The impact of Shift Length on Absentee Rates

Margo A. Karsten

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THE IMPACT LENGTH OF SHIFT HAS ON ABSENTEE RATES

BY

MARGO A. KARSTEN

B.S., University of Minnesota, Minneapolis, MN 1984

THESIS

Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Science in Nursing

The University of New Mexico
Albuquerque, New Mexico

July, 1994
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ABSTRACT OF THESIS

Submitted in Partial Fulfillment of the
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The University of New Mexico
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July, 1994
The Impact of Shift Length on Absentee Rates

Margo A. Karsten

B.S. Nursing - University of Minnesota, Minneapolis, MN, 1984

M.S. Nursing - University of New Mexico, Albuquerque, NM, 1994

The purpose of this exploratory study was to investigate the difference in absenteeism rates between medical/surgical Registered Nurses (RN's), who work either eight-hour or 12-hour shifts. The study sought to examine the impact length of shift may have had on absenteeism.

Data were collected and analyzed from 80 automated personnel records in one acute-care hospital. Eight medical/surgical units were used in this study. The findings of this study demonstrate that medical/surgical RNs, who work either eight- or 12-hour shifts, do not have significantly different absentee rates.
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CHAPTER ONE

Introduction

Absenteism in the acute-care setting affects staffing patterns, staff morale, and patient care. Frustrations and difficulties occur at all levels when patient care assignments must be changed at the last minute because someone calls in sick. The absence of even one employee affects the entire healthcare team and, most importantly, patients.

Absenteism of any group of employees has a financial impact on an institution. Kleinman & Rosenberger (1985) report that in most hospitals, 90% of nurses who are absent require replacement personnel, and many of those replacements are paid overtime rates. With the addition of 12-hour shifts, nursing studies cited several advantages in using longer shifts; decreased absenteism and sick time were two advantages.

Recent studies, however, have not been performed in regard to the impact 12-hour shifts have on absenteism on medical/surgical units. In the past decade there has been a shift to more acutely ill patients and a decrease in length of stay for patients, thereby increasing the intensity of the nurse workload.

Purpose of the Study

The purpose of this study was to investigate absenteeism rates between nurses who work either eight-hour or 12-hour shifts. The study is important because during
the nursing shortage, various scheduling methods were introduced and evaluation of their impact on the nurse has only been minimally noted. Although there is not a current nursing shortage, the scheduling methods that were introduced a decade ago are still in place. Few studies have looked at the impact that 12-hour shifts have on absenteeism. In addition, many studies of the eight-hour versus 12-hour shift were completed in the early 1980s and are now outdated.

As mentioned previously, absenteeism is costly both to the organization and also to quality of care that is given to the patient. For these reasons an analysis of shift length and the impact it may have on absenteeism is important for both cost and quality reasons.

**Research Question**

This exploratory study was designed to answer the following research question: Is there a difference in short-term absentee rates between RN's who work 12-hour shifts and those who work eight-hour shifts?

**Operational Definitions**

The following operational definitions were used in the study.

**Absentee Rates**—the number of shifts absent from assigned work within 26 pay periods. Pay period was equal to two weeks, 14 days.
Short-Term Absences—in this study, short-term absences were utilized for the data collection. Short-term absences consisted of any absence of three or fewer consecutive shifts that occurred during a work schedule. A work schedule consist of four weeks.

Long-Term Absences—absences consisting of more than three consecutive shifts away from scheduled work time were considered long term. Long-term absences were not analyzed in this study.

Registered Nurses—full-time, Registered Nurses hired under the management of a medical/surgical nursing department prior to October 1, 1993.

Full-Time—Registered Nurses who worked 40 hours per week for eight-hour shifts, or 36 hours per week for 12-hour shifts.

Scope of the Study

The data were collected in an acute-care, private non-profit, 500-bed hospital in a major metropolitan city. Eight medical/surgical units were the only units utilized for this study. The studies that have been completed in the literature focused on critical care units; therefore I chose to focus on the medical/surgical units.

Significance of the Study

Dr. Pounds (1991) found that studies completed over the past decade have revealed the duration of absence has been decreasing but the frequency of absenteeism has been
increasing. This phenomenon has been cited in a study of nurses done in England by Dr. Frances Pounds (1991) who reviewed the sickness and absence records at King's College Hospital between 1980-1990. Dr. Pounds disclosed that the frequency of absenteeism, as related to the average work force employed in that period, has risen over 600%. A comparable study in the United States has not been completed.

