to the questionnaire sent to the possible participants. The email stated that connecting to the web link and completing the questionnaire served as informed consent for inclusion in

the study. Subjects were informed in the email of the deadline date to complete the questionnaire for inclusion in the study. Those who were not interested in participation could delete or ignore the email sent.

When the questionnaire was complete and web link was available, the researcher tested the web link by sending the planned email to an alternative email address of her own. The email and web link appeared to work without a problem. The nursing program directors were then sent individual emails, with instruction to forward on the next email received if still interested in facilitating the distribution of the questionnaire. They were advised a reminder email would be sent out to them to forward to faculty in approximately one week and asked to respond with the total number of faculty members they forwarded the email to.

The next email was sent to the nursing director including informed consent, web link to the questionnaire, and a deadline date for inclusion in the study. Unfortunately, the web link did not work from the email sent out. Upon discovery of this, the web link was researched and corrected. An email to the nursing directors was then sent out with an apology and explanation for the error, and a new email was sent with the corrected web link. This potentially could have had an impact on response rates to the questionnaire.

Nursing program directors were sent a reminder email nine days after initial contact was made to forward on to potential subjects with a deadline date reminder. Studies have shown increased response rates to questionnaires and surveys when follow up contact is made (Burns & Groves, 2005). A thank you page appeared online upon subject completion of the questionnaire to show appreciation of subjects volunteering

their time and responses. Participants were advised that study results will be distributed via email to subjects if they are interested in the findings.

Questionnaires were obtained via web link. The web tool chosen by the researcher to both support the web link and compile the data is through California State University, Channel Islands informational technology (IT) department. The researcher worked closely with the IT department to create the web link questionnaire correctly. IRB approval from CSU, Chico was sent to IRB at CSU, Channel Islands prior to data collection or web link creation. The web tool collected the data from each respondent anonymously, so the respondents can never be identified in or linked to the data itself. The data was collected and summarized in varied graphed and spreadsheets reports by the web tool itself. The data was only accessible to the researcher and the web tool creator secure through information technology at CSU, Channel Islands. The data was sent to the researcher via email from the web tool creator, who noted that data set and default reports would not be saved by him or the survey system and would not be accessible at a later time. The web link tool closed access to the questionnaire seventeen days after the first email was sent out to nursing program directors. The data reports were received three days after the close of the questionnaire.

Data Analysis

First, the data collected was organized as it was collected by the web tool used to create the questionnaire. Respondents remained anonymous answering only the data in the questionnaire as participants in the study. The web tool compiled the total responses and provided them in spreadsheets, graphs, and tables. The data reports were obtained

and secured both on computer and a back-up copy. The computer security includes password entry only known by the researcher. The data reports were saved onto a flash drive kept in a locked, secure space only accessible by the researcher.

Descriptive statistics were used to analyze the data. Analysis for the study was done in four parts. The demographics portion of the questionnaire was analyzed using descriptive statistics and percentages and was summarized to evaluate the representativeness of the sample population. The closed-ended questions, not related to demographics, were then analyzed using simple descriptive statistics with frequencies and percentages. The open-ended questions were individually evaluated to examine content. The content of each question was examined for one or two words to describe what the response referred to. Themes were created from the examined responses. Groupings were then made with themes of the same or similar content. The responses were reexamined in groupings to evaluate for similar meaning and content and also to ensure the statements were appropriately grouped together. The themed groups were then summarized to describe trends or ideas for data results.

Fourteen questions were specific to choosing a shift duration that best meets selected characteristics of clinical teaching/learning. The responses were first analyzed individually topic by topic. The researcher noted there appeared to be some topics that occurred together or fit together naturally due to the content of the topic. Those topics were grouped together and evaluated to look for similar trends in the research data results. For example, it seemed that topics related to faculty satisfaction or needs were grouped together, but separate from topics related to student satisfaction or needs that were grouped together. There appeared to be five groups of similar naturally occurring

topics which were named faculty satisfaction, student functionality, performance and learning, student-teacher support, and patient care. These topics will be discussed in more detail in chapters 4 and 5. The researcher looked for trends towards shift durations within the naturally occurring groups. Although grouping topics together was not in the original plan of the study, it was done in an effort to have a clearer understanding of trends of the responses.

The last portion of the questionnaire asked three open-ended questions/statements which respondents were not required to answer. The open-ended questions were analyzed for content and the data was summarized looking for major topics or themes. The first allowed respondents to explain their shift preference by typing in an open text box. There were nine major reoccurring themes identified from the faculty responses which included *fatigue, realistic experiences, progressive levels, unit-driven, repetitive learning, nontraditional, teaching time, schedule-driven,* and *intervention evaluation*. The second open-ended question asked respondents to comment on any benefits or drawbacks of any of the shift types in comparison with another shift type. These responses were categorized by the shift duration each statement referred to, comparing positive and negative statements about that shift. Lastly, respondents were given an opportunity before the close of the survey to add any further comments about the study. Again, the respondents' statements were evaluated for themes, but for this response statements did not follow a trend. They were individually reviewed. The data described above will be explored further in Chapters IV and V.

Conclusion

This quantitative research study obtained data regarding nursing faculty opinions about varied clinical shift types and current practices in nursing clinical rotations. Sample populations obtained by non-probability sampling were reviewed in detail, indicating representativeness of the subjects. Data collection methods and design for collection, maintenance, and analysis of the data has been reviewed in this chapter. Data collection was effective but contained some flaws that may have affected response numbers. Descriptive statistics were utilized to analyze the faculty responses along with content analysis of open-ended responses. The chapter to follow will review the actual findings from this research study.

CHAPTER IV

RESULTS

As identified in the literature review, research on clinical rotations related to shift types and durations is limited. Faculty perceptions about effective clinical learning are important in identifying strategies to deal with the barriers to growth in nursing education. This study is based on the questions: What is current practice in nursing programs related to clinical shift types and duration? What are nursing faculty perceptions about the use of different clinical shift types in preparing undergraduate students for the registered nurse role? How does faculty perceive different shift types related to their role? What are the perceived benefits or disadvantages of different clinical shift lengths?

The faculty members who responded to the online survey were from seven different nursing programs covering Southern and Northern California areas. They represented a range of educators, from novice to expert. Respondents were from a variety of clinical backgrounds and experiences, as well as working in a variety of different educational level nursing programs.

The sample population was nursing faculty. The population was fairly representative of nursing faculty in California. The majority of the population was female; Caucasian; Master's prepared; age 41 to 65. Approximately half of the respondents teach full-time and half teach part-time. Almost 45% of respondents have

taught for four to ten years. Over 16% of respondents have taught for eleven to twenty years, while almost 13% of respondents have taught greater than 20 years. More than half of respondents have taught multiple types of shift durations for clinical rotations.

Faculty respondents were asked to report which alternative clinical shift types they have worked, if any. Most faculty (72%) had worked an alternative shift at least once. Twenty-five percent of faculty respondents had worked some combination of multiple alternative shift types [evening and weekend (21%); evening and night (2%); weekend, evening and night (2%)]. Some faculty (28%) had taught clinical during alternative shift hours only on the evening shift. Some faculty (19%) reported teaching during alternative shift hours only on a weekend shift. In open-ended responses, a few faculty indicated either currently working or preferring alternative shift types. It was thought that experience with alternate shift work would enable respondents to clearly delineate what shift length or type worked best.

Faculty respondents were next asked to identify the preferred shift length for teaching clinical students. The options for the shift length were 4-hour, 6-hour, 8-hour, 12-hour, or other. The majority of respondents (52%) preferred 8-hour shifts. Thirty-one percent of faculty preferred 12-hour shifts, more than twelve percent preferred 6-hour shifts, and four percent preferred “other” shifts. “Other” shifts were either variable or multiple shift lengths.

Reasons given for shift length preference were obtained by open-ended question responses in a text box (Appendix C). Thirty-nine responses were provided by faculty (Appendix C). The responses were reviewed individually for themes and ideas. The responses were reviewed again in relationship with each other in an attempt to find

similar content. The answers were categorized into eight themed areas that were found to be recurrent in analysis of the responses. Those themes are *fatigue, realistic experiences, progressive levels, unit-driven, repetitive learning, teaching time*, *schedule-driven*, and *intervention evaluation*. Each concept will be described in the text which follows.

Faculty responses repeatedly identified concerns with longer hour shifts related to both faculty and student fatigue. *Student fatigue* was also linked to faculty concerns regarding safety and maintaining student readiness to learn in their responses. Comments included “8 hour shifts is an optimal learning length for students. Students begin to feel tired and the learning experience becomes less optimal after a certain length of time” and “less than 8 is not enough time and more than 8 the students are too tired…instructor too!”

Realistic experiences were statements that related to the length of the shift being a more realistic experience for the student related to expectations upon graduation. Interestingly, both 8-hour shifts and 12-hour shifts were identified as being a more realistic shift type. Faculty stated “This is a standard shift length and I believe it assists the student in making the transition to entry level nursing” in reference to 8-hour shifts. Other faculty responded “12 hour shifts more often match what the nurses are working in our clinical unit. Also, they allow the students to improve time management, open up opportunities for participation in procedures, and build rapport with the patients and families.”

Progressive levels is a category used to describe the idea that clinical shift rotations should progress from less time to more time as the students progress in skill level and experience. A few faculty mentioned the concept that the more advanced the

student is towards graduation, the length of clinical time can be extended and be effective. Examples include “in first semester, I prefer to progress in length as students gain skills and knowledge which can be utilized for the full length of time in clinical. In other words, if they only know how to do beds and vital signs, I don’t think 8 hour clinicals are an effective use of time” and “for beginning students think the prep-work they need to do prior to coming to the hospital would make doing a 12-hour shift difficult. More advanced students do fine with a 12-hour shift.”

Unit-driven is similar to *schedule-driven*. *Unit-driven* applies to faculty that implied student clinical rotations hours should be determined based on some element pertaining to the unit itself, while *schedule-driven* applies to responses made in which the type of shift such as day or evening shift was preferred. One *unit-driven* example is “OB nurses at the facility work 12-hour shifts. Gives the students a better understanding of the RN role in this area.” One response identified that clinical shifts should ideally match the hospital shift hours. One schedule-driven example is “I prefer evening shift because the pace of the unit is less hectic, the students perceive that the staff has more time for them, the students have better access to EMR and charts without feeling as though they are competing for the chart with other healthcare professionals. 8-hours gives the faculty ample time to observe and interact with the student group.”

Repetitive learning is a theme identified from faculty comments that they ideally wanted two or three six-hour consecutive day shifts in which the students could have opportunities to repeatedly practice skills and have time in between the shifts to absorb and study information as they continue to care for the same patients. Faculty did

identify this type of shift scheduling being beneficial in minimizing fatigue and utilizing repetition for learning.

A few respondents noted that not only learning opportunities are important, but clinical shift hours can be utilized to maximize teaching time during the shift. These comments were categorized as *teaching time*. With regard to 12-hour shifts, one respondent stated “I have more time to teach. I can actually go over the disease process, find more procedures and give more meds.” Another stated “8 hours gives the faculty ample time to observe and interact with the student group.” These statements describe faculty utilizing the shift duration to maximize instruction time with students. Another faculty response regarding 12-hour shifts was “I can hire faculty and it fits in with their work schedule. Maximizes clinical rotation space.” By this the respondent meant part-time faculty who work in an acute care setting can also teach a 12-hour clinical shift, without conflicts in scheduling. This would allow for increased numbers of potential part-time faculty. The other noted factor is 12-hour clinical rotations may maximize the number of days per week that are available for other clinical rotations at the same facility.

Intervention evaluation addresses statements related to the shift allowing for students to complete the process of implementing a plan and then being able to evaluate the effectiveness of that plan within the shift hours. A few faculty indicated this was one of the reasons they favored 12-hour shifts to other shift lengths. “Twelve hour shifts allow for continuity of care, allowing students to establish therapeutic relationships with the patients. They get to apply and individualize the care plan and evaluate the result on the same day.”

The tool next listed fourteen items for respondents to choose a shift duration that best met the topic described (Table 1). Shift options again included 4-hour, 6-hour, 8-hour, 12-hour, all or not applicable. For the topic *provides best faculty/job satisfaction* 8-hour shifts (52%) were favored over 12-hour (27%) or 6-hour shifts (13%). *Faculty fatigue* was most often reported as minimized in 6-hour (27%) and 8-hour (60%) shifts, a factor that directly relates to job satisfaction.