Dr. Pounds implicates that this increase in the frequency of absences means: (a) there are increased work disruptions within an organization, reduced efficiency and work overload for those on duty, (b) within the organization, there may be a mismatch between the nurse and her/his work environment (for example, for one shift, a medical/surgical nurse may be asked to work in pediatrics due to a call-in), (c) the cost to the organization of accommodating absenteeism is high, (d) patient care may suffer if the staff's workload becomes excessive or new personnel on the floor are not familiar with the particular care issues on the unit, (e) the necessity to find replacement on short notice creates high anxiety levels for administration, since the scheduling of other nurses is disrupted, and (f) the variations of absenteeism rates in specific nursing units will affect departmental working conditions, with examples being scheduling practice, quality
of team functioning, nurse-patient and nurse-physician relationships.

It is not possible to estimate precisely the extent or cost of nurses being absent from work; however, it is well established that absenteeism in a health care organization is pervasive and expensive. According to the Bureau of National Affairs (1985) the yearly absenteeism rate for a health care employee is approximately 6.5 days. The cost of a day of absenteeism has been estimated at over $175.00. Annualized, this yields an absenteeism cost estimate of over $1,100 per nurse (Cascio, 1982). Absenteeism definitely affects cost and may impact quality of patient care within a hospital. In this period of healthcare reform, controlling this type of variable in a work setting is imperative.

**Limitations and Delimitations**

The study is limited because it is an exploratory study, specifically a non-experimental ex-post facto study. The findings of the study are generally considered tentative (Polit & Hungler, 1991). A convenience sample was used, and this type of sampling is the weakest type utilized in research (Polit & Hungler, 1991). Personnel action to resolve excessive absentee patterns was not studied.

The study is delimited in that only one acute-care hospital located in the central region of New Mexico was used for data collection. Further, a total of 80 nursing files were analyzed in regard to their absenteeism. The reason for the absence was recorded on an manual log. The
nurses were RNs in a staff nurse capacity on an in-patient medical/surgical unit within the hospital and had been in their positions for at least one year. The sample was selected over a 12-month period between October 1, 1992-October 1, 1993.
CHAPTER TWO
Review of the Literature

Several studies have been completed in regard to absenteeism and the possible factors that influence absenteeism in an organization. In this study the conceptual framework that was utilized in this study will be presented. Studies and results in regard to absenteeism will then be presented. Lastly, specific literature will be presented that has examined the impact length of shift may have on fatigue levels and absenteeism.

Conceptual Framework

A review of literature reveals that there are certain factors which cause an employee to be absent from the job. Feit (1982) found three major classifications influenced absenteeism: external factors, personal factors and employer related factors. The first classification, external factors, may include weather conditions, distance to travel, etc. The second classification of absenteeism relates to personal factors that cause the employee to remain at home or away from the job. Examples of these factors include: personal illness, personality traits, family problems and marital status. The third classification of absenteeism is related to factors which are influenced by the employer: general atmosphere, human relations, shift arrangements, working conditions, workload, benefit policies, job satisfaction, wages, and supervisory style. Feit stated that a heavy workload with short staff
increases absenteeism because of fatigue and frustration. Longer work hours and short staffing may be caused by poorly organized work flow, extended length of shift, or by excessive numbers of peaks and valleys in the work pattern, usually driven by the change in unit census. These variables bring intensive pressures on the staff, causing both physical and mental fatigue which, in turn, may lead to higher absenteeism rates.