Faculty indicated *increased faculty support for students* was comparable for both 8-hour (39%) and 12-hour shifts (33%). *Increased communication time with students* was reported to occur slightly more on 12-hour shifts (40%) than 8-hour shifts (35%). For the topic *allows most time for individual student guidance*, faculty most often selected 12-hour shifts (51%) over 8-hour shifts (36%). Six-hour shifts did not apparently *allow time for individual student guidance* as only 6% of respondents cited 6-hour shifts as the choice. Eight-hour shifts (52%) were preferred to 12-hour shifts (29%) in *students' ability to take appropriate breaks*. *Student fatigue* was minimized most often during 8-hour shifts (56%); followed second by 6-hour shifts (23%). Data results for minimizing student fatigue are consistent with results for minimizing faculty fatigue.

Faculty reported *student critical thinking performance improved* in 8-hour (50%) shifts more than the three other shift durations [12-hour (17%), 6-hour (12%), and all clinical shifts (15%)]. Eight-hour (48%) and 12-hour shifts (31%) were identified as *best educational opportunities* for students by shift type, but 8-hour shifts were clearly preferred. Faculty were asked to identify which shift type *allows students to best meet clinical guidelines* and responses reported that 8-hour shifts (56%) were superior to all other options.

Table 1

Questionnaire Responses by Number of Faculty Per Shift Type Chosen

Topic	Shift Type by Hours					
	4	6	8	12	all	n/a
Provides best faculty job/role satisfaction	0	6	25	13	4	0
Faculty fatigue minimized	1	13	29	4	1	0
Permits increased faculty support for students	1	3	19	16	7	2
Allows for increased communication with students	0	3	17	19	6	3
Allows most time for individual student guidance	0	3	17	24	1	2
Allows ability for students to take appropriate breaks	0	1	25	14	7	1
Student fatigue minimized	2	11	27	6	0	2
Improves student critical thinking performance	1	6	24	8	7	2
Provides best educational opportunities for students	0	3	23	15	6	1
Students able to meet clinical guideline expectations	0	4	27	11	5	1
Increases student morale	1	4	22	13	4	4
Increases student satisfaction with clinical	0	3	23	12	5	4
Provides most realistic student experience in the acute care setting	0	3	16	24	3	2
Provides best patient care opportunities	0	4	22	16	5	0
Provides continuity of care for patients	0	4	18	22	3	0
Decreased transportation costs	0	1	6	32	3	5

Faculty responded that best shift length for *student morale* was 8-hour (46%) shifts, while 12-hour (27%) shifts were in the second position. Faculty also indicated 8-hour (49%) shifts, even more than 12-hour (26%) shifts, *increased student satisfaction* with clinical. This finding was surprising because 12-hour shifts were preferred in regards to *increased communication with students* and the *most time for individual student guidance,* which was presumed to correlate to student satisfaction. Faculty most frequently elected 12-hour (50%) shifts when identifying shift types that provide the *most realistic student experience in the acute care setting*. Eight-hour (34%) shifts were in the second position, while a few faculty indicated all (10%) shifts or 6-hour (8%) shifts could provide realistic student experiences in the acute care setting.

Faculty respondents selected the shift that was identified as *providing the best patient care opportunities*. Eight-hour shifts (47%) were far superior to 12-hour shifts (34%). When considering which shift provided *continuity of care for patients,* most faculty selected 12-hour shifts (47%) over 8-hour shifts (38%). This increased time with patients seemed to reflect increased continuity of care in connection with the length of the shift, rather than the number of shifts. Faculty respondents indicated 12-hour shifts (68%) most frequently helped *decreased transportation costs*.

The fourteen items (Table 1) were sorted into five themed groups and reanalyzed for trends. These themes included *faculty satisfaction, student functionality, performance and learning, student-teacher support,* and *patient care*. These themed groups could help identify faculty perceptions of the different shift types related to success in the role of the instructor and student preparation for the role of RN. *Faculty satisfaction* and *student-teacher support* evaluates preferences of shift types that support

individual faculty needs and expectations. *Student functionality, performance and learning, student-teacher support* and *patient care* ascertains faculty perceptions of student success, performance, and readiness for the RN role specific to clinical shift type. For each of the themed groups, the topics were collectively combined to total the preferred shift lengths. The percentages for the themed groups were derived from simple descriptive statistics of the combination of the response totals for the topics within the group. For example, for the theme patient care, the results for the two topics *provide the best patient care opportunities* and *provide continuity of care for patients* were combined together. The total number of responses combined for 8-hour shifts was totaled (e.g., 40) and then divided by the number of responses given for both topics combined (e.g., 94) to obtain a percentage.

Faculty satisfaction consisted of the topics *provides best faculty job/role satisfaction* and *faculty fatigue minimized*. *Faculty satisfaction* favored 8-hour shifts (56%), with 6-hour shifts (20%) and 12-hours shifts (18%) comparable as second and third choices. The topics *ability for students to take appropriate breaks*, *student fatigue minimized, increases student morale,* and *increases student satisfaction with clinical* were combined in the group *student functionality*. These topics appeared to address ideas that supported students being functional to succeed in the clinical setting. Interestingly enough, the trends for *student functionality*, as directed by faculty opinion responses, are slightly different from the *faculty satisfaction* trends. Reported data for this group favors 8-hour shifts (50%), similar to the *faculty satisfaction* theme, but 12-hour shifts (22%) are secondly preferred over 6-hour shifts (13%) unlike the *faculty satisfaction* theme.

Performance and *learning* was identified by the topics *improves student critical thinking performance, provides best educational opportunities for students, students able to meet clinical guideline expectations,* and *provides most realistic student experience in the acute care setting*. These areas were categorized based on their contribution to the student's learning experience or performance abilities for the clinical course. The 8-hour shift (47%) was clearly preferred over the other shift types for this themed group, while 12-hour shifts (30%) and all shift types (11%) were following.

Student-teacher support was selected to identify occurrences or actions in the clinical setting that are reflections of the student-teacher relationship. Topics for this group are *allows for increased communication with students, allows most time for individual student guidance,* and permits *increased faculty support for students*. Opinions reported both 8-hour (37%) and 12-hour (41%) clinical shifts almost equally effective in supporting student and teacher relationships.