Feit's (1982) study did indicate that, when attempting to deal with high absenteeism rates in an organization, health care professionals should be aware of the many potential causative factors which he mentioned and investigators should not limit their investigation to only one or two factors.
Based on Feit's studies the conceptual framework can be depicted as the following:

EXTERNAL FACTORS
- Weather conditions
- Distance to travel to work

PERSONAL FACTORS
- Fatigue
- Family illness
- Increase personal illness

EMPLOYER RELATED FACTORS
- General work environment
- Human relations
- Shift arrangements
- Job satisfaction
- Workload
Review of the Literature

In regard to personal factors associated with absenteeism, the literature focused on fatigue. The concept of workload and the problem of fatigue is central to the analysis of prolonged work hours and their influence on patient care and absenteeism. While research relevant to nursing practice has not been conducted, Poulton, Hunt, Carpenter & Edwards (1978) has indicated a fall in efficiency related to working 18 hours or longer and the presence of a large cumulative sleep deficit of eight-hours. The 12-hour schedule, recognized as a long workday, entails only a consecutive two- or three-day work period followed by several days off. In the absence of objective data, however, only staff perceptions of care and subjective evaluation of the personal impact is currently available. Arnold, Mills & Wood (1982) conducted a study regarding the impact 12-hour shift work has on critical thinking and fatigue. Staff fatigue levels were examined in relation to subjective symptoms, mental reasoning, and performance. Their overall findings stated: fatigue testing demonstrated that by the twelfth hour, subjectively identified symptoms of fatigue reflected increased physical symptoms of tiredness. As a result of their findings, due to the increased hours per day, staff fatigue has become an issue to evaluate while implementing 12-hour shifts.
Price (cited in Healy, Niemeier & Price, 1984) noted that in an intensive care unit that implemented 12-hour shifts, after six months the unit was operating precariously, with very fatigued staff. Although the nurses' actual time away from the hospital increased, they complained of a significant decrease in the quality and productivity of their leisure time. The subjective changes they reported included less socialization with family and friends, avoidance of formerly established exercise programs, and guilt stemming from their desire to "get away from patients." These subjective feelings may have increased the amount of fatigue or stress in their lives. This study found that the 12-hour pattern had adversely affected the quality of the nurses' professional and personal time and behavior. This particular organization returned to the conventional eight-hour rotating staffing pattern. Three months after the eight-hour schedule was resumed, evaluation showed a reduction in staff illness. This was a reduction in staff illness as compared to the absenteeism rate when the staff was on 12-hour shifts. Subjective changes reported by the staff included higher morale and an increase in quality leisure activities. Price recommended that for the majority of acute-care nurses, the 12-hour staffing pattern is not a viable alternative.

Healy and Niemeier (cited in Healy, Niemeier & Price, 1984) conducted a study on the viability of the 12-hour
shift. The results found no significant increases in absenteeism; however, fatigue was an issue. Increasing the length of a shift by four hours required a period of both physiological and psychological adjustment. Discussions with the staff revealed that tours of duty exceeding three consecutive days resulted in excessive fatigue.

Palmer (1991) conducted a study which compared nurses' behavior patterns on eight-hour and 12-hour shifts. Her study did not reflect a difference in absenteeism between the 12- and eight-hour shifts. However, she found in areas with low nurse/patient ratios, nurses can care for up to four patients at a time for 12 hours. However, her study found that 12-hour shift nurses who floated to medical units, thus having an increase in patient ratios, requested to work only eight hours there due to fatigue. Therefore she concluded that low nurse/patient areas are probably the best locations for scheduling personnel on 12-hour shifts. This study also indicated the reason for the absenteeism. In both the 12-hour nurse and the eight-hour nurse, personal illness was cited as the reason for absence.

Dugan and Ritz (1990) conducted a study in an operating room where the staff converted to a 12-hour scheduling system. Again, all nurses reported fatigue as a problem. Fatigue did decrease when the nurses had long periods of time off between the ending of one work week and the beginning of the next work week. The nurses preferred a
schedule in which they had two or more days off between work weeks.

Washburn (1991) conducted a study regarding fatigue levels and critical thinking abilities of nurses working 12-hour and eight-hour shifts. The sample included 117 nurses working in both critical care and medical/surgical departments. Data analysis of both fatigue scores and subjective symptoms of fatigue revealed no significant differences between the nurses working eight- and 12-hour shifts. In addition, there were no statistical differences between the eight- and 12-hour critical thinking scores.

In regard to employer related factors, the literature focused on job satisfaction, work environment and workload. Job dissatisfaction was a major contributing factor to absenteeism among nurses. Boredom, lack of incentive, and lack of a challenging job were noted causes of employee dissatisfaction (Slick, 1975).