Patient care is the final group distinguished from the other groups for the purpose of recognizing that student clinical experiences can reflect upon the patients being cared for. This category includes clinical shift types being selected that were perceived to *provide the best patient care opportunities* or *provide continuity of care for patients*. Both 8-hour (42%) and 12-hour shifts (40%) are identified as leading shift types nearly equally. Faculty may perceive 6-hour shifts as important in continuity of care, but only if the 6-hour shift was identified as normally occurring over two adjacent days in one week.

Decreased transportation costs did not seem to logically fit with other topics. Transportation costs could also be more important to certain nursing programs, but not

others, dependent upon the travel distance nursing programs travel for clinical rotations. Twelve-hour shifts were ranked highest in this category.

Five questions were asked of faculty respondents about current nursing program practices related to clinical rotations or faculty scheduling. Respondents were asked to respond either *yes*, *no*, or *don't know* to a series of questions about finding new faculty, changing hours or shifts to accommodate more clinical students, changing hours or shifts to gain access to more clinical sites, the use of simulation hours in place of clinical, and requests to work alternative clinical shift rotations. Almost 65% of faculty reported their nursing program has difficulty finding faculty. More than half of faculty respondents (54%) stated that their nursing program has changed the hours or shift of clinical rotations in order to accommodate more students. Over 62% of respondents reported their program has changed the hours or shift of clinical rotations in order to gain access to specific clinical sites. Simulation hours were reported as used to replace some clinical time by almost 71% of respondents. More than 58% of faculty reported being asked to teach alternative clinical rotations to meet clinical placement needs such as evening, night, or weekend shifts.

Faculty was asked at the end of the questionnaire to voluntarily comment on any benefits or drawbacks of any clinical shift types in comparison to any other shift types (Appendix D). This helps evaluate perceptions towards different clinical shift lengths to assess readiness or willingness to change. Discovering readiness to change prior to the need for change to occur may best utilize options for maximizing clinical sites and faculty available.

The responses included discussion of different shifts being good for varied uses, situations, or reasons. Twelve responses were submitted specific to 6-hour, 8-hour, and 12-hour shifts. Faculty identified 6-hour shifts as being beneficial to learning, minimizes fatigue for both students and faculty, allows for focused experiences, repetitive exercises to improve learning, and more appropriate for certain settings or rotations. Downfalls identified for this shift included difficulties balancing other coursework and personal obligations with multiple clinical days, as well as shifts being too short if clinical sites are located lengthy distances.

Reported benefits of 8-hour clinical shifts included “realism of shift-shift care that incorporates multiple tasks and experiences including report,” minimizing fatigue for students and faculty, increased likelihood of retained learning, and beneficial for certain types of clinical rotations. Students having to care for increased numbers of patients during 8-hour shifts in comparison with fewer patients during a shorter shift were reported as a concern referred to as “quantity over quality.” Benefits reported for the 12-hour shift include promoting continuity of patient care, assuming care of multiple patients, and a more realistic view of the nurse role. Negatively, 12-hour shifts are described as increasing fatigue for both students and faculty, too long for students to absorb information, and difficulties with scheduling clinical conference at the end of the day due to lack of student focus.

Any final thoughts or comments were offered to faculty at the close of the questionnaire (Appendix E). Faculty reported other thoughts on topics related to the survey including workplaces recently implementing 12-hour shifts, current teaching schedules that are 12-hour weekend days, alternative student scheduling over a ten week

period for clinical, and the benefit of day shift when all disciplines are available and involved in patient care. Other interesting comments included were “use of simulation labs needs to become less time intensive for faculty if they are to be considered a viable clinical replacement” and “I would think this is a very touchy topic for faculty and students. Students would be less fatigued and probably better thinkers in shorter shifts but the reality is they need to learn and to think well for 12-hours at a time. If ratios were different and faculty had more time, 8-hour shifts would most likely work better because more could be accomplished in an 8-hour shift. A 12 at least gives instructors greater times they can come in contact with each student.”

Conclusions summarizing data from faculty responses are to follow. The researcher will also address what these findings may indicate for future research. This is discussed in more detail in Chapter V.

CHAPTER V

CONCLUSIONS

This study is based on the questions: What is current practice in nursing programs related to clinical shift types and duration? What are nursing faculty perceptions about the use of different clinical shift types in preparing undergraduate students for the registered nurse role? How do faculty perceive different shift types relate to their role? What are the perceived benefits or disadvantages of different clinical shift lengths?

Current practice in nursing programs related to clinical shift types and durations are varied and attempt to best meet the needs of the nursing program. Most programs have implemented the use of alternative shifts, variable shift durations, or simulation labs to manage clinical rotation needs. Faculty report a preference for 8-hour clinical shifts for both faculty and student success, yet there are still other shift durations utilized for clinical rotations. This is possibly due to the lack of clinical site availability or faculty availability. Explaining a preference for 12-hour shifts, one faculty respondent stated “I understand that clinical sites are at a premium, they are long and I am not sure they are conducive to learning, but it is a changing world that requires flexibility.” Faculty statements such as these addressed issues distinguishing the most effective clinical durations for faculty and students may or may not be the most feasible clinical duration. Difficulties with clinical site placements are a barrier to nursing program

growth; therefore, faculty may need to be open to change if alternative shifts or durations are necessary for continued clinical successes.

Faculty respondents were asked if they have ever taught an alternative shift type such as weekend, evening, or night shift. Seventy-two percent of respondents had. Due to the increased incidences of alternative shift use, it appears that nursing programs are already attempting to maximize clinical site availability.

Faculty was then asked what is the preferred shift length for teaching. Most (52%) preferred 8-hour shift lengths, with some (31%) preferring 12-hour shift lengths and some (12%) preferring 6-hour shift lengths. Respondents were asked to explain their choice for shift preference. These responses were categorized into themes, explained in detail in Chapter IV. Themes derived included *fatigue* for students and faculty, *realistic experiences* for students related to shift duration or type, and effective *teaching time* for student and faculty. Other themes included clinical rotations which can be *unit-driven*, *schedule-driven*, and directed by student's learning opportunities on a continuum with *repetitive learning*. Finally, respondents talked about shift types for necessary *intervention* and *evaluation* in care planning, and shift types based on student progress *(progressive levels)*. Several faculty noted that beginning students do best with short shifts while more advanced students can work extended shift durations as they increase their knowledge base. This last concept was especially noteworthy as it was not located in any literature review or anecdotal findings.