Kirtane (1975) stated in regard to job satisfaction, 26% of nursing personnel reported that they stayed home from work because they just could not "take it" another day. In addition, 24% were absent because they were "too tired." There was no mention of type or length of shift the nurses were working.

Healy, Niemeier and Price (cited in Healy, Niemeier & Price, 1984) completed a systematic evaluation that focused on nurse job satisfaction while implementing 12-hour shifts.
on medical/surgical units. Their initial results found job satisfaction scores were uniformly high on all three medical/surgical units that had implemented 12-hour shifts. However, the job satisfaction scores gradually decreased as the study progressed. The nurses reported an increase in fatigue, which negatively impacted their job satisfaction.

Brown and James (1985) researched the impact 12-hour shifts had on morale and absenteeism. After implementation of 12-hour shifts in a critical care unit, staff morale was subjectively measured. The study demonstrated that 12-hour scheduling increased morale and decreased costs related to absenteeism.

Erickson and Lee (1990) reported that job satisfaction is inversely related to absenteeism. Working conditions and the nature of supervision are frequently identified as significant organizational variables influencing job satisfaction. In Dugan and Ritz's (1990) study in an Operating Room where the staff converted to a 12-hour scheduling system, a review of questionnaires and interviews at the end of the two-month period showed that there were no changes in job satisfaction or morale.

Burns, Houston and Ragsdale (1991) also identified several variables that consistently emerged as contributing factors to absenteeism in nursing. The contributing factors included the work setting and job dissatisfaction. Factors associated in the work setting were shift arrangements,
undesirable or unsafe working conditions, workload, wages, and benefit policies. Factors associated with job dissatisfaction were the following: the job itself, boredom, feelings that the job was not important, lack of control, poor group relations, ineffective supervision and overwork, which were all aspects that promoted absenteeism.

Neuman (1991) conducted a study that examined the effect of flexible scheduling options on professional nurses' job satisfaction. Of the RNs working one of three scheduling options: (a) Permanent weekends, (b) 12-hour shifts, or (c) eight-hour shifts—there was no significant difference in perceived job satisfaction. All three groups indicated a moderate to high level of job satisfaction as measured by the Nursing Job Satisfaction Scale. In this particular study, there was no mention of the type of units the nurses were working.

Conflicting literature was found in regard to the direct impact 12-hour shift work has on absenteeism. The following are studies that focused on direct association between length of shift and absenteeism.

Price (cited in Healy, Niemeier & Price, 1984) found after implementing 12-hour shifts that there was an increase in documented and undocumented staff illness. The hospital in this study then resumed the eight-hour shift and found after three months there was a reduction in staff illness.
Healy and Niemeier (cited in Healy, Niemeier & Price, 1984) implemented 12-hour shifts in a critical care unit. They analyzed the number of sick calls per month in relation to the number of filled nursing positions for each unit and found no differences between the number of sick calls reported during the six-month baseline and the total implementation period for any unit. While there were indeed some months when absenteeism was high, the general trend over time showed no difference.

Elliot (1989) conducted a study and found after implementing 12-hour shifts, the total mean sick hours decreased 35% in the six pilot units. The six pilot units implementing 12-hour shifts were three medical/surgical units and three critical care units.

Explanations for the differences in the results, among all reviewed, could be due to variations in the samples and research methods. The type of unit and nurses working full or part time may have had an influence on the absentee rate.

In conclusion, fatigue was a common concern throughout the studies. It was also of interest that in areas with low patient ratios the 12-hour shift seemed to be reasonable. Units that had higher staffing ratios were not readily identified as viable units for the 12-hour shifts. Since 12-hours shifts were primarily introduced in critical care areas, and are now implemented on general medical/surgical care units, the impact of the 12-hour shift on medical/
surgical units may result in fatigue and stress, thus resulting in absenteeism. The way in which eight and 12-hour shifts are utilized and assigned to various individuals and units may be a causative factor in impacting absenteeism rates.

It is reflected in research that fatigue is a factor associated with the length of shift. However, studies have not pursued what impact length of shift has on absenteeism. With the introduction of 12-hour shifts on general medical/surgical units, has the length of shift caused an increase in absenteeism? This study will pursue the answer to this question.