One of the goals in surveying the faculty was to gain insight into perceptions about varied shift types used for clinical practice. As previously discussed, part of the distributed questionnaire listed six shift types by hour (4, 6, 8, 12, all, or N/A) for faculty

to chose from for each of the fourteen topic areas (Table 1). For each topic, they were to choose the shift type that they felt best met the topic content. Faculty perceived overall 8-hour shifts (52%) provided best faculty job/role satisfaction. They felt faculty fatigue was minimized with 8-hour shifts, as was student fatigue. Nursing students' ability to take appropriate breaks (52%), increases in morale (46%), and increases in satisfaction with clinical (49%) were predominantly recognized in 8-hour shifts over other shift types.

In another question, the shift type was evaluated for most realistic student experience in the acute care setting. This topic response could be perceived as influenced by the trends of shift durations in the surrounding areas of which the respondents live or work. Further data would be necessary to evaluate this question related to the respondents' perception of the shift duration students will most often work as new nursing graduates. The majority of respondents felt 12-hour shifts (50%) were most effective for realistic student experiences in the acute care setting, while 8-hour shifts (33%) were less effective. The best patient care opportunities were thought to occur most often during 8-hour shifts (47%), while providing continuity of care for patients was thought to occur most often during 12-hour shifts (47%).

Preference for 8-hour clinical shifts for a variety of reasons appears to be the overwhelming trend for student preparation in the RN role and for faculty success in working with RN students. In reviewing the open-ended comments with this in mind, it appears nursing faculty are already thinking of alternatives to work through adjusted shift durations for clinical placement such as those who suggest clinical rotations be matched to the student level in progression or following the hours of the hospital staff by department or facility. The largest concerns in longer shifts seem to be fatigue, including

safety issues, and the ongoing learning capabilities of students. The varied clinical shift durations appear to have both benefits and disadvantages identified by faculty for each type. The explanation of progressing students through different shift types at different levels of the nursing program seem to potentially best utilize the benefits of the shift type, while attempting to minimize the disadvantages.

Review of the literature demonstrated limited research on this topic. A few studies in particular seem to offer valuable insight on clinical shift durations. Tobar, Wall, Parsh, and Sampson (2007) obtained some information on the subject of perceptions of 12-hour clinical shift durations. They found students reflected increased time for patient care and time management while faculty indicated increased individual time to discuss patient care priorities with students. Those findings concur with the data found in this study in which faculty reported 12-hour shifts were favored for topics *allows most time for individual student guidance* and *continuity of care for patients*. Tobar et al. (2007) reported faculty indicated increased fatigue with 12-hour shifts, but claimed recruitment for part-time faculty positions would be improved with 12-hour shifts. Again, these research findings concur with those results. Unlike this study, Tobar et al. indicated 12-hour shifts were a positive experience for faculty. The faculty respondents in this study favored 8-hour shifts. The NLN (2009) reported varied strategies to address barriers to effective clinical education were perceived by faculty to be limitedly effective. This study portrays an assortment of strategies by nursing programs utilizing varied shift types and durations to deal with clinical site limitations, and a strong willingness from faculty to change as needed.

This study could be considered for other regions (state and national) to provide a broader perspective on faculty perceptions and shift durations for the clinical setting. The shift duration preference was 8-hour shifts both for the directly asked question about shift preference and the overall collection of responses for fourteen topic areas, indicating consistency within the study.

Limitations of the Study

Limitations to this study include a low response rate. Although the initial goal of thirty total respondents was exceeded, only 23% of faculty sent the questionnaire responded. The sample size, although small, does provide initial insights on faculty perceptions of varied shift lengths for nursing student clinical rotations.

Another limitation was the email nature of the survey. Faculty who are uncomfortable with email surveys may have given different perceptions than those who are more comfortable with technology. An in person interview might allow for better representation and more fully elaborated answers. However, faculty who responded were often willing to provide very in-depth responses to the open-ended questions.

Data collection could have been altered to ask that the nursing faculty provide a list of faculty email contact information for the researcher to send the questionnaire and reminder email to improve the number of respondents. The data would still remain anonymous as the researcher would not know which faculty had responded or not, but the researcher would have to maintain confidentiality in regards to the email contact list. Increased response numbers could improve both representativeness of the population and validity of the research data. Email responses through a survey limited the information

that could be attained specific to the questions within the tool used to create the questionnaire. For this study, it is possible more data would be attained or better understood if verbal dialogue had occurred, specifically related to open ended questions or comments submitted.

Bias was suggested by the nature of the questions in the questionnaire by a respondent. Attempts to control any biases within the questionnaire were made by having an expert panel of three independent individuals review it. It is unknown what portion of the questionnaire the respondent felt was biased to 12-hour shifts. The researcher utilized an expert panel to evaluate the questionnaire prior to data collection to minimize any potential biases.

The questionnaire was created as a tool to obtain faculty perceptions on the use of varied shift lengths for student clinical rotations. The tool was loosely adapted from a questionnaire by McGettrick and O'Neill (2006) as no existing tools fit the desired topic. Efforts were made to optimize the validity of the tool. Clear, non-ambiguous terminology was used. An expert panel of three reviewed and validated the tool. Reliability of the tool was not determined.

Implications for Practice, Research, and/or Education

Many factors impact making the best shift choice, but the most critical were perceived to be related to content covered during the clinical rotation (OB, Peds, Psych, Med-Surg, Critical Care, etc.) and level of student experience. These faculty perceptions raise interesting questions for further research. For example, will a senior nursing student be able to manage a 12-hour shift better than a first semester nursing student? Are

Psychiatric rotations more effective during 8-hour day shifts if outpatient clinics are utilized? Are clinical rotations in Labor and Delivery more effective during 12-hour shifts, weekdays and weekends? Is a course related to critical care with rotations in recovery room, cardiac catheterization lab, and case management better utilized during 8-hour day shift weekdays? Is a medical-surgical rotation as effective during 8-hour evening shifts or 12-hour weekend shifts, as it is on weekday morning shifts?