Table 1 provides a summary of the articles reviewed and is found in Appendix B.
CHAPTER THREE
Methodology

Introduction

This study examined the impact length of shift has on absenteeism. A description of the sample population, settings, design of the study, and instrument used for data collection will be presented.

Subjects and Setting

Data was obtained from an automated personnel record that records short-term absences at a 500-bed, private, non-profit hospital in New Mexico. Short-term illnesses were investigated since these are the most disruptive types of absence. Extended absences due to maternity leave or elective surgery are usually scheduled in advance and do not cause as much chaos to the unit as short-term absences. Data were provided from an automated nurse scheduling system (ANSOS) of all Medical/Surgical RNs who worked full time and were employed for a full calendar year during the period October 1, 1992 to October 1, 1993. Data in regard to the reason for a given absence was obtained from a manual log kept by the staffing office.

Inclusion Criteria

Medical/Surgical RNs who were employed full time prior to October 1, 1992 were included in the study. Each RN had either an eight-hour or a 12-hour work schedule. The medical/surgical units were chosen because they were very large and the data were easy to retrieve. Convenience
sampling was utilized. Eighty RNs met the inclusion criteria from the selected hospital.

**Procedures Used in Data Collection**

Data were collected on computerized printouts. These printouts included a calendar year of hours paid, indicating which hours were worked and which were "short-term absences." The short-term absences were calculated on shifts absent. The reason for the absence was gathered from the hospital's absentee log. The reasons for absence were categorized into the following: personal illness, child care issues, or miscellaneous.

**Reliability/Validity of Data**

Reliability was evaluated regarding the absentee records utilized for this study. Reliability of the data was evaluated by comparing the computerized printout with the manual system used by the staffing office. The automated record dates were matched with the manual log. When the comparison between the records and the log was completed, two nurses were not registered on the manual log. THIS was a 98% accuracy rate. I chose to keep the two nurses in the statistical data. Data entry reliability was completed by the test-retest method. Reliability of the data entry was determined by entering the data twice and comparing the statistical analysis from each entry. Any discrepancies were corrected until 100% of the data was accurate.
Validity was evaluated based on face validity. Brink and Wood (1988) state that face validity merely establishes that the tool seems an appropriate way to find out what the researcher would like to know. For this study, the automated record and manual log were the appropriate tool to report the absentee shifts.

**Procedures Used in Data Analysis**

A two-sample t-test was used to test the research question concerning a difference between short-term absentee rates for nurses working 12-hour shifts vs. eight-hour shifts. The two-sample t-test was appropriate since it was used to test the difference between the means of two independent groups (Polit & Hungler, 1991).

**Protection of Human Rights**

A cover letter was sent to the Vice President of Nursing explaining the study. In addition, the institutional review board in the hospital reviewed the proposal for approval of the study (see Appendix A). Anonymity was assured due to the fact all names would be erased from the absentee records.

**Summary**

This study was designed to investigate if the length of shift impacts absenteeism on medical/surgical units. Comparisons were made among the nurses working eight- and 12-hour shifts.
CHAPTER FOUR
Findings and Evaluation

Introduction

This study investigated the impact length of shift had on absentee rates on medical/surgical units. An automated personnel record and manual log were used to obtain the raw data.

Characteristics of Sample

The largest number of subjects were female (92%). Most of the nurses (N=55, 69%) had been working for at least five years. The mean number of years in their present position was 2.5 years. The sample age ranged from 23 to 64, with the average age 39 years. The nurses in this study worked on medical/surgical units. Table 2 summarizes the characteristics of the sample and is found in the Appendix B.

Research Findings

Research Question: This exploratory study was designed to answer the following research question: Is there a difference in the short-term absentee rates between RNs who work 12-hour shifts and RNs who work eight-hour shifts?

Analysis of the research question was done by analyzing the mean scores between short-term absentee rates for nurses working 12-hour vs. eight-hour shifts. The mean number of absent shifts for eight-hour RNs was 4.8 (s=4.36). The mean number of absent shifts for 12-hour RNs was 4.9 (s=3.89). Results of the two sample t-test shows that the mean
absentee rate for the eight-hour shift employee was not significantly different from the 12-hour shift employees \((t=.108, p<.9142)\). Table 3 summarizes the statistical analysis and is found in the Appendix B. The range of absent shifts ranged from 0-16. Outliers were identified and removed from the data. Results from the two sample \(t\)-test with the outliers removed showed that the mean absentee rate for the eight-hour shift RN was not significantly different from the 12-hour shift RN \((t=8.7, p<.3140)\). Munro & Page (1993) state that if the results are similar, the outliers can be ignored. I chose to ignore the outliers. An analysis was completed on a random sample of 25% of the automated records to identify if there were patterns to the absentee shifts. For example, did RNs call in prior to a weekend off or after working long stretches? No pattern was identified.