In assessing motivation for change, it appears as if nursing faculty are continually making changes over time in the profession of nursing. Nursing is an ever changing field. Nurse educators seem to often be updating information, learning the newest evidenced based practice research, applying current protocols, managing new technology, and teaching in new and innovative ways. There may still be some resistance to change, as it is well known that change is difficult, but the nursing faculty in this survey appear willing to adjust to what best meets the clinical needs of the time, even when circumstances of the change are not ideal. With regard to Lippitt et al.'s (1958) seven-step change process, nursing faculty seem well aware of the continued need for change to deal with limitations of the growth of nursing programs. This study indicates the motivation and capacity for change (step 2) and the resources and motivation of the change agent (step 3) are excellent. Faculty respondents are utilizing simulation lab time, varied shift lengths, and diverse alternative shift types for clinical rotations. They verbalize benefits and drawbacks for the use of different shift durations. They indicate how alternative shifts are utilized to meet program requirements. Faculty seems interested and capable of further change. Faculty perceptions are important in continuing to gain

further data to assess current practices and evaluate continued nursing program solutions to challenges with clinical rotations.

Nursing shortages will continue to greatly impact nursing program growth if solutions are not found to increase the number of students admitted to nursing programs, including promotion of advanced degree program admittance rates. Continued exploration of faculty perception, student perception, and clinical facility perception regarding clinical rotations is important in directing future nursing education. Research such as this can address concerns with access to varied clinical shifts and clinical site availability.

These findings also suggest further study on larger levels to evaluate nursing faculty perceptions about best practices for clinical education. There may be solutions that can be derived from further research on the topic to combat limitations in program growth. Further study on clinical education is encouraged to drive nursing education towards best practices in preparing students in the RN role and maintaining faculty role satisfaction. Shift type and duration for clinical rotations should be researched on a larger scale study in an attempt to obtain data determining optimum clinical shift types. Further information on the impact of simulation education related to the increased use of simulation in replacement for or conjunction with clinical time is also important in addressing and evaluating clinical coursework and best practices in nursing education.

Potential research from perspectives alternative to nursing faculty may be important to evaluate clinical education practices as well. Student opinions regarding the use of varied clinical shift durations and types can be explored. Staff nurse perceptions of different shift durations can be evaluated. True comparison studies can be arranged for

one nursing program, one specialty clinical area, one acute care setting, or one shift length. One nursing program could evaluate their clinical rotations related to specific criteria applicable to that program such as shift lengths used, curriculum development, or clinical site availability. A clinical rotation in Obstetrics may be evaluated for student perceptions of the shift duration or clinical opportunities for patient care. Research could be applied to one specific acute care setting to evaluate how well the facility meets the clinical needs or objectives. Research obtaining student perceptions of the varied shift lengths could be conducted. Effectiveness of alternative shifts or effectiveness of shift durations can be evaluated by actual student learning outcomes or performance. The concepts of this study are just an opening of the possibilities of research in this field.

Summary

Faculty perceives 8-hour shifts to be most effective for clinical rotations, overall. Faculty respondents believe 8-hour shifts are effective shift durations for student and faculty successes. Perceived benefits and disadvantages of different clinical shift lengths are varied, but all shift lengths appear to have both benefits and disadvantages as reported by faculty. Faculty from multidimensional backgrounds has similar themes related to the discussion of varied clinical shift types and durations. Faculty respondents appear to be willing to adjust to changes in clinical course scheduling, if necessary. Current clinical practices for nursing programs from a variety of California State areas have varied practices or uses of different shift types and durations. The respondents in this study indicate plenty of flexibility in clinical rotation scheduling to maximize the use of clinical facilities and allow faculty to work in other settings. This seems to be the

current trend in managing limitations for clinical rotations related to faculty shortages and clinical site availability. Further study on a larger scale is suggested to utilize the potential benefits from research of this nature. Further study on clinical rotations from a variety of perspectives is suggested to gain a broader picture of how to combat the limitations on nursing program growth.

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APPENDIX A

FACULTY PERCEPTIONS ON THE USE

OF VARIED SHIFT LENGTHS FOR

NURSING STUDENT CLINICAL

ROTATIONS

Thank you for your time and interest in participation in this research study. Jaime Hannans is a registered nurse studying the opinions of nursing faculty related to varied or alternative shifts for student clinical rotations and current nursing program practices related to clinical rotations for her thesis research in pursuant of a Master's Degree in Nursing. Although the study may not benefit you directly, it may influence future educational practices in nursing and may assist in ideas or prompt discussion for improving the continued shortage of nursing faculty staff, while maintaining adequate learning opportunities.

The study and its procedures described below have been approved by the Institutional Review Board through California State University, Chico. The study procedures may take approximately 15 minutes to complete. The procedures include: (1) connecting to the web link, consenting to participate in the study, and (2) completion of a questionnaire. You are free to ask any questions about the study or participation in the study. You may contact the researcher, Jaime Hannans at (805) 404-7308 or by email at roxysnurse@hotmail.com for any further questions or concerns.

Your participation in this study is voluntary: you are under no obligation to participate and may discontinue at any time during the study. Your information, opinions, and responses will be kept unidentified. Your participation in this study will not reflect on any current or future positions.

The study data will be anonymous so it will not be linked to your name. Your identity will not be known while the study is being conducted or when the study is reported or published. All study data will be collected by Jaime Hannans, stored in a secure place, and only shared with those involved with reviewing and revising the documentation of this study. The study data will be anonymous from the time the data is submitted by you upon completion of the questionnaire. Aggregate data may be published or presented at conferences, but you will remain anonymous. You will have access to the study results and findings if you so wish when the study is complete.

I have read this consent form and voluntarily consent to participate in this study.

By clicking on the web link below you are verifying you
are voluntarily consenting to inclusion
in this study.

<<weblink>>

APPENDIX B

QUESTIONNAIRE

Please answer each section to the best of your knowledge

Nursing Program location: □ Northern CA (north of Bakersfield)
□ Southern CA (south of, and including Bakersfield)

Age: □ Under 35 □ 36-40 □ 41-45
□ 46-50 □ 51-55 □ 56-60 □ 61-65
□ 66-70 □ Over 71

Gender: □ Male □ Female

Ethnicity: □ Caucasian □ African American
□ Hispanic □ Asian □ Other

Marital Status: □ Single □ Married □ Life Partner □ Divorced

Number of children: □ None □ 1 □ 2 □ 3 □ 4 □ 5 or more

What is the highest degree of education that you completed?

□ Associates □ Bachelors □ Masters □ Doctorate

What is your nursing faculty position?

□ Full-Time □ Part-Time □ Not working currently

□ Other (state what position) _____

How many hours per week do you teach clinical? _____

Previous clinical shift hours taught:

□ 4 hours □ 6 hours □ 8 hours □ 12 hours

□ Other (state what other hours) _____

How many years have you taught nursing clinical rotations?