An analysis was completed on a random sample of 25% of the nurses listed on the manual log to identify the reason for the absence. A manual log was reviewed to identify, at the time of the absence, what the nurse stated as the reason for the absence. Ninety percent of the reasons for absence were due to personal illness. The remainder of the reasons stated for the absence were an ill child (eight percent) and poor road conditions (two percent).
Summary

RNs in this study ranged from 23 to 64 years of age and were predominately female. The RNs worked exclusively on a medical/surgical unit. In this exploratory study, the difference in short-term absentee rates between RNs who work 12-hour shifts and RNs who work eight-hour shifts were explored. The short-term absentee rate for the 12-hour shift RNs were not significantly different than the eight-hour shift employees.
CHAPTER FIVE
Summary, Conclusions, Recommendations

Introduction
Using an exploratory design, the researcher examined the difference in short-term absentee rates between medical/surgical RNS who work 12-hour shifts and RNS who work eight-hour shifts. As mentioned previously, absenteeism is costly to the organization and may also impact the quality of care that is given to the patient, due to the disruption that absenteeism causes on an unit. During the nursing shortage, 12-hour shifts were introduced; however, a current evaluation of the possible impact longer shifts could have on absenteeism has not been completed. For these reasons, an analysis of shift length and the impact it may have on absenteeism is beneficial for cost and quality factors.

Conclusions
The findings of the current research endeavor demonstrated that there is not a significant difference between absentee rates for RNS who work 12-hour shifts and RNS who work eight-hour shifts. Prior studies had indicated conflicting results in regard to the impact 12-hour shifts had on absenteeism. Proponents for the 12-hour shifts claimed that absentee rates decreased when these 12-hour shifts were implemented (Brown & James, 1985; Elliot, 1989). This study did not find any significant difference in absenteeism between the two types of shifts. It is interesting that compared with other research absentee
rates, this particular organization had a lower absentee rate. The reason for this decrease in absentee rate could be due to the fact that in 1991, the management team revised the absentee policy, and strictly enforced disciplinary action when the nurse accumulated more than six occurrences in a twelve month period. This may have had a positive impact on the number of absentee occurrences.

This particular study focused on length of shift, and did not research the cost associated with the absentee. Cost should not be overlooked when comparing 12-hour and eight-hour shifts. The 12-hour shift employee cost would be higher than the eight-hour employee cost. At this particular institution, the average hourly rate for an RN is $14.50/hour. Based on this research findings, the 12-hour absentee cost would equate to approximately $852.60. The absentee cost for the eight-hour RN would be approximately $556.80. Further research should be completed in regard to cost associated with absenteeism and length of shift. This study has relevance to current acute-care settings. The majority of the previous studies completed on 12-hour shifts occurred in critical care units. This study focused on medical/surgical units and found that implementing 12-hour shifts can be a viable option.

Regarding the nature of the absence, this study found that personal illness and child care issues were the two major root causes. It is interesting that this particular
institution did offer sick child care; however, employees were still absent due to sick children. This may have been due to annual examinations, etc.

**Limitations of the Study**

This study utilized a convenience sample from one hospital in a major Southwest metropolitan area. Other hospitals of similar size could have been utilized. This would have enlarged the sample size and a random sample could have been utilized.

Literature cited that management style may impact the incidence of absenteeism (Feit, 1982). This study analyzed absentee rates of eight different medical/surgical units; therefore, six different managers were accountable for the various units. Their management styles were not investigated in this study.