□ 0-3 □ 4-6 □ 7-10 □ 11-15 □ 16-20 □ Greater than 20

Do you hold a staff nursing position in addition to teaching?

□ Yes □ No

If yes, number of hours you work per week? _____

And, number of hours per scheduled shift? _____

Have you taught a nursing clinical rotation in an acute care facility in the past 3 years?

□ Yes □ No

What clinical rotation/s have you taught in the past? (mark more than one if applicable)

□ Pediatrics □ Maternity □ Medical-surgical □ Psychiatric

□ Public Health □ _____ (state what Other rotation)

What type of nursing program have you most recently taught for? (mark more than one if applicable)

□ LVN □ ADN □ BSN □ Other (state)_____

Have you ever taught an alternative clinical shift type, such as weekend, evening, or night shift? (mark more than one if applicable)

□ Weekend □ Evening □ Night □ None

What is your preference for shift length when teaching students?

□ 4 6 □ □ 8 □ 12 □ Other (state) _____

Please explain your reason for preference of shift type below

In your opinion from your experience in teaching clinical rotations, please select one shift type for each topic below. Please select only one **shift type** for each topic. If you feel all shift types apply to the topic equally, choose **all**. If you feel you cannot answer the question, then choose **n/a**.

Shift Type by hours	4	6	8	12	all	n/a
Topic						
Provides best faculty job/role satisfaction						
Faculty fatigue minimized						
Permits increased faculty support for students						
Allows for increased communication with students						
Allows most time for individual student guidance						
Allows ability for students to take appropriate breaks						
Student fatigue minimized						
Improves student critical thinking performance						
Provides best educational opportunities for students						
Students able to meet clinical guideline expectations						
Increases student morale						
Increases student satisfaction with clinical						
Provides most realistic student experience in the acute care setting						
Provides best patient care opportunities						
Provides continuity of care for patients						
Decreased transportation costs						

Please add any further comments on the benefits or drawbacks of any of the shift types in comparison to any of the other shift types.

Does your nursing program have difficulty finding clinical sites?

□ Yes □ No □ Don't know

Does your nursing program have difficulty finding faculty?

□ Yes □ No □ Don't know

Has your program changed the hours or shift of clinical rotations in order to accommodate more students?

□ Yes □ No □ Don't know

Has your program changed the hours or shift of clinical rotations in order to gain access to specific clinical sites?

□ Yes □ No □ Don't know

Has your program used simulation hours to replace clinical time hours?

□ Yes □ No □ Don't know

Have you been asked to teach alternative clinical rotations to meet clinical placement needs such as evening, night, or weekend shifts?

□ Yes □ No

Do you have any other comments to add?

Thank you for your participation and completion of the questionnaire. Contact the researcher for any questions.

APPENDIX C

FACULTY COMMENTS: REASON FOR

PREFERRED SHIFT TYPE

- Just too exhausted at the end of the day
- My perception was that 12 hours was too long for the students two days in a row.
- Less than 8 is not enough time and more than 8 the students are too tired...instructor too!
- Student attention and learning are more focused with 6 hour shifts. With longer shifts students tend to engage in more dialogue about other course work and social schedules. Shorter shift hours offer more frequent learning and avoid the fatigue of longer shifts. Students preferences are for longer shifts to “get it done” which is not as conducive to learning.
- OB nurses @ the facility work 12-hour shifts. Gives the students a better understanding of the RN role in this area.
- Purely for my convenience (don’t have to get up early to make early shift report on days); have more control of students’ experience & client caseload...also disadvantage that students miss “real life” shift from start to finish.
- Everything is organized on a 12 hour day, it is extremely important for the students to experience and participate in shift report, both taking and giving them at the beginning and end of shift.
- Provides adequate time for students to function as part of the team.
- I actually think the ideal is for students to have rotations that match the hospital shifts. I prefer 8h simply because 12h is a long day of teaching ;)
- Students are exhausted after 8 hours.
- 8 is probably better teaching opportunities in terms of students readiness to learn but 12s are more realistic in the current health care climate, so probably students should have clinical rotations in those types of shifts too.
- I understand that clinical sites are at a premium, they are long and I am not sure they are conducive to learning, but it is a changing world that requires flexibility
- After 8 hours, the students are no longer learning they are exhausted and safety becomes an issue.
- This is a standard shift length and I believe it assists the student in making the transition to entry level nursing.

- 12 hour shifts more often match what the nurses are working in our clinical unit. Also, they allow the students to improve time management, open up opportunities for participation in procedures, and build rapport with the patients and families.
- In first semester, I prefer to progress in length as student gain skills and knowledge which can be utilized for the full length of time in clinical. In other words, if they only know how to be beds & VSs, I don't think 8 hr clinicals are an effective use of time.
- 12 hours is too long for students to focus on clinical, 8 hours seems to be the shift they will most likely work as new grads
- Six hours on the floor with two hours to use for clinical prep review and post shift conference.
- I can hire faculty y and it fits in with their work schedule. Maximizes clinical rotation space.
- I prefer to teach 2 6 hours clinical days in a row—12 hrs is too long for students to learn anything and 1 day of clinical is not enough—even if it is 12 hrs. Students need repetition for learning.
- 12 hour clinical provides the students with a more realistic view of "real life" med-surg nursing. This shift strengthens their time management, prioritization, and skills
- For beginning students think the prep-work they need to do prior to coming to the hospital would make doing a 12-hour shift difficult. More advanced students do fine with a 12-hour shift.
- more relaxed because there is more time to get everything finished
- Student is able to see the full shift. I haven't worked 12 hour shifts with students
- students can't focus after 8 hrs- too tired
- The traditional shift has always been 8 hours, I believe more errors are likely to occur with longer shifts.
- I prefer evening shift because the pace of the unit is less hectic, the students perceive that the staff has more time for them, the students have better access to the EMR and charts without feeling as though they are competing for the chart with other healthcare professionals. 8 hours gives the faculty ample time to observe and interact with the student group.
- Six hours seems like the right amount of time to practice technical skills, administer medication, and care for the patient. The six hours seemed to help with time management whereas when I taught 12 hrs, the students seemed to have the perception of having the whole day. It seemed on the 12 hr shift, the students were running behind with basic care. Also with the 6 hours, the students go home, study meds, complete journals and better absorb the information for the next day caring for the same patient.