Neither length of time that the nurses had worked the 12-hour shifts nor the length of time the unit had been on 12-hour shifts were evaluated. Price (cited in Healy, Niemeier & Price, 1984) found that after six months of implementing 12-hour shifts, there was an increase in absenteeism. Length of time was a variable not evaluated in this study.
Recommendations

Based on the findings of this study, absenteeism is equally present on 12- and eight-hour shifts. Root causes for the absence need to be further investigated. Child care issues, management style, work ethic, fatigue level and employee motivation are variables that need further research in regard to the impact 12-hour shifts may have on medical/surgical units. In this study there were a few employees who had less than one shift absent in the entire year. Investigating and understanding what motivates this type of individual may benefit an organization.

This type of study should be replicated. In addition to length of shift, other variables should be investigated. A predictive model could then be established for an organization to utilize. This type of model could assist in projecting absentee costs, as well as scheduling needs on specific units.

Mentioned previously, this organization did offer sick child care, since the study has been completed the organization has closed their sick child day care. Closing this day care and the impact it may have on increasing absenteeism could be researched. This study did report that eight percent of the nurses did call in due to sick children. With the closing of the day care it would be interesting to study if this eight percent increases. Additional research could also be completed by comparing
absentee rates of organizations that do offer sick child care and those organizations that do not provide sick child care service.

**Summary**

Except for two studies (Elliot, 1989; Washburn, 1991), past research endeavors have not investigated the impact length of shift has on absenteeism on medical/surgical units. Currently in acute-care areas, 12-hour shifts are implemented on all types of units. This study was an attempt to add to the research about 12-hour shifts. Nursing management should have new information on the impact 12-hour shifts have on absenteeism.


APPENDIX A
APPENDIX B
<table>
<thead>
<tr>
<th>AUTHOR, YEAR</th>
<th>TYPE OF UNIT</th>
<th>IMPACT ON ABSENTEEISM</th>
<th>IMPACT ON JOB SATISFACTION</th>
<th>IMPACT ON FATIGUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healy &amp; Niemeier, in Healy, Neimeier &amp; Price, 1984</td>
<td>Critical care units</td>
<td>No change.</td>
<td>Initially increased satisfaction, however, decreased after six months of implementation.</td>
<td>Increase after six months of implementation.</td>
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<tr>
<td>Brown &amp; James, 1985</td>
<td>Critical care unit</td>
<td>Decreased costs associated with absenteeism.</td>
<td>Increased morale.</td>
<td>Not mentioned.</td>
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<tr>
<td>Elliot, 1989</td>
<td>Medical/surgical and critical care units.</td>
<td>Decreased total mean sick hours 35%.</td>
<td>Increased.</td>
<td>Not mentioned.</td>
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<tr>
<td>Dugan &amp; Ritz, 1990</td>
<td>Operating room.</td>
<td>Not mentioned.</td>
<td>No change.</td>
<td>Increase fatigue.</td>
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Table 1

**Summation of Articles Implementing 12-Hour Shifts**
(continued)

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Table 2

**Characteristics of the Sample**

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<th>Age</th>
<th>N</th>
<th>Mean</th>
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<td>23-64</td>
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<td>39.22</td>
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<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>Percent</th>
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<tr>
<td>Female</td>
<td>74</td>
<td>93</td>
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<tr>
<td>Male</td>
<td>6</td>
<td>7</td>
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<table>
<thead>
<tr>
<th>Years in Nursing</th>
<th>N</th>
<th>Percent</th>
<th>Mean</th>
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<tr>
<td>1-4</td>
<td>13</td>
<td>16</td>
<td></td>
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<tr>
<td>5-10</td>
<td>55</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>&gt; 10</td>
<td>12</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td></td>
<td>5.2  Years</td>
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<table>
<thead>
<tr>
<th>Years in Present Position</th>
<th>N</th>
<th>Mean</th>
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<tbody>
<tr>
<td></td>
<td>80</td>
<td>2.5  Years</td>
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</table>
Table 3

Two-Sample T-Test for Absentee Rates Between Eight-Hour and 12-Hour Shifts

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
<th>df</th>
<th>Prob.</th>
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</thead>
<tbody>
<tr>
<td>Eight-Hour</td>
<td>40</td>
<td>4.8</td>
<td>4.36</td>
<td>.108</td>
<td>78</td>
<td>.4816</td>
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<tr>
<td>12-Hour</td>
<td>40</td>
<td>4.9</td>
<td>3.89</td>
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