- Twelve hours shift allow for continuity of care, allowing students to establish therapeutic relationships with patients. They get to apply and individualize the care plan and evaluate the result on the same day.
- The students get the big picture of the patient. They are able to do more procedures and can actually see the results of interventions. It allows them to experience the entire nursing shift including report and recording I&O's
- I prefer day shift for 8 hours. The day shift because the psychiatrist is there to interact with the students in the patient care conference daily, and the 8 hours because the time is so intense, I don't think I could do more than 8 hours.
- Allows for students to take assignment and modulate care through end of shift. Allows for greater interaction with ancillary and physician staff. Provides greater opportunity to complete interventions and new procedures.
- More time to focus on non-medication related activities.
- I prefer weekday mornings. I find the evening shifts often do not have sufficient medication experience and it can be difficult for a student to transition to the floor in the middle of the day. The disadvantage of the weekend shift is that there is less interaction with ancillary personnel and there may be more discharges.
- 8 hour shifts is an optimal learning length for students. Students begin to feel tired and the learning experience becomes less optimal after a certain length of time. It also allows for added days in the clinical area which affords the students opportunities to see more experiences.
- The students are just too tired to learn after 8 hours. They are fatigued in post conference. I think they are emotional drained as well as physically draining. Since my students are not charting and the units slow down in the afternoon, they really isn't much more for them to do. I think 12 hours shifts are great when the student is ready to graduate and has a broader scope of practice and knowledge base but during 2nd semester, additional hours would not help 1st year RN students.
- I am a very hands on instructor and work closely with students in patient rooms. Although I personally haven't had students on 12 hour shifts, I am exhausted (mentally and physically) after 8 hours with students in the clinical area.
- I have more time to teach, I can actually go over the disease process, find more procedures and give more meds.
- Conducive to teaching time management.

APPENDIX D

FACULTY COMMENTS: BENEFITS OR

DRAWBACKS OF SHIFT TYPES

- We must remember students are in a learning mode; as faculty we need to support shifts that avoid fatigue which diminishes their learning and affects their wellness.
- 12's promote continuity of care for patient, and interaction with one other nurse. More than one patient can be assigned with 12's. 8's are also good for realism of shift-shift care that incorporates multiple tasks & experiences, including report. 6's are good for tasting focused experiences with the guidance of the clinical instructor and processing the experiences. Also, short shifts (shorter than a regular shift) are more appropriate for some settings than others and minimize fatigue for students & faculty.
- I think 12 hours shifts are too tiring for both faculty and students. Four hours shifts do not provide enough time for students to fully engage. I currently do one 4 hour in the evening followed by a 8 hour day shift.
- As I mentioned previously, I think the best case scenario is for students to have rotations that match the facilities where they train, whether that be 8 or 12 hours.
- The shorter the shift, the less fatigue, therefore the greater the likelihood of retained knowledge and satisfaction. The longer the shift, the more realistic experience and the greater exposure to patient care opportunities.
- Drawback of the 12 hour shift is clinical conference. Students either need conference on a different day or they need it mid-day on a 12 hour shift day so that they can maintain focus needed for conference discussion.
- I feel that 12 hour clinical shifts would be too long for students to absorb appropriate teaching and would increase burnout and possible dropout rate
- When using 6 hr clinical days—best if 2 days in a row. Cost may be an issue—but learning is the goal. Convenience for faculty or student should not be the driving factor for meeting clinical objectives. Also if working 8 or 12 hrs—you are pressured into assigning students many many patients—so quantity over quality. Best if 2 days in a row and then increased time for discussing pt details with the students. Can focus on organizing for am care, medications, patho, documentation etc. Again building on repetition and muscle memory.
- I would like to do a 12 and have it done in one day. There are pros and cons to both shifts, shorter shifts equal two days of clinical where students can really have the time to absorb the information regarding their patient. The first of the two days is

often spent organizing and looking up unfamiliar medications, whereas the second day, they have the information and are better able to focus on patient care. The twelve hour shift provides the student with a more realistic picture of a day of nursing.

- 4 or 6 hour shifts would be too short for students that travel a distance to get to clinical. 12 hours would be too stressful and cause student and instructor fatigue.
- I tried to have students prep on clinical days to decrease travel costs but then I found they were scrambling to get paperwork done and not spending time with the patients. I think if they learn a disease process and then get to spend time with the patient with this dx. they are more likely to learn rather than spending 12 hours in clinical with the same patients. Ideally, if they could come in for 3 6 hour clinicals with prep time, then they would learn so much more. The downside to this would be balancing didactic coursework and personal obligations.
- It appears to me that by the nature of many of these questions, the researcher has a bias towards 12 hour shifts.

APPENDIX E

FACULTY COMMENTS:

OTHER COMMENTS

- Thanks for this interesting survey and research study! Good luck with your thesis!
- The unit where I am currently employed has recently voted in a 12-hour shift which should facilitate easier scheduling of my work hours around my clinical responsibilities.
- Our psych clinical entails 10 weeks of one-one core therapeutic meetings a student has with one client for which the student is responsible for a major case study. During the ten weeks, the student will be assigned a six day rotation into an acute facility (could be days, evenings or weekends) and another group assignment over a week with other students to develop & execute a community teaching project at a facility/location different than the community mental health agency the student is doing their one-one work with their client for their case study. The one-one clinical instructor is involved in meeting with the students OFF SITE weekly to review their individual process recordings and review their client encounters with them, make suggestions and be resources to the students. The instructor in the acute clinical assignment has traditional "shifts"; the instructor assigned to evaluate the community teaching project does so while students present to consumer/clients on site.
- Use of simulation labs needs to become less time intensive for faculty if they are to be considered a viable clinical replacement.
- I would think this is a very touchy topic for faculty and students. Students would be less fatigues and probably better thinkers in shorter shifts but the reality is they need to learn to think well for 12 hours at a time. If ratios were different and faculty had more time 8 hour shifts would most likely work better because more could be accomplished in an 8 hour shift. A 12 at least gives instructors greater times they can come in contact with each student.
- Alternative schedules meet personal needs of faculty as well as the clinical sites.
- My hours for clinical change every semester, mainly depending on facility availability and how many schools are present at one given time.
- Currently work Sat. Clinical Rotation
- While coming to clinical at different times (e.g., nights and PMs) is a beneficial experience, the students seem to learn more during day shift when all the disciplines are available and providing care.